CHI St. Vincent

Imagine better health.[SM]

Community Health Needs Assessment
CHI St. Vincent Hot Springs
June 2016

Community Health Needs Assessment

CHI St. Vincent Hot Springs

Questions may be directed to:

Patrick McCruden
SVP, Mission Integration
CHI St. Vincent Health System
PMccruden@stvincenthealth.com

Suma Ashok
Administrative Fellow
Catholic Health Initiatives
Sumaashok@stvincethealth.com

Megan L. Roberts
Administrative Fellow
CHI St. Vincent Health System
Meganroberts@stvincenthealth.com

June 2016

Acknowledgments

We would like to thank the following organizations and individuals for their willingness to assist in our process of assessing the health needs of the CHI St. Vincent Hot Springs Community.

Vital Statistics Branch, Arkansas Department of Health – Howraa-Al-Mousawi, Shalini Manjanatha, Priya Kakkar

Area Agency on Aging West Central Arkansas – Sherial Bradley, Karen Sawyer

United Way of Garland County – Jane Browning

Jackson House – Janie Smith

City of Hot Springs – Mayor Ruth Carney

Human Trafficking Task Force of Garland County – Melissa Glenn

Garland County Health Unit – Janet McAdams

CHI St. Vincent Health System – Dr. Drew Kumpuris

CHI St. Vincent Hot Springs – Dr. Jamie Cardenas

Douglass-Newman Insurance, CHI St. Vincent Health System – Bart Newman

Sisters of Charity of Nazareth, CHI St. Vincent Health System–Sr. Trudy Foster

UAMS School of Public Health - Dr. M. Kate Stewart & Ashley Bachelder

Hometown Health Improvement, Arkansas Department of Health - Laura Taylor, Julie Harlan

CHI St. Vincent Hot Springs Auxiliary Volunteers

Garland County Project H.O.P.E

Contents

Introduction

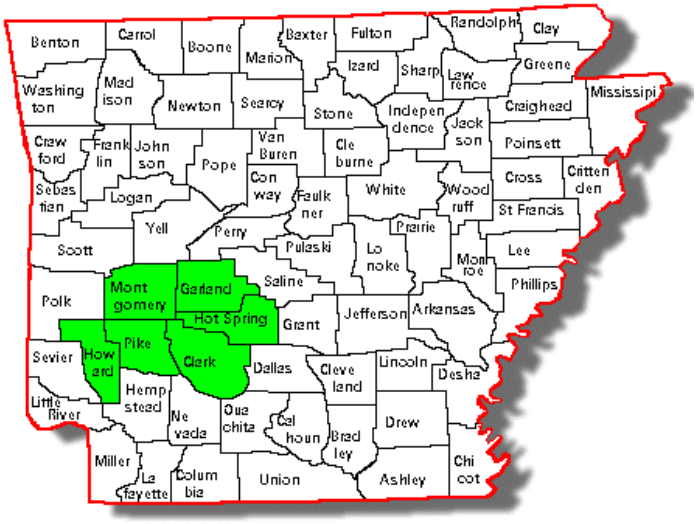
The 2016 CHI St. Vincent Hot Springs (SVHS) Community Health Needs Assessment (CHNA) is a comprehensive evaluation of the health needs of the SVHS community. SVHS, located in Hot Springs, Arkansas is one of four hospitals in the CHI St. Vincent Health System, a wholly-owned subsidiary of Catholic Health Initiatives. The hospital is licensed for 309 beds, is a Level II Trauma Center, and has since 1888 furthered the healing ministry of the Catholic Church in the greater Hot Springs community.

Primary Service Area

The primary service area was determined by our Strategy and Business Development Office. Using 75% of patient discharges as the threshold, six counties were identified as encompassing the SVHS primary service area. These counties include Clark, Garland, Hot Spring, Howard, Montgomery, and Pike County.

CHI St. Vincent Hot Springs

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 CHI St. Vincent CHNA reports. 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 SVHS primary service area, as well as data for the State of Arkansas and United States, publicly available data sources were used. See *Glossary Table* 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 SVHS 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 SVHS 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 SVHS 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 SVHS 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 SVHS 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 SVHS CHNA will be used to generate specific strategies to address a list of prioritized health needs in the SVHS 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 Hot Springs.

Executive Summary

After an extensive data collection and interview process the top health issues in the CHI St. Vincent Hot Springs (SVHS) primary service area 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 Hot Springs primary service area Analysis: Clark, Garland, Hot Spring, Howard, Montgomery, Pike 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.
    - 88.63% of the adult aggregate primary service area population report consuming less than 5 servings of fruits or vegetables a day.
    - 33% of the adult aggregate primary service area population report that they have no leisure-time physical activity.
    - 22.7% of the aggregate primary service area population reports that they use tobacco every day or most days which is slightly more than the state average of 22% and higher than the national average of 18%.
- In terms of preventative measures such as pap smears, colonoscopy, and Prostate Specific Antigen testing many of the counties within the primary service area performed worse than the state and national averages.
- Crime and violence - Homicide rates across the primary service area have fluctuated over 2011-2014, ranging from 4.32 to 8.28, per 100,000 population. Male citizens consistently recorded higher rates when compared to the female population. However, Whites and Blacks have alternatively recorded high rates over the period of four years.

- Mental health – 3 (Clark, Howard, Pike) out of 6 counties in the primary service area record higher number of mental health days of 4.1 when compared to the rest of the state (3.9) and country (2.3). From 2011 - 2014, the number of inpatient psychiatric discharges have gone up from 440 to 472. Suicide rates across the primary service area have increased from 19.6 to 24.39 per 100,000 population over the same time period. Whites recorded higher rates when compared to the other races. Males recorded higher rates compared to the female population. Suicide rates were higher for people between the ages of 35 - 54 years (37.36 suicides).
- In terms of maternal and child health, infant mortality was a major concern. White mothers saw extraordinarily high rates ranging from 4.45 infant deaths in 2011 to 11.18 infant deaths in 2013, when 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 have increased from 23.59 to 25.21, per 100,000 population over the four years. These rates exceed 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, 52.2% of female Medicare Enrollees age 67-69 primary service area received a Mammogram which is lower 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

Clark County

- Population, 2014 Estimate: 22,576
- County Seat- Arkadelphia
- Rural/Micro
- Foot hills Ouachita Mountains(Arkadelphia)
- Degray State Park and Degray Lake attract half million people annually
- Race & Ethnicity(2014)
    - White alone 73.4%
    - Black or African American alone 23.9%
    - Hispanic or Latino 4.4%

    - American Indian/Alaskan Native .6%
    - Asian alone .7%
    - Native Hawaiian/Other Pacific Islander Z
    - Two or more Races 1.4%
- Average Household size 2.41
- Average Family size 3.09
- Median Household Income $32,721
- Per Capita income $17,690
- % total Population below poverty line 24.3%
- % families below poverty line 17.6%

Garland

- Population, 2014 Estimate: 97, 322
- County Seat Hot Springs
- Urban/ Metro
- Heart of the Ouachita Mountains
- Hot Springs National Park only national park within city limits.
- Lake Ouachita, the state's largest manmade lake
- Race & Ethnicity(2014)
    - White Alone 87.7%
    - Black or African American 5.5%
    - Hispanic or Latino 5.3%
    - American Indian/ Alaskan Native .7%
    - Asian Alone .8%
    - Native Hawaiian/Other Pacific Islander .1%
    - Two or More Races 2.3%
- Median Age 44.2
- Average Household Size 2.37
- Average Family size 2.91
- Median Household Income $39,162
- Per Capita Income $23170
- %total Population below poverty line 2013 20.7%
- % families below poverty line 2013 15.2%

Hot Spring

- Population, 2014 Estimate: 33, 368
- County Seat- Malvern
- Rural/Micro
- Economy bases id beef and dairy cattle, and cultivation of hay, soybeans, and rice. Industrial development includes lumber mills, brick plants, metals, and small industry.
- Lake Catherine, getaway for fishing and water sports and Ouachita River for fishing and floating
- Race & Ethnicity 2013
    - White Alone, 85.6%
    - Black or African American alone 11.6%

    - Hispanic or Latino 3.3%
    - American Indian/Alaskan Native .6%
    - Asian alone .4%
    - Native Hawaiian/Other Pacific Islander .1%
    - Two or more Races 1.8%
- Median age 40.1
- Average Household size 2.58
- Average Family size 3.08
- Median Household Income $41,193
- Per Capita Income $19286
- % total Population below poverty line, 2013 14.2%
- % families below poverty line 10.5%

Howard

- Population, 2014 Estimate: 13,500
- County Seat Nashville, Arkansas
- Rural Southwest Arkansas
- It is a dry county
- Cossatot River State Park-Natural Area
- Race & Ethnicity(2014)
    - White alone 75.8%
    - Black or African American alone, 20.9%
    - Hispanic or Latino 11.0%
    - American Indian/Alaskan Native 1.0
    - Asian .7%
    - Native Hawaiian/ Other Pacific Islander .1%
    - Two or more races 1.4 %
- Median Age 36.9
- Average Household size 2.60
- Average Family Size 3.08
- Median Household Income $35,879
- Per Capita income $18707
- %total Population below poverty line 23.2%
- % families below poverty line 19.6 %

Montgomery

- Population, 2014 Estimate 9,082
- County Seat- Mount Ida
- Rural
- Each year Montgomery county has an annual Quartz Crystal Festival and Crystal Dig
- Race & Ethnicity(2014)
    - White Alone 92.3%
    - Black or African American alone .6%
    - Hispanic or Latino 3.6%

    - American Indian/Alaskan Native 1.3%
    - Asian alone .7%
    - Native Hawaiian/other Pacific Islander Z
    - Two or More Races 2.3%
- Median Age 46.9
- Median Household size 2.39
- Median Family size 2.93
- Median Household Income $31, 345
- Per Capita Income $19021
- Total population below poverty line 22.0%
- % families below poverty line 14.9%

Pike

- Population, 2014 Estimate: 11,024
- County seat-Murfreesboro
- Crater of Diamonds, an 866 acre natural park is the only diamond mine in North America open to the public
- Race & Ethnicity (2014)
    - White Alone 87.6%
    - Black or African American alone 3.5%
    - Hispanic or Latino 6.6%
    - American Indian/Alaskan Native 1.1%
    - Asian .7%
    - Native Hawaiian/Other Pacific Islander z
    - Two or More races 1.5%
- Median Age 40.7
- Average Household size 2.55
- Average Family size 2.97
- Median Household Income $32206
- Per Capita Income $18,377
- %total population below poverty line 24.8%
- %families below poverty line 19.6%

Key Community Socioeconomic Factors

Population Growth

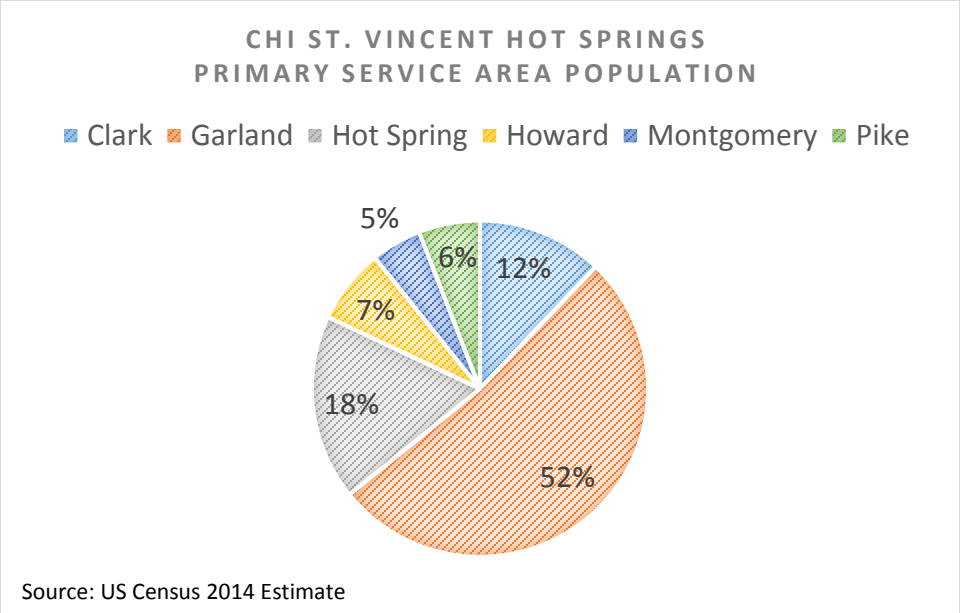
According to the US Census and indicated in the table below, four of the six counties in the SVHS primary service area have seen a decline in population growth between 2010 and 2014.[1] Garland County (1.4%) and Hot Spring County (1.4%) are the only counties in the primary service area that experienced positive growth. However, the 1.4% growth rate falls below the Arkansas and US growth rate of 1.7% and 3.3%, respectively.

Population Growth 2010-2014 , US Census 2014 Estimate	
County	% Change
Clark	-1.8
Garland	1.4
Hot Spring	1.4
Howard	-2.1
Montgomery	-4.3
Pike	-2.4
Arkansas	1.7
US	3.3
Aggregate	-1.3

As indicated in the pie graph, Garland County represents the bulk of the population in the primary service area with 52% of the population.[2] Hot Spring County is the second most populous county in the primary service area representing 18% of the population. Montgomery (5%) and Pike County (6%) are the least populated counties in the primary service area and both experienced negative growth rates of -4.3% and -2.4%, respectively.

[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



Source: US Census 2014 Estimate

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 six counties representing the SVHS primary service area was 40.8 years. Montgomery County (47.9 years) was the oldest county in the primary service area and also has the highest percentage of the population age 65 and over at 25.4%. Garland County, the most populous county in the primary service area has a median age of 44.1 years and 21.7% of the county's population was age 65 and over. The youngest county was Clark County (34.1 years) and 16.1% of the population was age 65 years or older.

Age Characteristics, US Census, 2014 Estimate			
	Median Age	% under age 5	% age 65 or over
Clark	34.1	4.9	16.1
Garland	44.1	5.7	21.7
Hot Spring	40.2	5.3	17.2
Howard	37.3	6.9	16.9
Montgomery	47.9	4.3	25.4
Pike	41.1	5.8	18.6
Arkansas	37.6	6.5	15.7
US	37.4	6.2	14.5
Aggregate	40.8	5.5	19.3

Race- Ethnicity

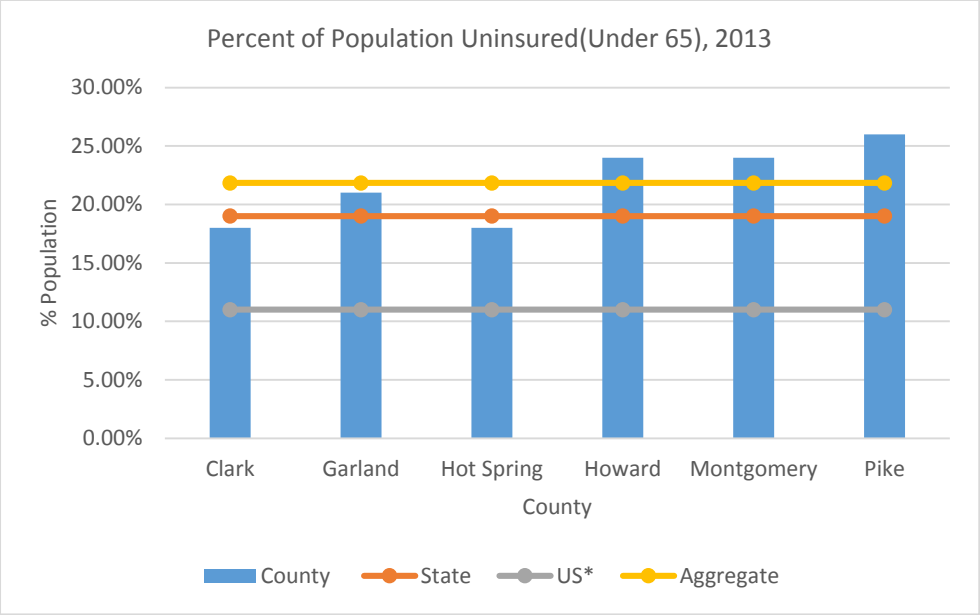
Race and Ethnicity are risk factors for adverse health conditions and so understanding the racial and ethnic breakdown of the population provides important context. According to the US Census, in 2014, the counties within the SVHS primary service area have similar racial and ethnic breakdowns among persons reporting one race as indicated in the table below. There are however some exceptions. Howard County has the largest Hispanic population (11.0%). This figure is higher than the state average of 7.0% and less than the national average of 17%. Clark County has the largest Black population at 24% which is higher than the state average of 15.6% and the national average of 13.2%.

Race-Ethnicity, US Census, 2014 Estimate				
Among Persons Reporting One Race				
	White	Black	Other	Hispanic (any race)
Clark	73.4%	24.0%	1.3%	4.4%
Garland	87.7%	8.5%	1.6%	5.3%
Hot Spring	85.6%	11.6%	1.1%	3.3%
Howard	75.8%	20.9%	1.8%	11.0%
Montgomery	95.1%	0.6%	2.0%	3.6%
Pike	93.3%	3.5%	1.8%	6.6%
Arkansas	79.7%	15.6%	2.8%	7.0%
US	77.4%	13.2%	6.8%	17%
Aggregate	85.2%	11.5%	1.6%	5.7%

Uninsured

Health insurance coverage is an important driver in ensuring access to healthcare services. As indicated in the graph below, Pike County (26%) had the highest uninsured population in 2013.[3] Additionally, Clark County and Howard County were the only two counties that performed better than the state average of 19%. None of the counties however performed better than the top US performers[4] (11%).

[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



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

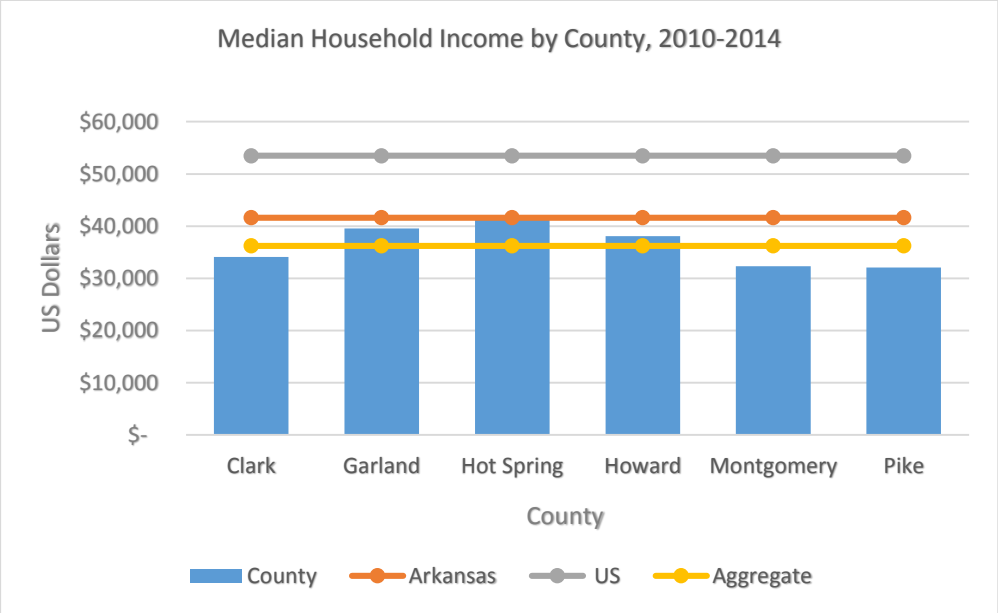
It is important to note that from 2013 to 2014, through the Arkansas Private Option, Arkansas was able to reduce its uninsured population (65 and younger) almost in half.[5] This was the second highest reduction in the nation and the most recent data available at the county level does not reflect this.

Income

As indicated in the graph below, all counties within SVHS primary service area fall below the state and national median household income of $41, 624 and $53,482, respectively.[6] Montgomery County has the lowest median household income at $32,293 dollars and Hot spring County has the highest median household income at $41, 353 dollars.

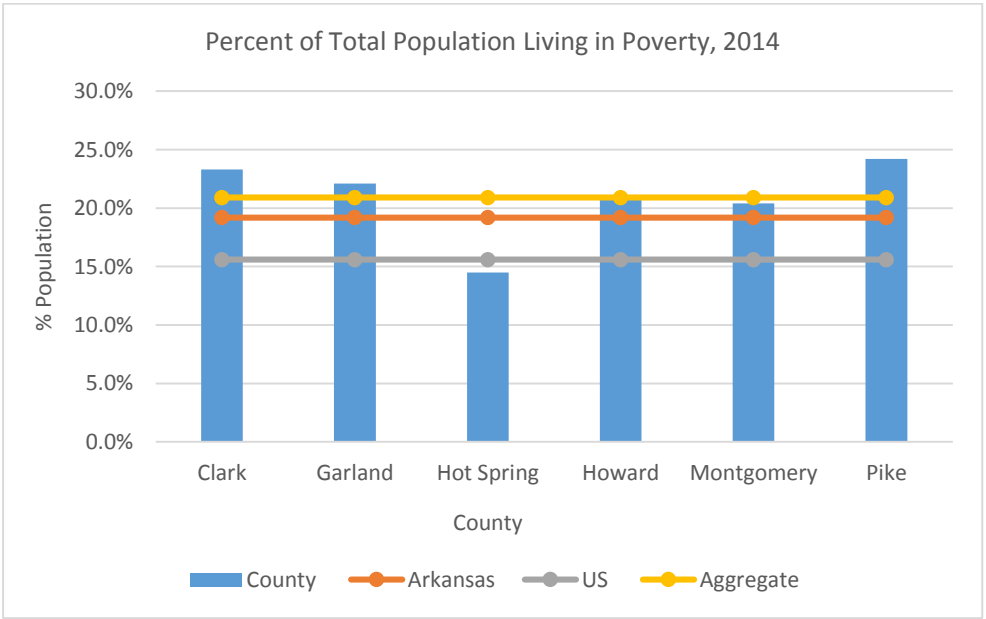
[5] Guyer, Jocelyn, Naomi Shine, Mary Beth Musumeci, and Robin Rudowtiz. "A Look at the Private Option in Arkansas." The Henry J. Kaiser Family Foundation, 2015. Web.

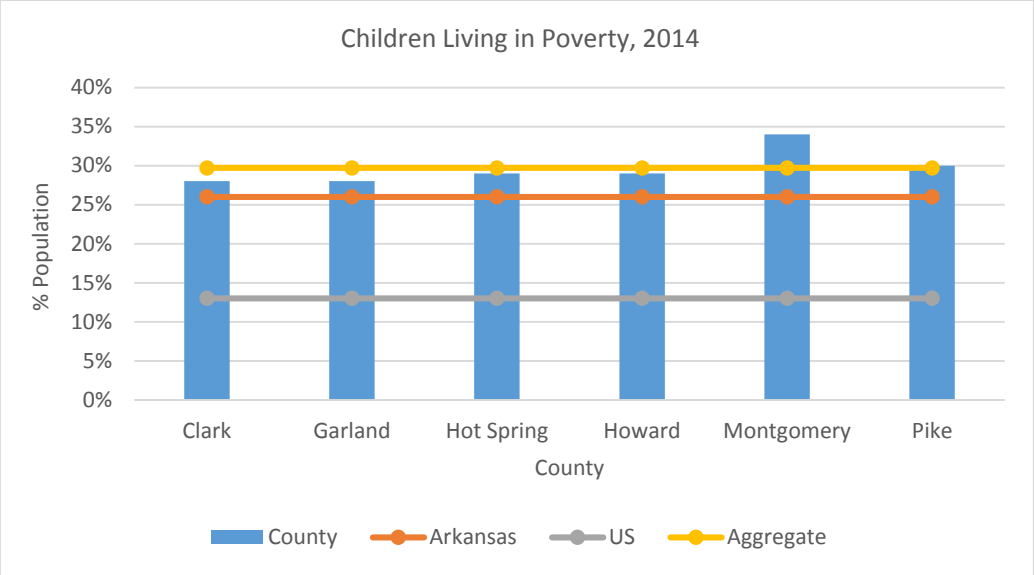
[6] US Census American Community Survey, 5 –year estimates 2010-2014



Poverty

With the exception of Hot Spring County, all counties within the SVHS primary service area have a higher percent of the population living in poverty than the state and US averages of 19.2% and 15.6%, respectively. Pike County (24.2%), has the highest percent of the total population living in poverty and Hot Spring County (14.5%) has the lowest.





*Constitutes the Top US performers (10th percentile)

This is also the case for children living in poverty with all of the counties recording a higher prevalence of individuals under the age of 18 living in poverty than the state (26%) and US (13%) averages.[7] No counties in the SVHS primary service performed equal to or better than top US performers[8] (13%).

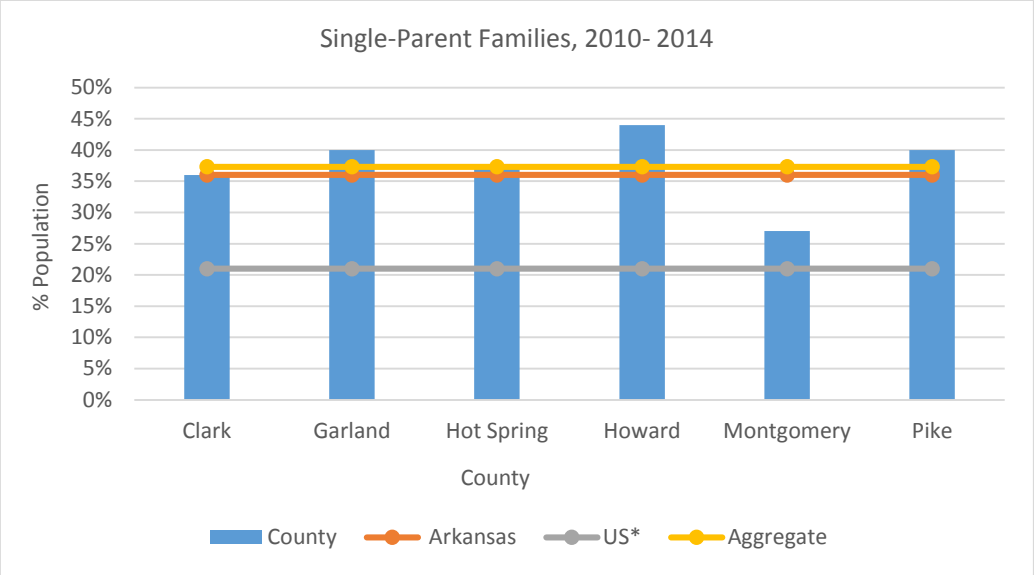
Single-Parent Families

Howard County has the highest percentage of children living in single parent households at 44% which is higher than the state average of 37% and higher than top US performers (21.0%). [9] Garland County and Pike County have 40 % of their children living in single parent households. The only county within the primary service area reporting a figure less than the state average is Montgomery County (27%).

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

[8] 10th percentile

[9] US Census American Community Survey, 5 –year estimates 2010-2014 accessed at County Health Ranking



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

Unemployment

According to the US Department of Labor, in 2014, Hot Spring and Howard County had the two lowest unemployment rates in SVHS primary service area.[10] Both counties had an unemployment rate of 5.9% which is slightly lower than the state and US averages for this period of 6.0% and 6.2%, respectively. Pike County had the highest unemployment rate (8.8%), followed by Montgomery County (8.1%), Cark County (7.0%), and Garland County (6.4%).

Disability

In all six counties, the percentage of the population 5 years and older with one type of disability (either sensory, physical, mental, or self-care) is higher than the state and US averages of 16.7% and 12. 3%, respectively.[11] Montgomery County (31.4%) has the highest percentage in the primary service area, followed by Pike County (27%), Hot Spring County (22.3%), Clark (18.5%) and Garland County (18.5).

Education

When looking at the total population of residents age 25 and over reporting less than a 9th grade education Howard County has the highest percentage of residents with less than a 9th grade education at 8.3%, with Montgomery following at 7.7%. All of the counties within the SVHS primary service area with the exception of Garland County, have a higher percentage of the population age 25 and over with a high school diploma than state and US figures of 35% and 28%, respectively. Among the counties in the SVHS primary service area, Clark County (22.4%) has the highest percentage of individuals with a bachelor's degree or higher.

[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

Education in 2014 among Population Age 25 and Over			
	% Less than 9th Grade	%High school Graduate	%Bachelor's Degree or Higher
Clark County	5.1	35.1	22.4
Garland	4.7	32.5	21
Hot Spring	4.5	41.3	14.1
Howard	8.3	35.8	14.5
Montgomery	7.7	37.6	13.6
Pike	6.8	36.5	12.9
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 SVHS primary service area is lowest among individuals that have a bachelor's degree or higher.[12]

Poverty Rate in 2014 by Educational Attainment among Population Age 25 and over			
	%Less than High school graduate	%High school Graduate	%Bachelor's Degree or Higher
Clark County	27.5	17	4.7
Garland	33	20.1	4.9
Hot Spring	21.8	12.9	5.7
Howard	27	14.1	1.9
Montgomery	27.7	19.2	9.4
Pike	27.2	20.3	4.5
State	28.4	16.2	4.4
US	27.6	14.2	4.5

Language Spoken at Home

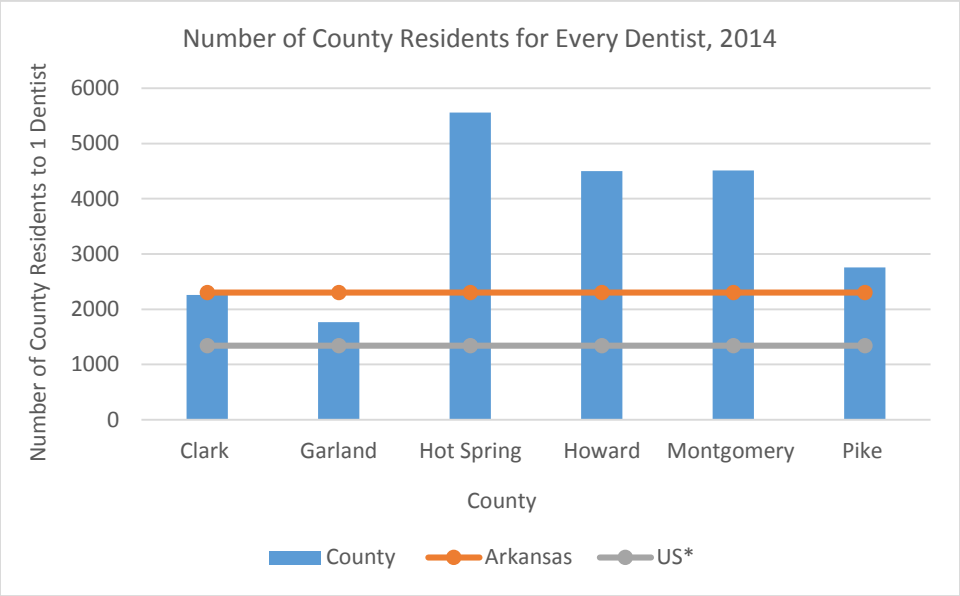
The 2009-2013 American Community Survey 5-Year Estimates, reports that in all six counties, 4.8% or less of the population speaks English less than "very well".

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

Health Resource Availability

Licensed Dentist

In the SVHS primary service area the number of residents for every dentist varies.[13] Garland County (1769:1) has the lowest number of county residents for every 1 dentist and is the only county lower than the state (1540: 1). Hot Spring County (5561:1) has the highest number of county residents for every 1 dentist. Montgomery County, the least populated county in the primary service area, has a 4514 to 1 ratio, followed by Pike County (2756:1), Howard County (4500:1) and Clark County (2258:1).



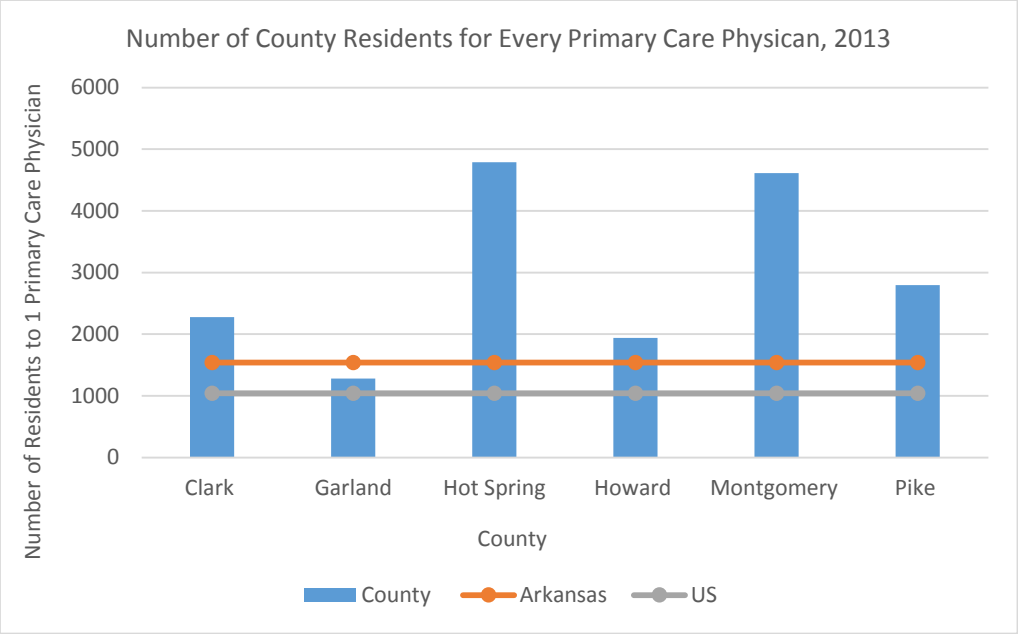
**Constitutes the Top US performers (10th percentile)*

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. Garland County (1279:1), the most populous county in the primary service area, has a higher concentration of primary care physicians for every person.[14] At this ratio, Garland County performs better than the state (1540:1), but worse than the top US performers (1040:1). All of the remaining counties in the primary service area, performed worse than Arkansas overall. Despite, Hot Spring County (4786:1) being the second most populated county in the primary service area it had the lowest concentration of primary care physicians. Following Hot Spring County was Montgomery County (4613:1), Pike County (2794:1), Clark County (2274:1), and Howard County (1940:1).

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

[14] Area Health Resource Fie/American Medical Association 2013, accessed at County Health Rankings & Roadmaps 2016 County Health Rankings. 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.

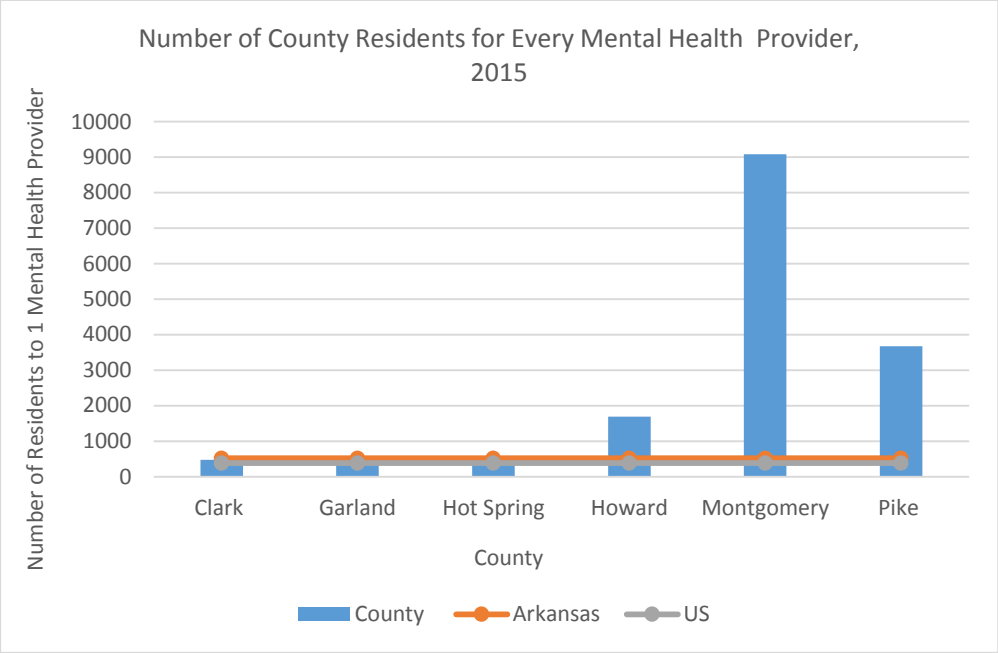


*Constitutes the Top US performers (10th percentile)

Mental Health Providers

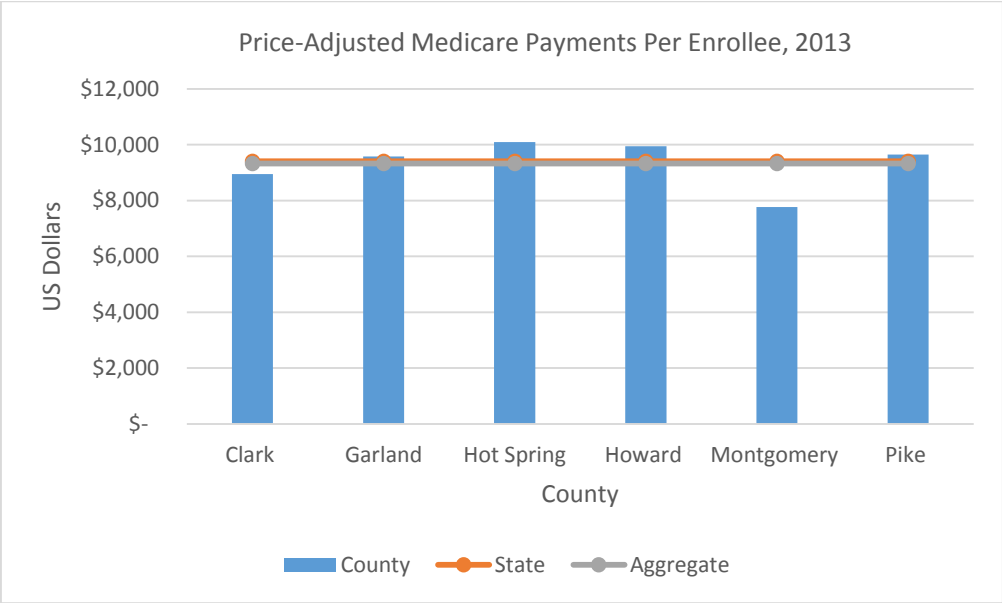
Access to mental health resources is critical to the overall health of a community and the ratio of mental health providers varies across the SVHS primary service area. Mental Health providers in this measure include psychiatrist, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in mental health care.[15] Montgomery and Pike County have the highest numbers of county residents for every mental health provider in the SVHS primary service at 9226 to 1 and 5589 to 1, respectively. This is higher than the state figure of 520 to 1 and the top US performers (370:1). Clark County (470:1) has the lowest number of county residents per 1 mental health provider, followed by Garland County (492:1), Hot Spring County (575:1) and Howard County (1688:1).

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



Price- Adjusted Medicare Payments per Enrollee

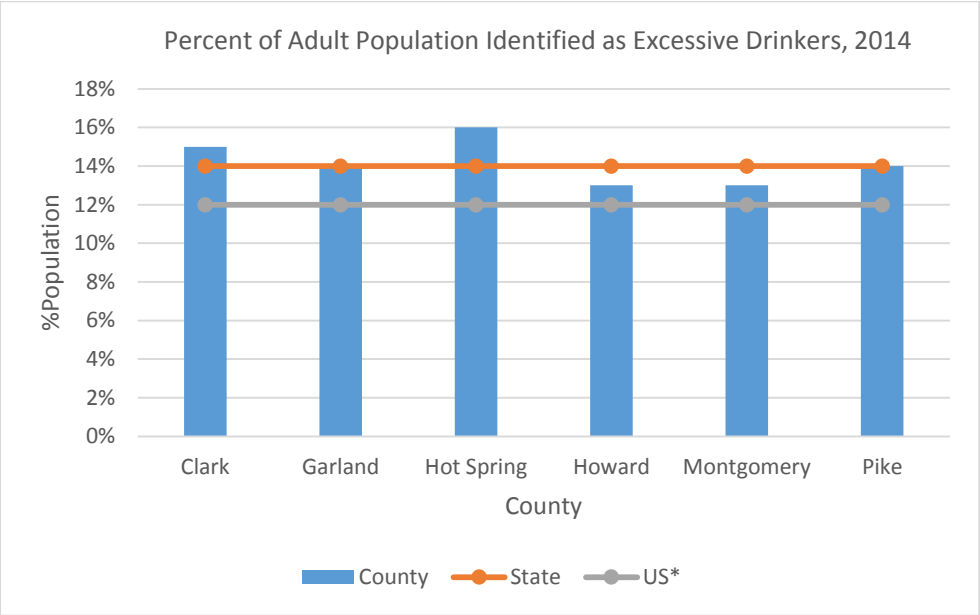
According to the Dartmouth Health Atlas, the 2013 price-adjusted Medicare payments per enrollee was $9,328 for the SVHS primary service area. Montgomery and Clark County, both have lower price-adjusted Medicare payments per enrollee than the state ($9,409) at $7,765 and $8,951 dollars, respectively. Hot Spring County ($10,088) has the highest price-adjusted Medicare payments per enrollee in the SVHS primary service area and has a figure than the state.



Behavioral Risk Factors

Excessive Drinking

Excessive alcohol consumption is associated with negative outcomes related to chronic conditions and accidental/intentional deaths.[16] Among the counties in the SVHS primary service area, Hot Spring County has the highest prevalence of excessive drinking[17] with 16% of the population reporting excessive alcohol consumption. This is higher than the state at 16% and greater than the top US performers at 12%. Following Hot Spring County in prevalence, is Clark County (15%), Garland County (14%), Pike County (14%), and Howard County (13%). The aggregate SVHS average is equal to the state average of 14%.



**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.[18]

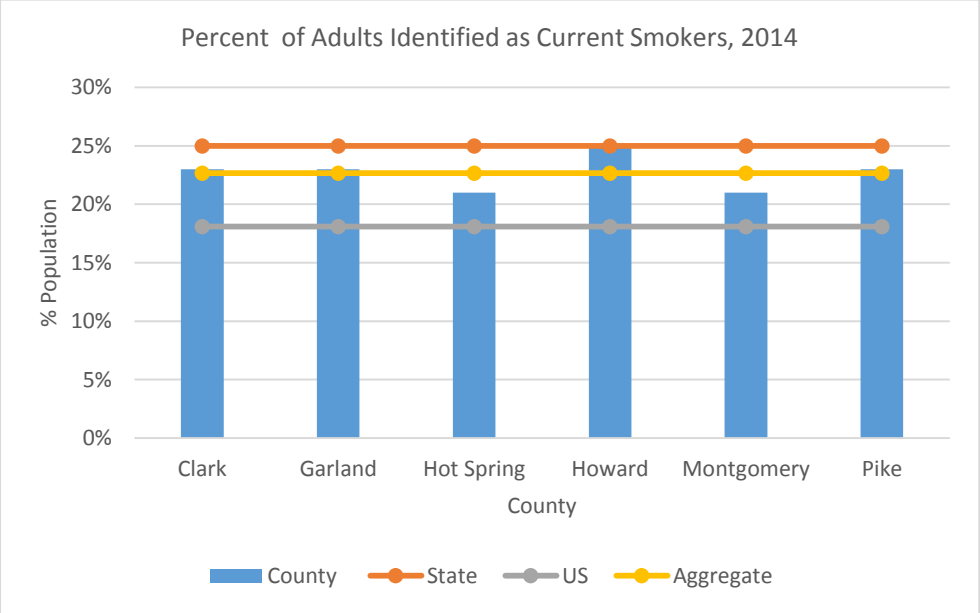
[16] Behavioral Risk Factor Surveillance System (BRFSS), 2014, accessed at County Health Rankings & Roadmap (CHRR) 2016

[17] 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.

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

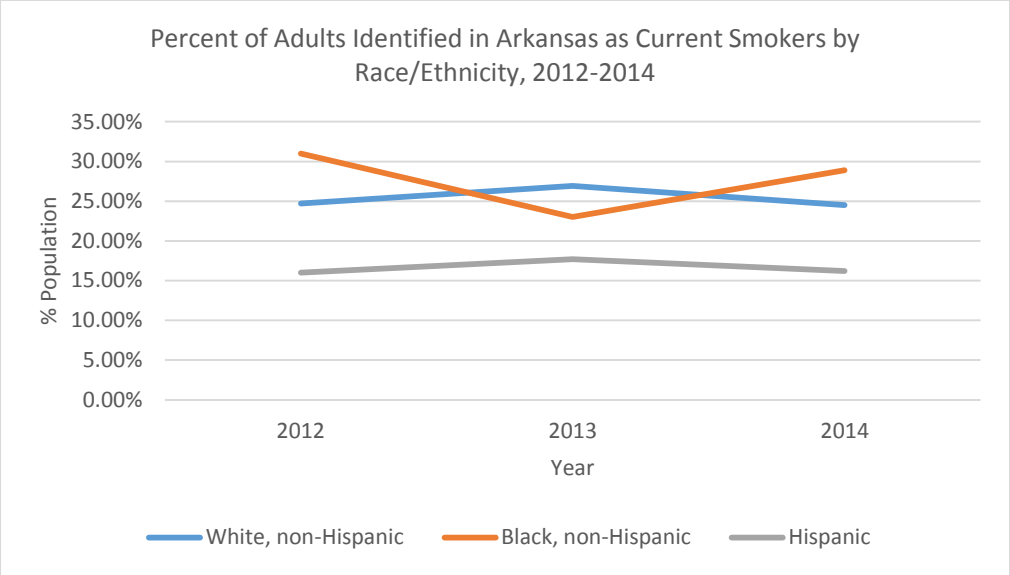
Tobacco Use

Tobacco use has been proven to cause various cancers and chronic conditions. Having an understanding of its use within the SVHS primary service area is therefore important to understanding the health needs of this community. The overall prevalence of adults in Arkansas that identify as a current smoker[19] is 22% which is higher than the national population (18.1%). In the SVHS primary service area, 22.7% of the population identify as current smokers. Montgomery County (21%) and Hot Spring County (21%) are the only two counties with a lower prevalence of current smokers than the state (22%).



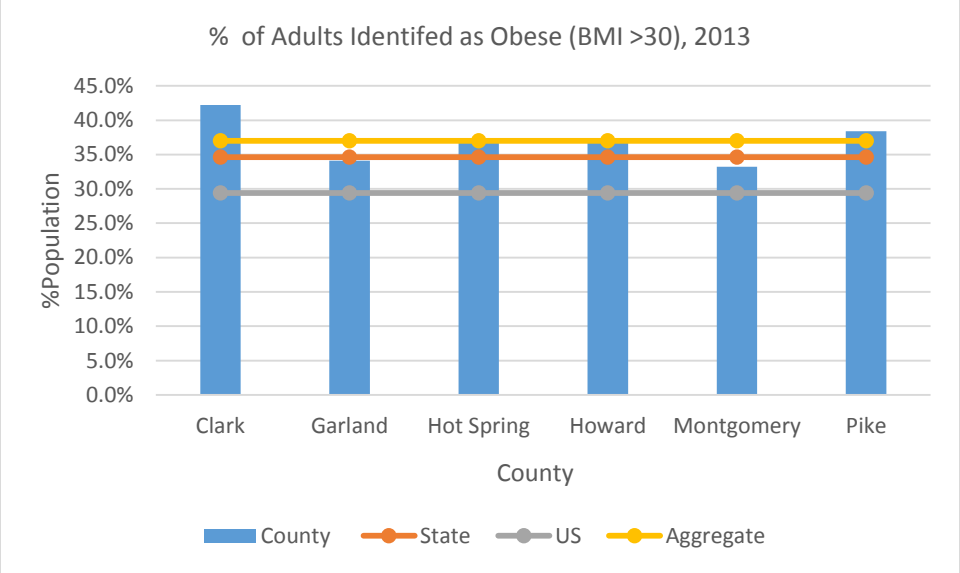
In regards to racial/ethnic groups in the state of Arkansas, Blacks report a greater prevalence of smoking than Whites and the Hispanic population. In 2014, the percent of black adults identified as current smokers was 28.9%, higher than the percentage in 2013 of 23.0%, but lower than the 2012 figure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

[19]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.



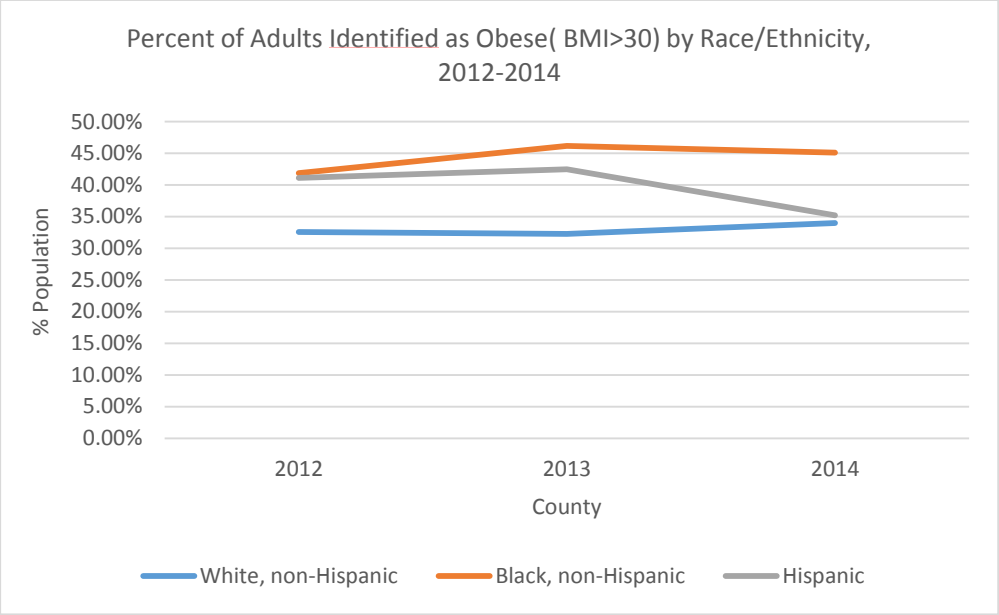
Obesity

Arkansas, overall has the highest population of obese individuals in the US.[20] This is a major health concern as obesity increases the risk for a host of chronic health conditions and diseases. Clark County had the highest prevalence of obesity in the SVHS primary service area (42.2%) and as indicated in the graph below all of the counties with the exception of Montgomery have a higher prevalence of obesity than state and US averages of 34.60% and 29.40% respectively.



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%).

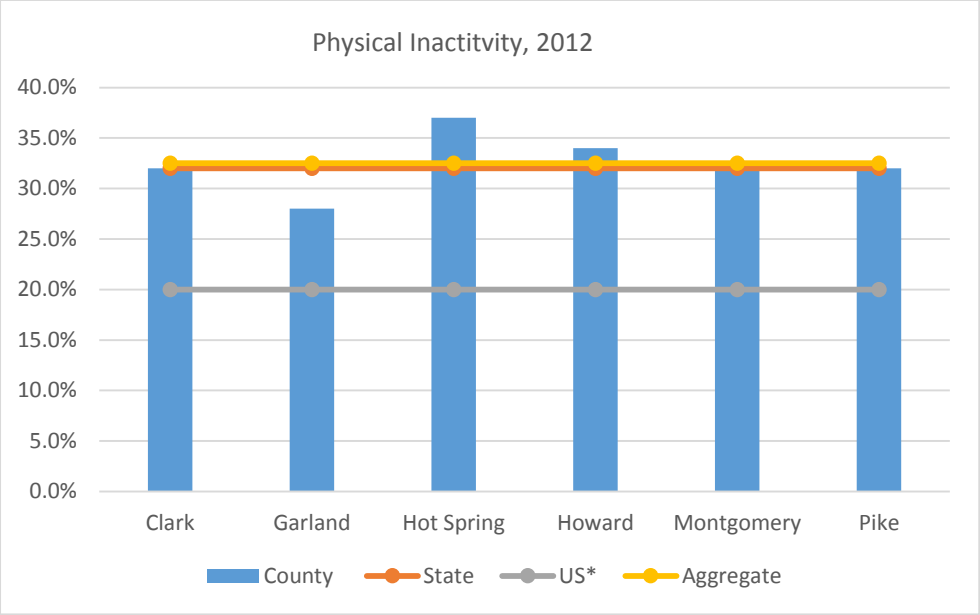
[20] "Arkansas Ranking". State of Obesity. http://stateofobesity.org/adult-obesity/



Physical Inactivity

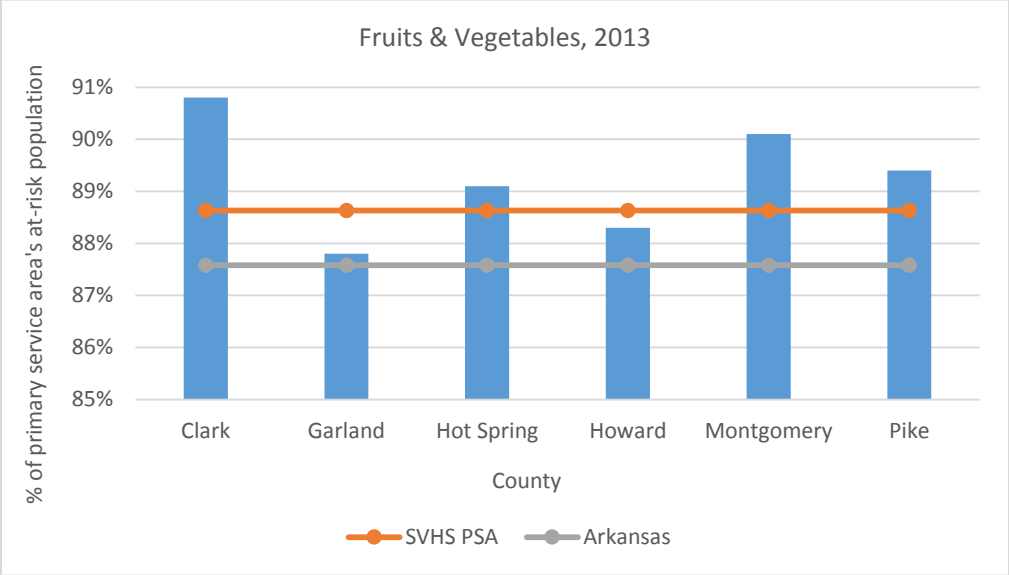
This measure refers to the percentage of adults age 20 and over that report no leisure physical activity.[21] All of the counties in the SVHS primary service area with the exception of Garland County have a greater than or equal to percentage of the population reporting no leisure physical activity when compared to the state (32%). As indicated in the graph below, Hot Spring County (37%) has the highest average and Garland County (28%) has the lowest average. None of the counties, in the SVHS primary service area perform equal or better than the top US performers (20%).

[21] "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



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

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. [22] This measure reports the percentage of adults (aged 18 years and older) not consuming the recommended five servings of fruit and vegetables a day. [23] Very few adults in SVHS's primary service area are consuming the recommended number of fruits and vegetables each day. In 2013, 88.63% reported not having

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

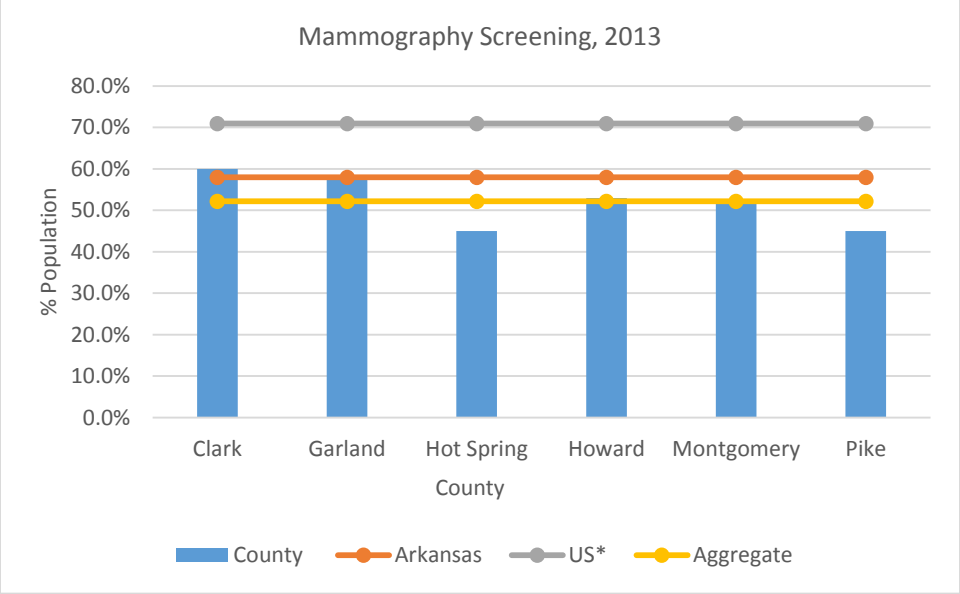
[23] 2010 Dietary Guidelines published by the Office of Disease Prevention and Health Promotion

consumed the recommended five servings.[24] This percentage is only slightly higher than Arkansas State's reported percentage of 87.58% adults (or 1,970,192 citizens out of an estimated 2,249,507 citizens). All six counties report a higher percentage when compared to the state as a whole. In 2013, Clark County reported the largest percent of citizens (90.80% of the county's population) not having met the required criteria, while Garland County reported the lowest number (87.80% of the county's population) for the same measure.

Protective Factors

Mammography

In the SVHS primary service area, the only county performing better the state average (58%) for mammography screenings is Clark County (60%).[25] The most populous county, Garland County (58%), has the same figure as the state average of 58%. The remaining counties in the SVHS primary service area have an average below the state average and none of the counties perform better or equal to top US performers (71%).



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

Pap Smear

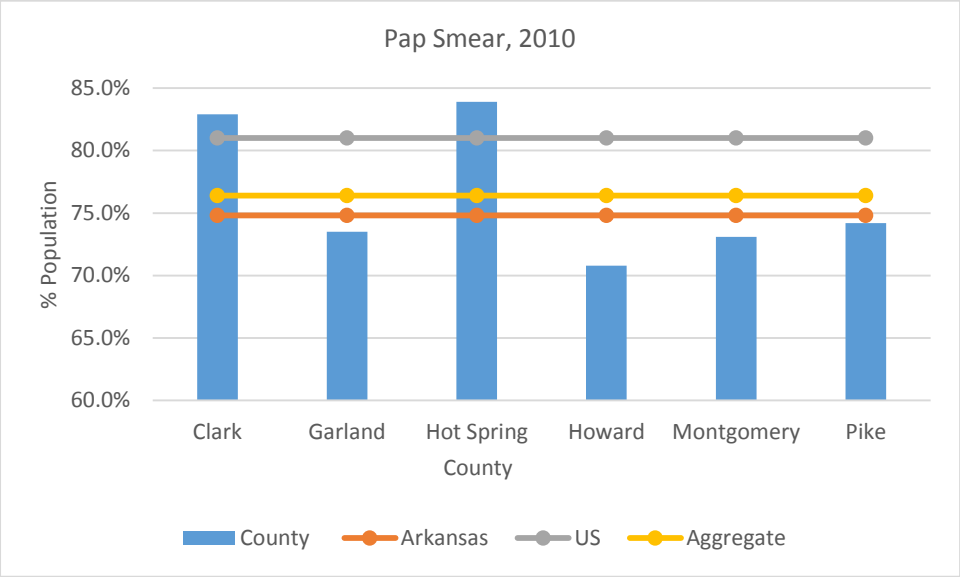
Pap Smears are a screening tool for cervical cancer and pre-cancerous cells. In the SVHS primary service area, 74.80% of women age 18 and above report that they have had a pap test in the past three years. [26] As indicated in the graph below, Clark County (82.9%) and Hot Spring County(83.9%) are the only two

[24] Behavioral Risk Factor Surveillance System accessed at Arkansas Department of Health Website

[25] 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.

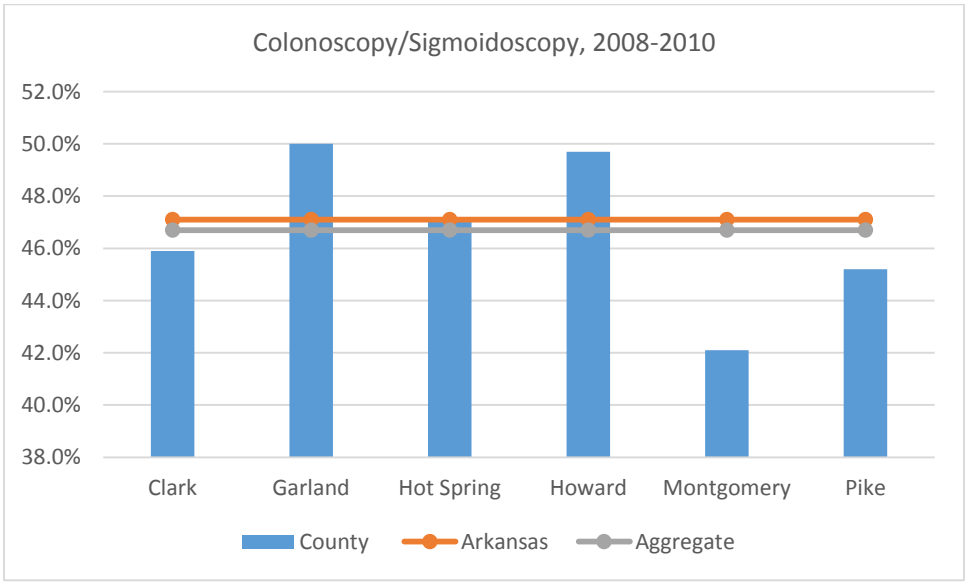
[26] Arkansas Department of Health. *County Data Estimates: Pap Smear*. 2010 report

counties in the SVHS primary service area that have a higher average than the state(74.80%) and the US (81%).



Colonoscopy/ Sigmoidoscopy

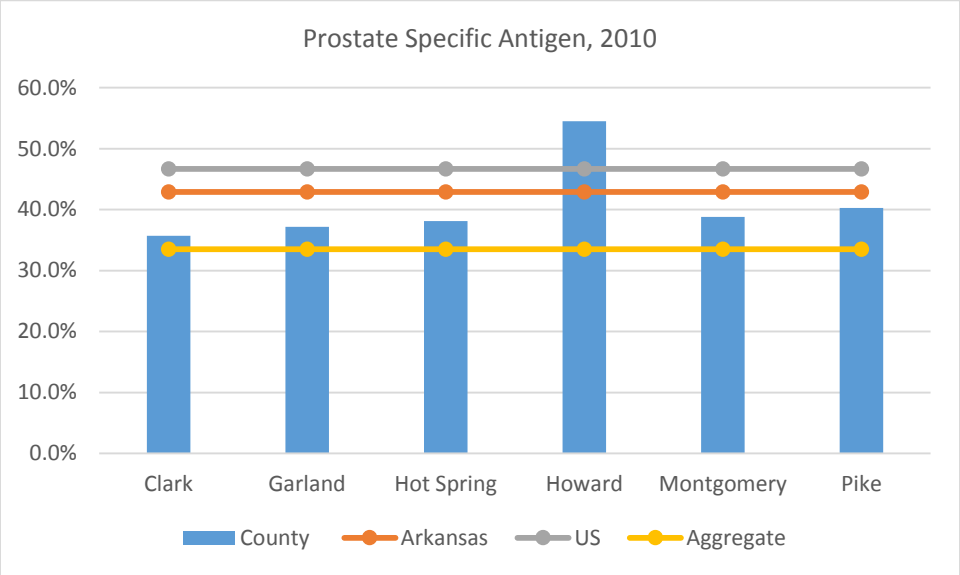
Garland County (50.0%) has the greatest percentage of adults over age 50 in the SVHS primary service area that had the recommended colonoscopy or sigmoidoscopy. Additionally, all of the counties in the SVHS primary service with the exception of Clark County (45.9%) and Pike County (45.2%) performed better than the Arkansas average overall (47.1%).



Prostate Specific Antigen Testing

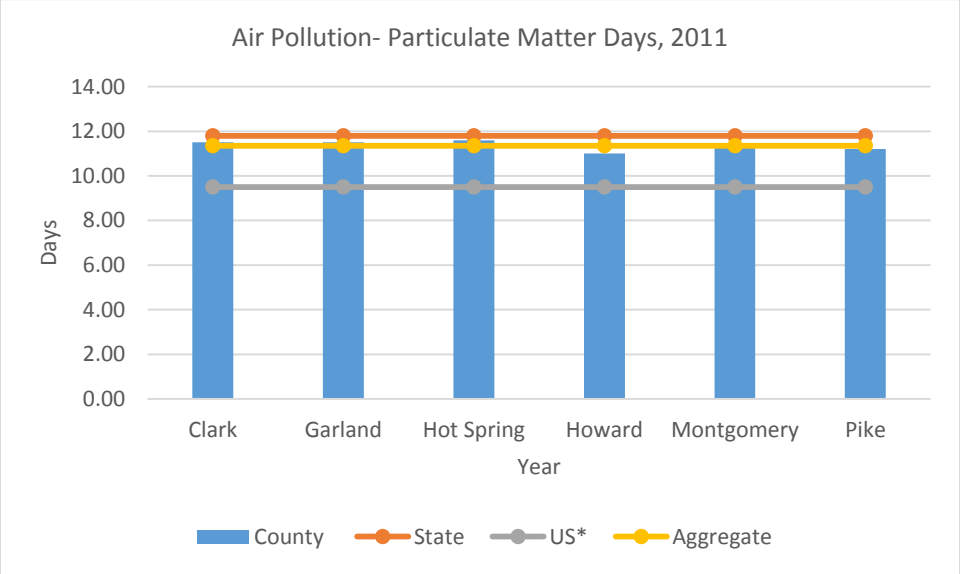
This measure refers to the percentage of men that report not having a prostate specific antigen test in the past two years. Howard County (37.2%) had the highest percentage of men reporting not having a

prostate specific antigen test in the past two years.[27] All of the counties, with the exception of Hot Spring County (54.5%) and Pike County (40.3%) performed better than the Arkansas (42.9%) and US (46.7%) averages for this measure.



Environmental Health Factors

Air Pollution



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

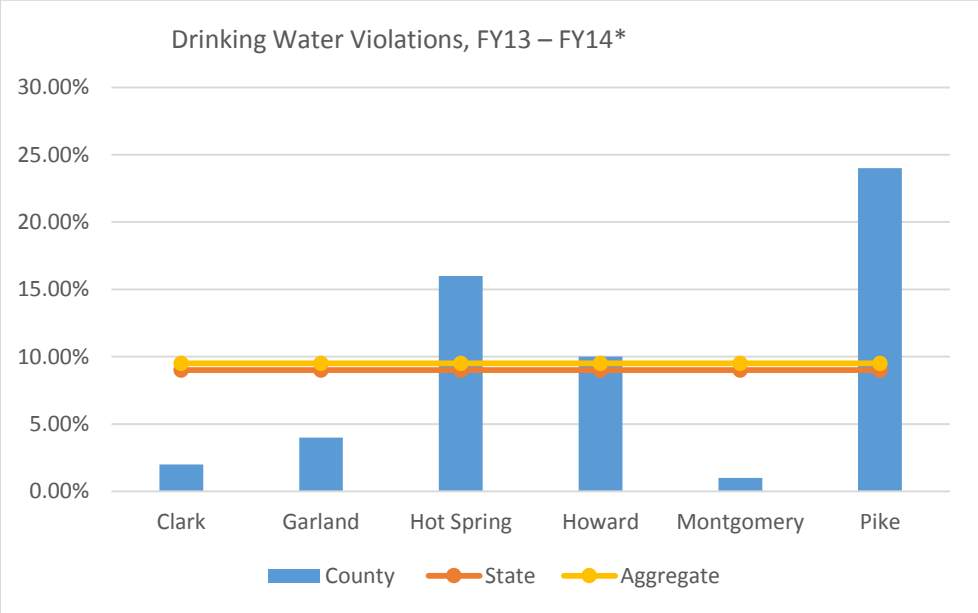
Air Pollution- Air Particulate Matter is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county.[28] All of the counties in the SVHS primary service area have a lower

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

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

average daily density of fine particulate matter than the state average of 11.8 PM2.5. The overall figure for the SVHS primary service area is 11.35 and none of the counties performed better than the top US performers.

Drinking Water Violations

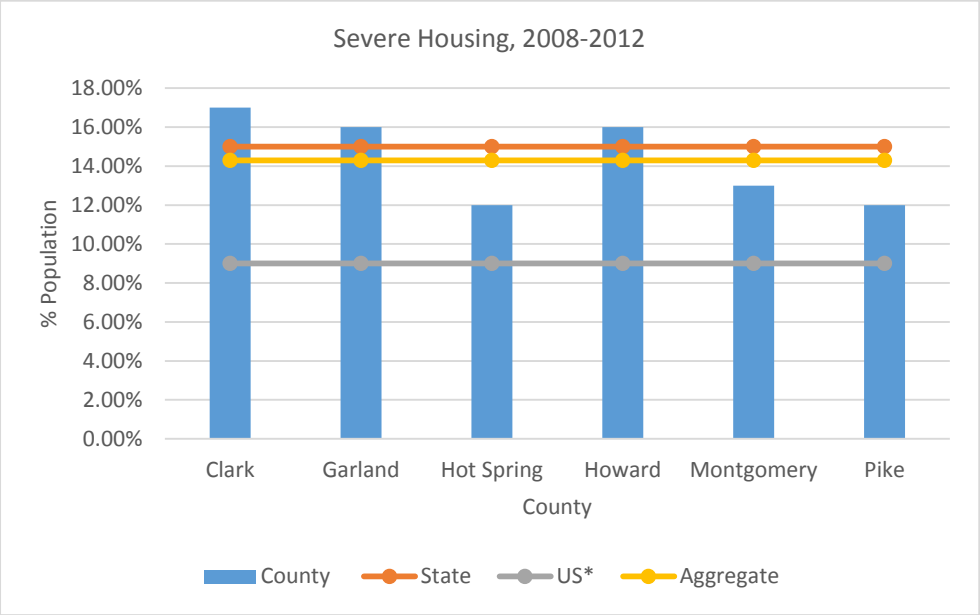


**October 1, 2012 - September 30, 2014*

According the Environmental Protection Agency, Pike County (24%) had the greatest average annual percentage of the population exposed to water that did not meet drinking water standards from FY13-FY14. [29] Following Pike County (7%), was Hot Spring County (16%), Howard County (10%). All three counties were below the state average of 9%, but as indicated in the graph above Garland County (4%), Clark (2%), and Montgomery (1%) all had averages below the state figure for this measure.

[29] 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

Severe Housing



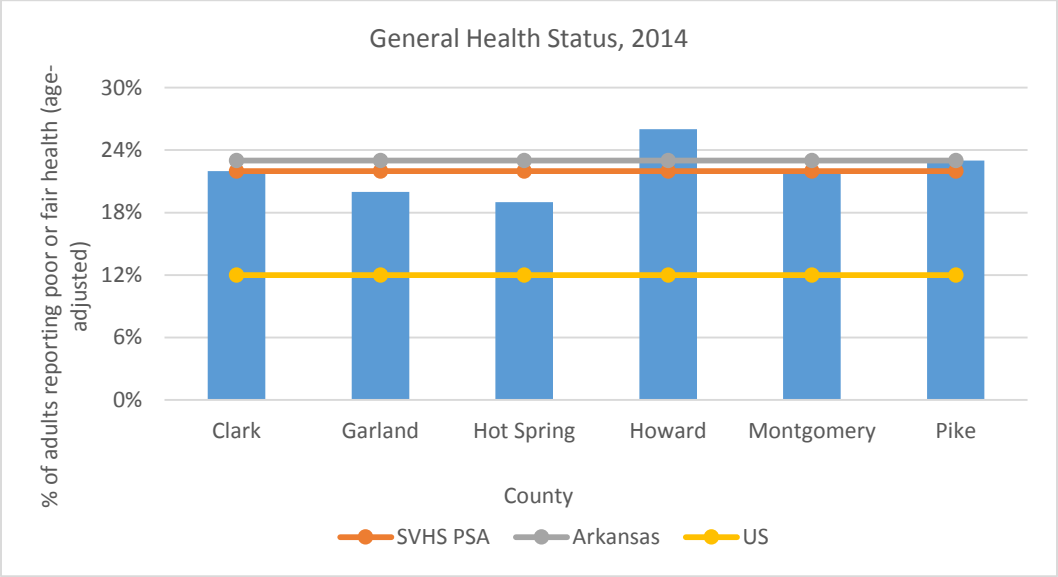
**Constitutes the Top US performers (10th percentile)*

In the SVHS primary service area, Clark County has the highest percentage of the population in a house identified as having a severe housing problem with a figure of 17.0% which is higher than the state figure of 15%. [30] As indicated in the graph above, none of the counties in the primary service area are performing better or equal to the top performing in the US (9%).

[30] 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)

Social and Mental Health

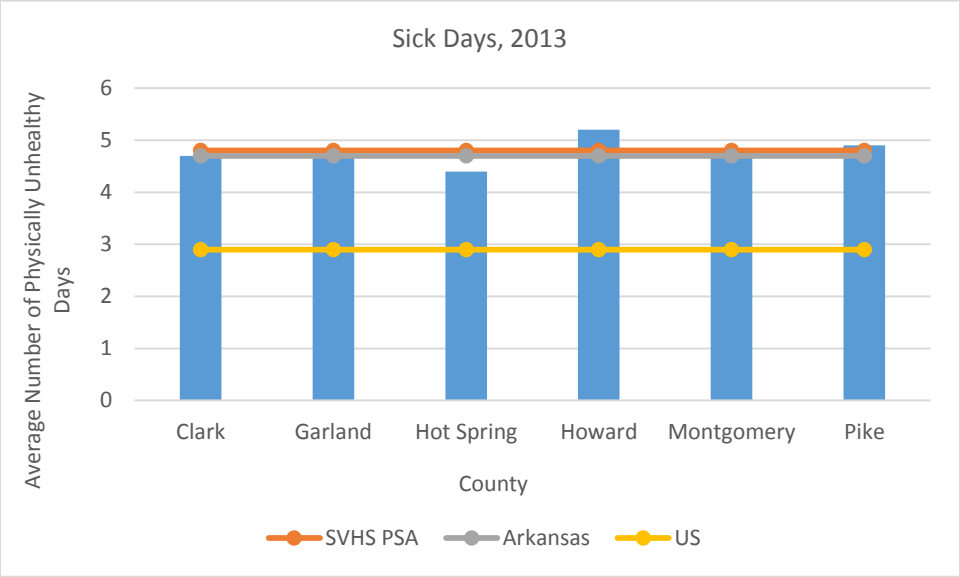
General health status



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. [31] 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, 22% of adults in the SVHS primary service area reported poor or fair health, whereas 23% of adults in Arkansas State reported poor or fair health. Adults in the SVHS primary service area and state reported much higher percentages than the top US performers' average of 12% adults across the country reporting poor or fair health in the same year. Howard County recorded the largest percentage (26%) of adults reporting poor or fair health, while Hot Spring County reported the lowest percentage (19%) for this measure. [32]

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

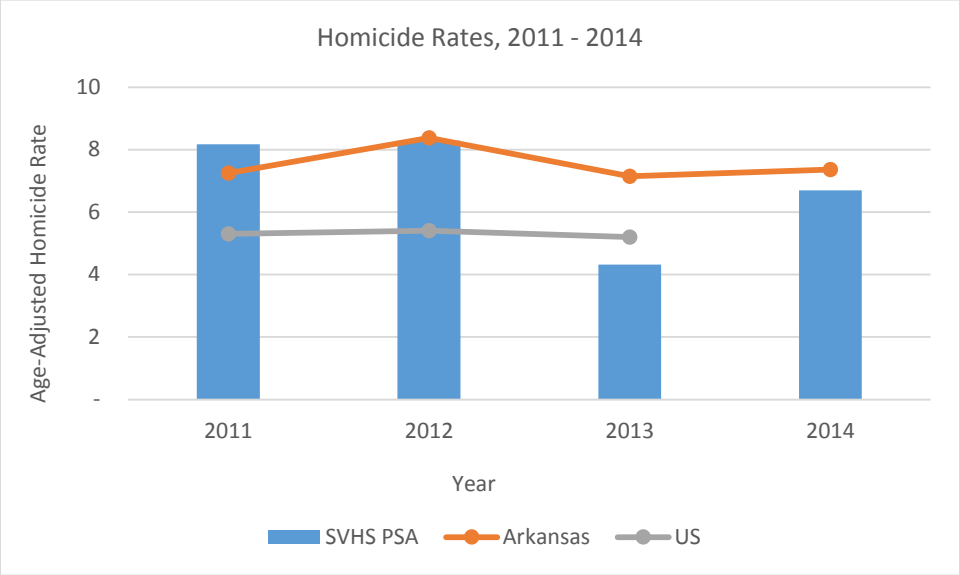
Average number of sick days

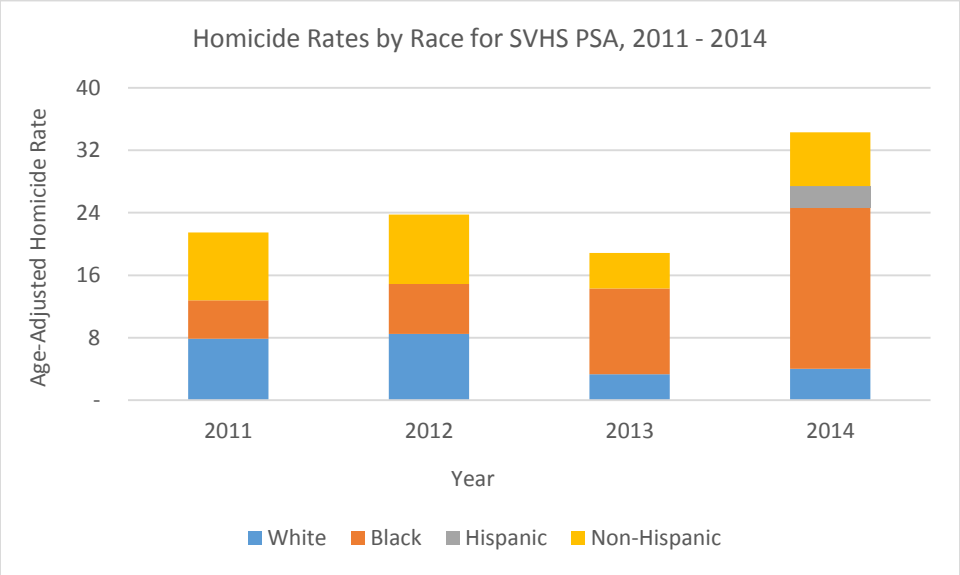


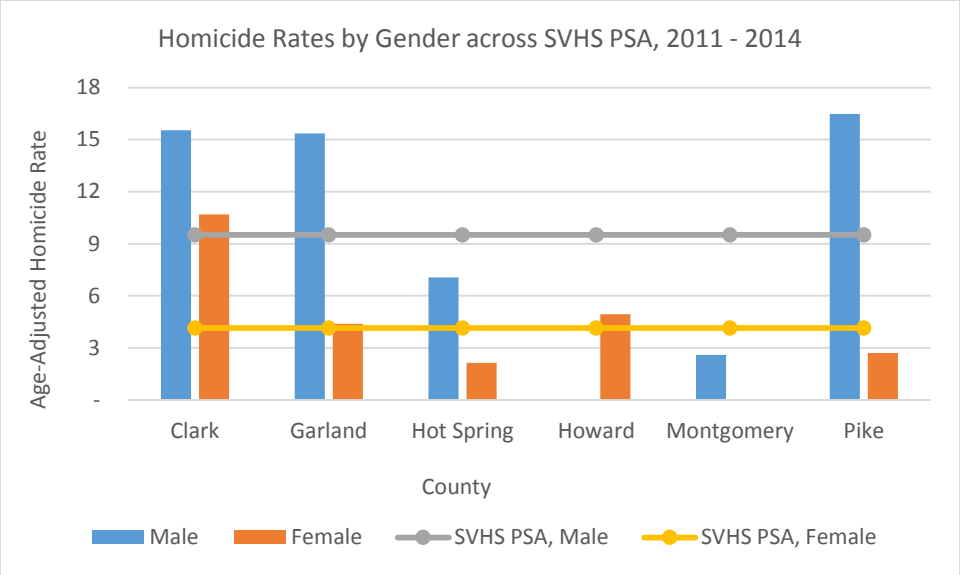
This measure is defined as the average number of days that adults, aged 18 years and older, report that their physical health is not good, age-adjusted to the 2000 US population. In 2014, adults in the SVHS primary service area reported an average of 4.8 physically unhealthy days which is higher than 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 SVHS primary service area aggregate numbers. Adults in Howard County reported the highest average (5.2 days) of physically unhealthy days, while adults in Hot Spring County reported the lowest average (4.4 days) for this measure.[33]

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

Homicide


Homicide Rates, 2011 - 2014
Age-Adjusted Homicide Rate
10
8
6
4
2
-
2011
2012
2013
2014
Year
SVHS PSA
Arkansas
US

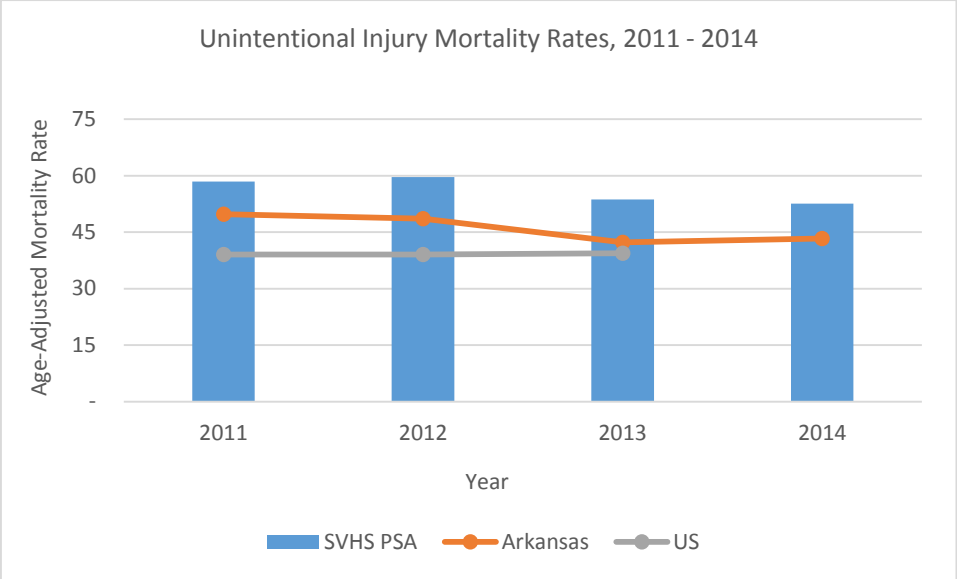

Homicide Rates by Race for SVHS PSA, 2011 - 2014
Age-Adjusted Homicide Rate
40
32
24
16
8
-
2011
2012
2013
2014
Year
White
Black
Hispanic
Non-Hispanic

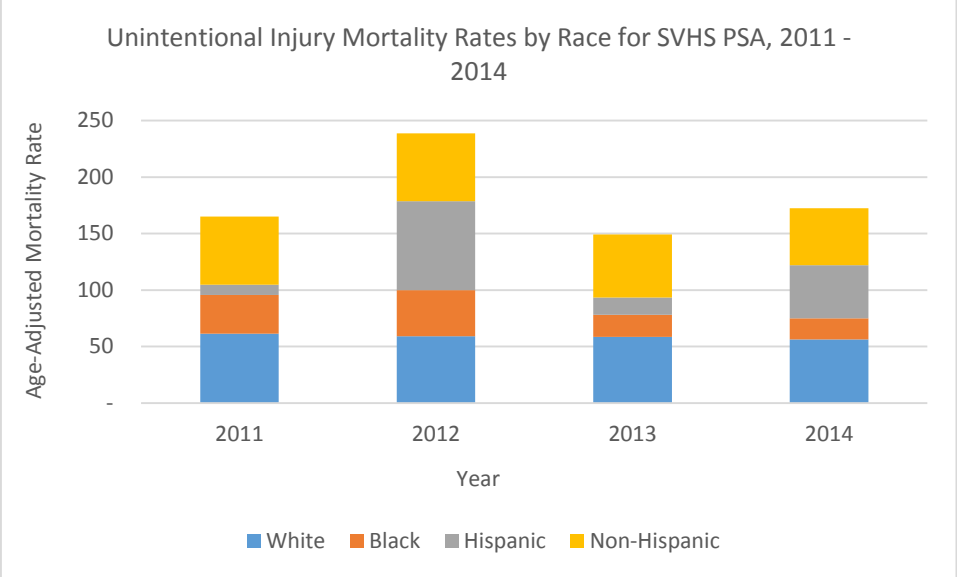


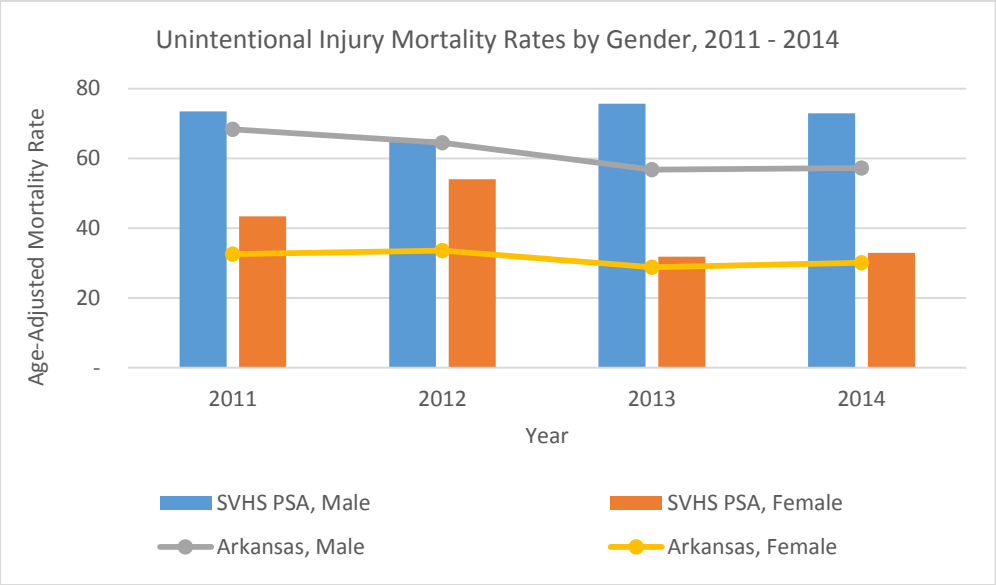
Homicides are defined as the number of deaths from assaults, murder and non-negligent manslaughter, assigned to ICD-10 codes X58-Y09, per 100,000 population (age-adjusted). [34] Nearly 17,000 men, women and children are victims of criminal homicide every year. [35] Aggregate homicide rates across the SVHS primary service area have decreased from 8.18 homicides in 2011 to 6.70 homicides in 2014. Among the six counties in the SVHS primary service area, Howard County reported the highest overall homicide rate (10.71 deaths), while Montgomery County reported the lowest rate (5.14 deaths) in 2014. Across the state however, homicide rates have increased from 7.25 homicides in 2011 to 7.36 homicides in 2014. [36] While White citizens reported higher homicide rates in 2011 and 2012, over the recent years, across the SVHS primary service area and the state, Black citizens reported the highest rates when compared to the other races. Male citizens reported consistently higher rates when compared to the female population. Homicide rates varied by age groups across the SVHS primary service area over the four years. In 2014, people between the ages of 65 – 74 years recorded the highest homicide rates, while people between the ages of 15 – 24 years recorded the lowest rates. The national homicide rates remained lower than the state and the SVHS primary service area aggregate rates and decreased from 5.30 deaths in 2011 to 5.20 deaths in 2013. [37]

[34] Compressed Mortality Files accessed at County Health Rankings & Roadmaps website
[35] Violent Crimes Victim Services – Homicide Facts
[36] Arkansas Center for Health Statistics – Arkansas Department of Health
[37] Mortality Files accessed at the National Center for Health Statistics website

Unintentional Injury Mortality



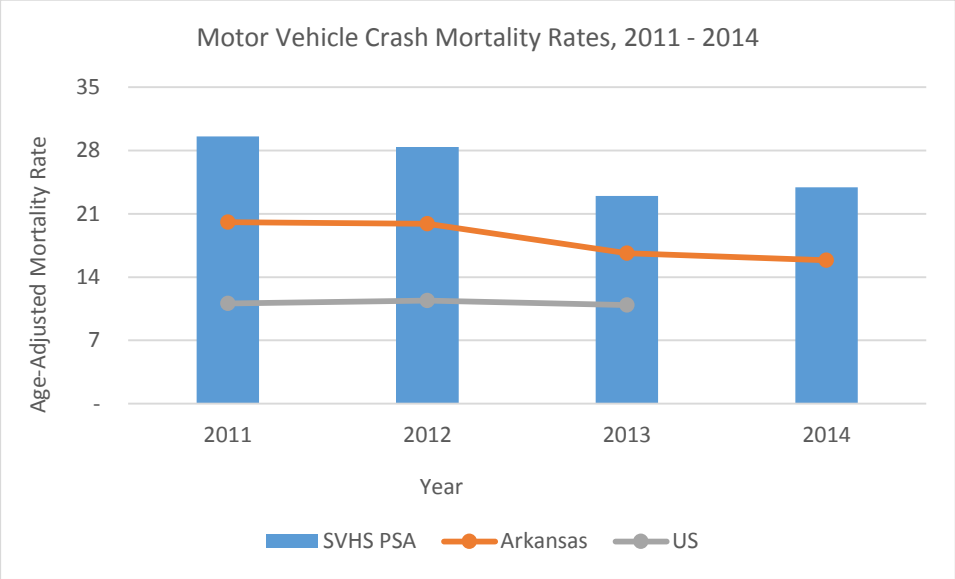


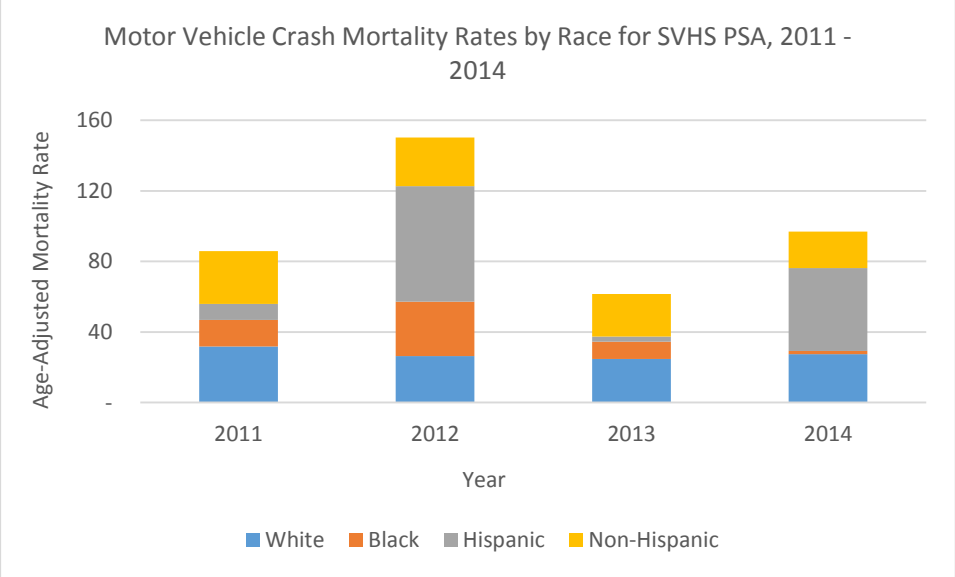


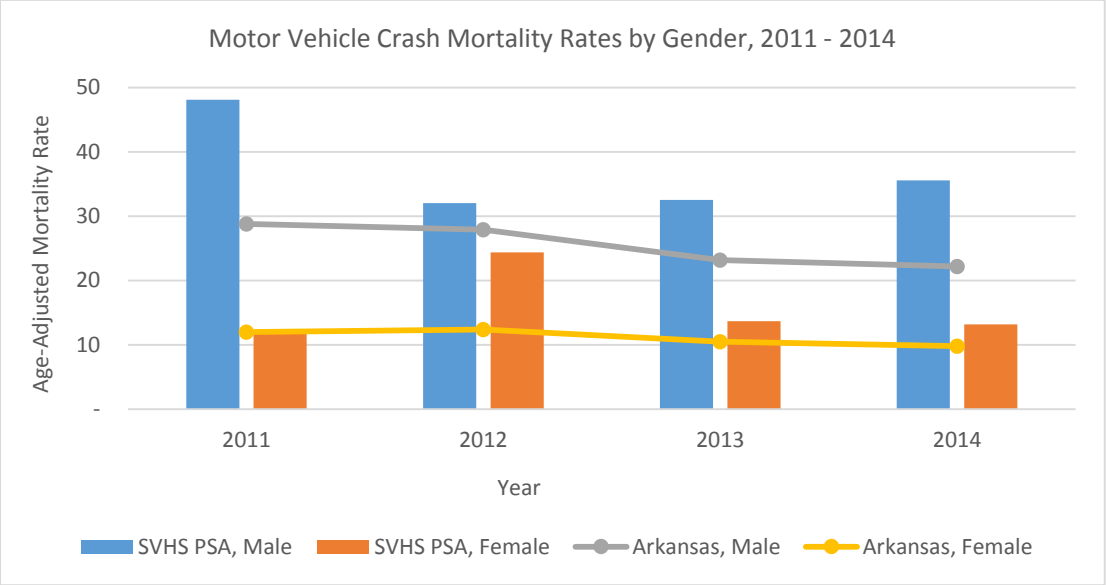
Accidents are defined as number of deaths due to unintentional injuries, assigned to ICD-10 codes V01-X59, age-adjusted to the 2000 US population. [38] Across the SVHS primary service area and the state, mortality rates from unintentional injuries have decreased from 2011 to 2014. SVHS primary service area recorded an aggregate mortality rate of 52.54 unintentional injury deaths in 2014, while the state recorded a lower rate of 43.30 deaths. The primary service area recorded higher aggregate rates than the state over the four years. An extraordinary spike of 121.68 deaths was recorded in Montgomery County in 2012. Garland County reported the highest overall unintentional injury mortality rate (70.38 deaths), while Clark County reported the lowest rates (34.56 deaths) in 2014. Over the four years, White citizens across the primary service area and the state have reported higher mortality rates from unintentional injuries when compared to the other races. In 2012, however, Hispanic citizens in Hot Spring County recorded an alarmingly high age-adjusted mortality rate of 337.08 deaths. Male citizens consistently recorded higher rates when compared to the female population. 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). [39]

[38] Arkansas Center for Health Statistics – Arkansas Department of Health
[39] Mortality Files accessed at National Center for Health Statistics

Motor Vehicle Crash Mortality



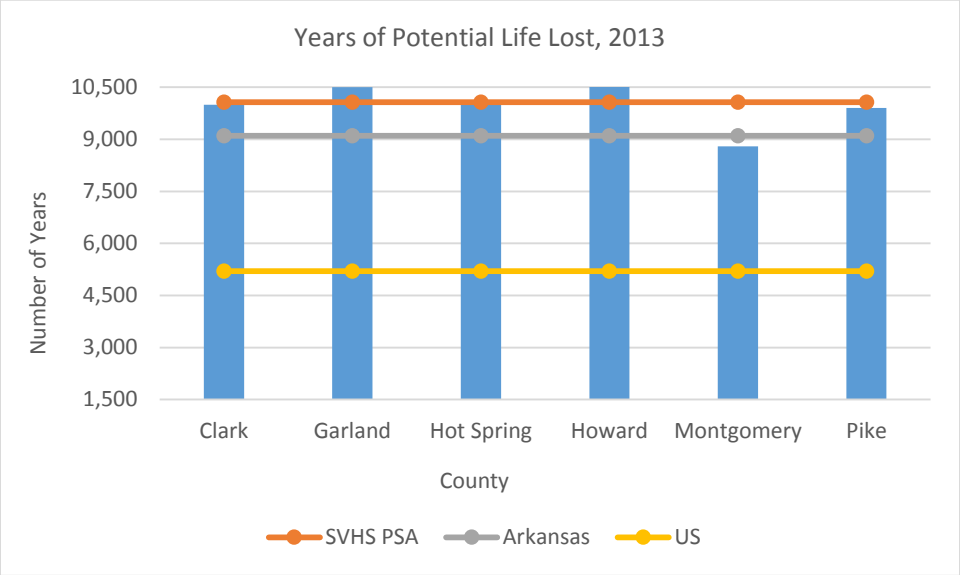




This measure is defined as the number of deaths due to motor vehicle crashes, age-adjusted to the 2000 US population. [40] Across the SVHS primary service area and the state, mortality rates from motor vehicle crashes have from declined from 2011 to 2014. SVHS primary service area recorded an aggregate mortality rate of 23.94 motor vehicle crash deaths in 2014, while the state recorded a rate of 15.86 deaths. The primary service area recorded higher aggregate rates than the state. Interestingly, while Pike County reported zero motor vehicle crash mortalities in 2012, it reported the highest rate for this measure (39.56 deaths) in 2014. Montgomery County reported the lowest rate (9.99 deaths) among the six counties in the SVHS primary service area in 2014. White citizens reported the highest rates each year when compared to other races. Male citizens 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. [41]

[40] Arkansas Center for Health Statistics – Arkansas Department of Health
[41] Mortality Files accessed at National Center for Health Statistics

Years of productive life lost

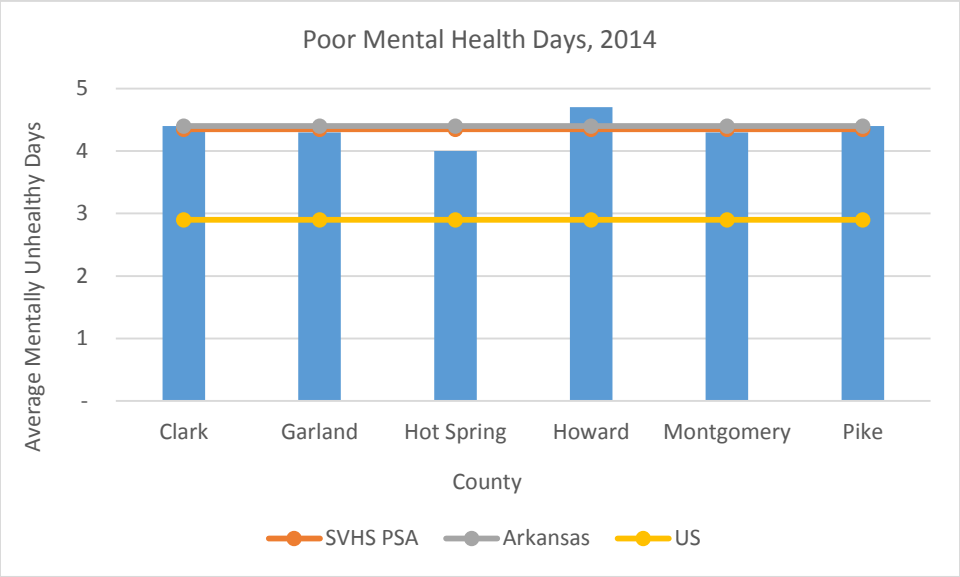


Years of productive life lost (YPLL) is measured as the number of years of potential life lost before the age of 75 years. [42] Every death occurring before the age of 75 contributes to the total number of YPLL. For example, a person dying at age 25 contributes 50 years of life lost. During years 2011 – 2013, SVHS primary service area recorded an average of 10,067 years YPLL which is a lot higher 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, Howard County reported the highest YPLL (11,100 years) while Montgomery County reported the lowest YPLL (8,800 years).

[42] Mortality Files published by National Center for Health Statistics accessed at County Health Rankings and Roadmaps website

Mental Health

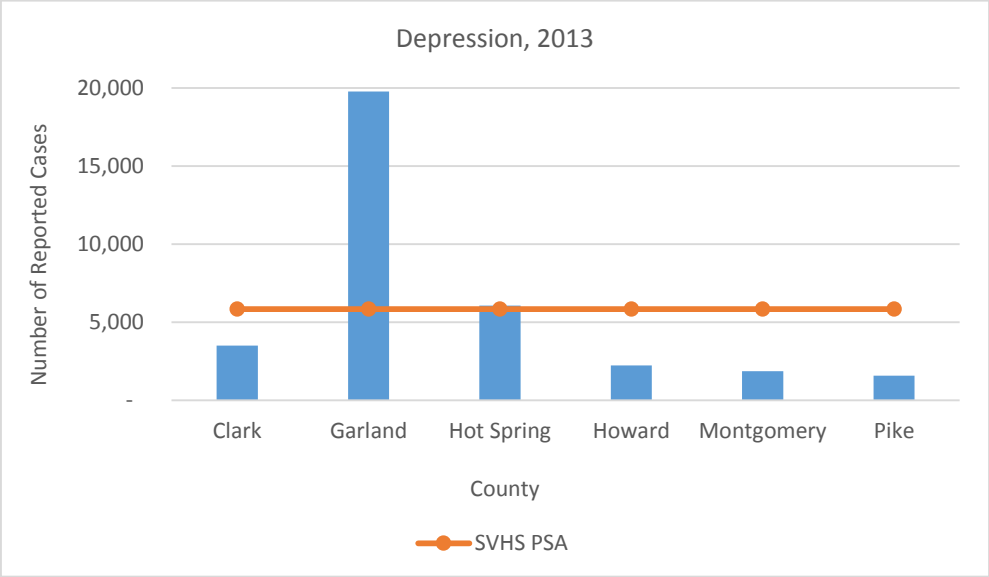
Poor Mental Health days



The average number of mentally unhealthy days reported by adults aged 18 years and above is an important indicator of mental health status. [43] In 2013, adults across the SVHS primary service area reported an aggregate of 4.35 mentally unhealthy days, which is lesser than the state average of 4.4 days but higher than the national average of 2.8 days. Among the six counties in the SVHS primary service area, adults in Howard County reported the highest average of mentally unhealthy days (4.70 days), whereas adults in Hot Spring County reported the lowest average of this measure (4.00 days).

[43] Behavioral risk Factor Surveillance system accessed at County Health Rankings and Roadmaps website

Depression

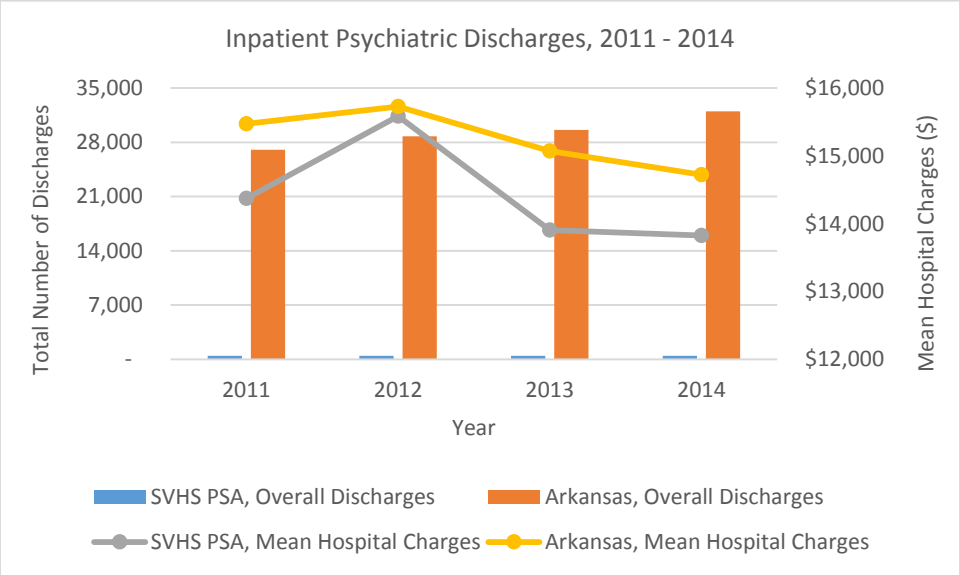


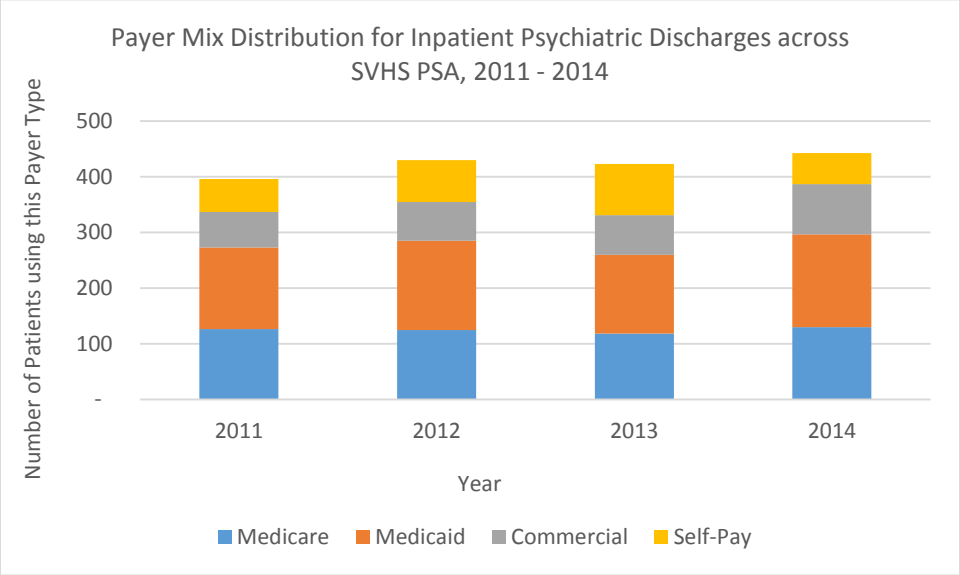
Depression (major depressive disorder or clinical depression) is a serious mood disorder. It is one of the most common mental disorders in the country. [44] In 2013, out of an average of 24,560 citizens in the SVHS primary service area at-risk for depression, an average of 5,841 citizens (or 22.37%) reported being depressed. [45] This number was lower than the state's reported number of depression cases (525,533 cases or 23.4% of the state's at-risk population). Garland County reported the highest number of cases of depression (9,782 cases or 25.70% of the county's at-risk population). Pike County reported the lowest number of cases of depression (1,577 cases or 18.50% of the county's at-risk population).

[44] Depression – National institute of Mental Health

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

Inpatient Psychiatric Discharges



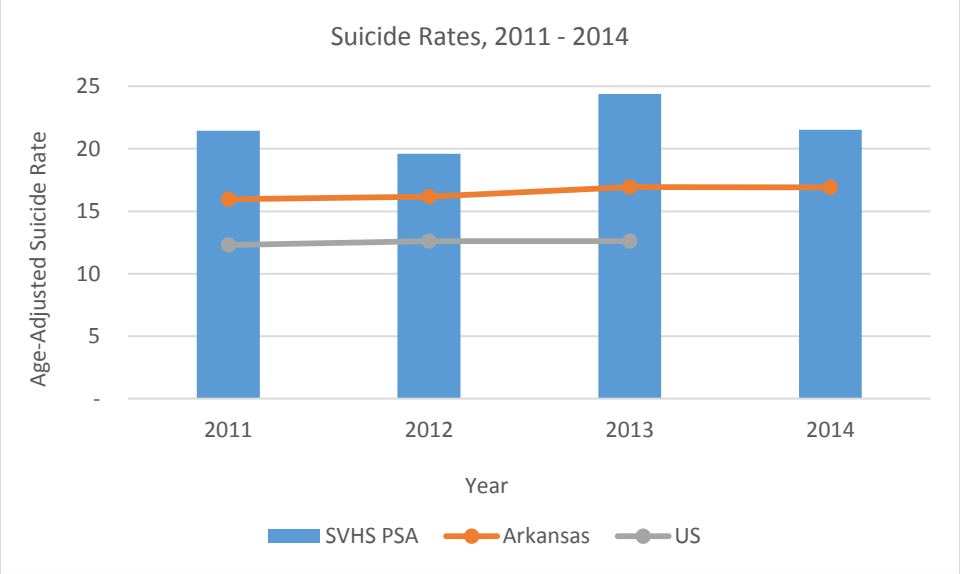


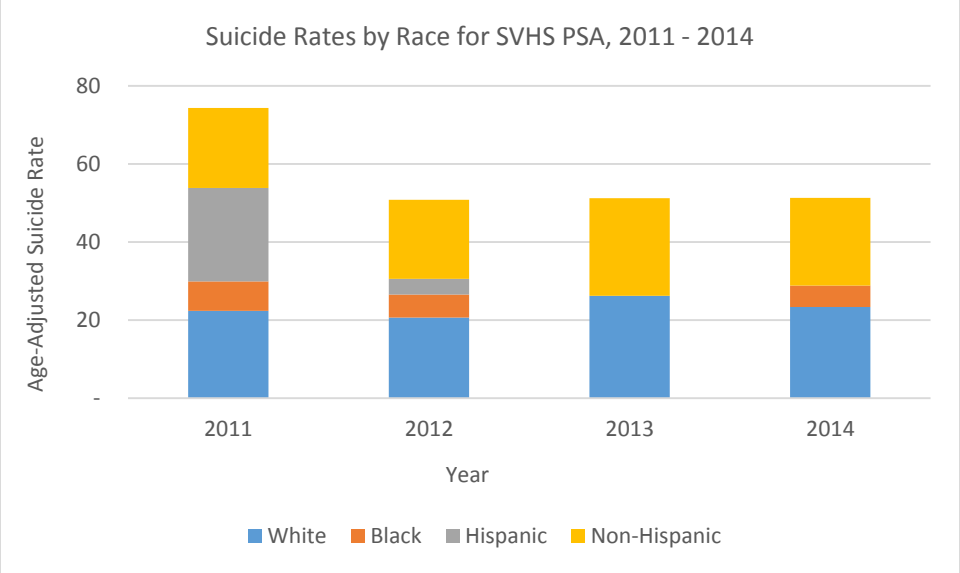
According to the Health Statistics Branch of the Arkansas Department of Health, the total number of inpatient psychiatric discharges across the SVHS primary service area and the state have increased over 2011 – 2014. [46] In 2014, the SVHS primary service area recorded an aggregate of 472 discharges while the state recorded an average of 32,007 discharges. Garland County recorded the highest number (1,885) of discharges while Howard County recorded the lowest number (84 discharges). 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 have decreased. The SVHS primary service area recorded mean hospital charges of $13,824 in 2014, which was lower than the state's mean hospital charge rate of $14,720. Over the four years, across the SVHS primary service area and the state, White citizens recorded the highest

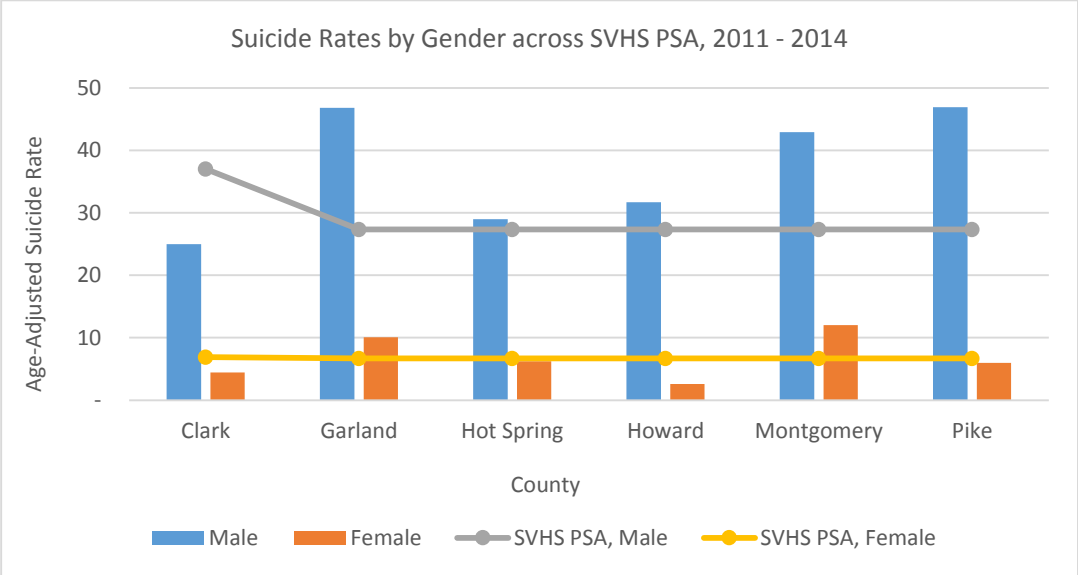
[46] Arkansas Center for Health Statistics – Arkansas Department of Health

number of discharges when compared to other races. Across the SVH primary service area, male citizens recorded higher numbers when compared to the female population. However, across the state, female citizens reported higher discharge numbers. These numbers varied across different age groups each year, with people between the ages of 25 – 34 years often reporting the highest rates. 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.

Suicide





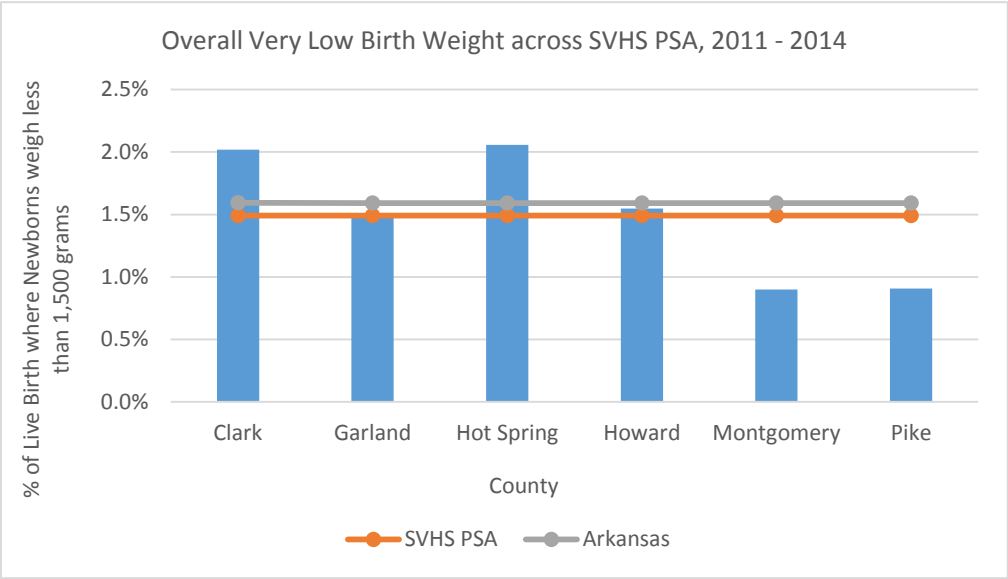


Suicides are defined as deaths caused by self-directed injurious behavior with an intent to die as a result of the behavior. [47] These deaths (per 100,000 population) are assigned to ICD-10 codes X60-X84, Y87.0, age-adjusted to the US 2000 population. [6] Suicide was the tenth leading cause of death 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. [48] Suicide rates across the SVHS primary service area and Arkansas State have increased from 2011 to 2014. [49] In 2014, the SVHS primary service area recorded an aggregate rate of 21.53 suicides, while the state recorded a lower rate of 16.9 suicides. Among the six counties in the SVHS primary service area, Garland County reported the highest suicide rate (41.31 suicides) while Clark County reported the lowest suicide rate (3.41 suicides) in 2014. White citizens reported higher suicide rates across the SVHS primary service area and the state when compared to other races. Male citizens consistently recorded higher suicide rates when compared to the female population across the SVHS primary service area and the state. The highest suicide rates each year were reported by different age groups, however people above the age of 75 years reported consistently lower rates in the SVHS 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. [50]

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

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. [51] The percentages of babies born with VLBW across the SVHS primary service area and the state have decreased from 2011 to 2014. [52] SVHS primary service area reported an aggregate of 1.0% of babies born with VLBW in 2014, while the state reported a slightly higher rate of 1.45% babies born with VLBW. In 2014, Clark County reported the highest percentage (2.24 %) while Howard County reported the lowest percentage (%) of babies born with VLBW. Montgomery and Pike Counties reported either zero or less than 5 babies born with VLBW. Across the SVHS 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. [53] In 2013, SVHS primary service area recorded an aggregate of 9.23 neonatal deaths, which is much higher than the state's rate of 4.39 neonatal deaths and the national rate

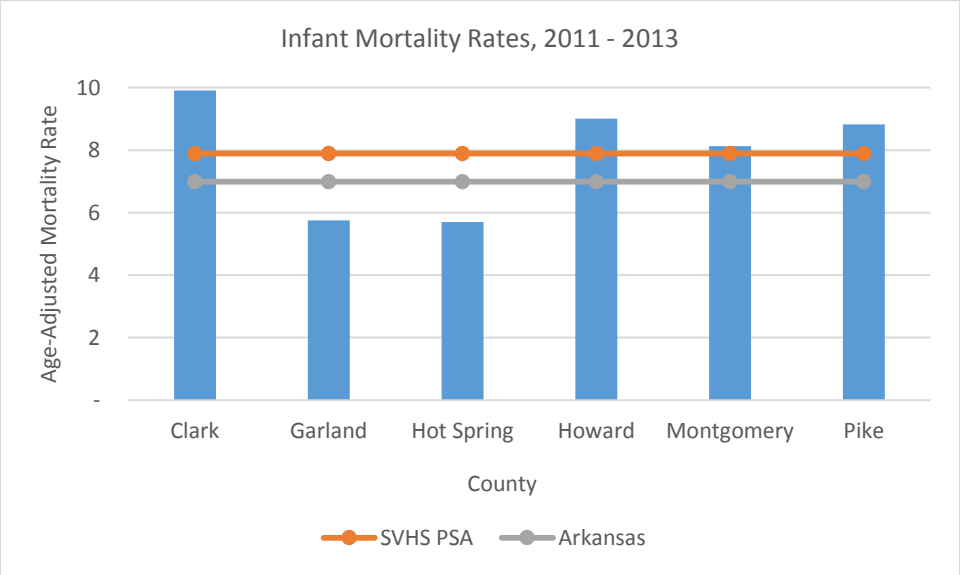
[51] Child Trends Data Bank
[52] Arkansas Center for Health Statistics – Arkansas Department of Health
[53] A Background Paper on Infant Mortality in Arkansas, March 2012 accessed at Arkansas Department of Health

of 4.04 neonatal deaths. Clark County reported the highest neonatal mortality rate (13.04 deaths) while Garland County reported the lowest rate (5.60 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, SVHS primary service area recorded an aggregate post-neonatal mortality rate of 0.78 deaths, which is much lower than the national rate of 1.93 deaths and the state's rate of 2.88 deaths. Hot Spring County reported the highest post-neonatal mortality rate (2.79 deaths), while Garland County reported the lowest rate (1.87 deaths). The other four counties (Clark, Howard, Montgomery, and Pike) in the SVHS primary service area had zero post-neonatal 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 SVHS primary service area and the state have increased between 2011 and 2013. In 2013, SVHS primary service area recorded an aggregate of 10.01 infant deaths, while the state recorded a lower rate of 7.16 deaths. Clark County recorded the highest infant mortality rate in 2013 (13.04 deaths) while Howard County reported the lowest rate (6.25 deaths) among the six counties in the SVHS primary service area. White mothers across the SVHS primary service area 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. [54] 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 SVHS primary service area have increased from 60 in 2011 to 70 in 2014. However, across the state of Arkansas, this number has declined from 7,969 in 2011 to 5,971 in 2014. Over the four years, across the SVHS primary service area, Garland County recorded the highest number of true assessments of child maltreatment completed, while Montgomery or Pike Counties recorded the lowest number of true assessments of child maltreatment. [55]

Child Mortality

Child mortality rate is defined as the number of deaths among children under age of 18 years per 100,000 population. During 2010 – 2013, the SVHS primary service area recorded an aggregate child mortality rate of 50 child deaths, which is lower than the state's rate of 70 child deaths. Howard County reported the highest child mortality rate (100 deaths), a rate higher than the state and the SVHS primary service area aggregate rates. Hot Spring County reported the lowest child mortality rate (50 deaths), while Montgomery and Pike Counties reported no child deaths during this time period. [56]

Teen birth rate

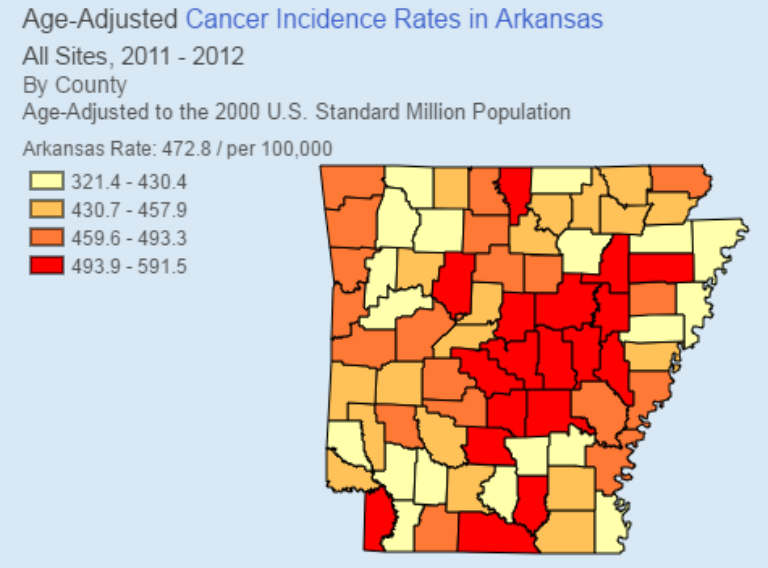
Teen birth rate is reported as the number of live births born to women between the ages of 15 – 19 years, per 1,000 residents. [57] In 2013, the SVHS primary service area reported an aggregate teen birth rate of 39.9 births for teenage mothers. This rate was lower than the state's teen birth rate of 42.5 births. Montgomery County recorded the highest teen birth rate (61.3 births), while Clark County reported the lowest rate (16.5 births) among all the counties in the primary service area.

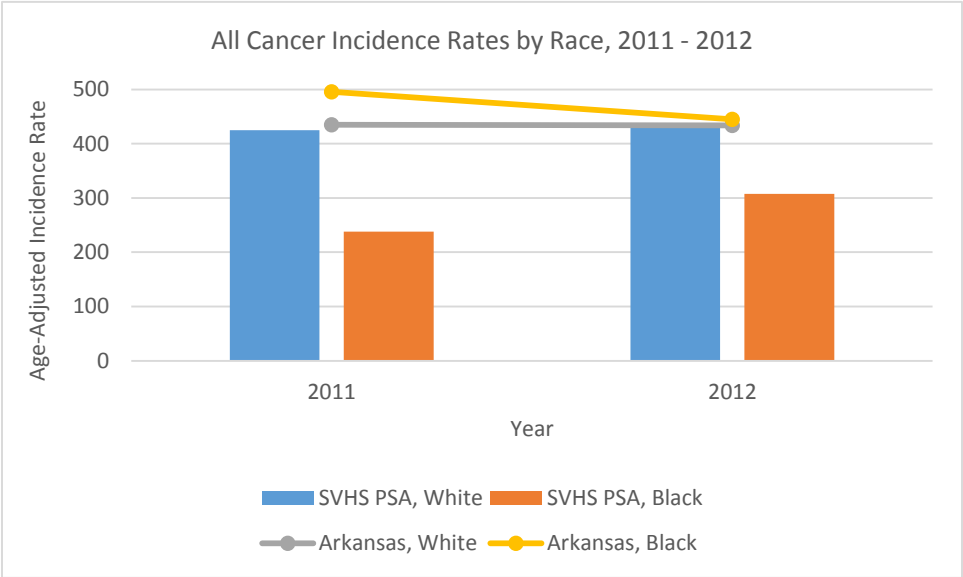
[54] Child Maltreatment – World Health Organization
[55] Total Number of True assessments of Child Maltreatment – Data provided by Arkansas Advocates for Children & Families accessed at Kids Count Data Center
[56] Compressed Mortality Files – Centers for Disease Control and Prevention
[57] Arkansas Advocates for Children & Families accessed at Kids Count Data Center

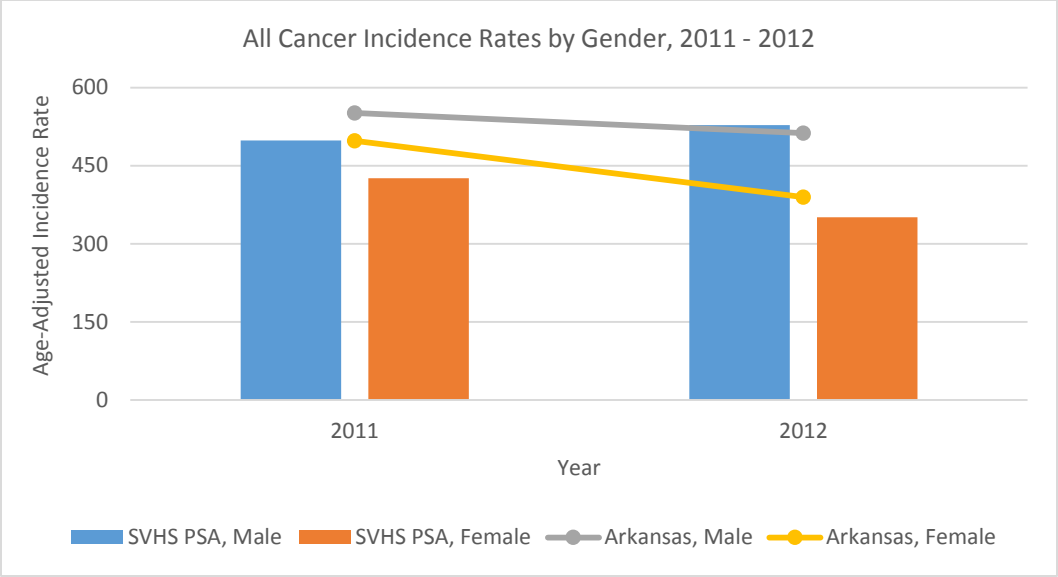
Death, Illness, and Injury

Cancer Incidence & Mortality

All Cancer Incidence

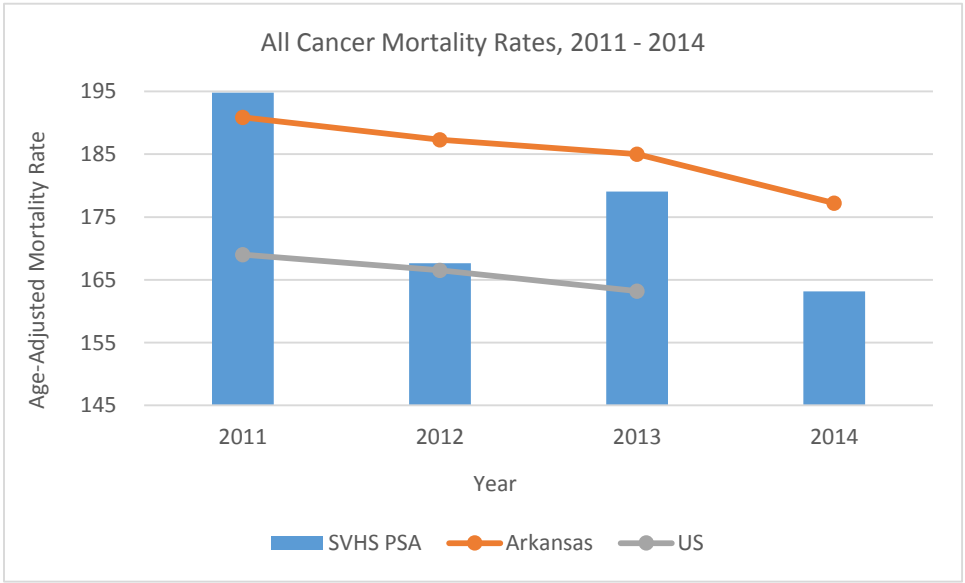




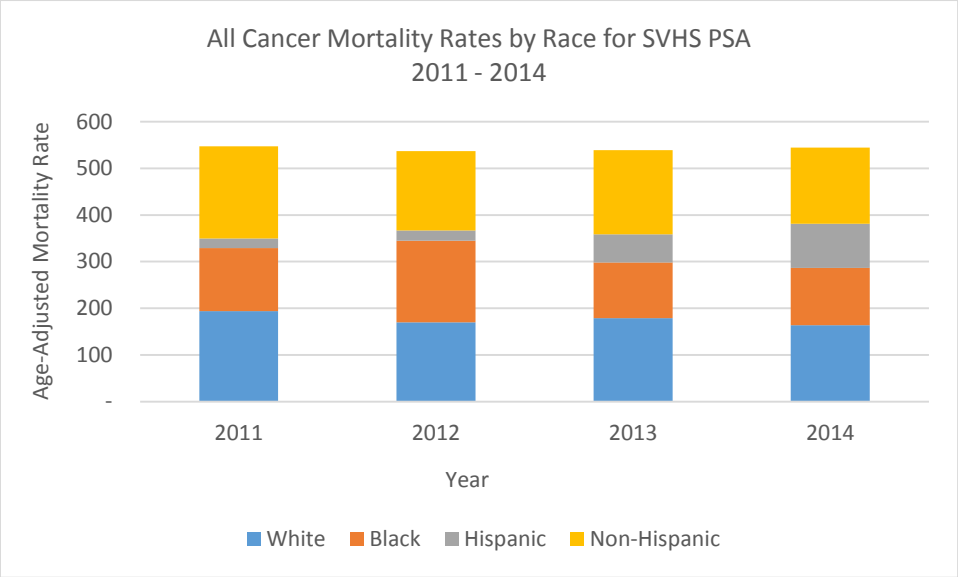


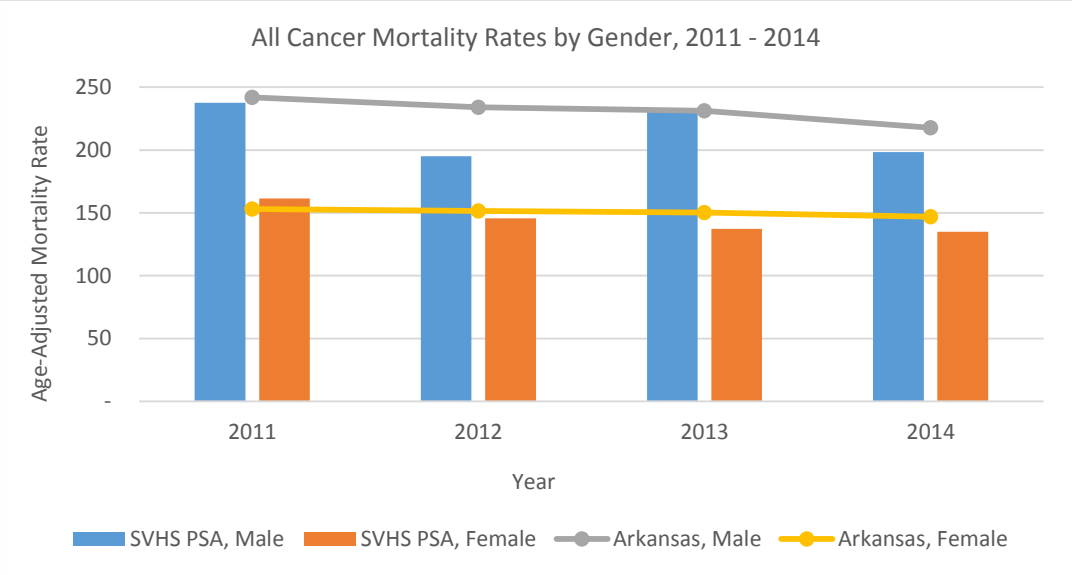
According to the 2012 data reported by Arkansas Central Cancer Registry, the SVHS primary service area aggregate incidence rate for all cancers was 429.5 cases per 100,000 population. This was lower than the Arkansas state average incidence rate for the same year (441.9 cases). Clark County reported the highest incidence rate (466.4 cases), while Montgomery County reported the lowest rate (341.6 cases). Across the primary service area and the state, more White citizens reported having cancer than Black citizens. More males in the primary service area and the state reported having cancer than females. Across the state, people between the ages of 80 – 84 years reported the highest all cancer incidence rates (2226.7 cases) while people between the ages of 5 – 9 years reported the lowest incidence rates (10.1 cases). [58]

All Cancer Mortality



[58] Arkansas Central Cancer Registry – all Cancer Incidence Data is provided by the ACCR



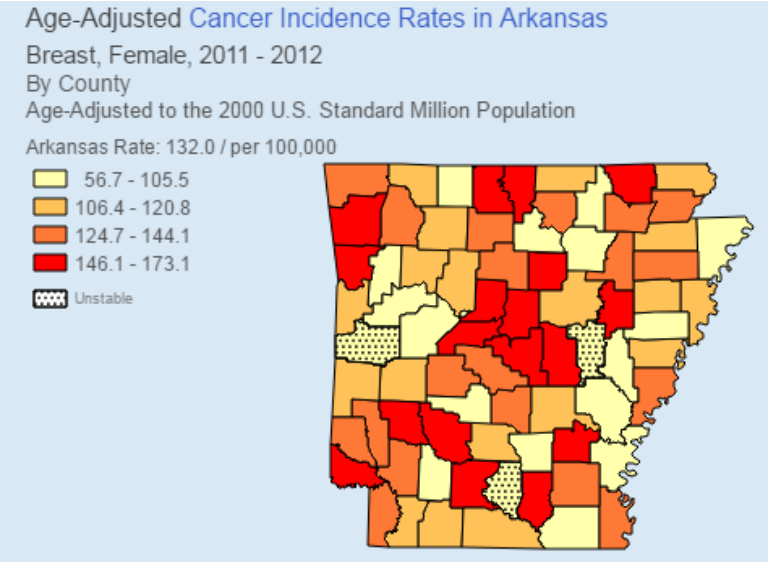


According to provisional data reported by the Health Statistics Branch of the Arkansas Department of Health, age-adjusted mortality rates for all cancers across the SVHS primary service area have declined from 194.78 deaths in 2011 to 163.15 deaths in 2014. Similarly, across the state, mortality rates (though much higher than the SVHS primary service area aggregate rates) have steadily declined from 190.88 deaths in 2011 to 177.21 deaths in 2014. Hot Spring County reported the highest mortality rate (187.71 deaths), while Pike County reported the lowest overall all cancer mortality rate (139.88 deaths) in 2014. While more White citizens reported higher mortality rates across the primary service area than Black citizens, the reverse was found to be true across the state. More males reported higher mortality rates from all cancers than females, across the primary service area and state. [59] All Cancer mortality rates

[59] All Cancer Mortality Data in this report is provided by the Arkansas Center for Health Statistics – Arkansas Department of Health

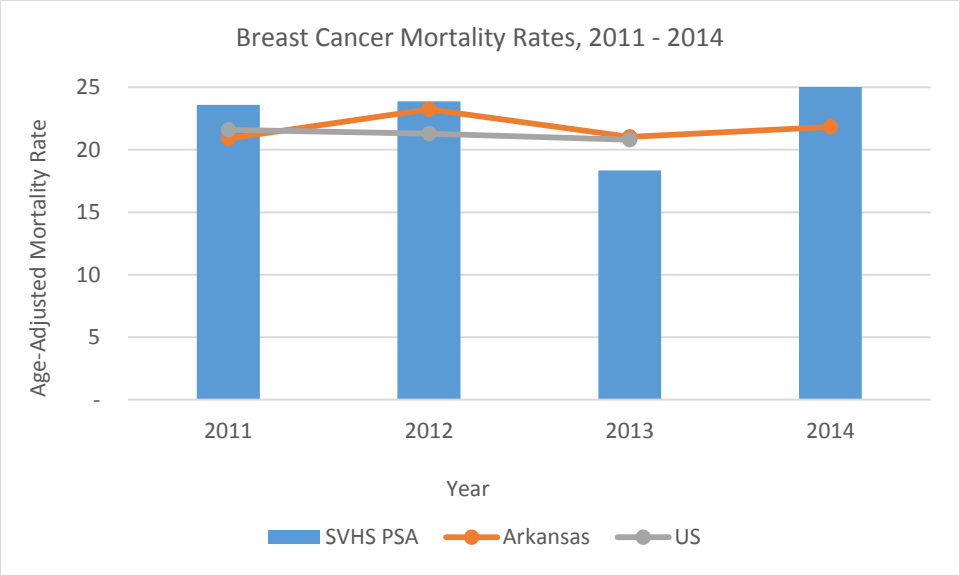
across the country while remaining lower than the SVHS primary service area aggregate and the state rates, declined from 169 deaths in 2011 to 163.20 deaths in 2013.

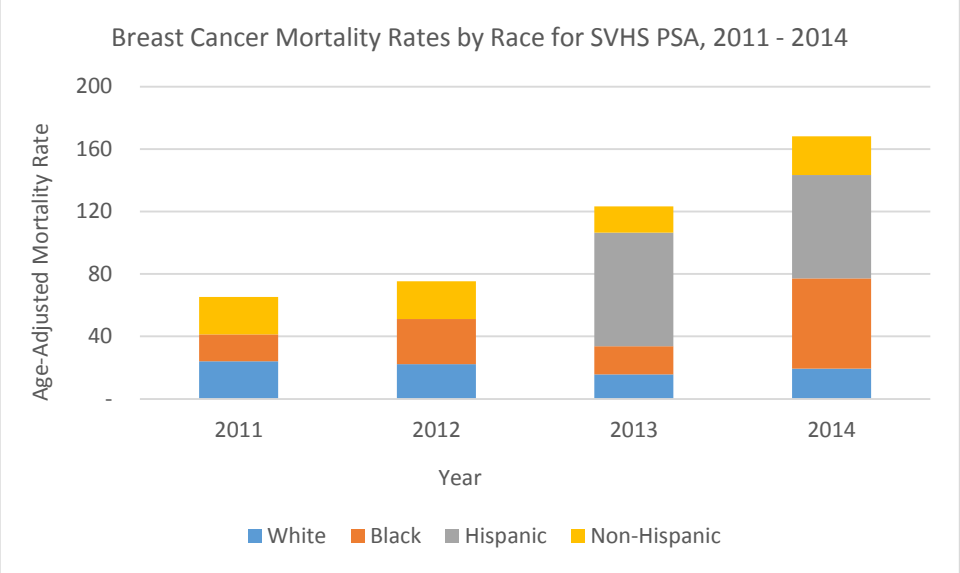
Breast Cancer Incidence



According to the 2012 data reported by Arkansas Central Cancer Registry, part of the Arkansas Department of Health, the SVHS primary service area aggregate incidence rate for breast cancer was 95.9 cases per 100,000 population. This was lower than the Arkansas state average incidence rate for the same year (133.5 cases). Hot Spring County reported the highest incidence rate (148.4 cases), while Garland County reported the lowest rate (114.3 cases). Montgomery and Pike Counties reported either zero or less than 5 incidences of breast cancer in 2012. Across the primary service area, Black women reported less than 5 incidences of breast cancer. Across the state, women between the ages of 65 – 69 years reported the highest breast cancer incidence rates (481.3 cases) while women between the ages of 25 - 29 years reported the lowest incidence rates (12.1 cases).

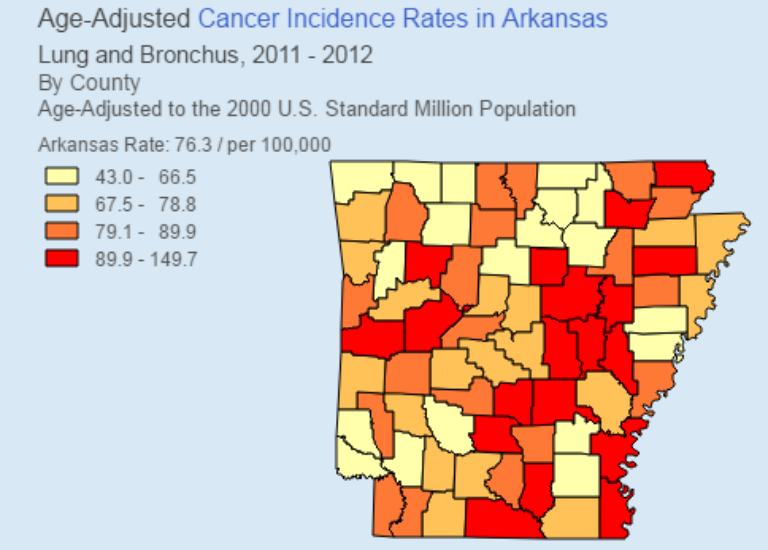
Breast Cancer Mortality





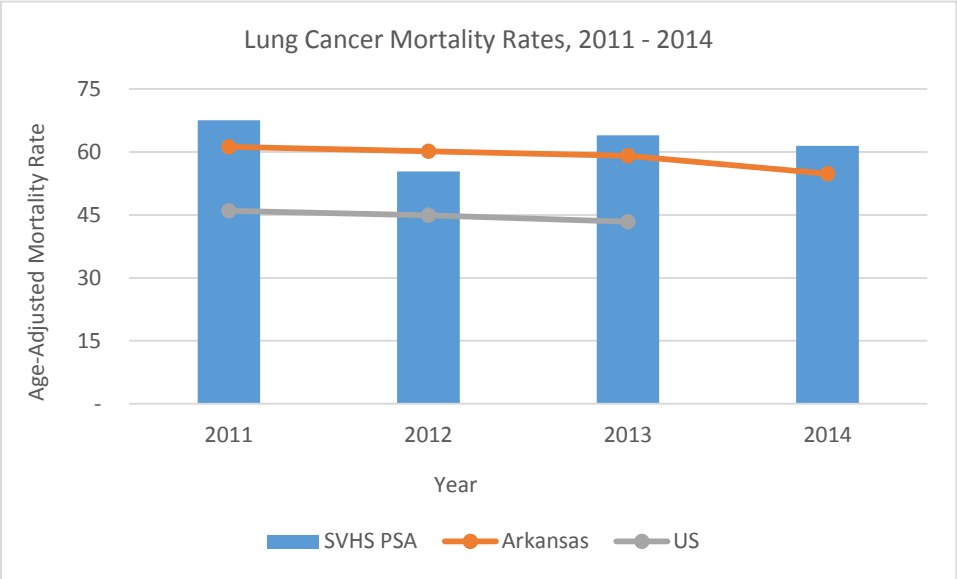
According to provisional data reported by the Health Statistics Branch of the Arkansas Department of Health, age-adjusted mortality rates for breast cancer across the SVHS primary service area have increased from 23.59 deaths in 2011 to 25.21 deaths in 2014. Howard County reported the highest breast cancer mortality rate (38.75 deaths), while Pike County reported the lowest rate (12.25 deaths) among the six counties in the SVHS primary service area, in 2014. Similar to the primary service area's rates, across the state, breast cancer mortality rates have increased from 20.91 deaths in 2011 to 21.83 deaths in 2014. More Black women reported higher mortality rates across the primary service area and the state. Breast cancer mortality rates across the country have declined from 21.60 deaths in 2011 to 20.80 deaths in 2013.

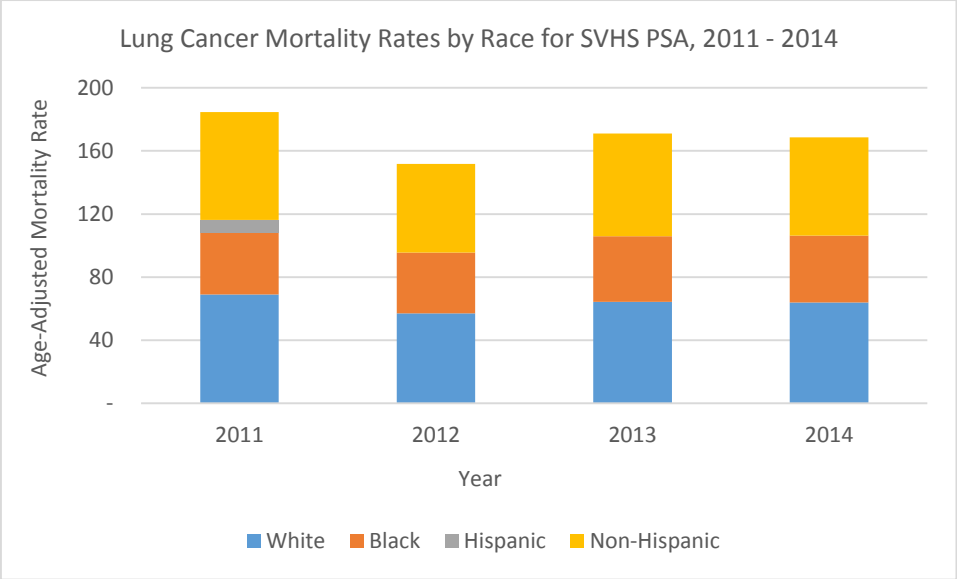
Lung Cancer Incidence

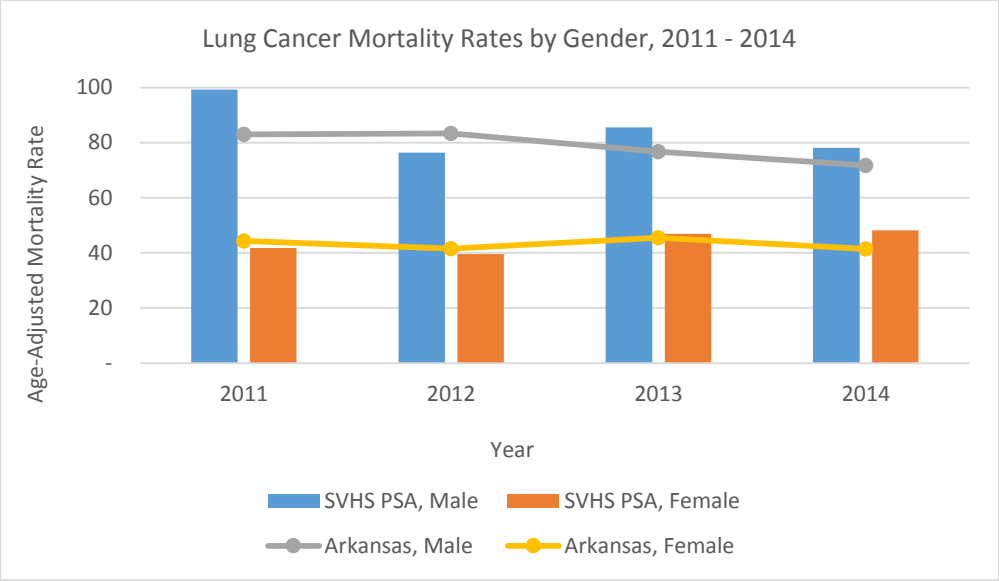


According to the 2012 data reported by Arkansas Central Cancer Registry, part of the Arkansas Department of Health, the SVHS primary service area aggregate incidence rate for lung cancer was 66.7 cases per 100,000 population. This was lower than the Arkansas state average incidence rate for the same year (75.3 cases). Howard County reported the highest incidence rate (105.7 cases), while Clark County reported the lowest rate (55.8 cases). Across the primary service area, more White citizens reported having cancer than Black citizens. 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 (484.5 cases) while people between the ages of 40 – 44 years reported the lowest incidence rates (10.8 cases). Incidence rates for people below the age of 40 years were not reported for the years 2011 and 2012.

Lung Cancer Mortality

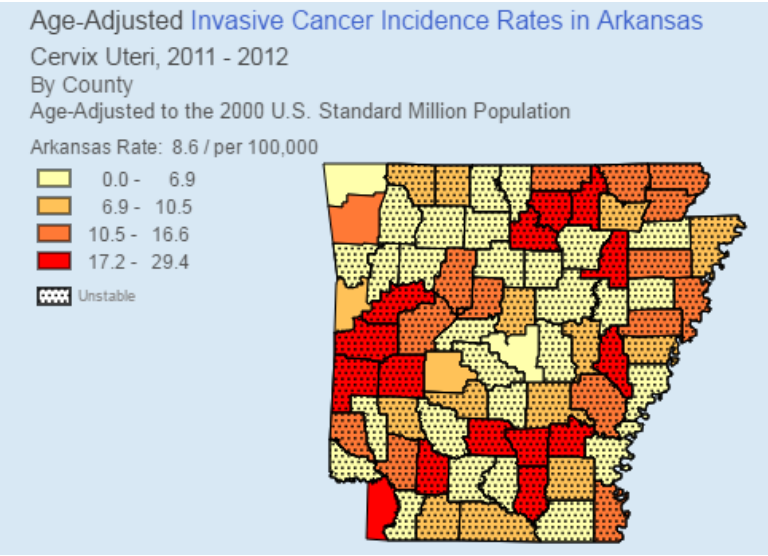






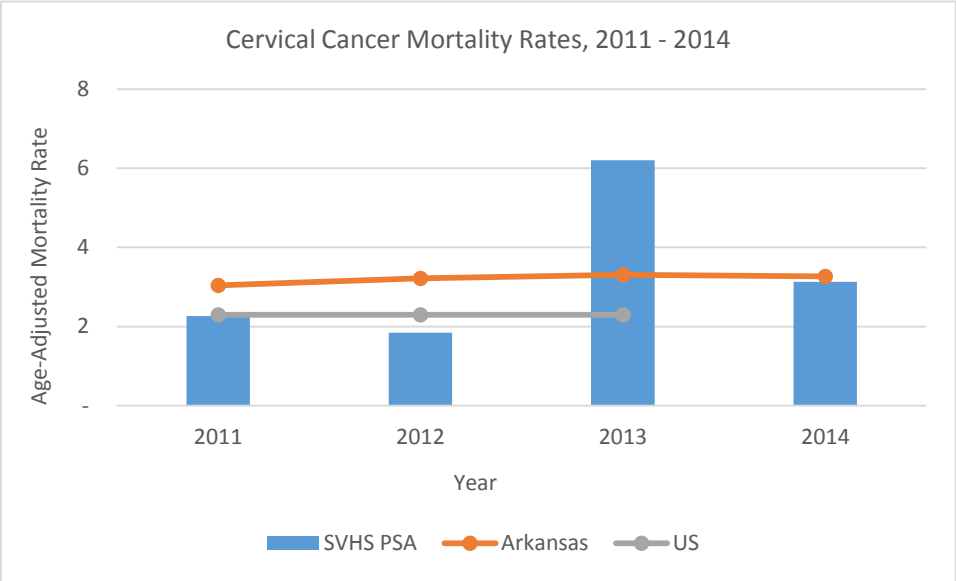
According to provisional data reported by the Health Statistics Branch of the Arkansas Department of Health, age-adjusted mortality rates for lung across the SVHS primary service area have decreased from 67.58 deaths in 2011 to 61.42 deaths in 2014. However, lung cancer mortality rates across the state, which were lower than the SVHS primary service area aggregate rates, have decreased from 61.22 deaths in 2011 to 54.82 deaths in 2014. Clark County reported the highest lung cancer mortality rate (93.35 deaths), while Montgomery County reported the lowest rate (33.52 deaths) among the six counties in the SVHS primary service area, in 2014. More White citizens reported lung cancer higher mortality rates across the primary service area than Black citizens. More males reported higher mortality rates from lung cancer than females, across the primary service area and state. Lung cancer mortality rates across the country, while remaining lower than the SVHS primary service area's aggregate and the state rates, have declined from 46.00 deaths in 2011 to 43.40 deaths in 2014.

Cervical Cancer Incidence



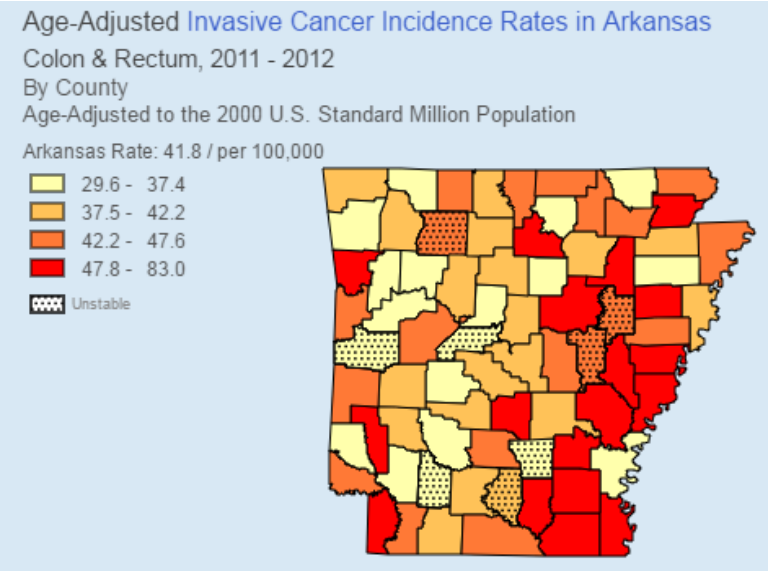
According to the 2012 data reported by Arkansas Central Cancer Registry, part of the Arkansas Department of Health, there were either zero or less than 5 incidences of cervical cancer reported for each county. Hence an age-adjusted rate could not be calculated and reported out. Arkansas State reported an incidence rate of 9.2 cases per 100,000 population for 2012. Primary service area-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. Across the state, women between the ages of 45 – 49 years reported the highest cervical cancer incidence rates (22.1 cases) while women between the ages of 60 - 64 years reported the lowest incidence rates (11.1 cases). Incidence rates for women less than 30 years old or more than 75 years old were not reported.

Cervical Cancer Mortality



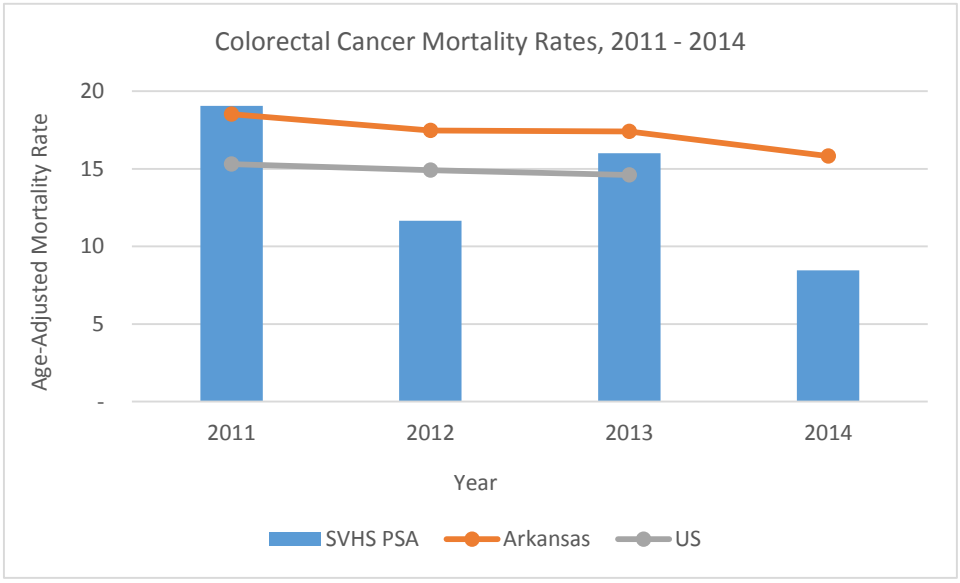
According to provisional data reported by the Health Statistics Branch of the Arkansas Department of Health, age-adjusted mortality rates for cervical cancer across the SVHS primary service area have increased from 2.27 deaths in 2011 to 3.13 deaths in 2014. Similarly, across the state, cervical cancer mortality rates (higher than the SVHS primary service area's aggregate rates) have increased from 3.04 deaths in 2011 to 3.27 deaths in 2014. Howard County reported the highest cervical cancer mortality rate (11.35 deaths), while Garland County reported the lowest rate (1.17 deaths) among the six counties in the SVHS primary service area in 2014. Only White women across the primary service area reported any cervical cancer mortalities. Their rates increased from 2.62 cases in 2011 to 3.59 cases in 2014. Cervical Cancer mortality rates across the country, though lower than the state rates, but higher than the SVHS primary service area aggregate rates, have remained the same at 2.30 deaths from 2011 to 2013.

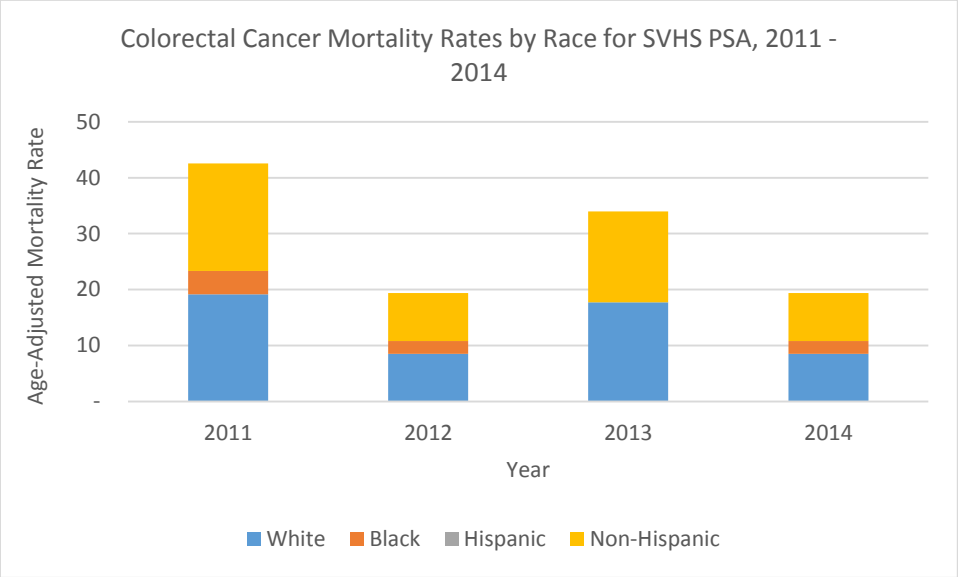
Colorectal Cancer Incidence

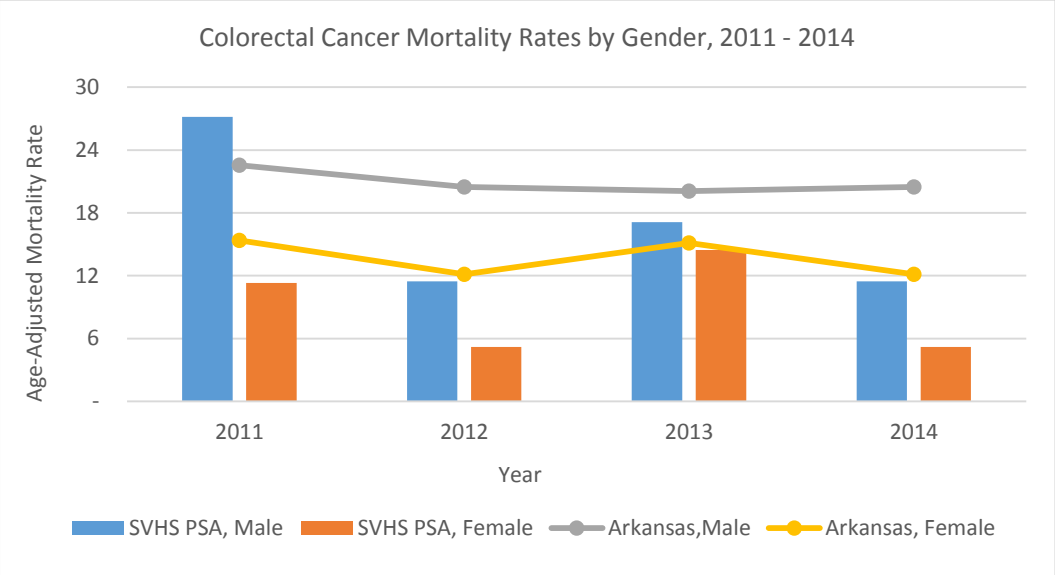


According to the 2012 data reported by Arkansas Central Cancer Registry, part of the Arkansas Department of Health, the SVHS primary service area aggregate incidence rate for colorectal cancer was 19.8 cases per 100,000 population. This was much lower than the Arkansas state average incidence rate for the same year (41.5 cases). Clark County reported the highest incidence rate (47.1 cases), while Garland County reported the lowest rate (32.1 cases). Across the primary service area, only White citizens reported having colorectal cancer. Across the state, more Black citizens reported having colorectal cancer than White citizens. More males in the primary service area and the state reported having colorectal cancer than females. Across the state, people between the ages of 80 – 84 years reported the highest colorectal cancer incidence rates (215.4 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



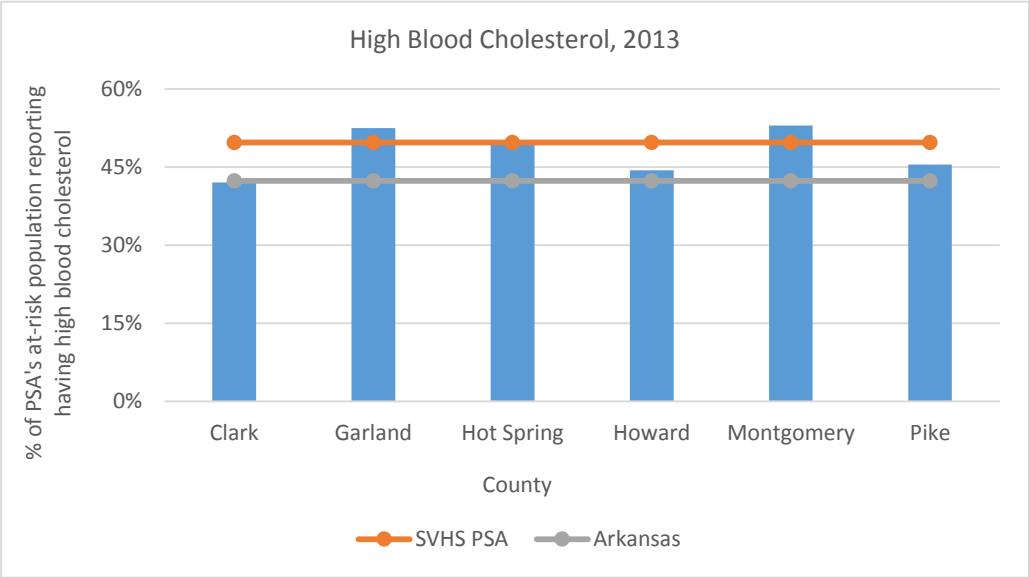




According to provisional data reported by the Health Statistics Branch of the Arkansas Department of Health, age-adjusted mortality rates for colorectal across the SVHS primary service area have decreased from 19.06 deaths in 2011 to 8.45 deaths in 2014. Similarly, across the state, though higher than the SVHS primary service area's aggregate rates, mortality rates have decreased from 18.52 deaths in 2011 to 15.82 deaths in 2014. Pike County reported the highest colorectal cancer mortality rate (18.66 deaths), while Hot Spring County reported the lowest rate (4.57 deaths) among the six counties in the SVHS primary service area, in 2014. While a comparable segment of either White or Black citizens reported higher mortality rates across the primary service area each year, across the state Black citizens reported higher mortality rates among all the races. More males reported higher mortality rates from colorectal cancer than females, across the primary service area and state. Colorectal cancer mortality rates across the country decreased from 15.30 deaths in 2011 to 14.60 deaths in 2013.

Cardiovascular Diseases: Indicators, Incidence & Mortality

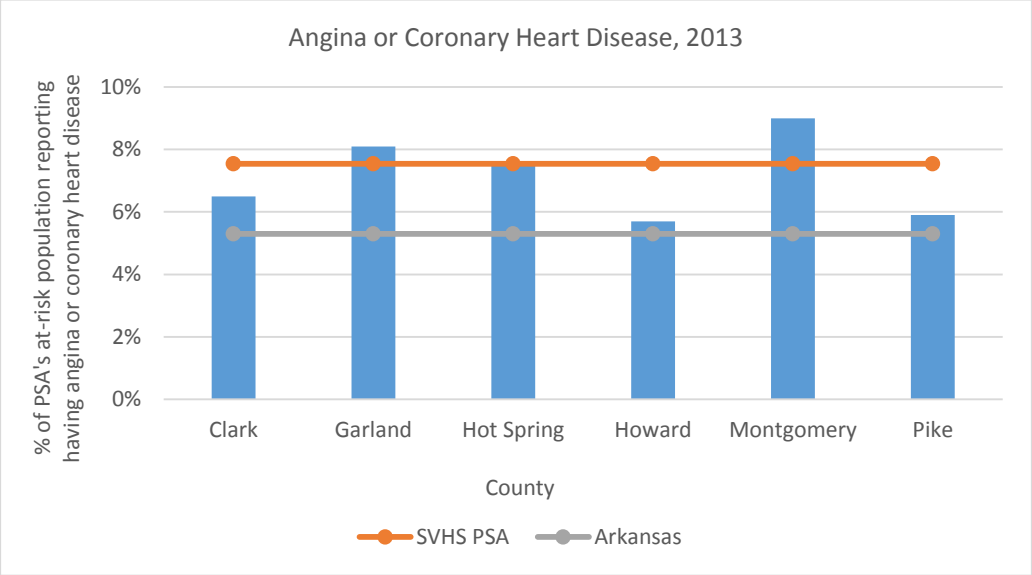
High Blood Cholesterol Incidence



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. [60] Almost half of the SVHS primary service area's adult population (49.77%) reported having high blood cholesterol in 2013. [61] Arkansas State reported a lower percent of its overall population (42.4%) as having high blood cholesterol. Out of the six counties in the primary service area, two counties (Garland, Montgomery) reported higher percentage numbers for this measure relative to the SVHS primary service area aggregate and the state. Montgomery County reported the highest percent (53%) of its population having high blood cholesterol, while Clark County reported the lowest percent (42.10%).

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

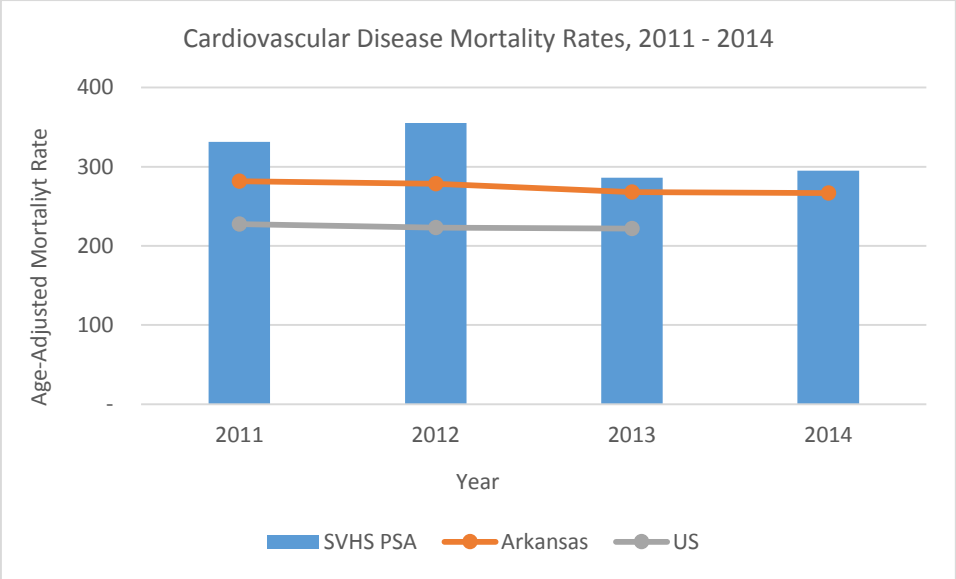
Coronary Heart Disease Incidence

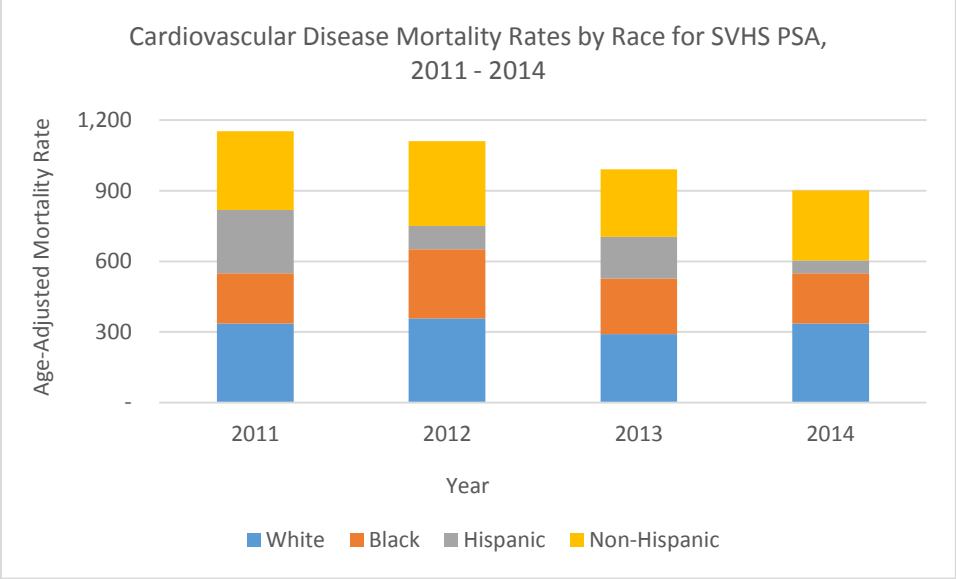


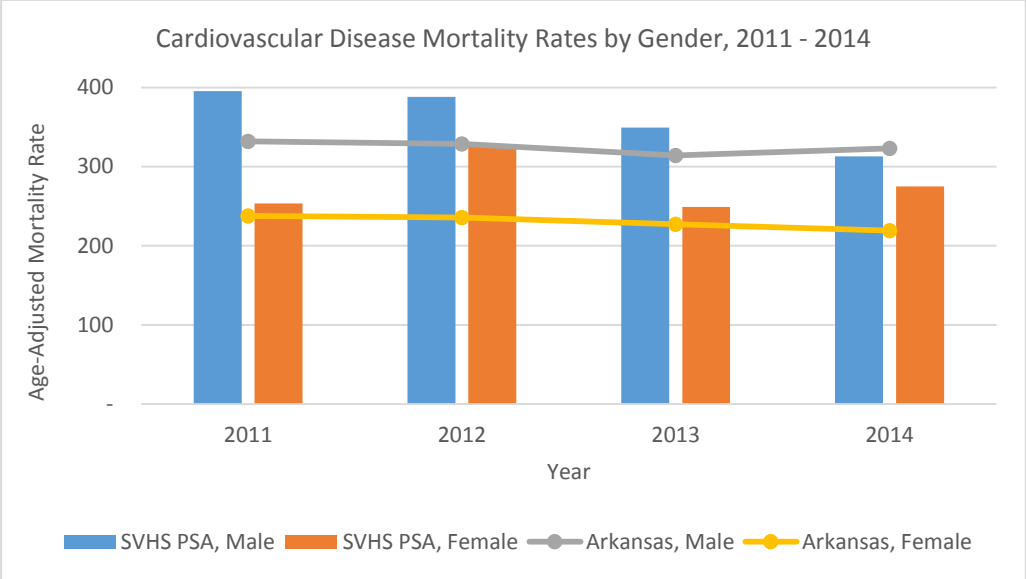
Coronary Heart Disease or CHD, is a common heart disease or condition in which a waxy substance called plaque builds up on the inner walls of the coronary arteries and reduces blood flow to the heart muscle. Eventually these plaques can rupture forming a blood clot which when large enough can sometimes 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. [62] In 2013, 7.54% of the SVHS primary service area's aggregate population at-risk (or 1,853 citizens out of 24,560 citizens) reported having CHD, which was a higher percent when compared to the state (5.30% or 118,529 citizens out of 2,236,326 citizens). [63] Two (Garland, Montgomery) out of six counties in the primary service area report higher percentages compared to the SVHS primary service area aggregate and the state. Montgomery County reported the highest percentage (9%) of its population having CHD, while Howard County reported the lowest percentage (5.70%).

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

Cardiovascular Disease Mortality





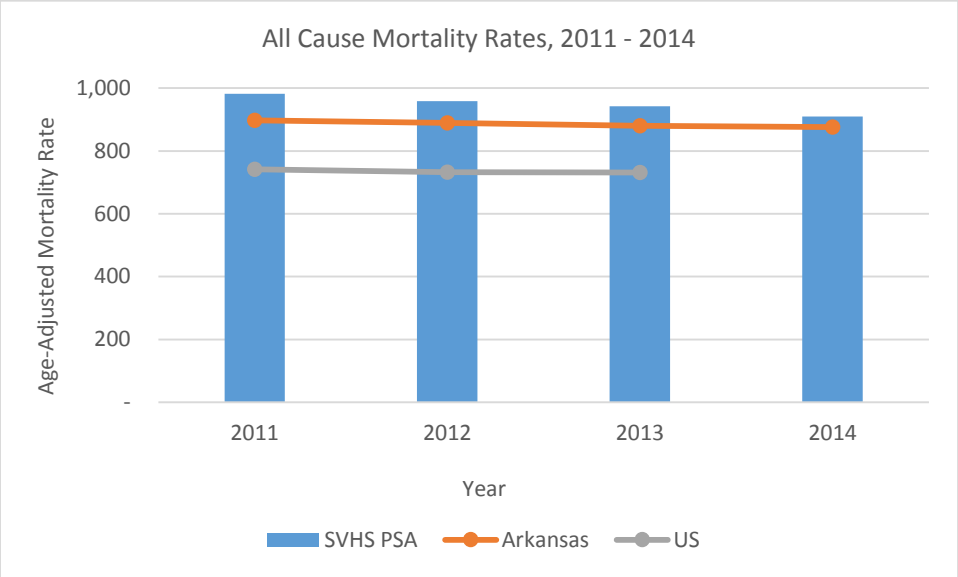


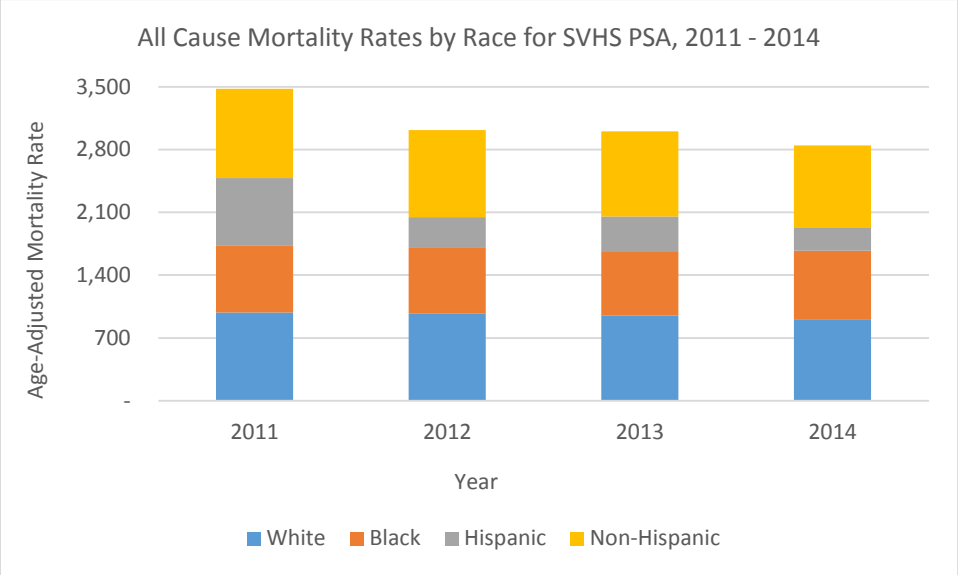
Cardiovascular Disease (CVD) was the leading cause of death in the United States in 2009. More than 600,000 Americans die of heart disease each year. [64] Provisional data provided by the Arkansas Center for Health Statistics reported that the age-adjusted mortality rates per 100,000 population for CVD across the SVHS primary service area have decreased from 331.25 deaths in 2011 to 294.89 deaths in 2014. These rates were higher than the state's rates (281.74 deaths in 2011 to 266.79 deaths in 2014) which have also decreased over time. White citizens across the SVHS primary service area and Black citizens across the state report higher mortality rates when compared to other races. Male citizens report higher mortality rates compared to female citizens across the SVHS primary service area and the state. In 2014, CVD mortality rates in three out of six counties exceeded the SVHS primary service area aggregate rate while all six counties exceeded the state's rate. Pike County reported the highest CVD mortality rate (340.93deaths) while Howard County reported the lowest CVD mortality rate (273.12 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 SVHS primary service area's aggregate rates during this time period.

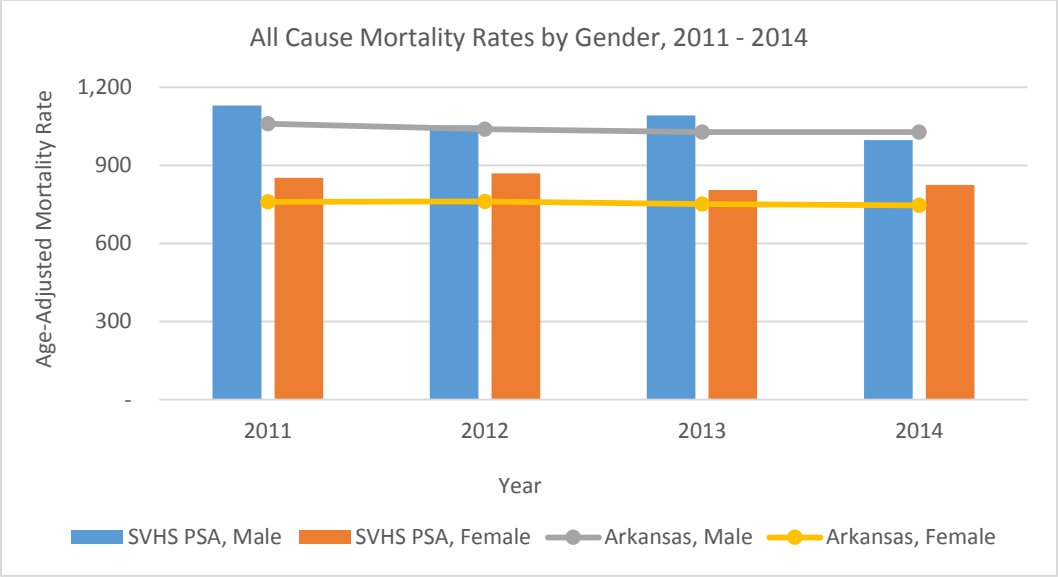
[64] Heart Disease Fact Sheet – Centers for Disease Control and Prevention

Other Types of Incidence & Mortality Data

All-Cause Mortality



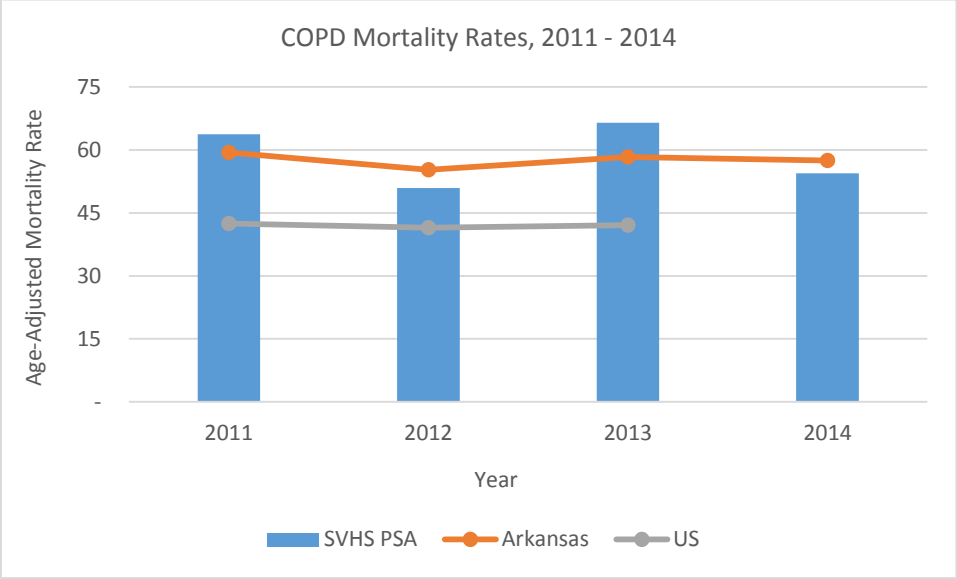


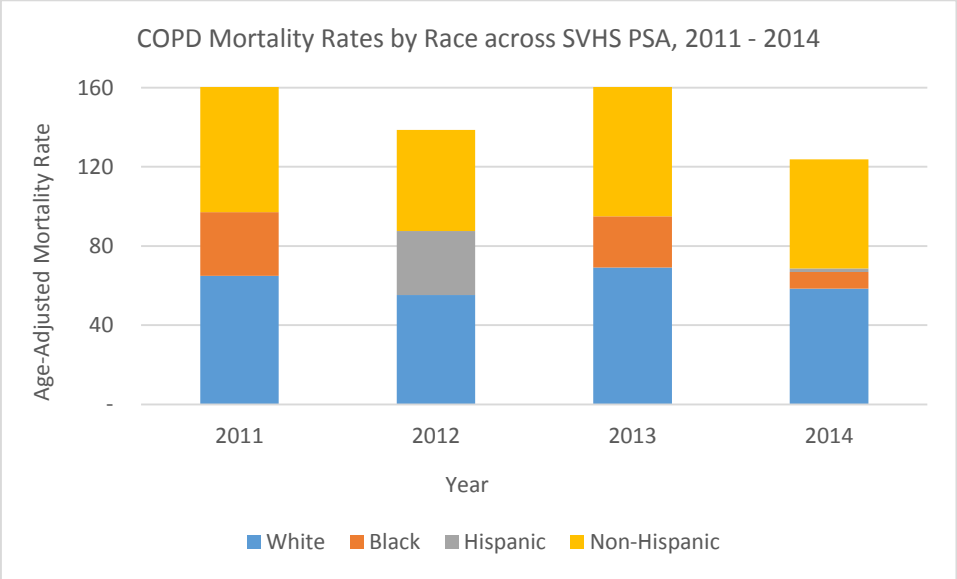


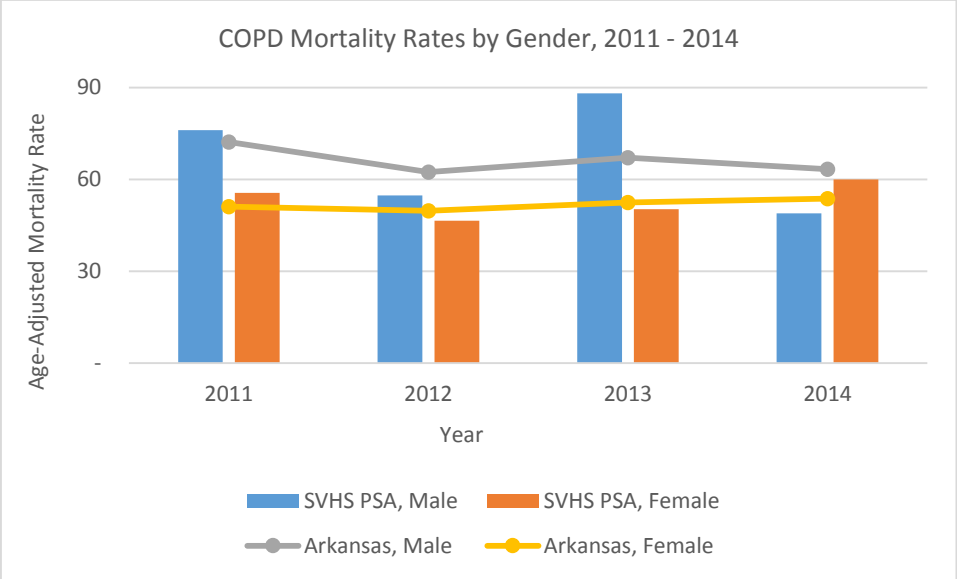
This measure reports mortality rates from all causes, age-adjusted to US 2000 population. All-cause mortality rates across SVHS primary service area have decreased from 981.81 deaths in 2011 to 909.99 deaths in 2014. Pike County reported the highest all-cause mortality rate (1022.59 deaths), while Montgomery County reported the lowest rate (808.98 deaths) among the six counties in the SVHS primary service area, in 2014. All-cause mortality rates across the state, which were lower than the SVHS primary service area aggregate rates, have declined from 897.49 deaths in 2011 to 875.59 deaths in 2014. While White citizens across the primary service area reported higher all-cause mortality rates, Black citizens across the state reported higher all-cause mortality rates, when compared to other races. Male citizens consistently reported higher all-cause mortality rates across the SVHS primary service area and the state.[65] All-cause mortality rates across the country, though lower than the state and the SVHS primary service area aggregate rates, declined from 741.30 deaths in 2011 to 731.90 deaths in 2014.

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

COPD Mortality



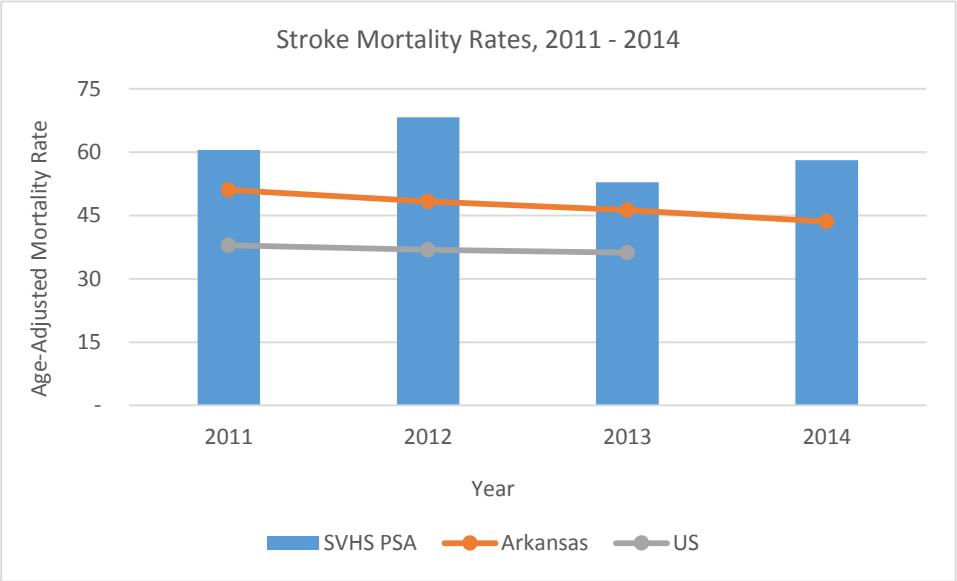


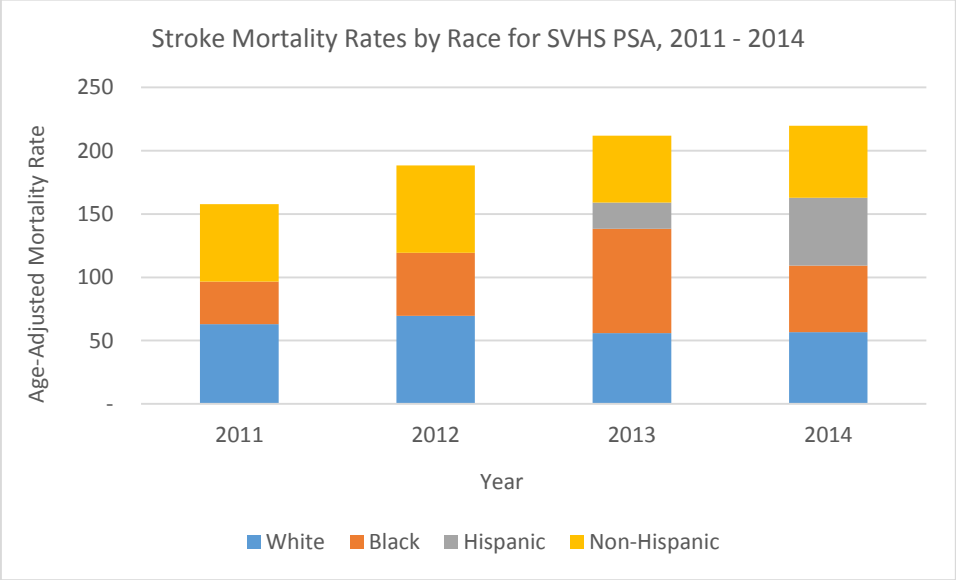


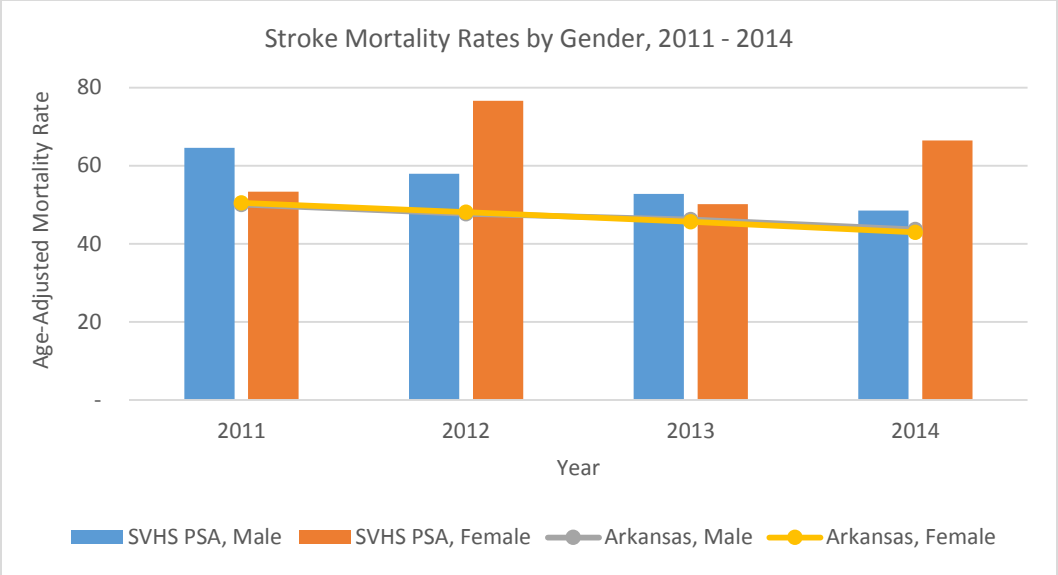
COPD, or chronic obstructive pulmonary disease, is a progressive disease that makes it hard to breathe. Cigarette smoking is the leading cause of COPD. It is a major cause of disability, and it's the third leading cause of death in the United States. Currently, millions of people are diagnosed with COPD. [66] 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 primary service area have increased from 54.23 deaths in 2011 to 58.34 deaths in 2014. Pike County reported the highest overall COPD mortality rate (111.13 deaths), while Clark County reported the lowest rate (33.22 deaths) in 2014. Across the state however, COPD mortality rates have decreased from 59.40 deaths in 2011 to 58.34 deaths in 2014. White citizens across the primary service area and the state report higher mortality rates when compared to other races. Male citizens consistently report higher rates when compared to the female population across the state and the primary service area. COPD mortality rates across the nation have remained lower than the state and SVHS primary service area's aggregate rates and have decreased from 42.50 deaths in 2011 to 42.10 deaths in 2013.

[66] National Heart, Lung and Blood Institute

Stroke Mortality



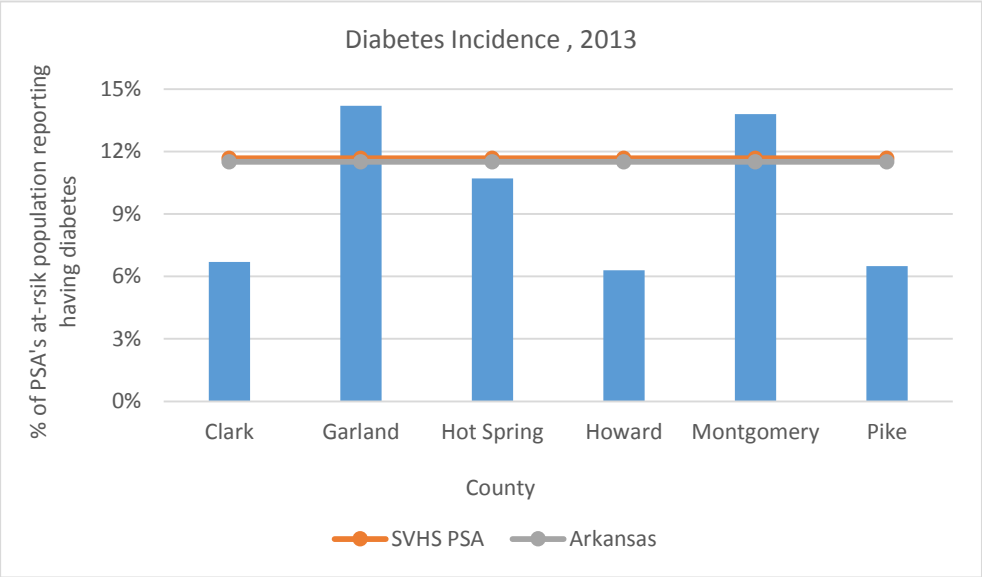




A stroke, sometimes called a brain attack, occurs when a clot blocks the blood supply to the brain or when a blood vessel in the brain bursts. [67] Stroke is the fifth leading cause of death in the United States, but the risk of having a stroke increases with age and varies with race and ethnicity. The 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 SVHS primary service area have decreased from 60.53 deaths in 2011 to 58.08 deaths in 2014. These rates were higher than the state's rates (51.04 deaths in 2011 to 43.58 deaths in 2014) which have also decreased over time. White citizens across the primary service area reported higher rates when compared to other races. Male and female citizens alternatively reported higher rates across the SVHS primary service area. In 2014, stroke mortality rates in two out of six counties exceeded the SVHS primary service area aggregate rates, while all six counties exceeded the state rates. Clark County reported the highest stroke mortality rate (68.12 deaths) while Pike County reported the lowest rate (51.99 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 SVHS primary service area's aggregate rates, while decreasing from 37.9 deaths in 2011 to 36.2 deaths in 2013.

[67] Stroke Fact Sheet – Centers for Disease Control and Prevention

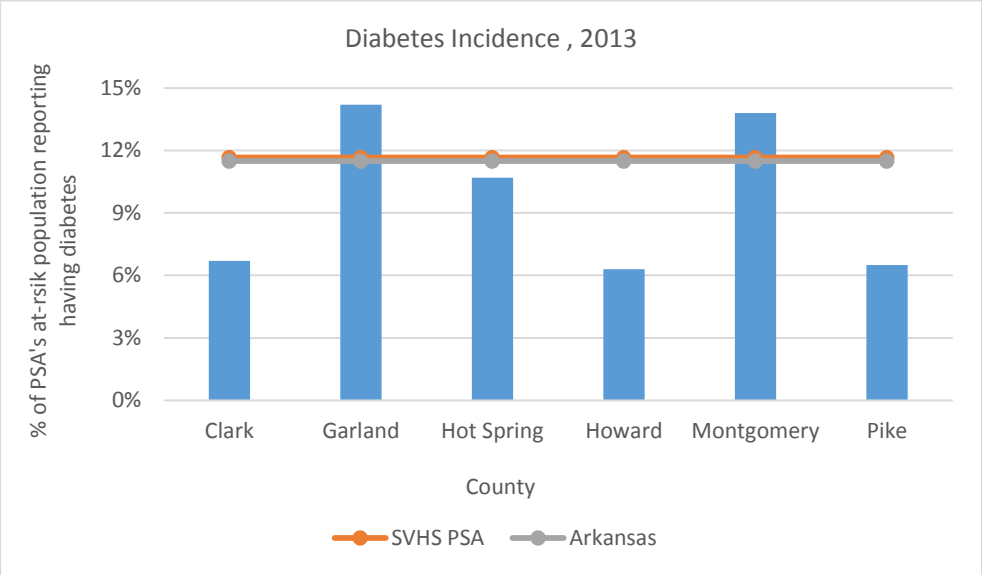
Diabetes Incidence

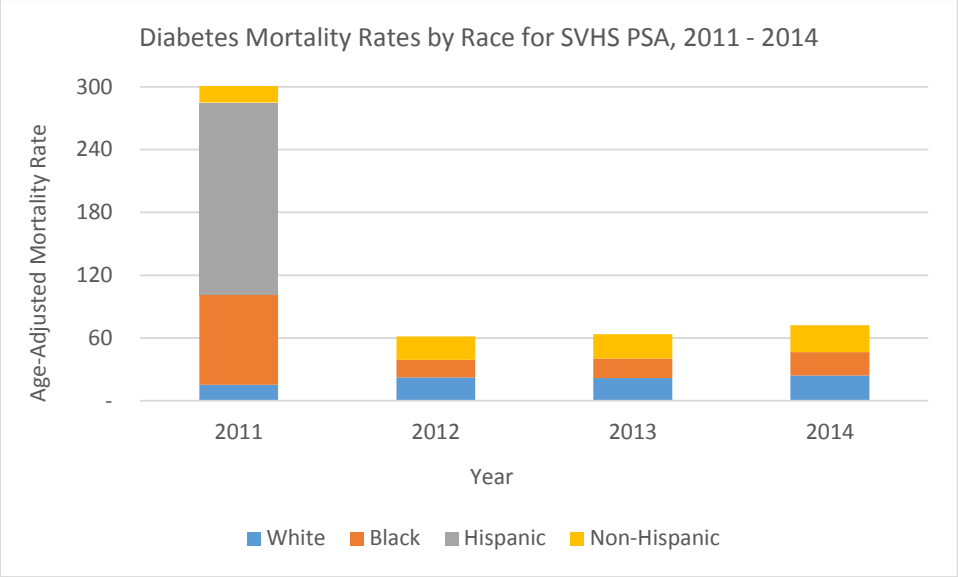


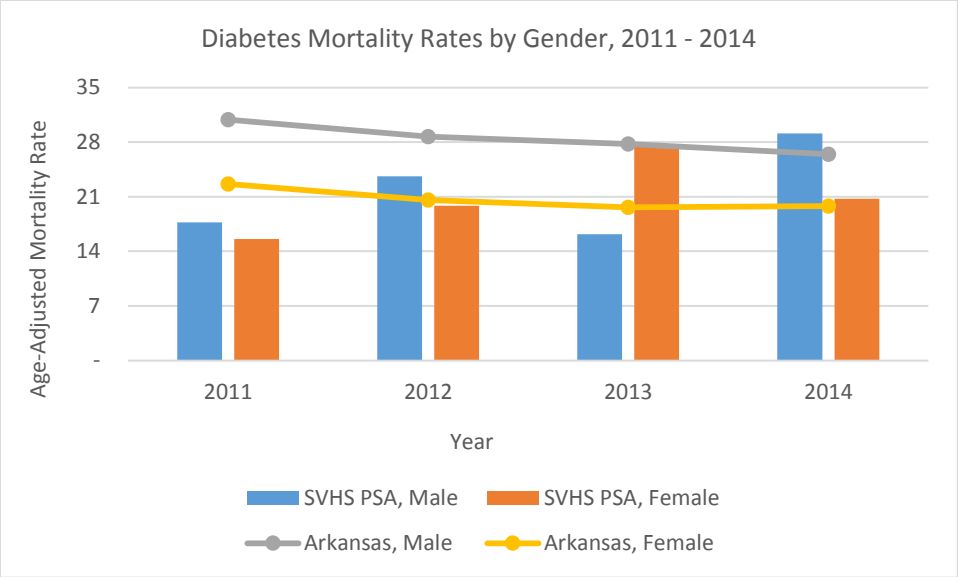
Diabetes Mellitus, the most common form of diabetes, is defined as a condition characterized by hyperglycemia resulting from the body's inability to use blood glucose for energy. [68] Chronic diabetes conditions include type 1 and type 2 diabetes. [69] The condition can be treated and managed by healthy eating, regular physical activities and medications to lower blood glucose levels. [70] Diabetes is one of the risk factors that lead to CHD. In 2013, 11.67% of the SVHS primary service area's at-risk population reported having diabetes mellitus (2,867 citizens out of 24,560 citizens). [71] Arkansas State as a whole reported a slightly lower percentage (11.65%) of its population having diabetes mellitus. In 2013, two out of six counties reported a higher percentage of its population having diabetes relative to the SVHS primary service area aggregate. Montgomery County reported the largest percentage (13.80%) while Howard County reported the lowest percentage (6.30%).

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

Diabetes Mortality

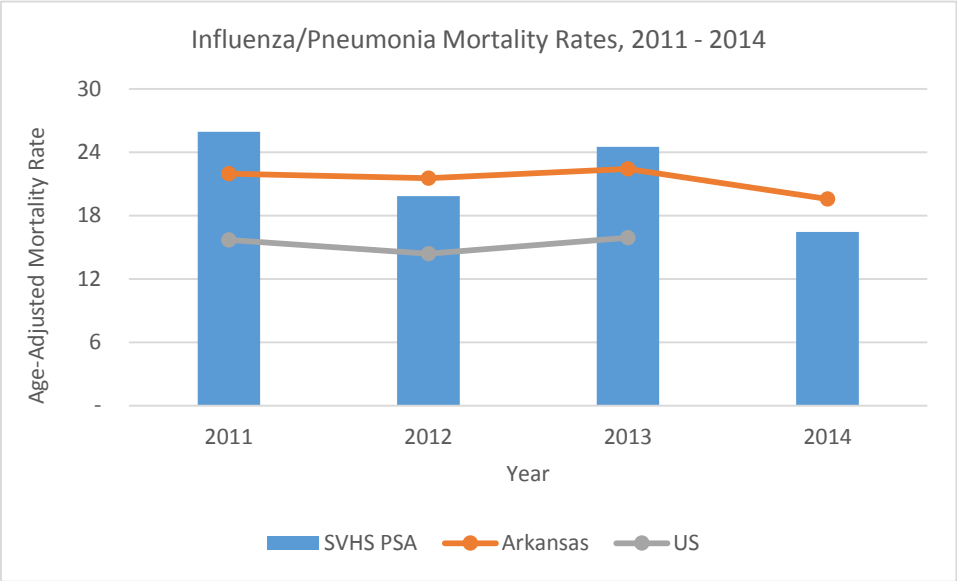


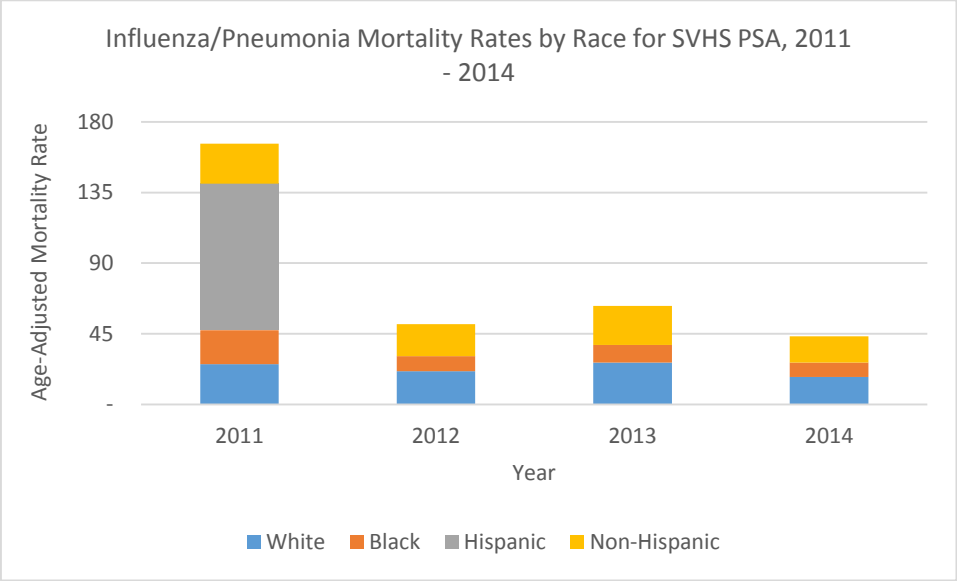


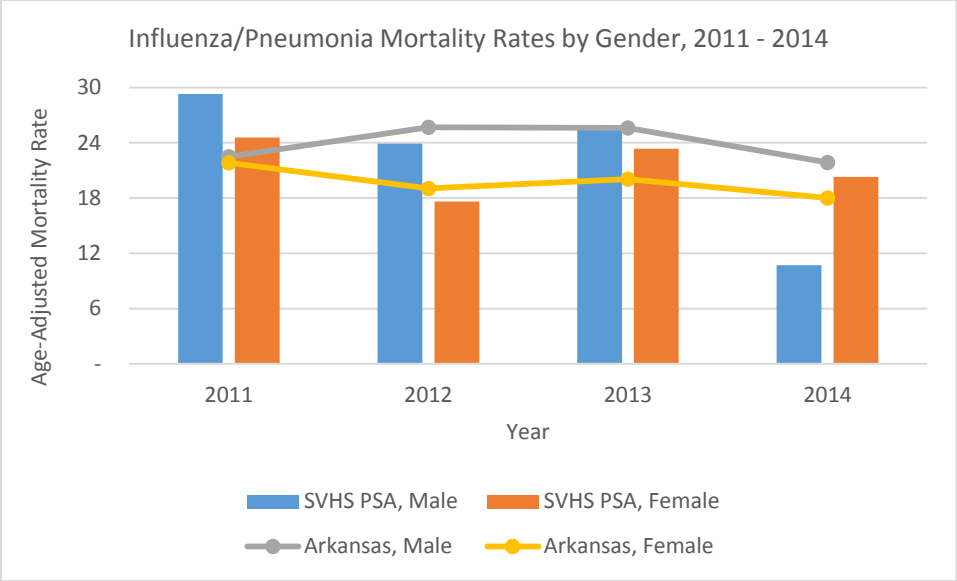


According to the provisional data reported by the Arkansas Department of Health, mortality rates due to Diabetes Mellitus are deaths assigned to ICD-10 codes E10-E14, age-adjusted to the 2000 US population. Diabetes mortality rates across the SVHS primary service area have increased from 2011 to 2014. In 2014, SVHS primary service area recorded an aggregate diabetes mortality rate of 24.87 deaths, while the state recorded a lower rate of 22.96 deaths. Howard County reported the highest diabetes mortality rate (34.99 deaths), while Montgomery County reported the lowest rate (24.87 deaths) among the six counties in the SVHS primary service area, during the same year. White citizens across the SVHS primary service area reported higher diabetes mortality rates when compared to other races. Male citizens across the SVHS 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





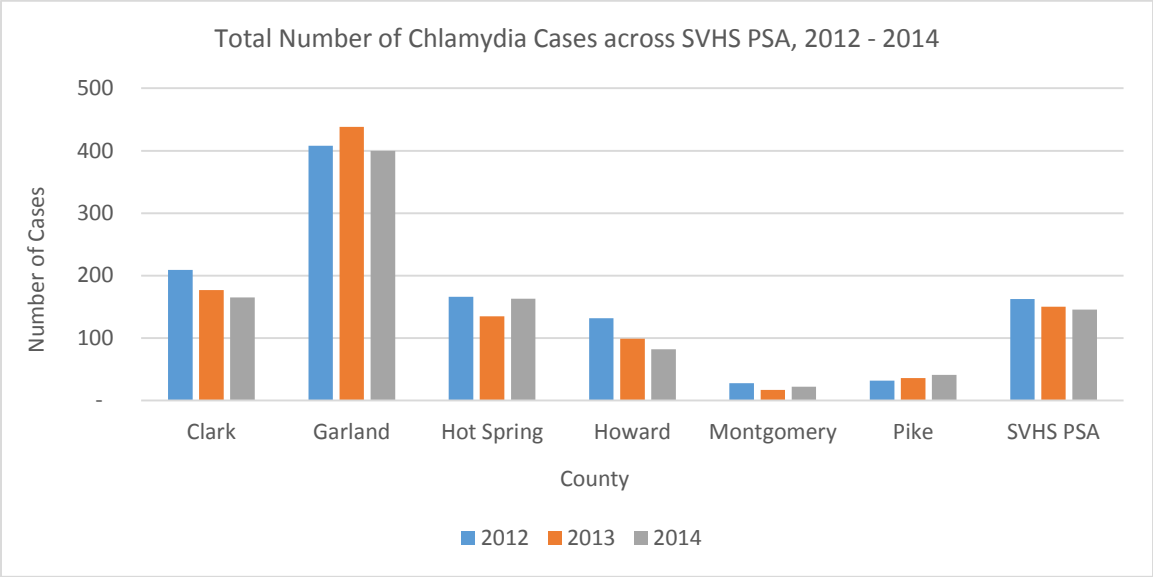


Influenza (flu) is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and at times can lead to death. [72] Pneumonia is an infection of the lungs that can be caused by viruses, bacteria and fungi. Similar to the flu, 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. [73] 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 SVHS primary service area have decreased from 25.95 deaths in 2011 to 16.47 deaths in 2014. Hot Spring County reported the highest overall mortality rate (31.96 deaths), while Howard County reported the lowest rate (5.44 deaths) in 2014. Similar to SVHS 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. White citizens across the primary service area and the state have reported higher mortality rates when compared to other races. Male citizens reported consistently higher rates when compared to the female population across the primary service area and the state. [6] 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 primary service area rates however, national mortality rates increased from 15.70 deaths in 2011 to 15.90 deaths in 2013. [7]

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

Communicable Diseases

Chlamydia

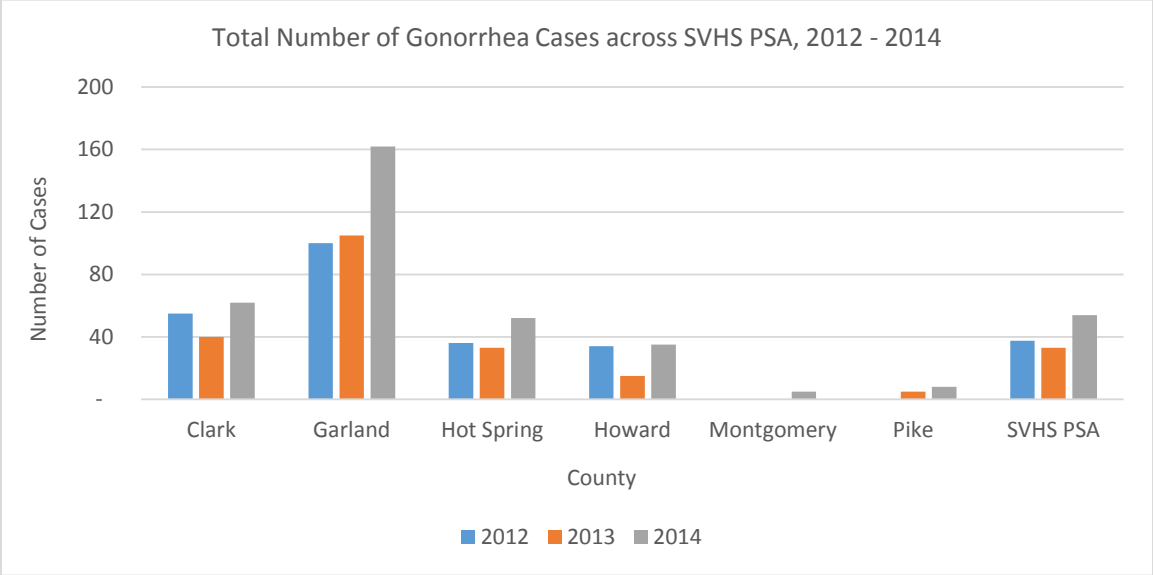


Chlamydia is a common sexually transmitted disease (STD) caused by infection with *Chlamydia trachomatis*. It is the most frequently reported bacterial STD in the United States with an estimated 2.86 million infections occurring annually. A large number of cases are not reported because most people with chlamydia are asymptomatic and do not seek testing. [74] The average number of reported chlamydia cases in the SVHS primary service area have decreased from 163 cases in 2012 to 146 cases being reported in 2014. Garland County reported the largest number of chlamydia cases (400 cases) and Montgomery County reported the lowest number (22 cases) in 2014. Similarly, the total number of chlamydia cases across the state of Arkansas have declined from 16,590 cases in 2012 to 15,428 cases in 2014. Black, Non-Hispanic citizens 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 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). [75]

[74] Chlamydia – Centers for Disease Control and Prevention

[75] 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. [76] The average number of gonorrhea cases reported in the primary service area increased from 38 cases in 2012 to 54 cases in 2014. In 2014, Garland County reported the largest number of gonorrhea cases (162 cases) and Montgomery County reported the lowest number of gonorrhea cases (5 cases). Across the state of Arkansas, the total number of gonorrhea cases have also increased from 4,279 cases reported in 2012 to 4,398 cases being reported in 2014. Black, Non-Hispanic citizens 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. 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). [40]

Syphilis

Syphilis is an STD caused by the bacterium *Treponema pallidum*. Syphilis can cause long-term complications if not adequately treated. [77] The average number of early syphilis cases across the primary service area has remained the same from 2012 to 2014. Only Garland (8 cases) reported syphilis cases in 2014. 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-Hispanic citizens across the state reported the highest number of cases each year from 2012 to 2014, when compared across other races. Males reported higher numbers when compared against the female population. While people between the ages of 25 – 34 years recorded the highest number of cases, people above the ages of 65 years reported the lowest number of cases.

[76] Gonorrhea – Centers for Disease Control and Prevention
[77] 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 over a four month period. The participants listed in the table below represent a comprehensive, balanced and diverse mix of community members and officials representing regular as well as underserved, low income, minority population 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 such as:

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 Hot Springs 2016 CHNA Interview Participants		
Organization	**Name**	**Title**
Area Agency on Aging West Central Arkansas	Sherial Bradley	Program Coordinator
Area Agency on Aging West Central Arkansas	Karen Sawyer	Case Manager
United Way of Garland County	Jane Browning	Executive Director
City of Hot Springs	Ruth Carney	Mayor
Human Trafficking Task Force of Garland County	Melissa Glenn	Chairperson
Garland County Health Unit	Janet McAdams	Administrator
CHI St. Vincent Hot Springs	Dr. Jamie Cardenas	Obstetrician, Board Member
CHI St. Vincent Hot Springs	Bart Newman	Board Chair
CHI St. Vincent Health System	Dr. Drew Kumpuris	Board Chair
City of Little Rock, CHI St. Vincent Health System	Bruce T. Moore	City Manager, Board Member
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	Program Manager

Organization	Name	Title
Sisters of Charity of Nazareth, CHI St. Vincent Health System	Sr. Trudy Foster	Board Member
Hometown Health Improvement, Arkansas Department of Health	Laura Taylor	Central Region Coordinator
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
CHI St. Vincent Hot Springs Auxiliary Volunteers	Senior Citizen Focus group (4) 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 SVHS 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 Gaps

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. It was also noted that human trafficking has been on the rise over the last three years.

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) 2010-2014 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: 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. The US numerical figure represents the figure for the Top US performers (90th percentile).
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(PSA 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 (PSA Testing) indicates the percent of adult men ages 40+ who reported not having had a PSA 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(10th 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 (10th 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 2012, 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 100,000 population.

Data Measures by Category	Source	Definition
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
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

Data Measures by Category	Source	Definition
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.
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.

Data Measures by Category	Source	Definition
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
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. United Way of Garland County created a comprehensive directory of area social, health, counseling, educational, community resources, and employment services in Garland County and surrounding counties - http://www.hsresourceguide.org/index.html

2. Clark County Community Foundation, an affiliate of the Arkansas Community Foundation, published a resource list of public and private agencies in Clark County that offers services to those in need of assistance.
   http://www.arcf.org/Portals/0/Uploads/Documents/Affiliates/ClarkCounty/Clark%20County%20Resource%20Guide_2015.pdf

3. AAA Meals on Wheels
   905 West Grand
   Hot Springs, AR 71913
   (501) 321-2811 or 1-800-467-2170
   www.seniorspecialists.org

4. Jackson House
   705 Malvern Avenue
   Hot Springs, AR 71901
   (501) 623-4048
   http://www.jacksonhouse.org/

5. United Way of Garland County
   233 Hobson Avenue
   Hot Springs, AR 71913
   http://www.unitedwaygarland.org/

6. Clark County Health Unit– Arkadelphia
   605 S. 10th Street
   Arkadelphia, AR 71923
   (870)-246-4471

7. Garland County Health Unit– Hot Springs
   125 Malvern Avenue
   Hot Springs, AR 71901
   (501) 624-3394

8. Hot Spring County Health Unit – Malvern
   2204 E. Sullenberger
   Malvern, AR 72104
   (501) 332-6972

9. Howard County Health Unit – Nashville
   201 E. Hempstead, Suite 2
   Nashville, AR 71852
   (870) 845-2208

10. Montgomery County Health Unit- Mt. Ida
    346 Luzerne Ste.
    Mt. Ida, AR 71957
    (870) 867-2331

11. Pike County Health Unit – Murfreesboro
    15 Caddo Drive
    Murfreesboro, AR 71958
    (870) 285-3154

Appendix A.

CHI St. Vincent Hot Springs 2013 Implementation Strategy

Introduction

During 2012/13, Mercy Hospital- Hot Springs engaged in a community needs assessment process.

The needs assessment process involved review of both quantitative and qualitative information to attain the full scope of our community's needs. This summary is documentation that Mercy Hospital is in compliance with IRS requirements for conducting community health needs assessments.

Description of Community

Basic Demographics

Total Population:

Total Population	7,006
Total Area in Square Miles	2.17
Persons Per Square Mile	3,234.43

Total Population, by Gender:

Gender	Total	Percent
Male	3,553	50.71%
Female	3,453	49.29%

Total Population, by Age:

Age Groups	Total	Percent
Age 0 to 17	1,580	22.55%
Age 18 to 64	4,541	64.82%
Age 65 and Up	885	12.63%

Total Population, by Race/Ethnicity:

Race / Ethnicity	Total	Percent
White	4,479	63.93%
Black	1,694	24.18%
Asian	0	0.00%
Native American / Alaska Native	12	0.17%
Native Hawaiian / Pacific Islander	0	0.00%
Some Other Race	693	9.89%
Multiple Race	128	1.83%

Vulnerable Populations

Indicators	Total	Percent
Population in Poverty	2,103	33.38%
Population with Less Than High School Education	1,401	30.74%

Data Source:

U.S. Census Bureau, 2007-2011 American Community Survey 5-Year Estimates.

Community Health Needs Assessment (CHNA)

Core Health Indicators Report

Report Options

« Start Over

SOCIAL & ECONOMIC FACTORS

Report Area: Garland County, AR

Demographics **Social & Economic Factors** **Physical Environment** **Clinical Care** **Health Behaviors**

- High School Graduation Rate

Economic and social insecurity often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community's ability to engage in healthy behaviors. Without a network of support and a safe community, families cannot thrive. Ensuring access to social and economic resources provides a foundation for a healthy community.

High School Graduation Rate

Within the report area 68.50% of students are receiving their high school diploma within four years. This is less than the Healthy People 2020 target of 82.4%. This indicator is relevant because research suggests education is one the strongest predictors of health (Freudenberg & Ruglis, 2007).

Download Data

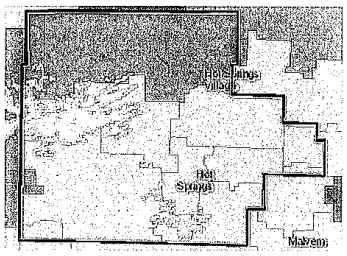
Report Area	Average Freshman Base Enrollment	Estimated Number of Diplomas Issued	On-Time Graduation Rate
Garland County, AR	1,128	772	**68.50**
Arkansas	37,912	28,057	**74**
United States	4,024,345	3,039,015	**75.50**
HP 2020 Target			**>=82.4**

Note: This indicator is compared with the Healthy People 2020 Target. Data breakout by demographic groups are not available.

Data Source: National Center for Education Statistics, NCES - Common Core of Data: 2008-09. Source geography: County.

On-Time Graduation Rate

- Garland County, AR (68.50%)
- HP 2020 Target (82.40%)
- United States (75.50%)



View larger map

On-Time Graduation, Rate by School District, 2008-09

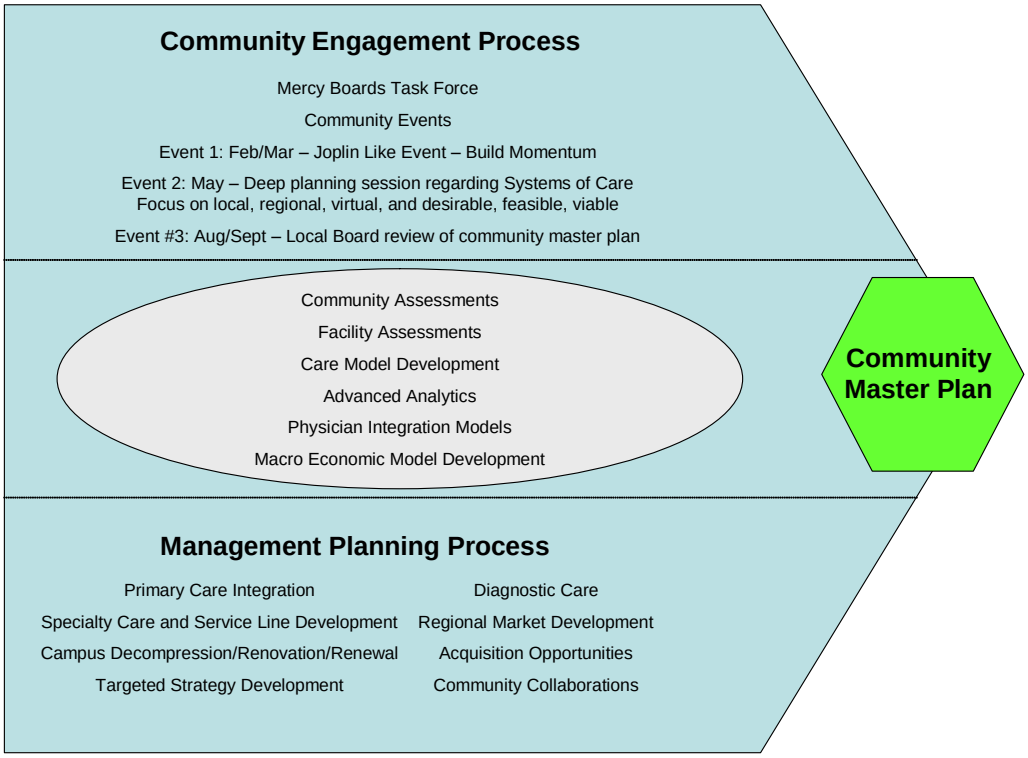
- Over 94.1%
- 85.1 - 94.0%
- 75.1 - 85.0%
- Under 75.1%
- No Data or Data Suppressed

Role of the Board of Directors

The Mercy Hospital Board of Directors reviews the plans and programs designed to meet community health needs in Mercy's service area. The Board also reviews Community Benefit expenditures on an annual basis to ensure fidelity to our strategic direction and appropriate allocation of resources to community needs. These expenditures are then reported to the community. The Board of Directors reviewed and approved this plan in November 2013.

Relationship of Community Benefits to Strategic Plan

Mercy in 2010 embarked on a systematic process of engaging the communities we serve and developing a community master plan for each community. This process is symbolized below.



Assessing Community Needs

As a part of community master planning Mercy has undertaken community meetings throughout the communities they serve. Meetings were held in Hot Springs in September 2011 in follow-up to meetings held throughout 2010. Additionally, special attention has been directed the past several years to linking Mercy's with existing and emerging community coalitions that are assessing community needs and working to address specific issues.

Mercy is a founding and funding partner, along with many other organizations, of Project HOPE, Garland County Hometown Health. This collaborative is a mobilizing force responding to differing community health needs.

In Support of this community master plan Mercy has identified eight work streams critical to meeting the community's needs. These include:

- **Campus Decompression, Renovation, and Renewal**
- **Primary Care Expansion**
- **Specialist Integration/Service Line Development**
- **Diagnostic Care Services**
- **Regional Market Development**
- **Targeted Strategy Development**
- **Acquisitions**
- **Community Collaboration**

Mercy Health System- Community Benefit Operating Principles

Key Operating Principles:

- Program development is supported by both formal and ongoing informal needs assessment involving the community.
- Program development focuses on a few priority needs with a long-term commitment to these needs.
- Mercy focuses on addressing the needs of the communities it serves with disproportionate unmet health-related needs.
- Mercy works to address the underlying causes of persistent health problems.
- Mercy will target resources to mobilize and build the capacity of existing community assets and work in partnership with the community.
- Mercy will engage community stakeholders in the selection, design, implementation, and evaluation of program activities.

Who Was Involved in Assessment

At the center of this needs assessment were the people of our community. In 2010 and again in 2011, Mercy held roundtable events to directly discuss with local community members their needs, ideas and concerns relating to health care.

Common themes included community members wanting to see greater access to high quality affordable health care services through traditional and non-traditional delivery systems, as well as more of a focus on prevention, wellness and health literacy. Also mentioned was the importance of a spirit of cooperation among health care organizations and freedom to choose healthcare provider.

Barriers sited include the physician and specialist shortages, the number of low income/families living in poverty in the region, the increase in non-English speaking patients, tort reform and lack of focus on prevention/wellness/healthy lifestyles among many.

Mercy Planning and Research provided analysis of both internal and external demographic, utilization, chronic condition and health status data. Sg2 was also engaged by Mercy as a partner to analyze current utilization and future demand for health care services. Press Ganey Associates assists Mercy on an ongoing basis in measuring and providing benchmark data on patient satisfaction of inpatients, ambulatory surgery and emergency room patients.

Co-workers of Mercy Hospital Hot Springs, along with the vice president of Mission in Hot Springs, lead our work with the community needs assessment as part of their responsibility for overseeing the Community Benefit/Community Health Program for the hospital. Community health assessment and planning is an ongoing process at Mercy. As community/public health data is released, plans and programming are adjusted.

How the Assessment Was Conducted

Our needs assessment process involved the following **five steps** to attain the full scope of our community's needs.

1. **Examine existing community health needs assessments.** The needs assessment examination process included the collection and analysis of quantitative data available in community/public health resources. Mercy staff and members of the Garland County Hometown Health Coalition examined:
    - *The County Health Rankings for 2012*
      This is a new resource that was unveiled in March 2010. It is county-level data that will be updated annually by the University of Wisconsin-Population Health Institute and the Robert Wood Johnson Foundation.
    - *Community Health Status Report – Garland County, AR. 2009*
      Communityhealth.hhs.gov. tables.
    - BRFSS- 2009 from Arkansas Department of Health:
      http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/SurveyList.aspx#g
    - Data from Mercy's Health Information Systems Department: Data from Mercy's own records was pulled and used to assess the needs of the community.
2. **Conduct roundtable discussions with community members.**
   As previously mentioned, in an effort to dialogue directly with the community and include qualitative data, input from both community individuals served by Mercy and also those with expertise in public health were invited to community roundtable meetings to share their views on the needs of their community.
3. **Analyze and summarize the data to prioritize needs.**
4. **Review community benefit activities in place.**
5. **Create an action plan in partnership with the community.**

Health Needs Identified

Analyze and summarize the data to prioritize needs (Step 3)

After careful analysis of the data collected, health needs were identified. According to the Behavioral Risk Factor Surveillance System, 66% of our adult citizens are overweight or obese. We are statistically higher than the state rates for people reporting adequate physical activity (46.1%), and less than five fruits and vegetables per day (74.7%). A higher than average number of women in our service area report not having had a screening mammogram in the past two years (41.9%). Similarly a higher than average number of

our adult residents do not have health insurance (25.5%) or access to a primary care physician (17.5%). The infant mortality rate is slightly higher than the state rate (8.8) which is still significantly higher than the national rate.

Poverty indicators for our county closely match the state average (17.7%) but according to the Area Agency on Aging there is a significantly higher percentage of elderly people living in poverty (31.44%) than the state average.

We rank higher than the state and the nation in mortality for heart disease, diabetes, chronic obstructive pulmonary disease, and stroke.

Community Assets Identified

We are fortunate that we have a very active Community Health Collaborative (CHC) named Project Hope that meets monthly to share resources and work together on community needs/issues. Since 2001 Mercy Hospital Hot Springs has been intimately involved in community health collaboration and spearheaded the original team to look at area health issues, set priorities and plans for improvement.

Mercy Hospital Hot Springs continues our deep commitment and involvement in the community health collaborative today. Multiple community health issues have been addressed over the past 10 years in this collaboration. The CHC has a strong record of improving community health in the two-county area by our collaborative initiatives that include:

Next Steps

Review community benefit activities in place (Step 4)

Using Lyon Software's CBISA tool, a review will be conducted of current community benefit activities and what Mercy was presently doing to meet the identified priorities. In addition, the community benefit activity of others in the community will be reviewed.

Create an action plan (Step 5)

In collaboration with other Mercy departments and community organizations, Mercy's community health team will create partnerships and programs based on the results of the needs assessment.

<u>Mercy Hot Springs Community Services Priorities</u>

Using needs assessment reports and input from multiple stakeholders, Mercy is focusing on these priorities:

1. Providing care across the continuum to at-risk populations especially the economically poor without insurance.
2. Expanding access to primary care for area residents especially low income residents covered by the Medicaid Program.
3. Protecting and caring for children who are vulnerable to or victims of child abuse.
4. Maintaining access to specialty care especially in the areas of emergency medicine, trauma, neurosurgical, cancer, breast cancer screening and cardiac care.
5. Improving access to health care for low-income expectant mothers.
6. Expanding access to urgent care for the uninsured.
7. Maintaining access to nutrition, transportation and socialization for the low income elderly.

8. Developing primary prevention strategies to identify health risks and conditions and implement prevention, care and treatment earlier in the cycle of illness including childhood vaccinations.

Community Services Plan for FY 2014

GOAL 1: Protect and improve the health of expectant and new mothers at risk.

Existing, continuing programs that protect and improve health for expectant mothers.

Program	Objectives	Strategies	Performance metrics
Mercy Pregnancy Clinic	Provide comprehensive pre-natal services to low-income pregnant women.	Measure progress against performance metrics re: initiation of pre-natal care, follow-up appointments, immunization rates, smoking cessation, risk behavior reduction, nutritional knowledge/behavior.	% First trimester Care % very low birth weight infants. % low birth weight infants % compliance with pre-natal appointments % compliance with tobacco cessation

GOAL 2: Improve access to healthcare

Program	Objectives	Strategies	Performance metrics
Provision of specialized services through hospital subsidies.	Ensure availability of neurosurgical, general surgery and neurology call coverage for region.	Work with existing practitioners to develop call schedules and avoid breaks in service.	# days without specialty call coverage.
Expansion of Express Care Clinic Capacity to serve all populations.	Provide a lower cost alternative to the emergency department.	Expand Express Care availability.	Decrease in number of ESI level 4&5 seen in SJMHS ED.
Mercy Medicaid Clinic Primary Care Building	Expansion of clinic to serve adult Medicaid patients in Garland and surrounding counties.	Review adult Medicaid population without a medical home. Network with area agencies to assist in finding primary care home for new Medicaid enrollees under the ACA.	Number of new patients in clinic. Number of new enrollees.

Provision of mobile mammography services.	ADH statistics indicate that access to Mammography services outside metropolitan areas reduces the likelihood of women receiving effective screening and treatment.	Utilize new mobile mammography bus to serve Mercy's service area and expand southwest to Polk County.	Number of women receiving mammograms as recommended by screening guidelines. Number of women with household income below $50,000 receiving mammograms.
Provision of mobile mammography services.	ADH statistics indicate that access to Mammography services outside metropolitan areas reduces the likelihood of women receiving effective screening and treatment.	Utilize new mobile mammography bus to serve Mercy's service area and expand southwest to Polk County.	Number of women receiving mammograms as recommended by screening guidelines. Number of women with household income below $50,000 receiving mammograms.
Trauma Services	Continued development and enhancement of a Level II Trauma Center to serve South Central Arkansas	• Providing protocols by which trauma care is delivered, including activating the trauma team before patient arrival to the hospital when appropriate. • Minimizing, if not eliminating, patient delays caused by searching for the facility who can provide the needed level of care. Services will be coordinated for the entire state, and field EMS will have this information real time.	# of staff trained in ATLS Establishment of on-call trauma specialties. # of trauma protocols developed.

Goal 3: Enhanced care for children at-risk

Existing, continuing programs that provide preventive services

Program	Objectives	Strategies	Performance metrics
Mercy Child Advocacy Center	Improve care to child victims of abuse. Reduce unintentional trauma to children through a comprehensive approach to abuse detection, investigation and prosecution.	Maintain competent forensic interviewers and medical professionals. Maintain advocate program. Provide education to law enforcement mandatory reporters and others. Provide childhood child-abuse prevention information at community events.	Secure funding for additional advocate. # Of children seen in CAC. # Of convictions. # Of contacts post assault.

New initiatives to provide preventive healthcare for expectant mothers, children and adolescents

Program	Objective	Strategies	Performance metrics
Mercy Child Advocacy Program	Expand advocate program to ensure greater follow-up with victims of abuse.	Child Advocate conduct or participate in 4 programs to educate school personnel, daycare workers and therapists in child advocacy center functions and services, mandated reporting, signs and symptoms of abuse, and child sexual abuse dynamics. Child Advocate to attend 80% of Multi-Disciplinary Meetings in a 12 month cycle. Multi-Disciplinary Team.	# Of personnel receiving training. # Of children receiving training. % of meetings attended % of contacts made.
Mercy Child Advocacy Center	Extend services to western service area.	Open satellite center in Polk County	# Of children seen in new satellite.

Breastfeeding is a documented method to improve newborn health and decrease early infancy disease and complications.	Improve breastfeeding percentage one month post-delivery to greater than 55% (42% baseline)	Hospital mother/baby unit education program. Lactation consultant. Mercy Pregnancy Clinic follow-up with M.D.	Percentage of women breastfeeding only while hospitalized >50%

GOAL 4: Maintaining access to nutrition, transportation and socialization for the low income elderly in the face of ongoing budget cuts.

Program	Objectives	Strategies	Performance metrics
Mercy Senior Services	Senior poverty and hunger continues to be a major challenge in our service area. Maintain meal levels for at-risk seniors in the light of sequestration and budget cuts.	Aggressively manage food costs through contract pricing. Aggressively manage other operating expenses to ensure available funding directly impact the greatest number of meals served. Partner with Oaklawn Center on Aging to receive federal reimbursement for education programs which qualify.	Secure additional philanthropy funding for senior services. # Of adults receiving MOWs. # Of adults at congregate meal. Increase in funding via Oaklawn partnership.

CHI St. Vincent Hot Springs Implementation Update

SVHS Implementation Plans:

The Hot Springs CHNA was developed in 2013 under the auspices of Mercy Health.[78] It identified several priority areas which the hospital addressed in its community health planning and execution.

1. Senior Hunger- Arkansas ranks #1 in the country in Senior Hunger. This is a negative ranking with food insecurity for senior citizens being a serious public health issue. In the counties served by the hospital senior hunger was identified as an issue in the CHNA. The hospital addresses this problem through its operation and funding of two senior centers and its operation of the meals on wheels programs in Garland County. Through direct subsidy and in-kind donation the hospital addresses low income senior who suffer from food insecurity.

2. Motor vehicle crash rates. Arkansas has one of the least developed trauma programs in the US. Motor vehicle crash death rates were identified in the hospital's CHNA as a priority area. The hospital maintains the only Level II trauma program which serves all of south central Arkansas at

[78] There were no written comments received on the 2013 CHI St. Vincent Hot Springs CHNA.

considerable expense as a money losing entity. The trauma program includes not only direct care for trauma victims but additionally public education and the education of health professionals.

3. Uninsured- The hospital's service area has a high rate of uninsured individuals. The hospital addresses this through its outreach to the uninsured population. Its partnership with the Charitable Christian Clinic to provide no-cost lab, radiology and ancillary services to the uninsured and for the provision of specialty surgical services in collaboration with our physician clinics.

5. Screening mammography/Breast Cancer- High incidence of breast cancer and the lack of screening mammography in our rural areas was identified in the hospitals CHNA. The hospital operates the only mobile mammography unit servicing south central Arkansas which reaches into communities all around the state. The mobile unit provides no cost mammograms to low income woman in collaboration with Ark Breast Care, the Komen Foundation and other support.

6. 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.

7. Diabetes screening: Likewise diabetes screening and education was identified in our CHNA and addressed through our heart and diabetes center and outreach efforts.

<u>Areas identified on the CHNA that were not addressed.</u>

Obesity - Obesity is a significant problem throughout Arkansas and is identified in our CHNA. The problem is being addressed by several community groups: YMCA, Arkansas Department of Health, Project Hope. The hospital collaborates with these groups but takes a secondary role.

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 – This was not addressed due to lack of resources.