Public Health
Prevent.Promote.Protect.

Webster County, MO
Community Health Assessment
2018

The Community Health Assessment is a vital part of a community health improvement process. Data gathered serves as the foundation for analyzing and identifying community health issues and determining where the community stands in relation to peer communities, state data, and national data. Data collected during this process also serves as a guideline for determining the goals and strategies to include in the department's Strategic Plan.

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Community Health Assessment
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Introduction: What is a Community Health Assessment?

The Community Health Assessment is completed after gathering local, state, and national data about certain characteristics of the people living in the community. Such statistics give information about the population, socioeconomic status, health care resources, behavioral risk factors, environmental health indicators, social and mental health, maternal and child health, death, illnesses, injuries, infectious diseases, and sentinel events. Through this process, the community members gain an understanding of the health, concerns, and health care systems of the community by identifying, collecting, analyzing, and disseminating information on community assets, strengths, resources, and needs. A community health assessment usually culminates in a report, or a presentation, information about the health of the community as it is today, and about the community's capacity to improve the lives of residents. A thorough assessment involves scanning existing information about the community, developing a family focus, identifying community assets and their accessibility, and analyzing information. Assessments should view the community from multiple perspectives and recognize cultural, linguistic, ethnic, and economic diversity.

The Webster County Health Unit will utilize this community assessment to assess and generate awareness of the issues being studied, and to implement a Strategic Plan for the department and a Community Health Improvement Plan for the county. A successful community health assessment provides comprehensive, usable and accurate information for decision-making. Community assessments that result in this information begin with an assessment of the current situation. The current capacities of the community – services and other resources provided by local agencies, institutions and associations, and the skills and abilities of individual children and youth, and their families are identified. Information on needs is collected through data that already exists (secondary data) and through newly collected data, also known as primary data. The gap between current capacities and needs is identified and ideas on how to eliminate the gap can be generated. Successful community assessments also begin with a vision of the future and allow questions to drive the information gathering process. Finally, community assessments that result in useful, comprehensive information address issues that stakeholders – people with an interest in the issue such as parents, students, agency personnel, and government officials – perceived as important. A community health assessment can provide the basis for discussion and action to influence a change in the healthy behaviors of a community.

Mission, Vision, Values Statements

Mission:

We are committed to improving the health and well-being of our residents through education, preparedness, care, and prevention. Three core values that guide our agency are integrity, compassion, and professional excellence.

Vision:

The Webster County Health Unit will be considered a model LPHA in Missouri by implementing and maintaining evidence based public health practices to enhance health education and patterns in our county.

Values:

Preserving, protecting, and promoting public health in our community.

Health Priorities

After analyzing the data presented from the Community Health Assessment, the Webster County Health Unit identified four (4) Health Priorities. These priorities were deemed to be High Priority/Low Status, meaning that they are major concerns in the community and there is currently minimal progress toward improvement of those issues.

The Health Priorities are also considered to be Strategic Issues: fundamental policy changes or critical health challenges that must be addressed in order for a community to achieve its vision.

Four Health Priorities:

1. Mental Health
2. Chronic Disease Prevention and Management
3. Nutrition Education
4. Public Health Infrastructure

Strategic Priorities:

Mental Health	Chronic Disease Prevention and Management
Substance Abuse - Youth Child Abuse	Physical Activity Overweight/Obesity Deterra Drug Disposal Kits
Nutrition Education	**Public Health Infrastructure**
Children Adults Feeding Programs	Collaboration Exposure/Marketing Sustainability Poverty/Housing

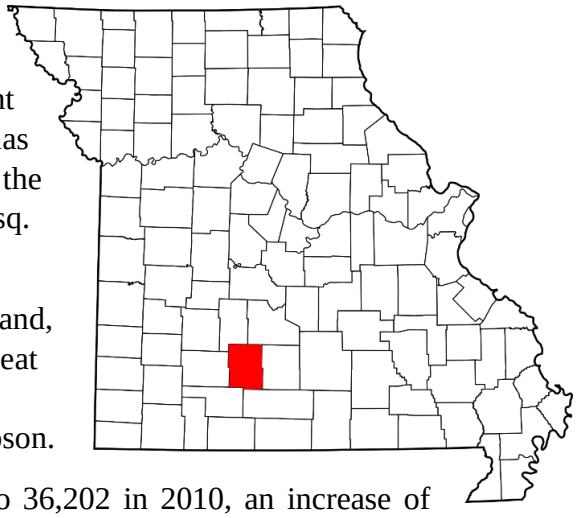
Source: Webster County Health Unit, 2018

Community Health Assessment

Chapter 1: Demographics of Webster County Residents

Location

Webster County is located in the southern part of Missouri. The county is bordered by Greene County to the west, Wright County to the east, Christian County to the southwest, Douglas County to the southeast, and Dallas and Laclede Counties to the north. The county covers 594 sq. miles, which includes 593 sq. miles land and 1.2 sq. miles water.



Incorporated communities include villages of Diggins, Fordland, Marshfield, Rogersville, Seymour, and Niangua. Its county seat is Marshfield. In addition, some of the unincorporated communities include Elkland, Redtop, Northview, and Sampson.

Webster County's population grew from 31,045 in 2000 to 36,202 in 2010, an increase of over 13 percent. There was a slight decrease in unincorporated population of Webster County from 66% to 64% from 2000 to 2010. The current population is 38,106.

Table 1.1 is a review of population estimates and projections from 1990 – 2025 in Webster County. There has only been a slight increase in the last ten years; however, with a recent spike in population growth in Rogersville and Marshfield, projections show a much larger increase in the next ten years. A recent study for Rogersville suggests a 50% increase in the next two years.

Table 1.1: Population Estimates and Projections for Webster County, 1990-2025

Webster County Population Estimates and Projection, 1990-2025							
Year	1990	2000	2004	2005	2015	2018	2025
Webster Co.	23,753	31,045	33,394	34,145	37,526	38,106	49,675
Missouri	5,117,073	5,595,211	5,754,618	5,800,310	6,077,000	6,158,244	6,580,868

Source: U.S. Census Bureau, 2010, https://oa.mo.gov/budget-planning/demographic-information/population-projections/2000-2030-projections

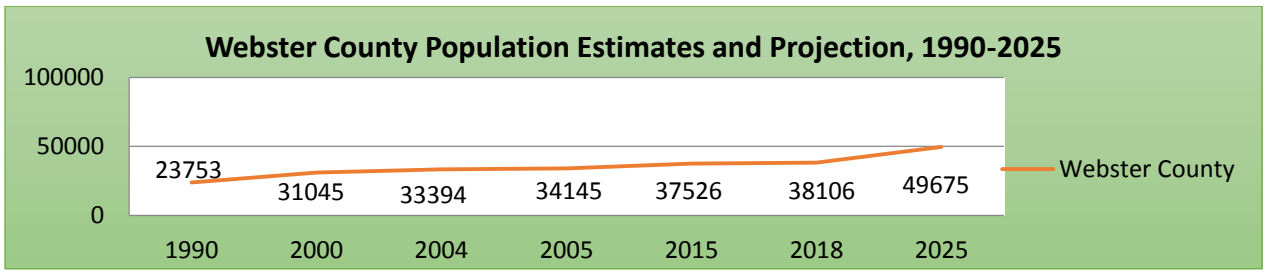


Figure 1.1: Population Estimates and Projections for Webster County, 1990-2025

Source: U.S. Census Bureau, 2010, https://oa.mo.gov/budget-planning/demographic-information/population-projections/2000-2030-projections

Figure 1.1 provides a visual look at the population growth in Webster County. In 2000, growth levels off with a slight increase over the following 15 years. The last few years have shown a higher increase in population growth. By 2025, it is expected that Webster County's population will have doubled since 1990.

The youth under 20 years represent over 29% of the total population in Webster County. The median age of the population is 37.4 years. The three largest cohorts are the 25 – 34, 35 – 44, and the 45 – 54 age groups. The retirement age of the population 65 and over constitutes 15% of the population.

Table 1.2: Webster County Age Specific Population, 2013 to 2017

Age Cohort	Population	Percent of Total
Under 5	2,700	7.2
5 to 9	2,950	7.9
10 to 14	2,825	7.5
15 to 19	2,694	7.2
20 to 24	2,034	5.4
25 to 34	4,310	11.5
35 to 44	4,528	12.1
45 to 54	5,245	14.0
55 to 59	2,716	7.2
60 to 64	1,948	5.2
65 to 74	3,262	8.7
75 to 84	1,753	4.7
85+	593	1.6
Total	37,558	100

Source: American Community Survey 5-Year Estimates 2013 – 2017

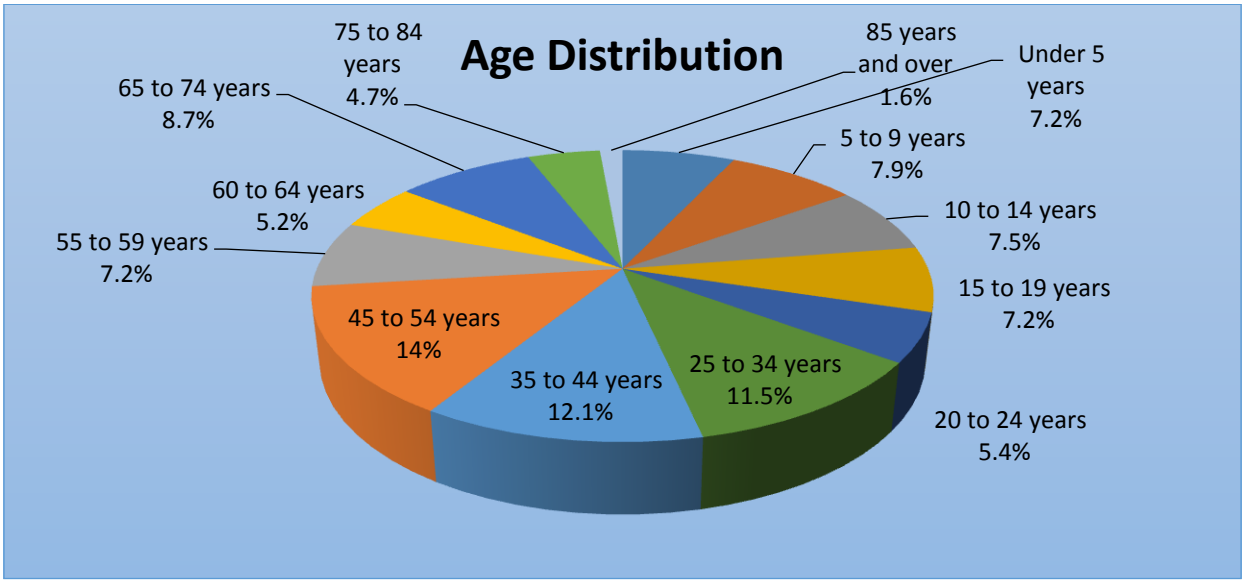


Figure 1.2: Age Distribution of Webster County, MO
Source: American Community Survey 5-Year Estimates 2013 – 2017

Table 1.3 is a review of the reported populations in Webster County and no significant change in population distribution for any gender was seen.

Table 1.3: Population Estimate Trends for Webster County by Gender, 2006-2016

Population Estimate for Webster County by Gender, 2006-2016											
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Male	17,569	17,939	18,166	18,197	18,298	18,360	18,408	18,559	18,769	19,069	19,413
Female	17,123	17,538	17,772	17,800	17,904	17,942	17,926	17,943	18,119	18,414	18,693
Total for selection	34,692	35,477	35,938	35,997	36,202	36,302	36,334	36,502	36,888	37,483	38,106

Source: DHSS - MOPHIMS - Population MICA

Table 1.4 contains information for dependent age groups median ages of the entire county and its incorporated communities. Of the municipalities in Webster County, Rogersville has the largest percentage of population under the age 18 followed by Fordland, Marshfield, Seymour, Diggins Village, and Niangua. Niangua city has largest percentage of population from 18 to 64 years. Seymour has greatest percentage of ages 65 and over followed by Marshfield and Niangua.

Table 1.4: Webster County and Municipalities, Population by Age, 2010

Jurisdiction	Total Population	Percent Under 18	Percent 18 - 64	Percent 65 and over	Median Age
Diggins	299	26.1	39.2	10.4	41.1
Fordland	800	28.6	58.4	13.0	34.2
Marshfield	6,633	27.6	54.7	17.7	36.4
Niangua	405	23.2	59.2	17.5	41.4
Rogersville	2,792	33.1	57.7	9.1	29.8
Seymour	1,921	26.7	55.3	18.1	39.2
Webster County	36,202	27.7		13.1	37.5

Source: U.S. Bureau of the Census, Summary File 1, Census 2010

Table 1.5 contains information of Race and Hispanic population percentages of the entire county as well as its incorporated areas. Webster County's population is primarily white with minorities totaling 5.4% of the total population. Hispanics account for 1.7% of the total population and has continued to increase mainly in the southern part of the county.

Table 1.5: Race and Hispanic Population Percentages, 2010

Jurisdiction	White	Black or African American	American Indian and Alaska Native	Asian	Hawaiian and Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino (any race)
Webster County	96.3	0.9	0.7	0.2	0.0	0.4	1.5	1.7
Diggins	97.7	0.3	0.0	0.0	0.0	0.7	1.3	1.0
Fordland	96.3	0.4	1.0	0.1	0.0	0.5	1.8	3.1
Marshfield	96.5	0.4	0.8	0.2	0.0	0.5	1.7	1.7
Niangua	97.3	0.5	1.5	0.2	0.0	0.2	0.2	1.7
Rogersville	95.2	0.3	0.8	0.5	0.0	0.5	2.7	3.4
Seymour	95.5	0.3	1.0	0.3	0.1	0.7	2.1	2.8

Source: *U.S. Bureau of the Census. 2010 Census: 2010 Demographic Profile Data*

Household Characteristics

In Table 1.6, the total households have increased from 11,073 in 2000 to 13,062 in 2010. The majority for the households are family households, about 75%. However, traditional family households of married couples with children under 18 represents a little over 50%. The average household size of the population of Webster County is 2.70 and average family size of the population is 3.14. Non-family households represent 25% of the population.

Table 1.6: Household Characteristics, 2010

Household Characteristics, 2010	
Total Households	13,062
Total Families	9,785
Married Couple w/children under 18	7,904
Single Parent w/children under 18	1,150
Non-Family Households	3,277
Single Person Household	2,771
Average Household Size	2.70

Source: U.S. Bureau of the Census, American Community Survey 2011-2015

Chapter 2: Socio-Economic Characteristics of Webster County

Educational Attainment

The educational attainment of Webster County population has slightly increased from 2010 to 2015. Table 2.1 indicates that 85.7% of age 25 years and older graduated high school or higher compared to 82.9% in 2010. Also 10.1% of the county's population has a bachelor's degree, compared to 9.2% in 2010.

Table 2.1: Educational Attainment, Population 25 Years and Older, 2015

Less Than 9th grade	1,404	5.9
9-12th grade, no diploma	1,998	8.4
High school graduate	9,653	40.5
Some college, no degree	5,100	21.4
Assoc. degree	1,924	8.1
Bachelor's Degree	2,417	10.1
Graduate or Prof. degree	1,347	5.6
% high school graduate or higher	-	85.7
% BA/BS degree or higher	-	15.8

Source: U.S. Bureau of the Census, American Community Survey 2011-2015

Educational attainment for persons age 25 years of age and older is higher in Webster County than in the state except for Bachelor's and graduate degrees. Figure 2.1 shows each level of education and the corresponding percentages of the population for both the state and Webster County for the year 2015.

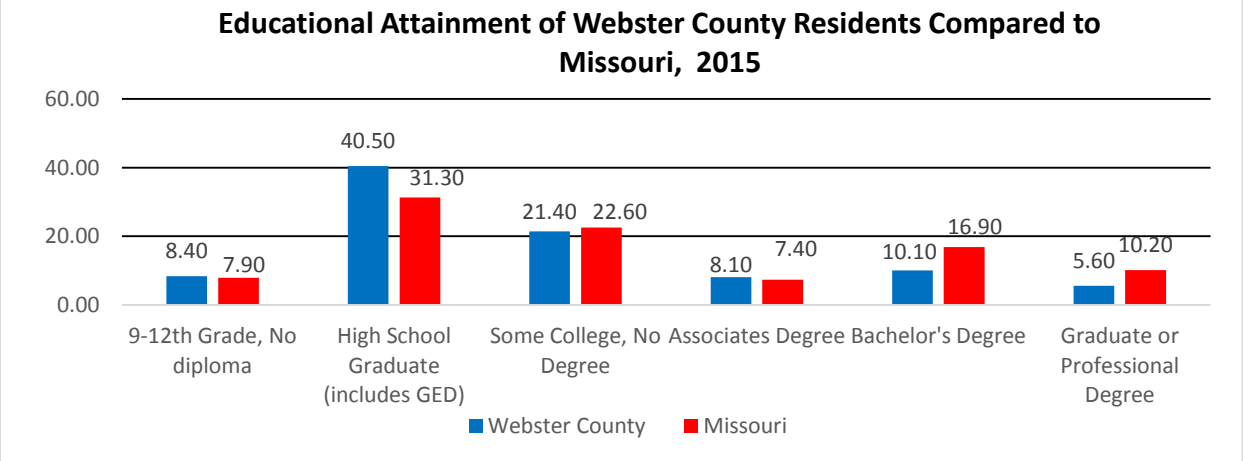


Figure 2.1: Educational Attainment Percentages of Webster County Residents, Age 25 and Over, Compared to Missouri Residents, 2015

Source: U.S. Bureau of the Census, 2015 American Community Survey

Webster County females have higher levels of educational attainment in Associates Degree, Bachelor's Degree and graduate or professional degree. However, males represent higher levels of educational attainment in 9 – 12th grades. Figure 2.2 shows each level of education and the corresponding percentages of the population separated by Webster County males and Webster County females.

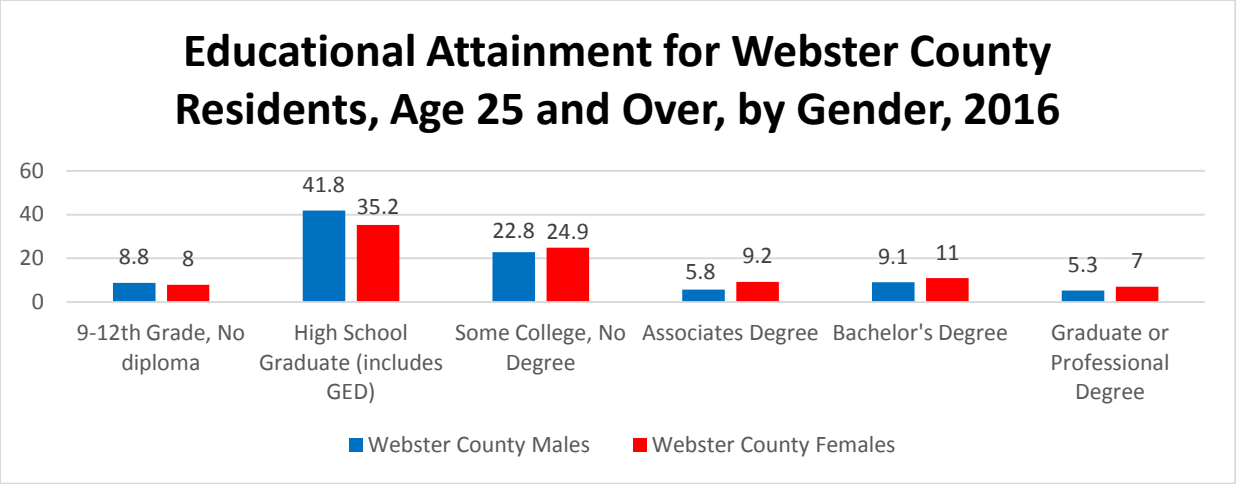


Figure 2.2: Educational Attainment for Webster County Residents, Age 25 and Over, by Gender, 2016
Source: U.S. Bureau of the Census, 2016 American Community Survey

Income Characteristics

Webster County's five-year estimates of 2012-2016 median household income estimate was $44,814, which is slightly lower than the state at $48,173 and then the nation at $53,889. The per capita income of Webster County in 2016 is $20,424. Approximately 25.5% of the population makes less than $25,000 in year 2015 and 51.5% of the population is accumulated in $25,000 to $75,000. Less than 4% of the population makes more than $150,000.

Table 2.2: Webster County Income, 2012-2016

Income	Number of Households	Percent of Total
Less than $10,000	864	6.6
$10,000 to $14,999	849	6.5
$15,000 to $24,999	1,630	12.4
$25,000 to $34,999	1,680	12.8
$35,000 to $49,999	2,256	17.2
$50,000 to $74,999	2,518	19.2
$75,000 to $99,999	1,509	11.5
$100,000 to $149,999	1,386	10.6
$150,000 to $199,999	257	2.0
$200,000 or more	173	1.3
Total	13,122	100
Median Household Income	44,814	-
Per Capita Income	20,424	-

Source: Missouri Census Data Center, ACS Profile Report 2012-2016

Table 2.3 shows about the median household income of the Webster County population by age. The median household income of population age less than 25 years is greater than the median household income of the state and nation. The table shows that median household income of the population age greater than 25 is less than the state and the nation.

Table 2.3: Median Household Income by Age

Age	Webster County	MO	U.S.
Less than 25	$32,500	$23,579	$25,788
25 to 44	$50,800	$53,109	$58,398
45 to 64	$50,861	$57,978	$65,027
65 or over	$32,702	$34,776	$37,945

Source: USA.com

Poverty & Food Disparity

Table 2.4 shows the unemployment rates of Webster County for the year 2016 – 2018. Webster County's unemployment rate has decreased from 4.9% in 2016 to 3.1% in 2018.

Table 2.4: Unemployment Rates in Webster County, 2016-2018

	Labor Force	Employed	Unemployed	Rate
2018	16,821	16,307	514	3.1
2017	16,764	16,118	646	3.9
2016	16,938	16,103	835	4.9

Source: Missouri Economic Research and Information Center, 2018

Table 2.5 shows the comparison of the poverty level by age in Webster County versus the state.

Table 2.5: Percent of Persons below Poverty Level by Age–Webster County

	≤18 Years	18-64 Years	>65 Years
Webster	25.7	17.3	11.3
Missouri	21.1	14.7	8.9

Source: U.S. Bureau of the Census, 2012-2016 American Community Survey

Table 2.6 compares the percentages of population and families in poverty in Webster County to the state and nation. The Webster County poverty rate is higher than state and national rates.

Table 2.6: Poverty Comparison Percentages

Unit Size	Webster County	MO	U.S.
Population in Poverty	16.47 (5,848)	15.60	15.59
Families in Poverty	10.64 (1,005)	11.14	11.47

Source: USA.Com – Based on 2010-2014 data

Table 2.7 shows poverty levels in Webster County municipalities. Niangua has the highest levels of poverty in Webster County followed by Seymour and Conway. Fordland and Marshfield rates are also higher than the state and national rates.

Table 2.7: Poverty Levels in Webster County 2015 (2011-2015)

Municipality	Rate	Municipality	Rate
Niangua	27.5	Rogersville	11.3
Seymour	25	Conway	24.3
Fordland	17.3	Fair Grove	9.4
Marshfield	16.1	Strafford	8.5

Table 2.8 shows the percentage of students in Webster County that are on free or reduced lunch. Niangua and Seymour see the largest number of students on free or reduced lunches with numbers reaching 70% of students receiving assistance. Some Fordland and Marshfield schools also have numbers reaching near 60% on assistance.

Table 2.8: Number of Students on Free or Reduced Lunch

School	# of Students	# Free/ Reduced	Percentage
Marshfield High School	979	416	42.49
Marshfield Jr. High	697	360	51.65
Hubble Elementary	581	280	48.19
Webster Elementary	424	212	50.00
Shook Elementary	458	243	53.06
Marshfield Total	**3139**	**1511**	**48.1**
Fordland High School	159	70	44.03
Fordland Middle School	129	64	49.61
Fordland Elementary	249	140	56.22
Fordland Total	**537**	**274**	**51.02**
Niangua High School	81	38	46.91
Niangua Middle School	76	52	68.42
Niangua Elementary	194	136	70.10
Niangua Total	**351**	**226**	**64.40**
Rogersville High School	717	181	25.24
Rogersville Middle School	350	106	30.29
Rogersville Primary	297	111	37.37
Rogersville Elementary	337	127	37.69
Rogersville Upper Ele.	539	206	38.22
Rogersville Total	**2240**	**731**	**32.63**
Seymour High School	180	92	51.11
Seymour Middle School	166	102	61.45
Seymour Elementary	320	221	69.06
Seymour Total	**666**	**415**	**62.3**
County Total	**6933**	**3157**	**45.54**

Source: Missouri Department of Elementary and Secondary Education, 2018-2019

Data on Table 2.9 comes from the Missouri Food Atlas and shows a comparison between the food security needs in Webster County as compared to the performance in reducing disparity. Food uncertainty is higher for those under the age of 18 as compared to the rest of the population in the county and state; however, fewer of those 18 and under are income eligible for the SNAP program. Income eligibility for WIC shows a greater disparity in Webster County as compared to the state.

Table 2.9: Food Insecurity in Webster County

Need Indicators

Food Uncertainty	County	State
% Individuals Food Uncertain	15.6	16.4
% Individuals <18 Uncertain	24.5	20.9
% Individuals w/ hunger	7.3	7.7
SNAP/ Food Stamps		
% Total Income Eligible	37.5	29.0
% <18 Income Eligible	36.7	28.0
National School Lunch Program		
% Students Eligible	56.9	50.3
WIC		
% <5 Years Income Eligible	62.5	46.4

Source: Missouri Hunger Atlas 2016

Performance Indicators

SNAP/Food Stamps Participation	County	State
# of Monthly Participants	4,801	815,575
% Total Population	13.2	14.3
% Income Eligible	35.3	46.8
# of Monthly Participants <18	2,106	353,540
% Population <18	21.0	25.0
National School Lunch Program		
% Eligible and Participating	74.4	78.4
WIC Participation		
# of Monthly Participation	824	139,147
# of Monthly Infants/Children	613	103,380
% <5 Eligible & Participating	38.7	59.7
Food Bank Distribution		
Total Pounds in County	589,173	116,851,067
Lbs. Per Capita Below 100% Poverty Level	93	120

Chapter 3: Healthcare Access

Figure 3.1 shows the uninsured rates in Webster County. Rates show a gradual decline from 2015 – 2017. Approximately 17% of the population in Webster County was uninsured in 2017.

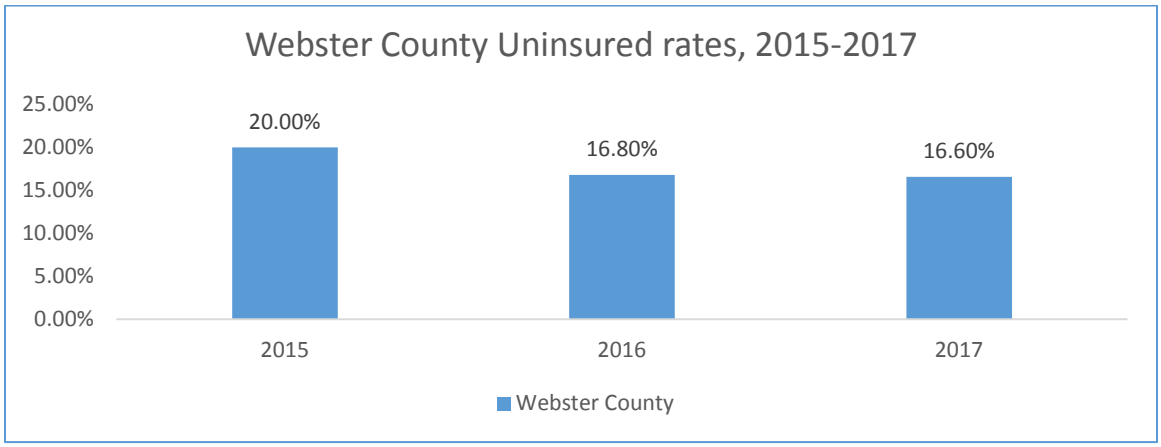


Figure 3.1: Uninsured Rates in Webster County
Source: U.S. Census Bureau, 2013 – 2017 American Community Survey 5-year Estimates

Figure 3.2 shows the percentage of women aged 18 – 44 who are uninsured in Webster County. The percentage of uninsured women is greater in Webster County than the state.

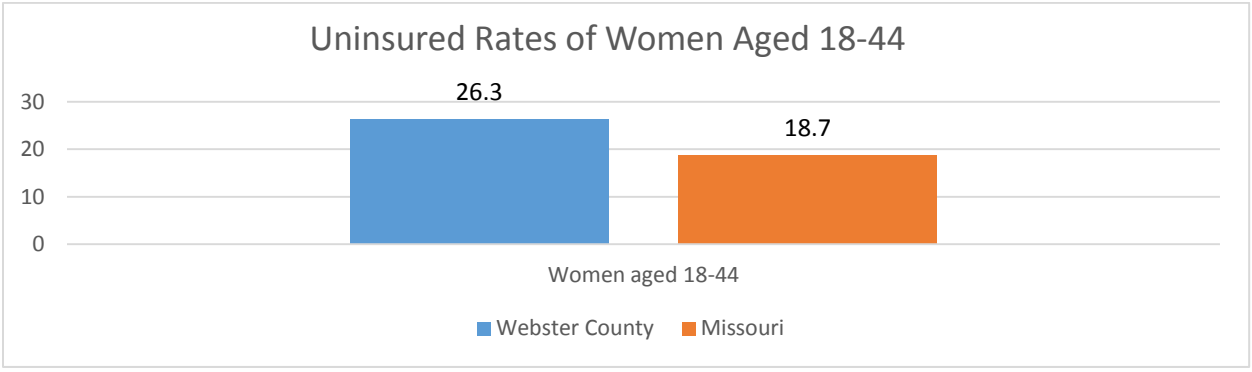


Figure 3.2: Percentage of Women Aged 18-44 Who Are Uninsured 2011-2015
Source: U.S. Census Bureau, 2011 – 2015 American Community Survey 5-year Estimates

Dental Health

Figure 3.3 shows about the Missouri's Dentist shortage. Webster County does show only 1 – 14 reported dentists in the county.

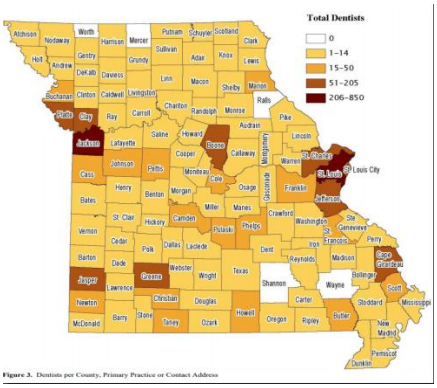


Figure 3.3: Missouri's Total Number of Dentists

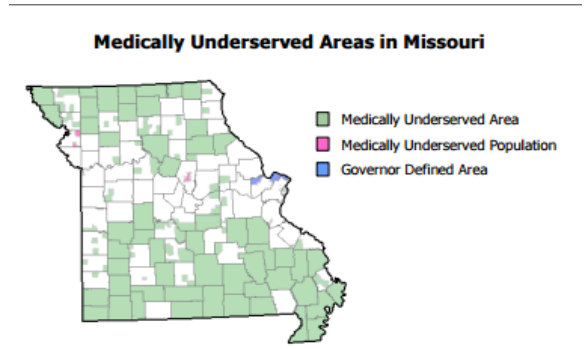
Health Care Services

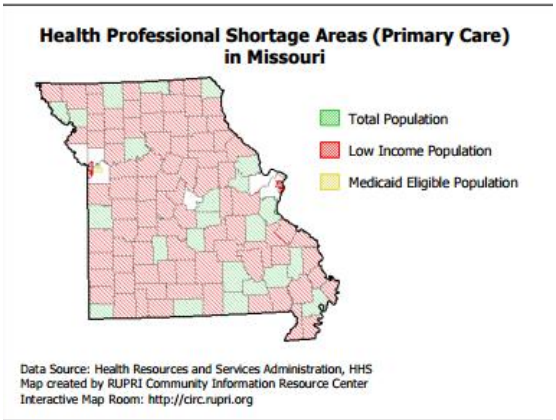
The designation of areas or populations as medically underserved is based on an index of four variables: the ratio of primary medical care physicians per 1,000 population, the infant mortality rate, the percent of the population with incomes below the poverty level, and the percent of the population age 65 and over (Health Resources and Services Administration, HRSA). Within Missouri, several areas in the northern and southern portions of the state are considered medically underserved as shown in the map on the following page.

Health Professional Shortage Areas (HPSAs) are those areas that "have shortages of primary medical care, dental or mental health providers and may be urban or rural areas, population groups, or medical or other public facilities" (Health Resources and Services Administration, HHS). Within Missouri, many areas of the state are designated as primary care HPSAs for the total or low-income populations.

Medically Underserved Areas (MUA) in Missouri are based on the population per medical provider. To be considered an MUA, the variance must be larger than 3500:1. HPSAs are based on three categories: total population, low income population, and Medicaid eligible population. Webster County is considered in the shortage area based on the level of Low Income Population.

Table 3.1 shows the grading scale used by the HRSA. HRSA is the official organization providing this designation. Webster County is in a Primary





Care Health Professional Shortage Area (score 16) and a Dental Health Care Professional Shortage Area (score 18). Webster County is not in a Mental Health Professional Shortage Area.

Table 3.1: **Health Resources and Services Administration Designation**

In a Primary Healthcare Shortage Area: Yes	
Primary Healthcare HPSA Name	Low Income - Webster County
Primary Care HPSA ID	1,292,815,947
Primary Care HPSA Status	Designated
Primary Care HPSA Score	16
Primary Care HPSA Designation Date	03/05/2010
Primary Care HPSA Designation Last Update Date	09/20/2017
In a Dental Health Care Shortage Area: Yes	
Dental Health HPSA Name	Low Income – Webster County
Dental Health HPSA ID	6,298,681,164
Dental Health HPSA Status	Designated
Dental Health HPSA Score	18
Dental Health HPSA Designation Date	03/05/2009
Dental Health HPSA Designation Last Update Date	03/08/2017
In a Mental Health Professional Shortage Areas: No	

Chapter 4: Behavioral Risk Factors

Figure 4.1 indicates the percentages of behavioral risk factors of the Webster County residents. The prevalence of risk factors was not significant compared with the state. The obesity rate is about 36%, which signifies the increased risk for obesity. About 33% of the residents of Webster County have no leisure time for physical activity. The obesity and smoking prevalence rates are less than the state.

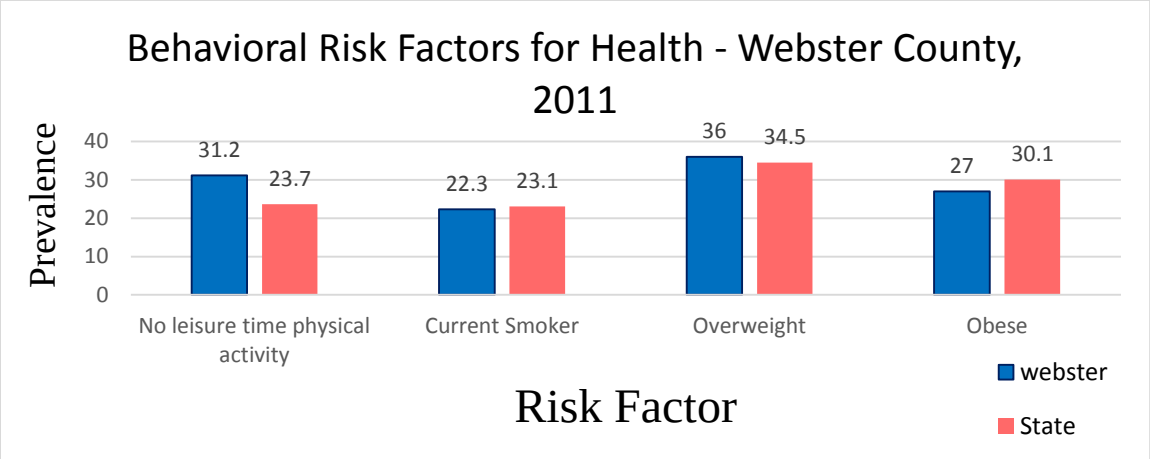


Figure 4.1: Behavioral Risk Factors for Health, 2011
Source: Missouri Department of Health and Senior Services, 2011

Figure 4.2 shows the comparison of the behavioral risk factors for Webster County with that of the state and the southwest region including the risk factors of poor health, insurance coverage, high blood pressure, high cholesterol, and activity limitation. Webster County highly exceeds both state and southwest region in high cholesterol and fair or poor health status. The prevalence of high blood pressure in Webster County residents is less when compared to state and the southwest region.

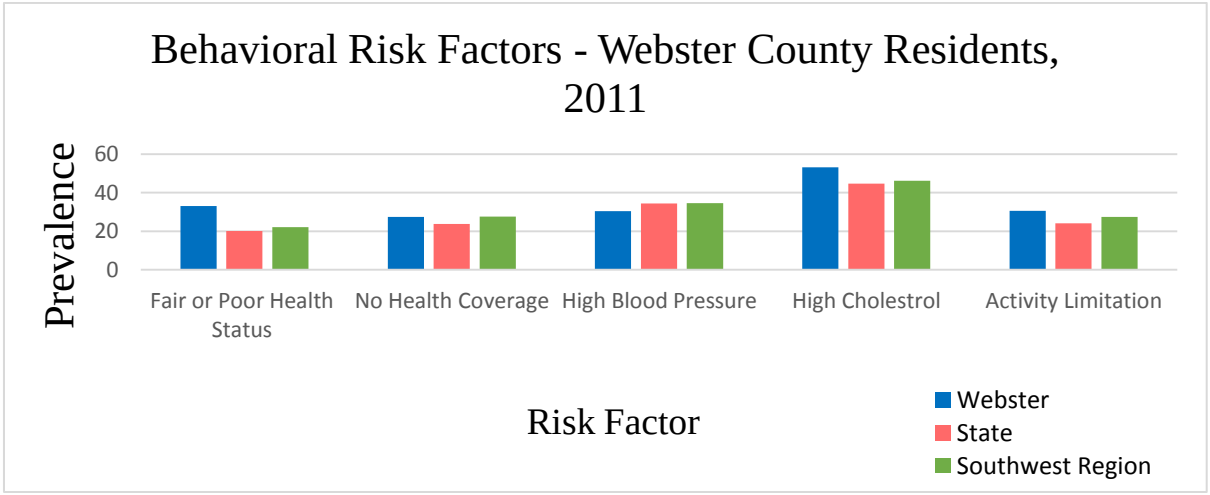


Figure 4.2: Behavioral Risk Factors, Compared to Region, 2011
Source: Missouri Department of Health and Senior Services, 2011

Table 4.1 shows the utilization of screening tests among men and women in Webster County. In 2011, 26.3% women reported that they never had a mammogram before and 11.2% of women older than 18 reported that they never had a pap smear. These rates are higher than the region and the state.

Table 4.1: Screening Test and Utilization

Prevalence Percentage of Screening Test and Utilization – Webster County, 2011			
	Webster	**Southwest Region**	**State**
Women			
Never had a Mammogram	26.30%	12.3%	9.9
No Mammogram or Clinical Breast Exam In the Last Year: 40 and older	34.40%	33.3%	30.5
Never Had a Pap Smear 18 and older	11.20%	8.4%	7.5
No Pap Smear Last 3 Years	31.80%	32.5%	26.4
Men and Women			
Never Had a Blood Stool Test	59.70%	58.8%	66.1
No Blood Stool Test Last Year	95.80%	87.4%	90.4
Never had Sigmoidoscopy/Colonoscopy	39.20%	39.3%	33.8
None in Last Ten Years	41.00%	43.9%	38.0

Source: Missouri Department of Health and Senior Services, 2011

Chapter 5: Mental and Social Health

Mental Health
Individuals struggling with serious mental illness are at higher risk for homicide, suicide, and accidents as well as chronic conditions including cardiovascular, respiratory diseases, and substance use disorders.

A total of 300 individuals received treatment for a variety of mental disorders in 2017, with 190 of those being for serious mental illness. A gradual increase in the total number of patients is seen from 2015 – 2017. This increase could be due to a consistent increase in the total population of the county. Those seeking treatment for mental disorders represent less than one percent of the county population. This may not reflect the total number with a mental illness as many may not seek treatment.

Figure 5.1 shows the number of individuals who received psychiatric services in Webster County, Missouri. Some individuals do present with multiple disorders so the numbers listed are not necessarily the number of patients, but the number of psychiatric disorders.

Individuals who received psychiatric services had the following types of disorders. The total number of diagnoses is larger than the number served because some individuals had more than one type of disorder.

DIAGNOSIS CATEGORY	FY2017	FY2016	FY2015
Adjustment Disorder	15	6	7
Anxiety Disorder	169	154	119
Dementia	0	0	*
Developmental Disorder	6	*	10
Impulse Control Disorder	57	37	28
Mood Disorder	186	172	166
Personality Disorder	30	35	32
Psychotic Disorder	47	39	39
Sexual Disorder	0	0	0
Other Diagnosis	50	49	45
Diagnosis Unknown	34	13	17

Figure 5.1: Mental Health Diagnoses in Webster County, Missouri
Source: Division of Behavioral Health: Mental Illness Treatment Services, 2018

Approximately 5% of mental health patients are employed while more than two-thirds are not included in the labor work force. Only four patients included in the survey did not seek services voluntarily. There is a fairly even distribution among different ages as well as gender (See Figures 5.2 & 5.3). There has been an increase in males seeking treatment from 2015 – 2017.

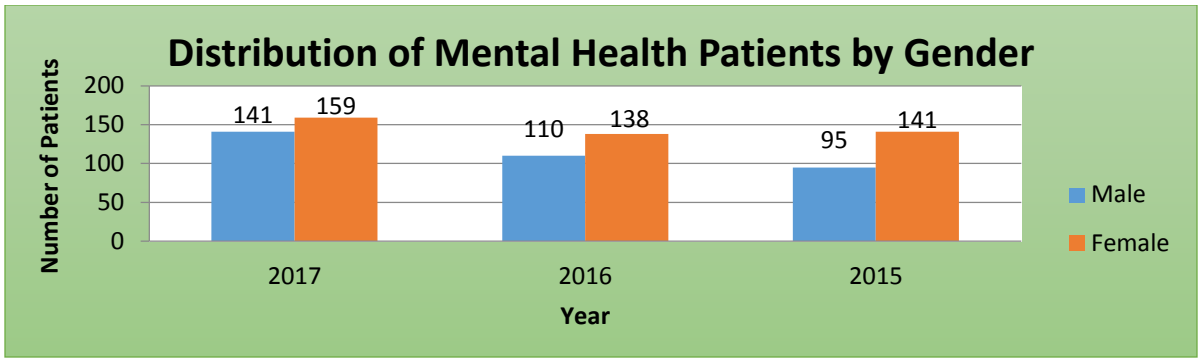


Figure 5.2 Mental Health Patients by Gender
Source: Division of Behavioral Health: Mental Illness Treatment Services, 2018

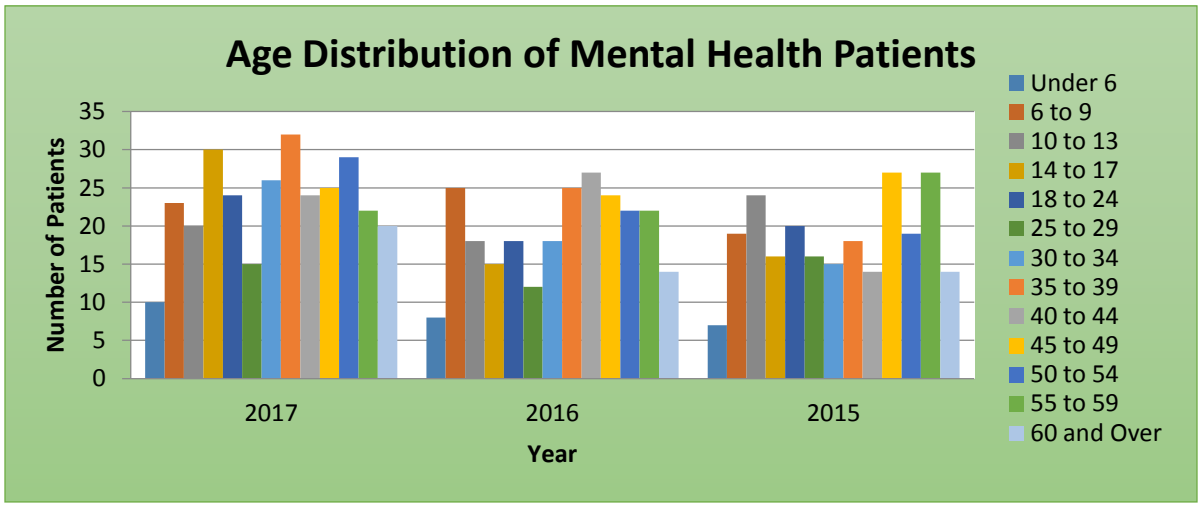


Figure 5.3 Mental Health Patients by Age
Source: Division of Behavioral Health: Mental Illness Treatment Services, 2018

Suicide is the act of intentionally causing one's own death. Depression, bipolar disorder, schizophrenia, personality disorders, and substance abuse — including alcoholism and the use of benzodiazepines — are risk factors. Some suicides are impulsive acts due to stress such as from financial difficulties, troubles with relationships, or bullying. Those who have previously attempted suicide are at a higher risk for future attempts. Suicide prevention efforts include limiting access to methods of suicide — such as firearms and drugs; treating mental illness and substance abuse; proper media reporting of suicide; and improving economic conditions.

Mental illness is often present at the time of suicide with estimates ranging from 27% to more than 90%. Half of all people who die by suicide may have major depressive disorder; having this or one of the other mood disorders such as bipolar disorder increases the risk of suicide 20-fold.

Table 5.1: Self-inflicted Deaths and Injury rates in Webster County, 2012-2014

Deaths & Injuries	2016	2015	2014	2013	2012
Suicides	8	14	7	5	7
Self-inflicted Injury		40	55	43	

Source: Division of Behavioral Health: Status Report on Missouri's Substance Use and Mental Health

Acts of self-harm are not usually suicide attempts and most that self-harm are not at high risk of suicide. Some who self-harm; however, do still end their life by suicide, and risk for self-harm and suicide may overlap. (See Figure 5.4)

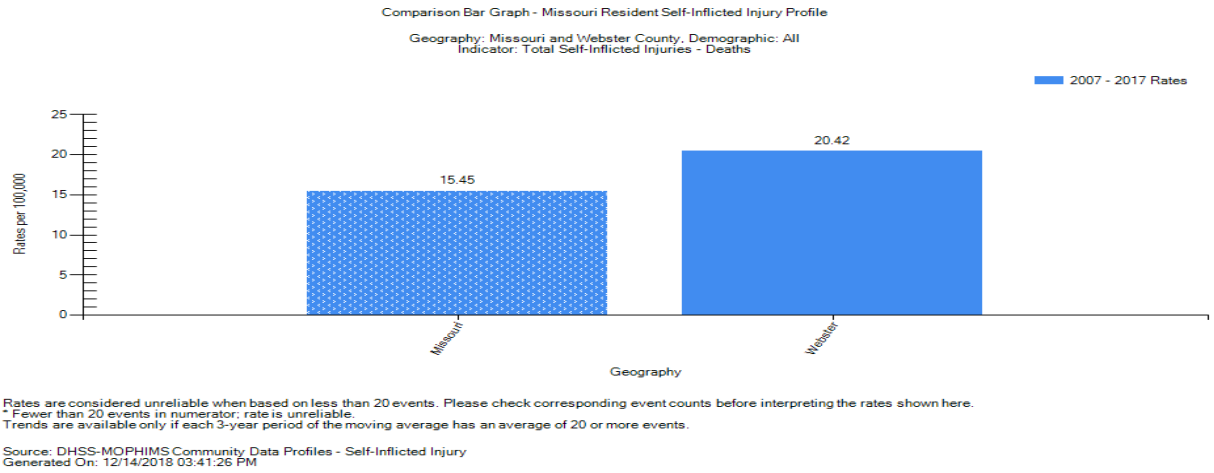


Figure 5.4: Self-inflicted Injury Comparison between Webster County and State

Suicide is a serious public health problem that affects many young people. Suicide is the third leading cause of death for youth between the ages of 10 and 24, and results in approximately 4,600 lives lost each year.

Table 5.2: Suicides in Webster County in 6-12th Grade Levels

6-12th Grade	2017	2015
Suicide Thoughts	16.8	12
Planned Suicide	15.8	8.5
Attempted Suicide	0	3.7

Source: Division of Behavioral Health: Behavioral Health Profile

More young people survive suicide attempts than actually die. A nationwide survey of high school students in the United States found that 16% of students reported seriously considering suicide, 13% reported creating a plan, and 8% reporting trying to take their own life in the 12 months preceding the survey.

Table 5.3 shows the rates of assaults in Webster County from 2012 – 2015. The rate of assault resulting in injury has been decreasing from 2012 – 2015; although, there was an increase in Juvenile Violent Offenses from 2012 – 2013, with a decrease in the assault rate from 2013 – 2015.

Table 5.3: Social Issues in Webster County, 2012-2015

Assault	2015	2014	2013	2012
Homicides	0	2	0	3
Injury	80	67	60	89
Juvenile Violent Offenses	53	64	75	60

Source: Missouri Department of Mental Health Division of Behavioral Health

Bullying is a form of aggressive behavior in which someone intentionally and repeatedly causes another person injury or discomfort. Bullying can take the form of physical contact, words, or more subtle actions.

The bullied individual typically has trouble defending him or herself and does nothing to "cause" the bullying.

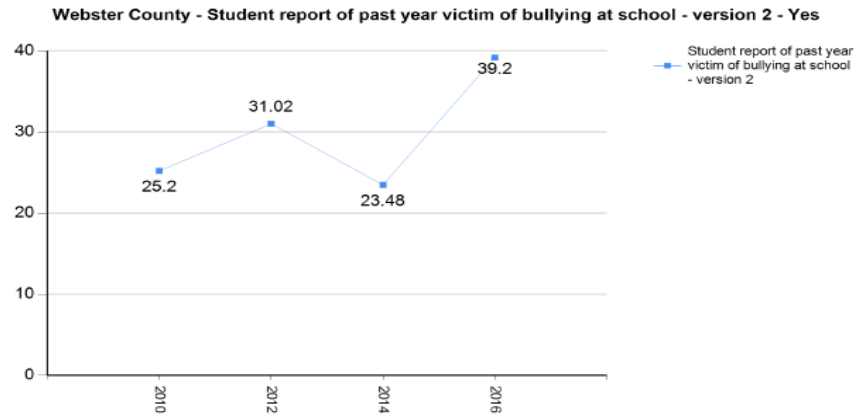


Figure 5.5: Student Victim of Bullying Past Year
Source: Missouri Department of Mental Health Division of Behavioral Health

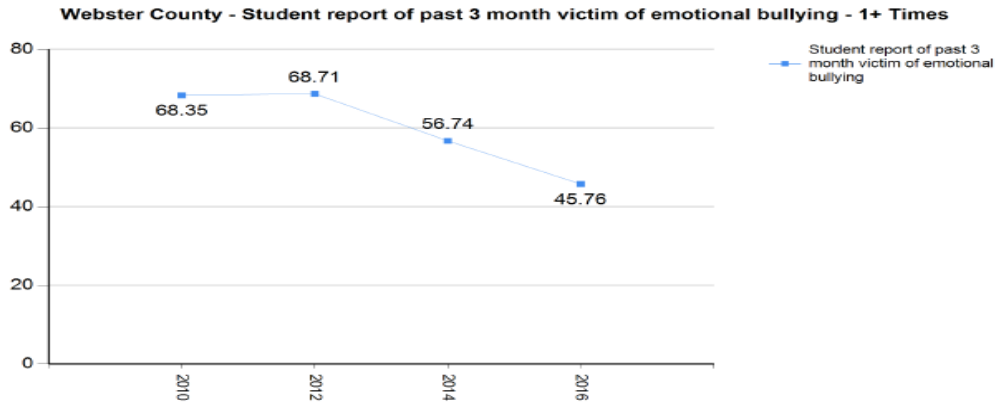


Figure 5.6: Student Victim of Emotional Bullying Past 3 Months
Source: Missouri Department of Mental Health Division of Behavioral Health

Substance Abuse

Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems. These problems include:

- Teenage pregnancy
- Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)
- Other sexually transmitted diseases (STDs)

- Domestic violence
- Child abuse
- Motor vehicle crashes
- Physical fights
- Crime
- Homicide
- Suicide

Figure 5.7 shows the percentages of substance use in Webster County among students. The use of alcohol, e-cigs, Rx-misuse, and cigarettes is greater in Webster County compared to the state. The use of marijuana, Hookah, etc., is more for the state when compared to Webster County. Binging is slightly lower for the state when compared to Webster County.

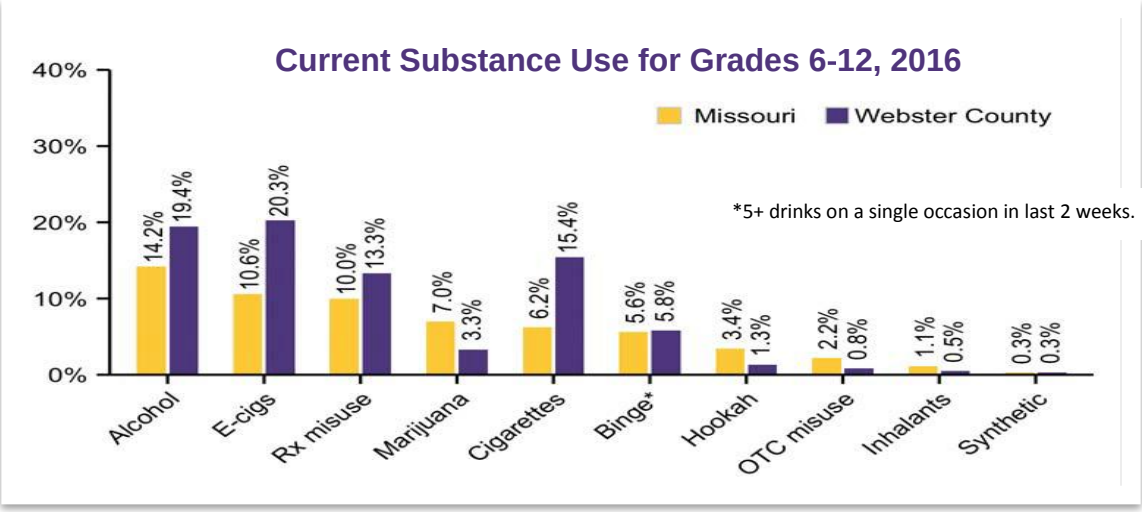


Figure 5.7: Substance Usage among Students
Source: Missouri Department of Mental Health Division of Behavioral Health, 2017

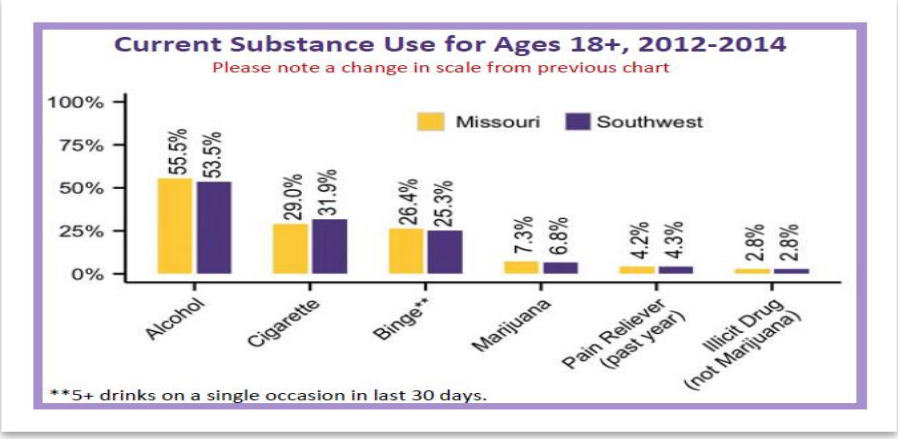


Figure 5.8: Substance Usage among Adults over 18
Source: Missouri Department of Mental Health Division of Behavioral Health, 2015

Table 5.4: Deaths and Injury rates in Webster County, 2013-2015

Deaths & Injuries	2013	2014	2015
Alcohol Induced Deaths	3	0	3
Drug Induced Deaths	4	6	12
Smoking Attributable Deaths	55	54	56

Source: Division of Behavioral Health: Status Report on Missouri's Substance Use and Mental Health

Tables 5.5 and 5.6 show the number of Law Enforcement and Drug Treatment events in Webster County between the years of 2013 – 2017.

Table 5.5: Law Enforcement Events, 2013-2017

Law Enforcement	2013	2014	2015	2016	2017
DWI	131	114	97	84	112
Liquor Law Violations	23	18	15	11	20
Drug Arrests	301	321	335	296	281
Meth Lab	14	14	2	2	0

Source: Missouri Department of Mental Health Division of Behavioral Health

Table 5.6: Drug Treatment Events, 2014-2017

Drug Treatment	2014	2015	2016	2017
Methamphetamine	32	52	60	58
Alcohol	46	41	53	43
Marijuana	21	21	20	18
Prescription Drugs	12	17	17	16

Source: Missouri Department of Mental Health Division of Behavioral Health

Table 5.7 shows the hospital admissions and ER visits for alcohol and drugs in years 2012 and 2014. Hospital admission and ER visits for alcohol has decreased from 2012 – 2014.

Table 5.7: Hospital Admissions and ER Status for Alcohol and Drugs

Health Status	2012	2013	2014	2015	
Hospital Admissions for Alcohol	12	2	4	22	
Drugs	18	17	12	18	
ER Visits for Alcohol	44	61	42	68	
Drugs	74	74	79	70	

Source: Missouri Department of Mental Health Division of Behavioral Health

Chapter 6: Maternal and Child Health

Maternal Health

Maternal health is essential to ensure the health of children, as well as the whole family. Poor health can be mental or physical and can have an effect on all stages of pregnancy from the ability to become pregnant to the ability to care for the child after birth. Many barriers can stand in the way of good health such as lack of access to healthcare, poor living conditions, and poor quality of life. This section will focus on the health of the mother and draw a picture of the current state of women's health in Webster County, Missouri.

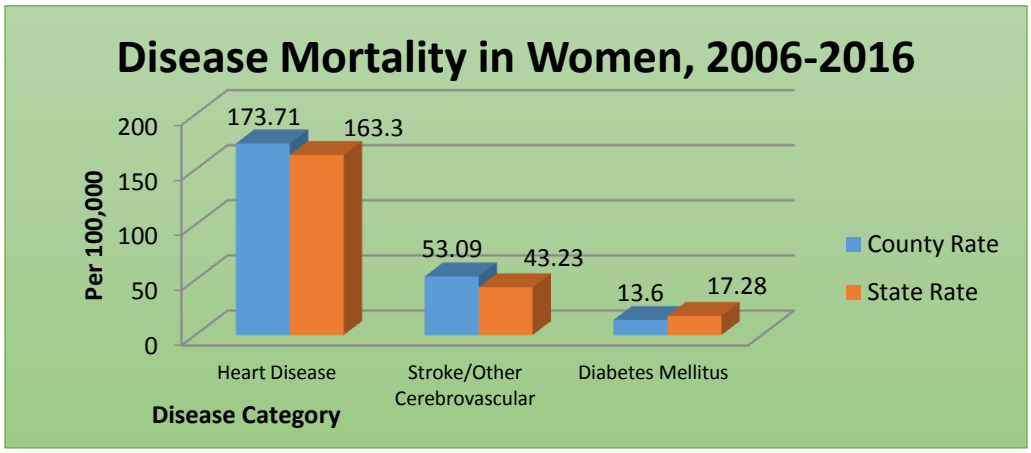


Figure 6.1: Disease Mortality in Women
Source: Missouri Department of Health and Senior Services, 2018

Heart disease had the highest number of deaths with 405 from 2006 – 2016 resulting in a mortality rate of 173.71 over the state rate of 163.3 per 100,000 (See Figure 6.1). Many factors can result in heart disease and heart death such as stress, poor diet, lack of exercise, and other behavioral factors. These factors can also contribute to poor vascular health leading to events such as stroke or other negative outcomes. Stroke and other cerebrovascular diseases are a major contributor to the death rate in Webster County with 123 events over the same period resulting in a mortality rate of 53.09 per 100,000 as compared to the state rate of 43.23.

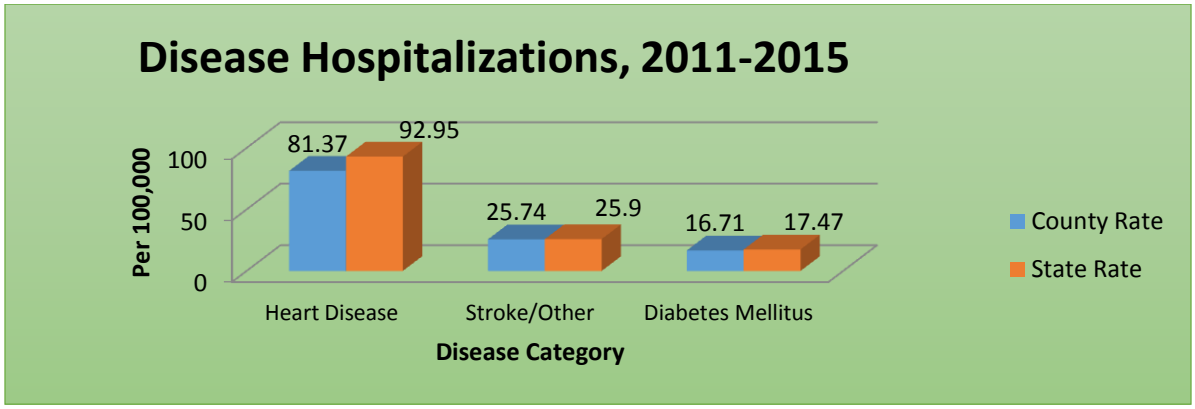


Figure 6.2: Hospitalization Due to Disease
Source: Missouri Department of Health and Senior Services, 2018

Hospitalization rates for heart disease and other vascular diseases are much lower than mortality rates (See Figure 6.2). This could be due to the lack of hospitals in the rural region and the length of time it takes to get proper medical care. Actual incidents involving heart disease are higher but rates are still lower than compared to the state.

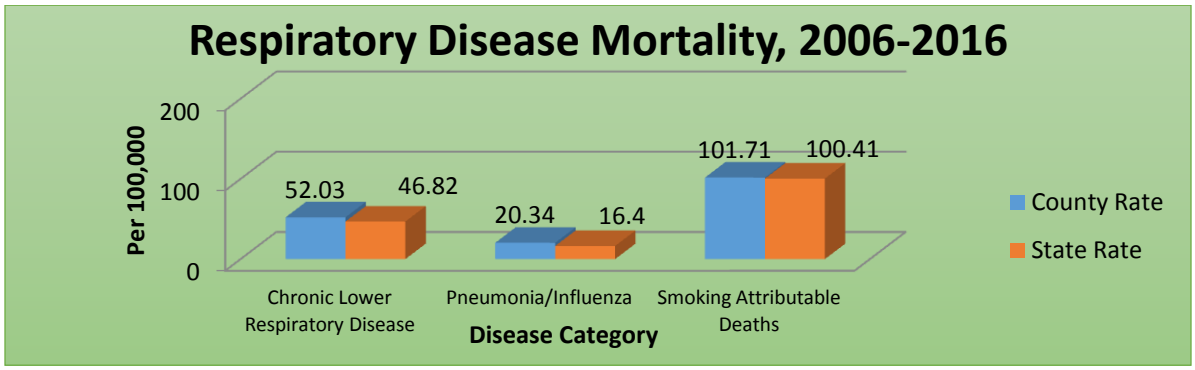


Figure 6.3: Respiratory Disease Mortality
Source: Missouri Department of Health and Senior Services, 2018

Smoking attributed deaths are the leading causes of respiratory disease mortality in women (See Figure 6.3). They are also second to heart disease in mortality rate with 238 deaths attributed to smoking at a rate of 101.71 per 100,000 compared to 100.41 per 100,000 with the rest of the state. More naturally occurring respiratory diseases such as chronic lower respiratory disease and pneumonia lead in those types of deaths but are dwarfed by the number of deaths associated with smoking.

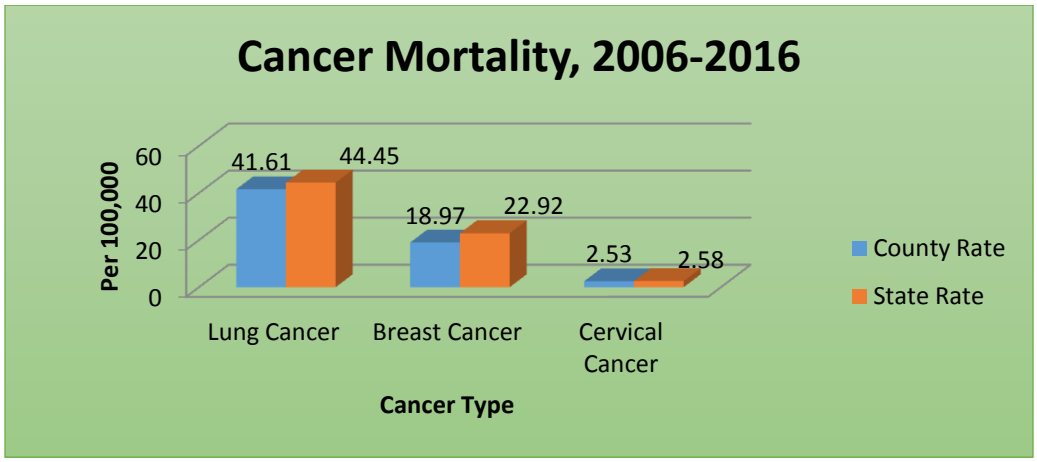


Figure 6.4: Women's Cancer Mortality Rates
Source: Missouri Department of Health and Senior Services, 2018

Lung cancer mortality has the highest rate among cancers (See Figure 6.4). All rates fall below the state rate; however, lung cancer still has twice the mortality rate as other cancers in Webster County. This could be due to the higher rate of smoking. There were 98 deaths attributed to lung cancer next to 43 cases resulting in death due to breast cancer. Cervical cancer saw five deaths across the county over the ten year observation period.

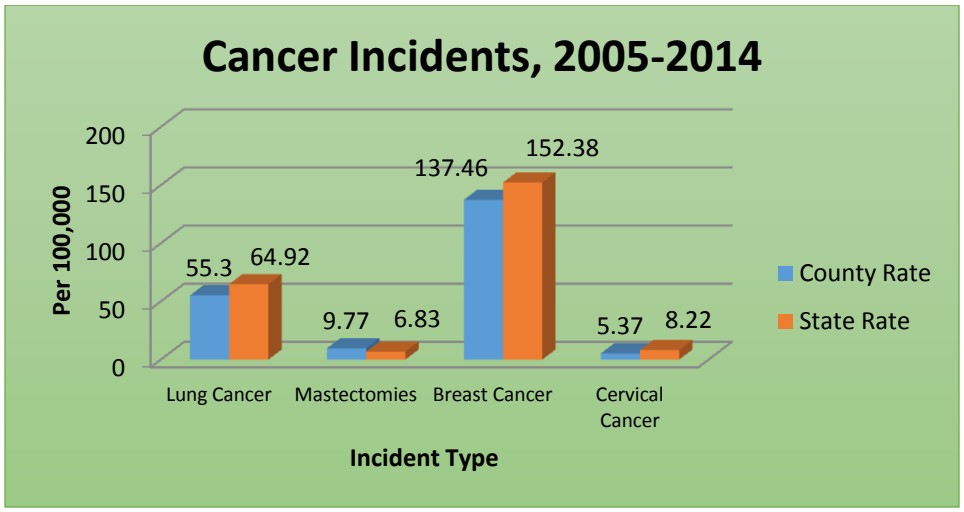


Figure 6.5: Cancer Incidents in Women
Source: Missouri Department of Health and Senior Services, 2018

Although there is a higher mortality rate for lung cancer, incidents of breast cancer are more than twice as high as incidents of lung cancer (See Figure 6.5). Cancer incidents also remain below the state rate; however, mastectomies due to breast cancer are performed at a higher rate in Webster County than the rest of the state. More research is necessary in order to determine the cause for the higher mastectomy rate.

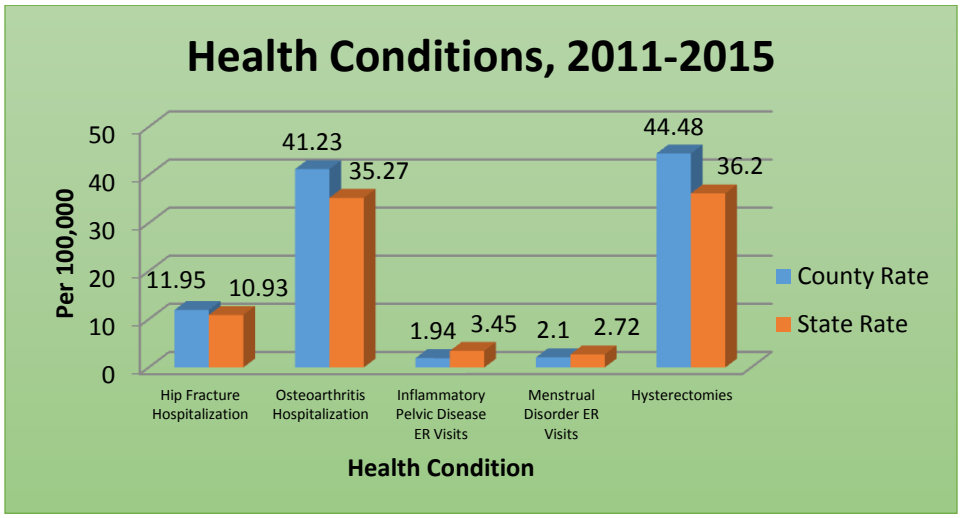


Figure 6.6: Health Conditions
Source: Missouri Department of Health and Senior Services, 2018

A number of conditions that afflict women are listed in Figure 6.6. Hospitalizations for osteoarthritis and hysterectomies have the highest rates and also top the state rate. Hysterectomy rates along with mastectomy rates show that surgeries for removal of parts of the reproductive system are much higher in Webster County than the overall state rate. This may be due to lack of access to preventive screenings or late discovery and not receiving treatment in time. A focused study would be necessary to make this determination as to why there are higher rates.

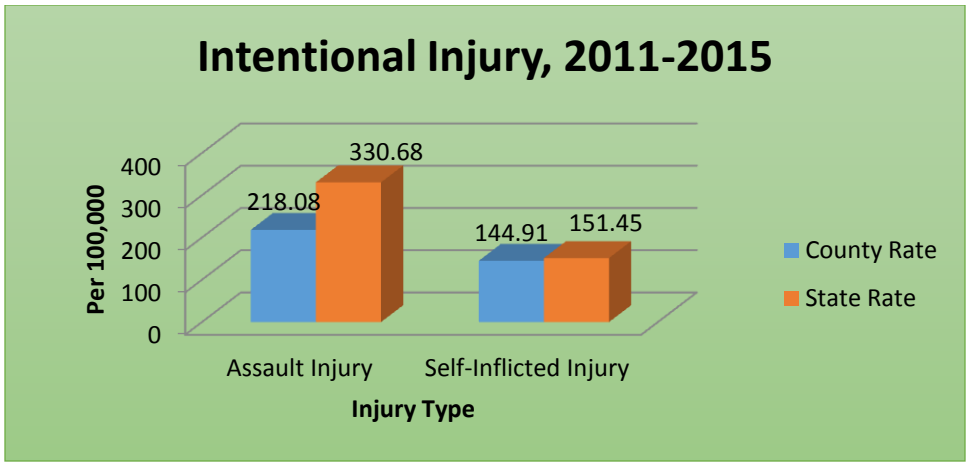


Figure 6.7: Intentional Injuries
Source: Missouri Department of Health and Senior Services, 2018

Intentional injuries such as assaults or self-inflicted injuries reflect a possible negative environment for prospective mothers. Self-inflicted injuries also reflect a poor mental health status within individuals that can have a negative effect on a child's health. There were 169 assaults against women in Webster County from 2011 – 2015 which gives a rate lower than the state at 218.08 per 100,000 (See Figure 6.7). There were 122 self-inflicted injuries committed by women rendering a rate of 144.91 per 100,000 which is slightly closer to the state rate of 151.45 per 100,000.

Women's Reproductive Health

A woman's reproductive system is a delicate and complex system in the body. It is important to take steps to protect it from infections and injury and prevent problems including some long-term health problems. Taking care of yourself and making healthy choices can help protect you and your loved ones. Protecting your reproductive system also means having control of your health, if and when, you become pregnant.

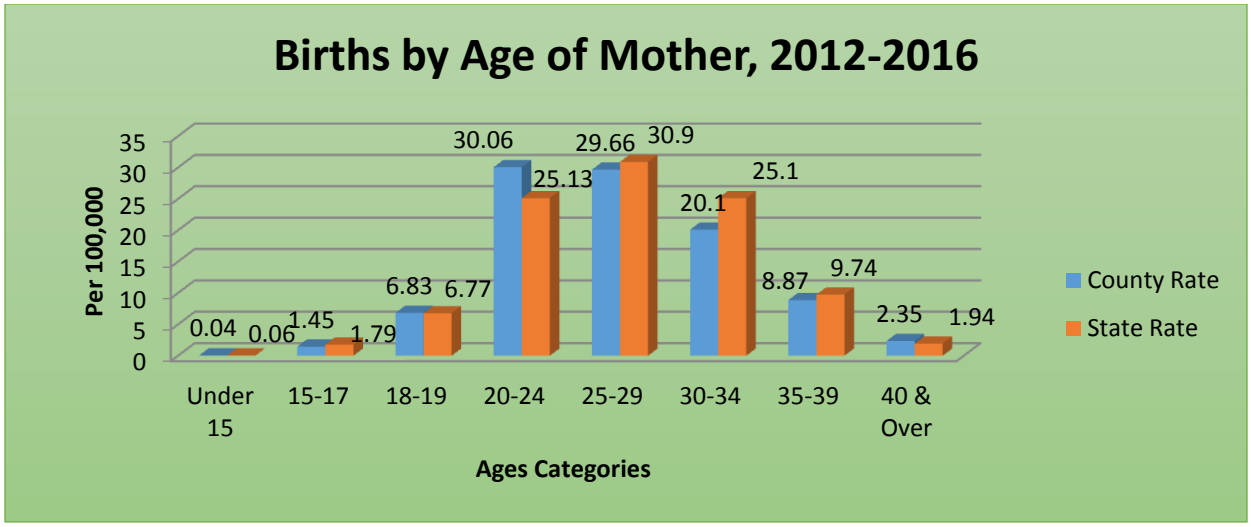


Figure 6.8: Age Distribution of Mothers Giving Birth
Source: Missouri Department of Health and Senior Services, 2018

The age distribution of mothers giving birth is listed in Figure 6.8. The majority of mothers generally have an age range of 20 to 34 years. Far fewer women are giving birth at age 19 years and younger and 35 years and older. Compared to the state rates, Webster County follows the general distribution of age for mothers giving birth. There are a number of health risks associated with youth pregnancies such as preterm birth, high blood pressure, and anemia. Having children at a young age can also lead to poor nutrition for the child and overall improper care. Women who conceive at an older age have a higher risk of preterm birth and hypertension syndrome.

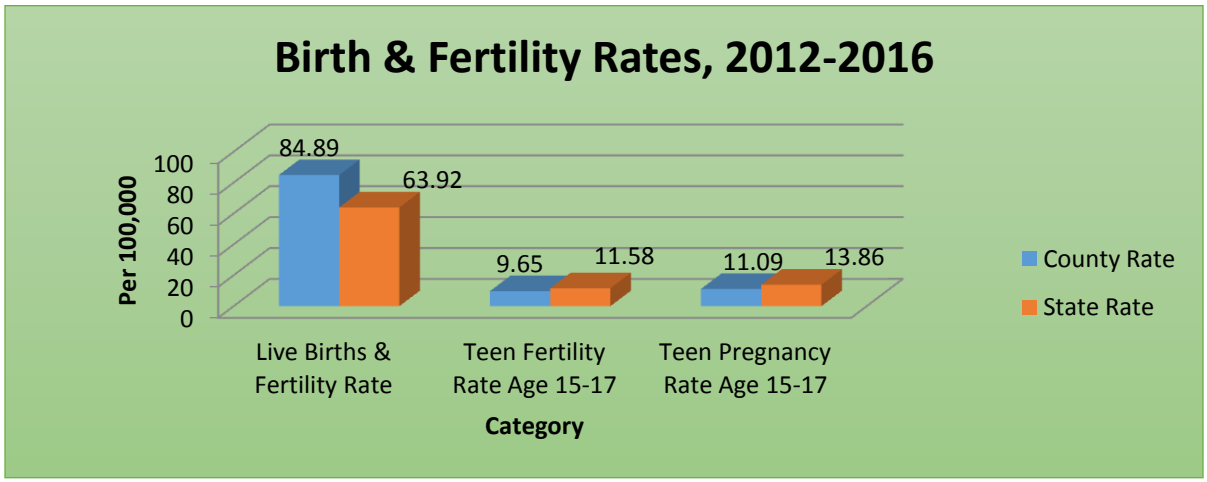


Figure 6.9: Birth & Fertility Rates
Source: Missouri Department of Health and Senior Services, 2018

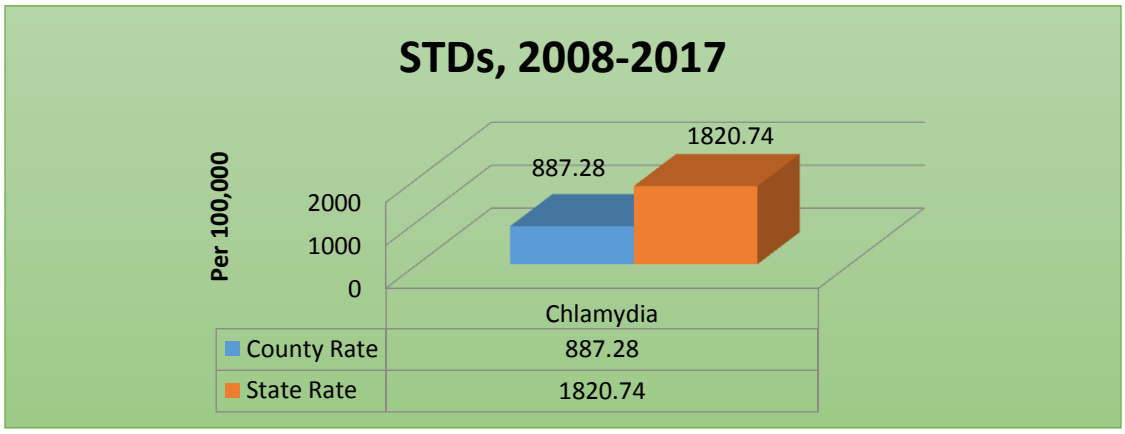


Figure 6.10: Sexually Transmitted Diseases
Source: Missouri Department of Health and Senior Services, 2018

Undiagnosed or untreated STDs can cause major irreparable damage to the female reproductive system. More than 500 cases of chlamydia were diagnosed and reported in Webster County from 2008 – 2017. This does not necessarily represent the entirety of all cases that exist as many can go months or years without presenting symptoms, if symptoms are present at all. Plus, many do not seek diagnosis or treatment. Even so, the rate for chlamydia in Webster County is less than half that of the state rate (See Figure 6.10).

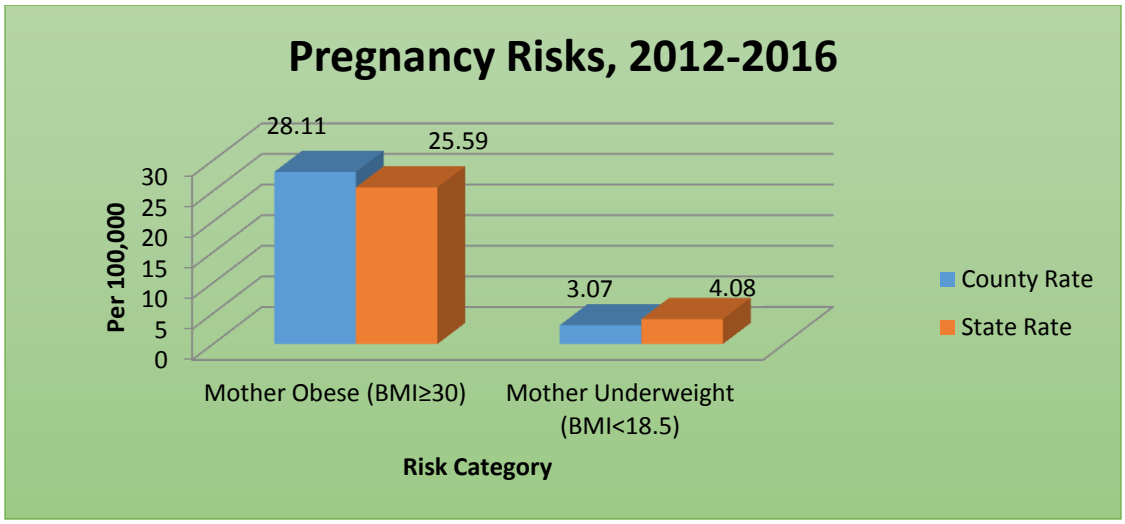


Figure 6.11: Risks to Health Pregnancy
Source: Missouri Department of Health and Senior Services, 2018

Obesity can cause a number of health problems with the pregnant mother and her baby. Mothers who are obese are at risk of gestational diabetes, preeclampsia or high blood pressure, and sleep apnea. Diagnostic testing can be hampered as too much body fat can make it difficult to observe any anatomical issues with the baby or registering heartbeat. There are also risks of birth defects, macrosomia, preterm birth, and stillbirth. The obesity prevalence for Webster County is near 37% and the rate for pregnant mothers is 28.11 per 100,000 (See Figure 6.11). Underweight mothers can also place their babies at risk of health issues such as preterm birth, the need for obstetric surgical interventions, or postpartum hemorrhage which can lead to death.

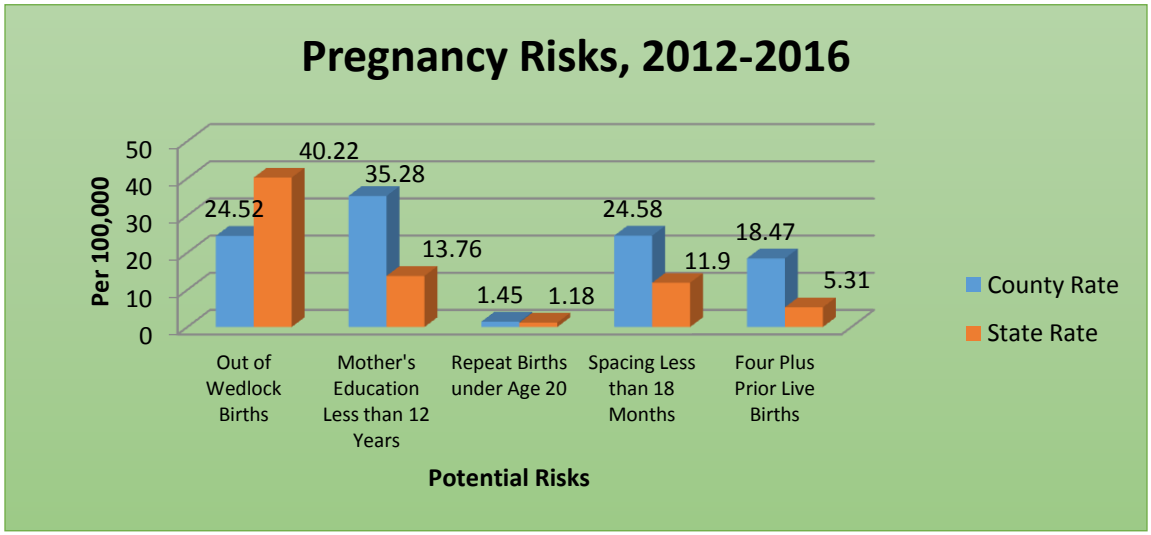


Figure 6.12: Risks to Health Pregnancy
Source: Missouri Department of Health and Senior Services, 2018

Figure 6.12 lists other behaviors or characteristics that can place a risk to mother and her baby. Having a child out of wedlock can put a child at risk of poverty, stress, and less care. The county rate is well below the state rate, which means there are typically more whole family units in

Webster County than other parts of the state and potentially better care and income to ensure the child's security. Mothers in Webster County, however, tend to have less education than other parts of the state. The county rate is 35.28 per 100,000 versus the state rate of 13.76 per 100,000. For single parent families, this can put a huge strain on resources and increases the risk of lack of care for the child. Repeat teen births can put the baby at risk of being born premature or having a small body size. This can lead to developmental problems in the future. While the county rate is slightly higher than the state, this does not occur as often as having children less than 18 months apart, which can also lead to serious developmental problems for the second child. The rate for Webster County is more than double the rate found for the state as a whole. Having more than one or two children has been found to put the mother's health at risk. There is an increase in heart disease which will affect the health of mothers and put families at risk.

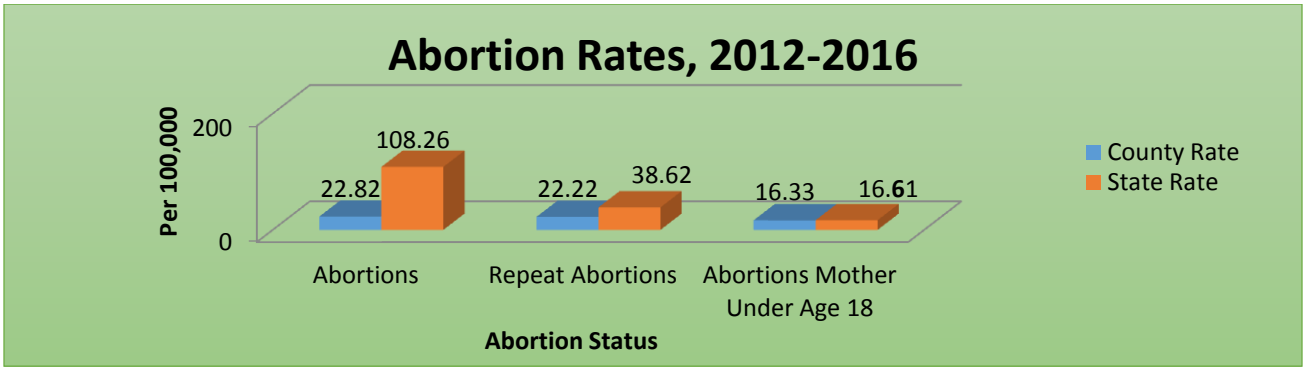


Figure 6.13: Abortion Rates
Source: Missouri Department of Health and Senior Services, 2018

The rate for abortions and repeat abortions is low in Webster County when compared to the state (See Figure 6.13). However, for mothers under 18 years, the rates for both county and state are similar. Repeat abortions can cause complications for both the baby and the mother. Some of the effects include preterm birth, low birth weight, and even miscarriage. Effects on the mother include fertility issues, prenatal complications, and pelvic inflammatory disease. Across a four year period, 63 abortions were performed on residents of Webster County.

Prenatal Profile

Having a healthy pregnancy is one of the best ways to promote a healthy birth. Getting early and regular prenatal care improves the chances of a healthy pregnancy. Babies of mothers who do not get prenatal care are three times more likely to have a low birth weight and five times more likely to die than those born to mothers who do get care.

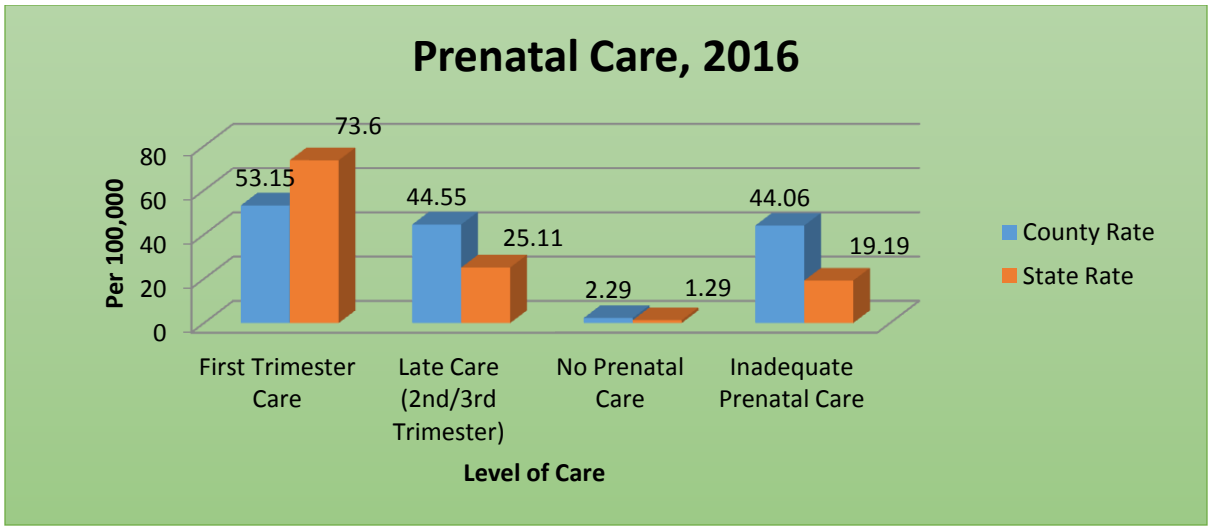


Figure 6.14: Prenatal Profile
Source: Missouri Department of Health and Senior Services, 2018

A look at the numbers shows that a little over half of pregnant mothers seek prenatal care in the first trimester (See Figure 6.14). The county rate of 53.15 per 100,000 still remains under the state rate of 73.6 per 100,000. There are few seeking late care, however, the county rate is well above the state rate. This shows that mothers in Webster County are seeking care later in pregnancy than the rest of the state. Those who do not seek care in the county have a comparable rate with the rest of the state. The quality of care is measured by inadequate care, and the county is more than double the state rate at receiving inadequate care.

With the high level of poverty in Webster County, it would be expected that the need for assistance would be fairly high; however, statistics show that those who apply for assistance fall below the state rate for seeking assistance. From Medicaid, WIC, and Food stamps for prenatal mothers, county numbers are well below those who seek assistance within the rest of the state (See Figure 6.15). This can have an adverse effect on care. More effort may need to be taken in connecting prenatal mothers to the services they need to protect their babies.

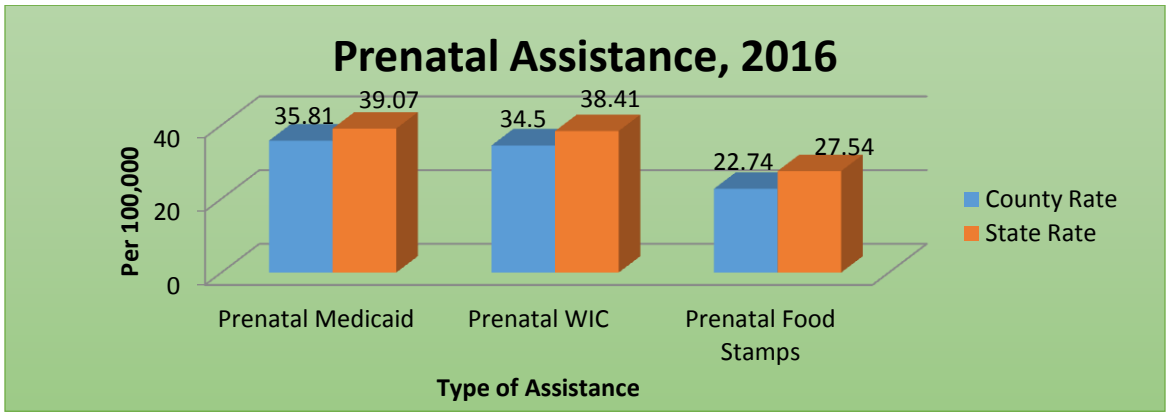


Figure 6.15: Prenatal Assistance
Source: Missouri Department of Health and Senior Services, 2018

Gestational diabetes develops during pregnancy (gestation). Like other types of diabetes, gestational diabetes affects how your cells use sugar (glucose). Gestational diabetes causes high blood sugar that can affect your pregnancy and your baby's health. Some risk factors for developing gestational diabetes include being older than 25 years, family history, and excessive weight. There were 51 cases of gestational diabetes in Webster County for a rate of 8.72 per 100,000 which is higher than the state rate of 6.1 per 100,000 (See Figure 6.16). Only four were diagnosed with diabetes prior to pregnancy for a rate that falls below the state rate.

Smoking can have a significant impact on the mother and her baby. There is an increased risk of ectopic pregnancy, miscarriage, and preterm birth. Effects on the baby include a higher risk of Sudden Infant Death Syndrome (SIDS), weaker lungs, and a low birth weight. Webster County mothers fall below the state rate for smoking. Statistics show that 67 mothers were documented as smoking during their pregnancy for a rate of 11.57 per 100,000 against the state rate of 15.25 per 100,000 (Figure 6.16).

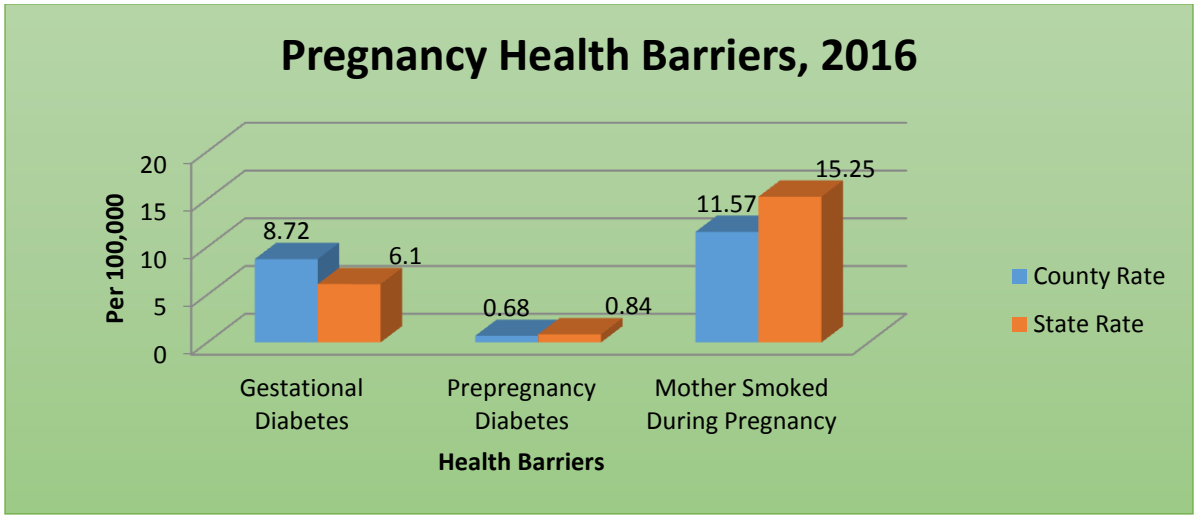


Figure 6.16: Pregnancy Health Barriers
Source: Missouri Department of Health and Senior Services, 2018

Gaining too little weight can deprive the baby of necessary nutrition resulting in malnourishment and being born underweight. Other effects include preterm birth, birth defects, and a risk later in life of developing hypertension, obesity, and heart disease. There were 290 mothers that fell into this category giving a rate of 11.93 per 100,000, which is close to the state rate (See Figure 6.17). Gaining too much weight during a pregnancy can lead to gestational diabetes, complications during delivery, and potentially an overweight baby that has an increased risk of diabetes and obesity starting during childhood. The rate of mothers from the county with excessive weight gain falls below the state rate.

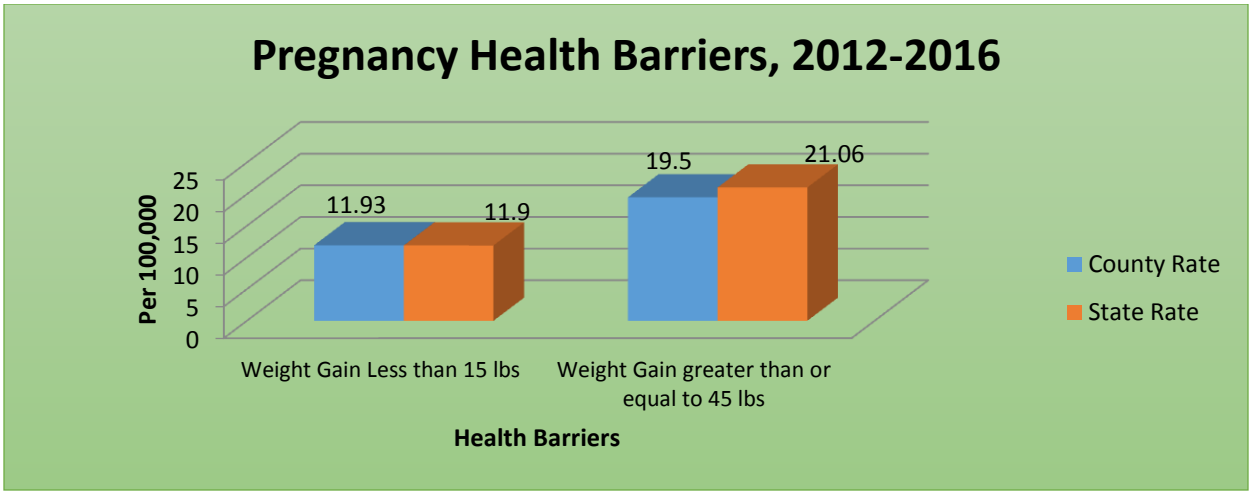


Figure 6.17: Pregnancy Health Barriers, cont.
Source: Missouri Department of Health and Senior Services, 2018

Delivery Profile

Most pregnancies occur without complications. However, some women who are pregnant will experience complications that can involve their health, their baby's health, or both. Sometimes, diseases or conditions the mother had before she became pregnant can lead to complications during pregnancy. Some complications occur during delivery. Some of the most common complications of delivery include:

- **Breech position**

A baby is considered in a breech position when their feet are positioned to be delivered before their head. This occurs in about four percent of full-term births. If the baby is still in the breech position when labor starts, most doctors recommend a cesarean delivery.

- **Placenta previa**

Placenta previa means that the placenta is covering the cervix. Doctors will usually perform a cesarean delivery if this is the case.

- **Low birth weight**

Low birth weight usually occurs due to poor nutrition or the use of cigarettes, alcohol, or drugs during pregnancy. Babies who are born at a low birth weight may need to stay in the hospital for a few months after birth and have a higher risk of:

  - respiratory infections
  - learning disabilities
  - heart infections
  - blindness

Webster County statistics show a lower rate of cesarean sections in comparison with the state (See Figure 6.18). There is, however, a much higher rate of non-hospital live births in the county than compared to the state. State and county rates for fetal deaths are about even.

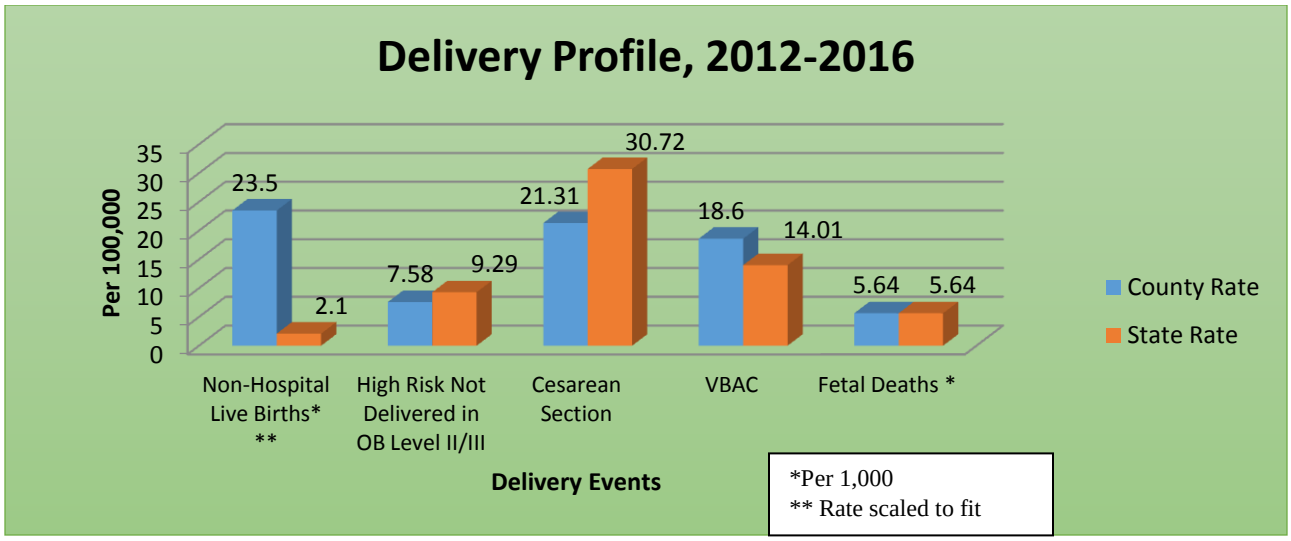


Figure 6.18: Delivery Profile
Source: The Missouri Public health information management, 2018

Infant Profile

Infant morbidity and mortality are important measures of county health because of their association with a variety of factors such as maternal health, quality of medical care, socioeconomic conditions, and public health practices.

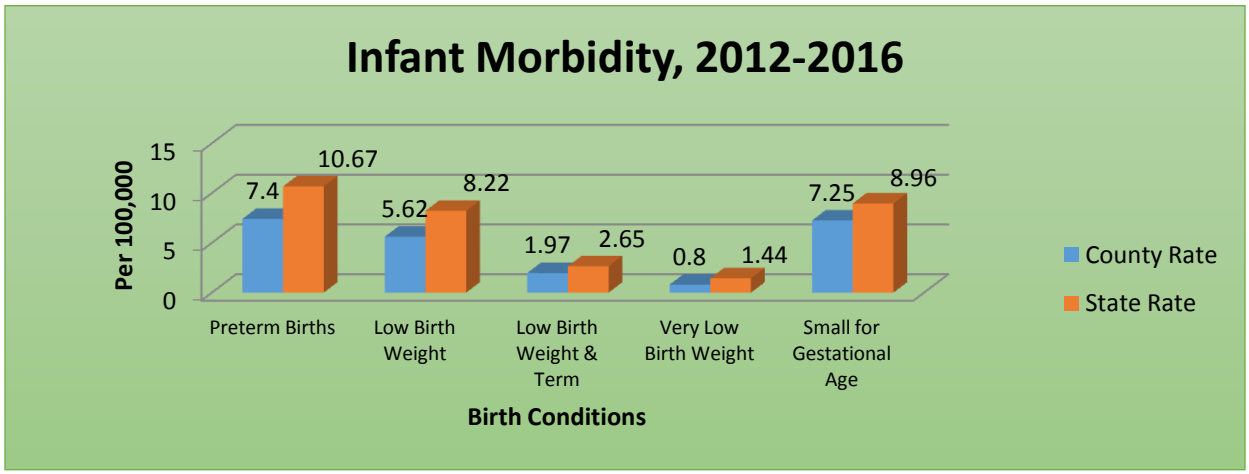


Figure 6.19: Infant Morbidity
Source: The Missouri Public Health Information Management, 2018

Figure 6.19 provides a breakdown of some of the delivery outcomes that can harm infant growth. Webster County performs well overall as these outcomes all fall below the state rate. There were 203 preterm births from 2012 – 2016 for a rate of 7.4 per 100,000. There were 155 infants born with a low birth weight and 22 with a very low birth rate. Increasing prenatal visits to the first term and prior to conception can help reduce the risk of these types of outcomes.

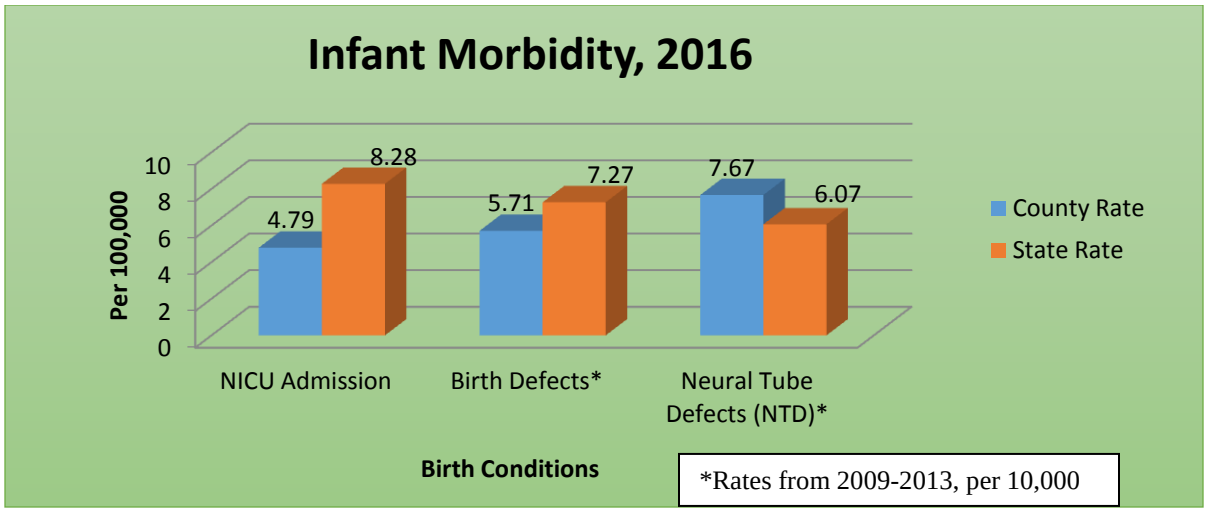


Figure 6.20: Infant Morbidity
Source: The Missouri Public Health Information Management, 2018

Figure 6.20 shows rates for NICU admissions, birth defects, and neural tube defects (NTD). In 2016, there were 28 NICU admissions. From 2009 – 2013, there were a total of 149 birth defects, two of those being neural tube defects. Rates, overall, are low when compared to the state, but numbers can still be improved by increasing the number of prenatal visits overall and during the first term.

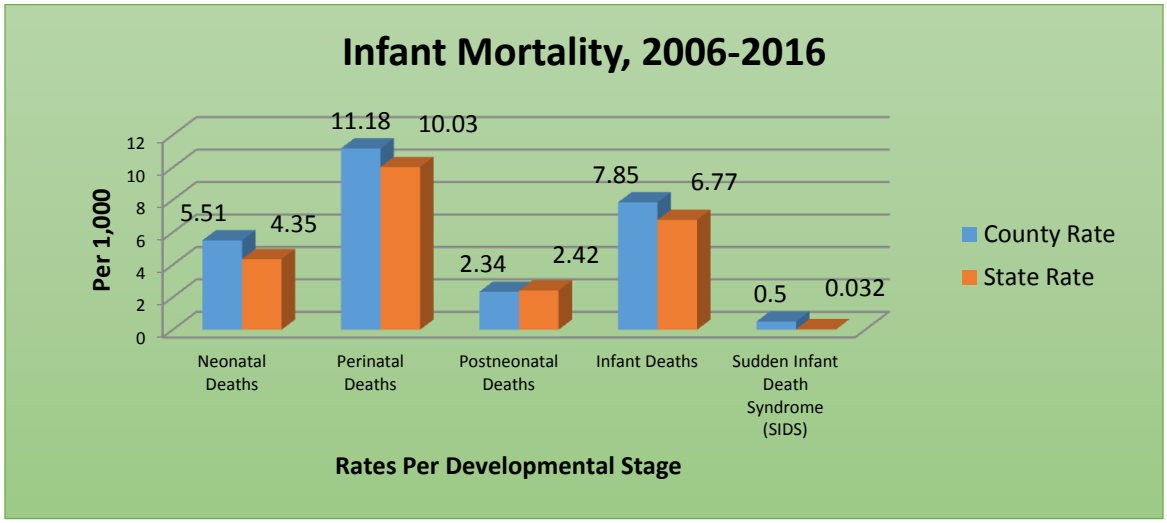


Figure 6.21: Infant Mortality
Source: The Missouri Public Health Information Management, 2018

Figure 6.21 shows infant mortality rates to be slightly above the state with neonatal, perinatal, and infant deaths. SIDS also has a slightly higher rate for Webster County. There were 47 infant deaths from 2006 – 2016 for a rate of 7.85 per 1,000. The highest rate is with perinatal deaths at 11.18 per 1,000. The mortality rate for SIDS is 0.50 for Webster County versus the state rate of 0.032 per 1,000.

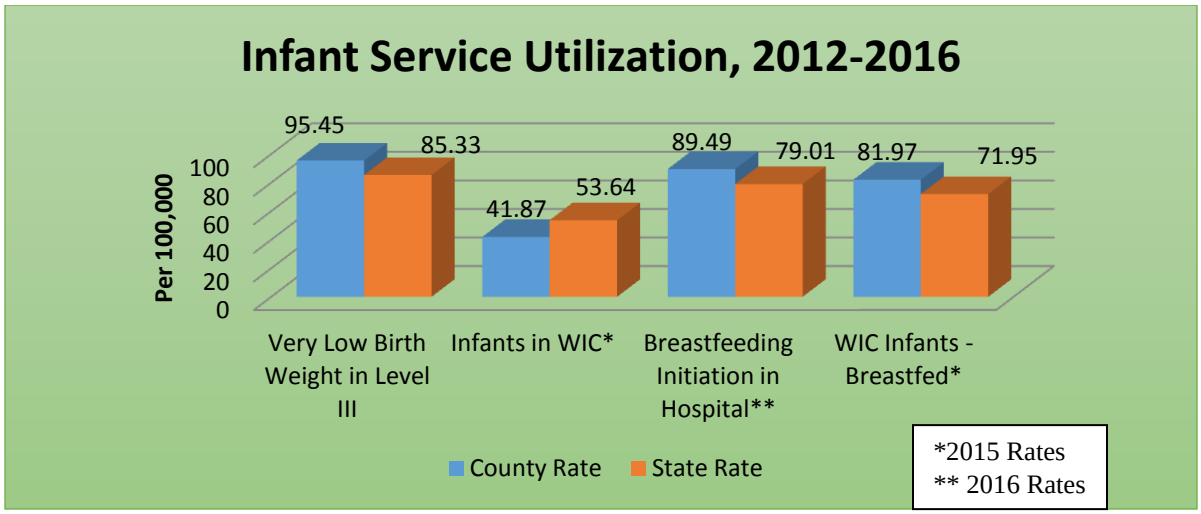


Figure 6.22: Infant Service Utilization
Source: The Missouri Public Health Information Management, 2018

Statistics for 2012 – 2016 show that WIC is not utilized as often as the state. There were 237 infants participating in WIC for a rate of 41.87 per 100,000. This is compared to the state rate of 53.64 per 100,000. Services that can be utilized in the hospital have more usage by mothers and their babies. Mothers in Webster County have a higher rate of breastfeeding initiation in the hospital as well as utilizing level III unit in response to very low birth weight.

Child Health Profile

Child health is a state of physical, mental, intellectual, social, and emotional well-being and not merely the absence of disease or infirmity. Healthy children live in families, environments, and communities that provide them with the opportunity to reach their fullest potential.

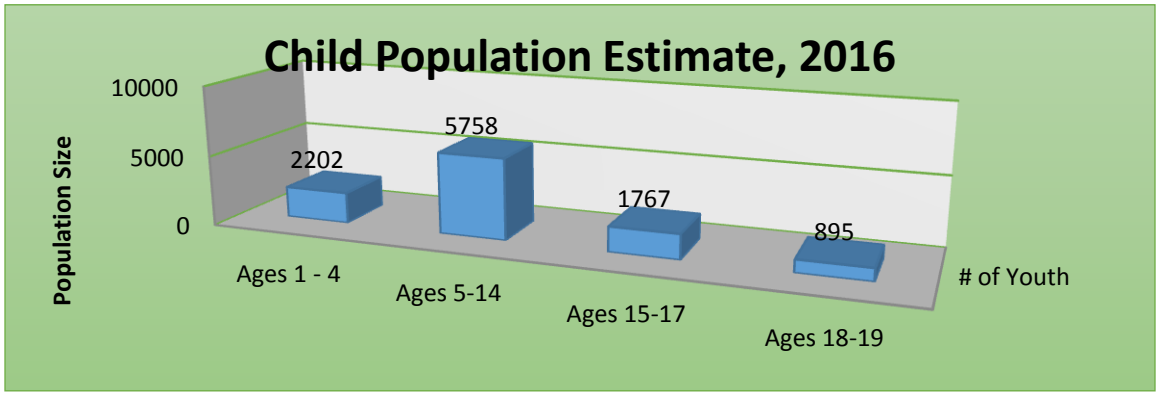


Figure 6.23: Child Population Estimate
Source: The Missouri Public Health Information Management, 2018

Children's health, or pediatrics, focuses on the well-being of children from conception through adolescence. It is vitally concerned with all aspects of children's growth and development and with the unique opportunity that each child has to achieve their full potential as a healthy adult.

There are a number of indicators to measure the potential of the community's youth. The youth population is approximately 10,622 children aged 1 – 19 years in Webster County. Figure 6.23

shows the breakdown of children using different age brackets. Figure 6.24 shows the number of children that participated in WIC. There were 525 children that participated in WIC in 2015 for a rate of 26.41 per 100,000, which is slightly higher than the state rate. This is to be expected with a higher poverty rate than the state. For children ages 2 – 5 years, there were 41 that were measured obese. This rate is almost even with the state rate.

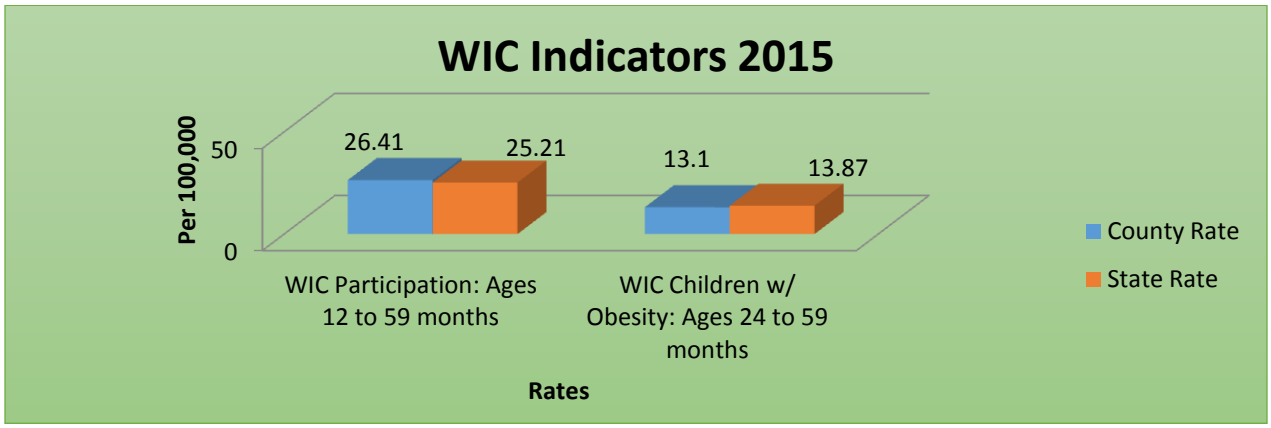


Figure 6.24: WIC Indicators
Source: The Missouri Public Health Information Management, 2018

Other stats such as incidents with asthma are reflected in Figure 6.25. These relate the rate of ER visits and hospitalizations for children under 18 years and having complications from asthma. This figure also shows the rate of divorced parents in the county. There are several risks associated with divorce that can affect both mental and physical health of children. Webster County shows a higher rate of divorce than the rest of the state. There is also a higher rate for children that were potentially exposed to child abuse or neglect. In 2015, there were 79 cases of possible child abuse or neglect for a rate of 7.77 per 100,000.

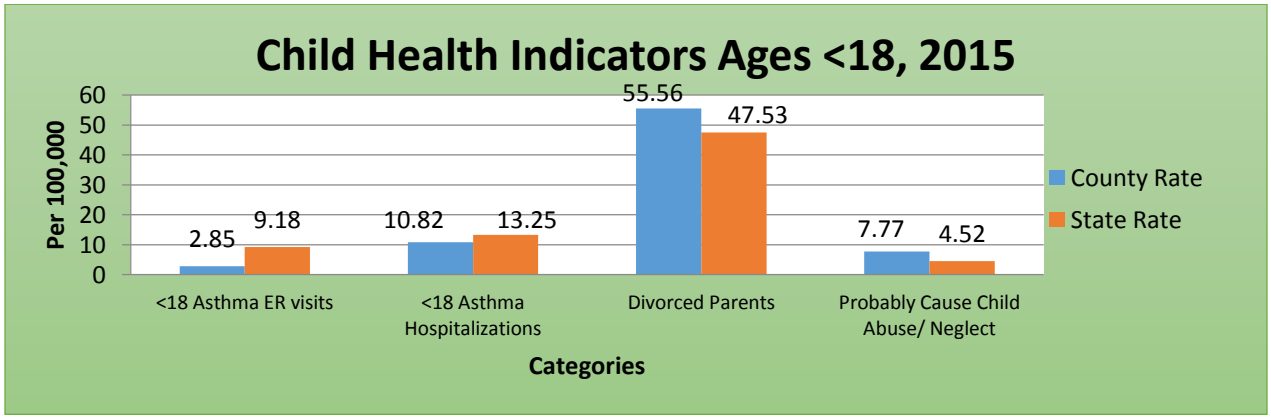


Figure 6.25: Child Health Indicators <18
Source: The Missouri Public Health Information Management, 2018

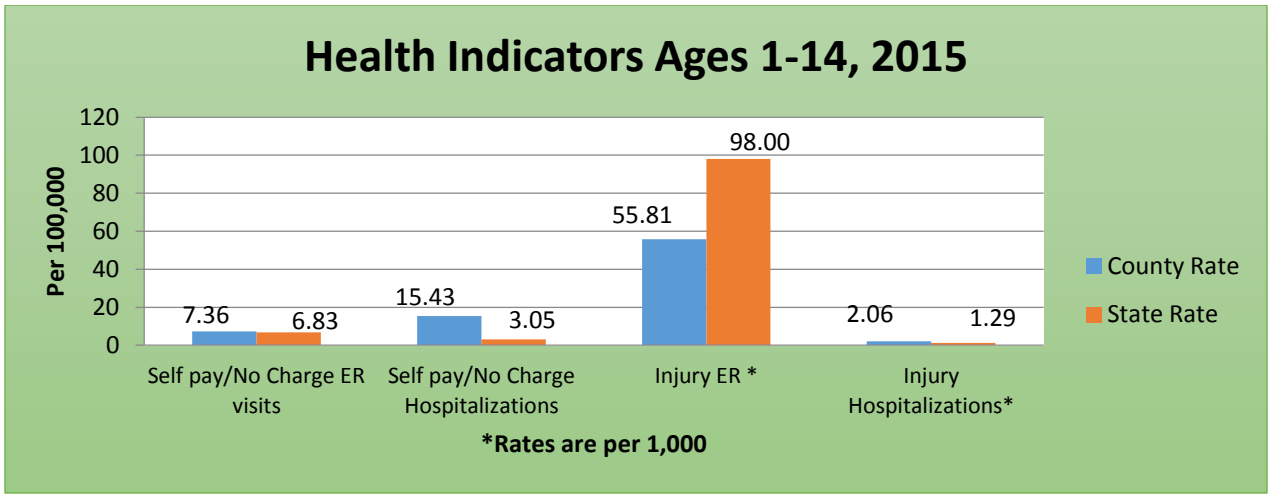


Figure 6.26: Child Health Indicators Ages 1-14
Source: The Missouri Public Health Information Management, 2018

A good measure for overall health of children is determined by the number of hospitalizations and ER visits. Injuries for children ages 1 – 14 years were fairly high for Webster County with a total of 513 visits. There were only 17 hospitalizations. Rates for hospitalizations were slightly even with the state; however, the ER visit rate for Webster County was well below the state rate at 55.81 per 1,000 verses 98 per 1,000 (See Figure 6.26). Self-pay ER visit and hospitalization rates for Webster County were higher than the state rates.

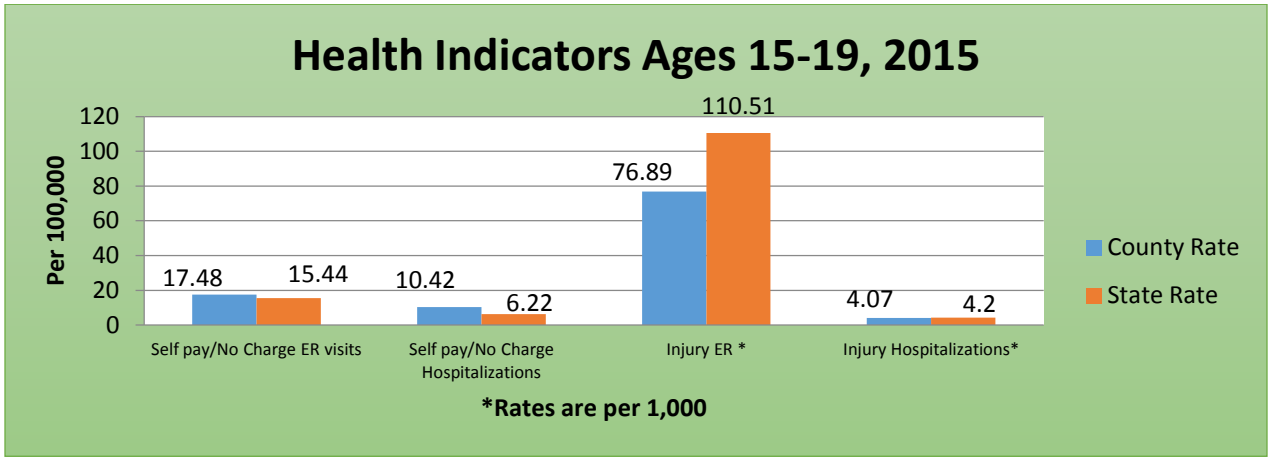


Figure 6.27: Child Health Indicators Ages 15-19
Source: The Missouri Public Health Information Management, 2018

For ages 15 – 19 years, Figure 6.27 shows a similar distribution for children injury hospitalizations and ER visits. Rates for self-pay or no charge are higher than state rates. This could be due to the higher rate of poverty within the county. County rates for injury ER visits are well below the state rate. Hospitalizations, however, are about even with the state.

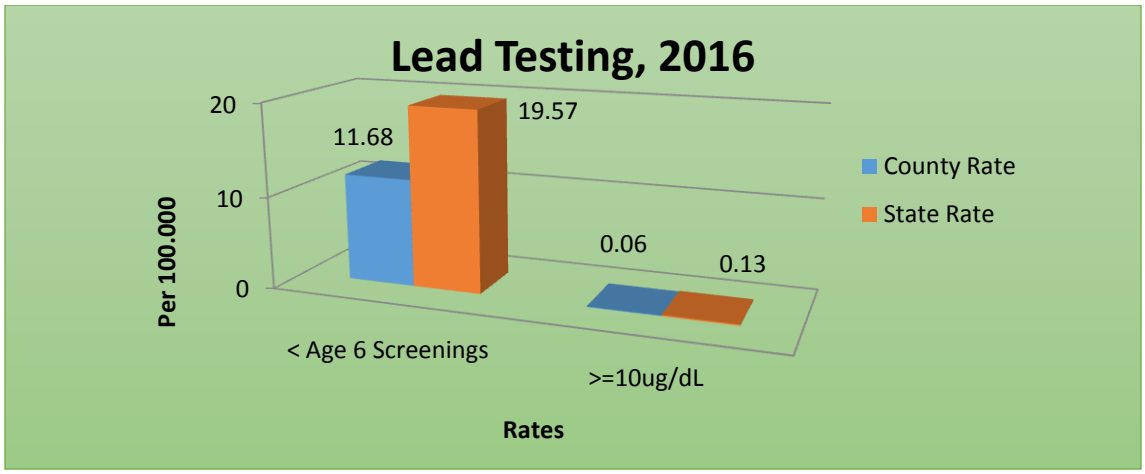


Figure 6.28: Lead Testing
Source: The Missouri Public Health Information Management, 2018

Exposure to lead can cause damage to the brain and other vital organs, as well as intellectual and behavioral deficits. Because children who are exposed to lead often have no obvious symptoms, lead poisoning often goes unrecognized. Screening for lead is an easy way to detect an abnormal blood lead level in children. There is no safe blood lead level. If not found early, exposure to lead and high blood lead levels can lead to irreversible effects on a child's physical and mental health. Targeted screening for elevated blood lead levels should be performed in all children deemed to be at risk.

Webster County is behind the state with lead screenings. It is important to monitor the population health to ensure lead contamination does not have an effect on child development. The county rate for children under age 6 years is 11.68 per 100,000 versus the state rate of 19.57 per 100,000. There were a total of 399 screenings in 2016. The rate for elevated lead levels is, however, below the state rate at 0.06 per 100,000 versus 0.13 per 100,000.

Sexually Transmitted Diseases (STDs)
Many young people engage in sexual risk behaviors and experiences that can result in unintended health outcomes. Young people are more likely than any other age group to:

- Have multiple sex partners
- Engage in unprotected sex
- Use drugs and alcohol at high rates
- Engage in high risk behaviors while under the influence of drugs and/or alcohol

STDs cause many harmful, often irreversible, and costly clinical complications, such as:

- Reproductive health problems
- Fetal and perinatal health problems
- Cancer
- Facilitation of the sexual transmission of human immunodeficiency virus (HIV), hepatitis B, and hepatitis C, syphilis, herpes

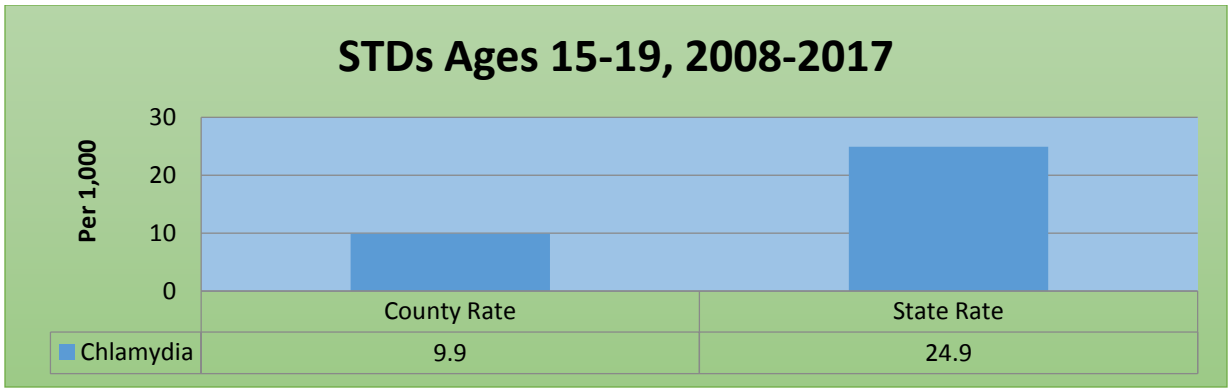


Figure 6.29: STDs
Source: The Missouri Public Health Information Management, 2018

Chlamydia is the more common sexually transmitted disease and is a good indicator of risky behavior by the county's youth. There were 235 cases of chlamydia among 15 – 19 year olds from 2008 – 2017. The county rate is 9.9 per 1,000 which is much lower than the state rate of 24.9 per 1,000 (See Figure 6.29). This could indicate that fewer youth are taking part in this risky behavior but can also be a reflection of higher testing rates throughout the rest of the state (See also Chapter 8).

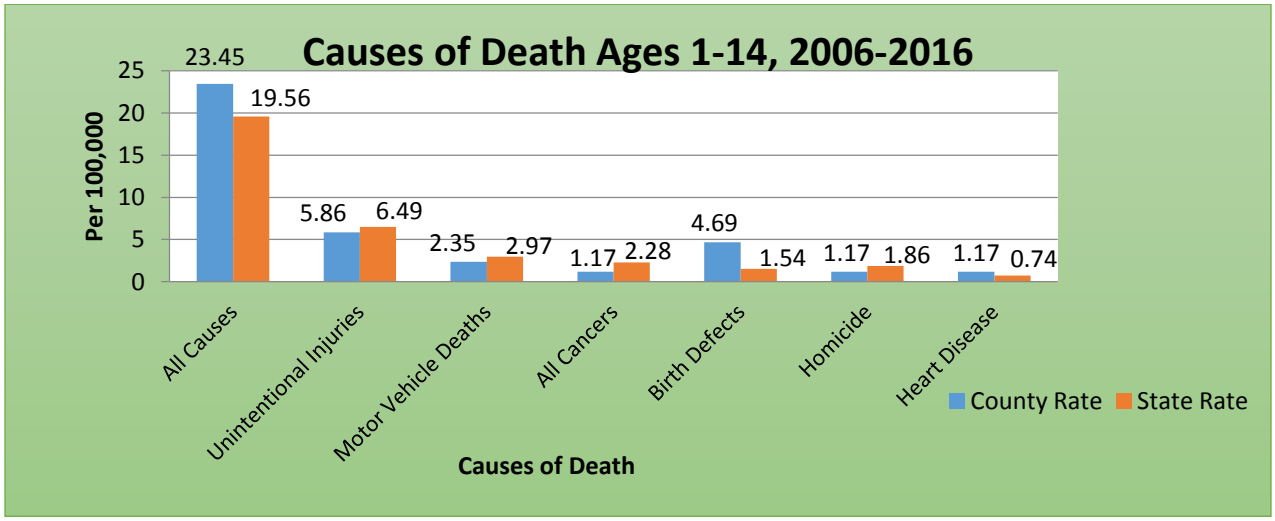


Figure 6.30: Cause of Death Ages 1-14
Source: The Missouri Public Health Information Management, 2018

The death rates and causes can be found in Figure 6.30. There were 25 deaths among 1 – 14 year olds from 2006 – 2016 for a rate of 23.45 per 100,000 compared to the state rate of 19.56 per 100,000. There were seven deaths due to unintentional deaths which included four caused by motor vehicle accidents. There were also four deaths caused by birth defects which provide the highest single rate for deaths in that age group for county residents. The rate for birth defects is 4.69 per 100,000 versus the state rate of 1.54 per 100,000. All other single causes are lower than the state rate except heart disease which had two cases during the same ten year period. The higher rate in birth defects could be due to a lack of prenatal care. Previously mentioned data show a lower rate than the state for first trimester care and higher rates for second and third

trimesters. There is also a much higher rate for overall inadequate care in the county than within the state.

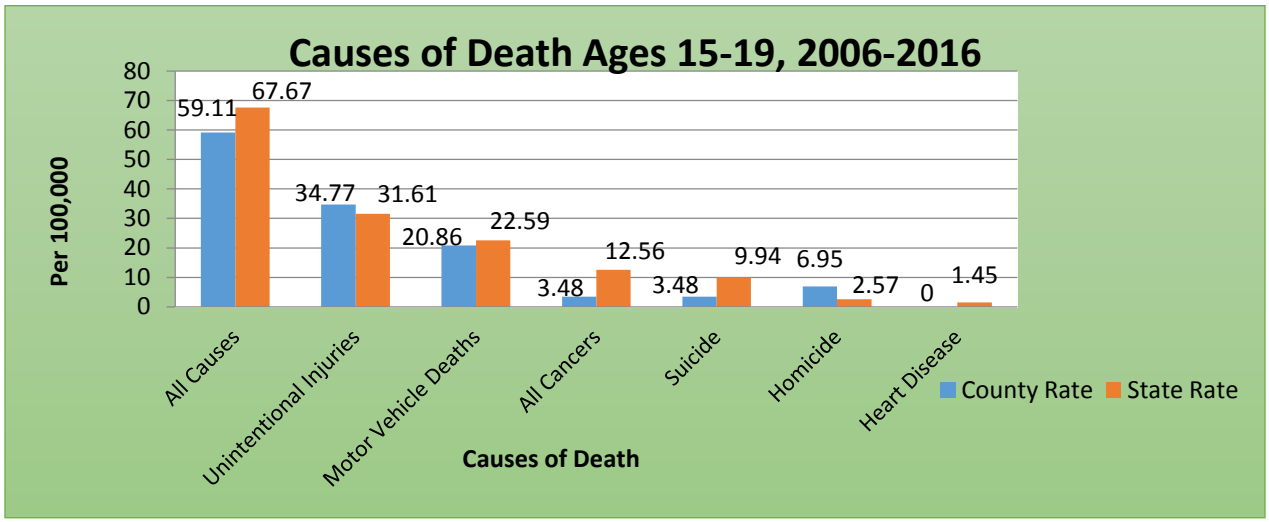


Figure 6.31: Cause of Death Ages 15-19
Source: The Missouri Public Health Information Management, 2018

The death rates and causes for 15 – 19 year olds can be found in Figure 6.31. There were 21 deaths among 15 – 19 year olds from 2006 – 2016 for a rate of 59.11 per 100,000 compared to the state rate of 67.67 per 100,000. There were 14 deaths due to unintentional deaths which included nine caused by motor vehicle accidents. The remaining causes were two cancer cases, one homicide, and one suicide. The highest rate for the county for single events is due to homicide; however, with only one homicide during this period, it cannot be said there is a higher risk in the county versus the state.

Chapter 7: Injury, Chronic Illness, and Death

Figure 7.1 shows the death rates of total unintentional injuries of Webster County with comparison to the state. The death rate has decreased from 2008 – 2012 but there was a slight increase in the deaths again from 2012 – 2013 and a sharper spike from 2013 – 2015.

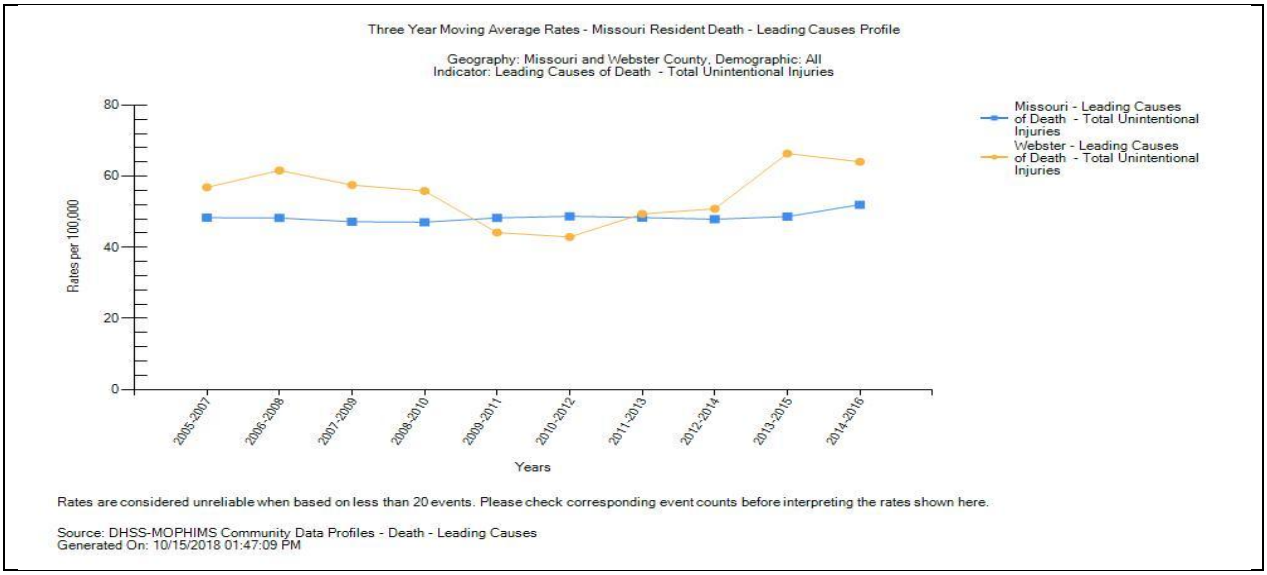


Figure 7.1: Unintentional Injury Profile for Webster County Deaths: Total Unintentional Injury 2005-2016

Source: MO Department of Health and Senior Services, 2018

Figure 7.2 shows the number of deaths, hospitalizations, and ER visits for total unintentional injuries in Webster County, 2005 – 2015. The rates of deaths and hospitalizations for total unintentional injuries are higher in Webster County when compared to the state. The rates for ER visits are less in Webster County when compared to the state.

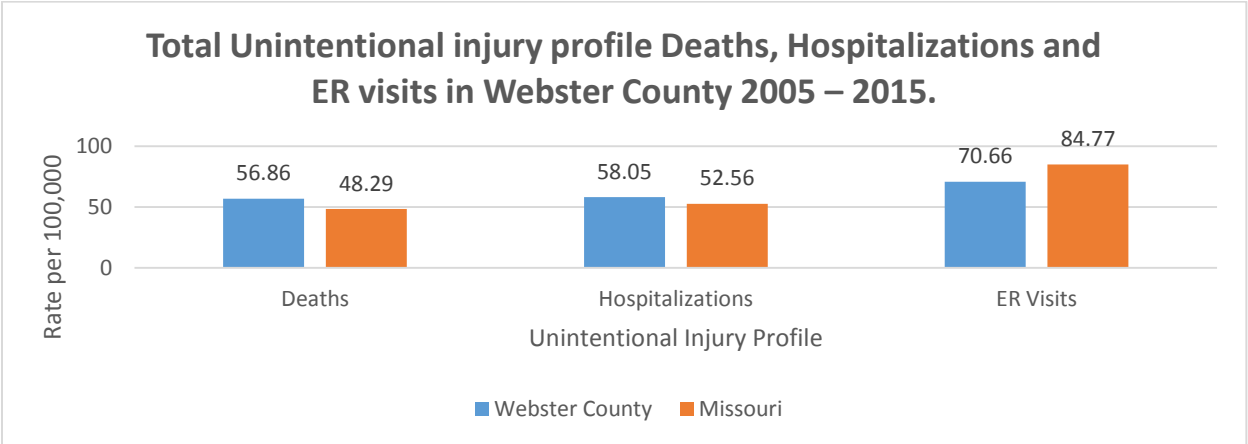


Figure 7.2: Total Unintentional injury Profile Deaths, Hospitalizations and ER Visits in Webster County 2005 – 2015

Source: MO Department of Health and Senior Services, 2018

Figures 7.3 and 7.4 show the number of hospitalizations due to motor vehicle accidents and poisoning drugs/alcohol for the years 2002 – 2013 and 1994 – 2013, respectively. The rates of hospitalizations for motor vehicle accidents are more than the state, and there was a gradual decrease in the rates of the hospitalizations from 2003 – 2013. There was an increase in rates for hospitalizations for poisoning in Webster County.

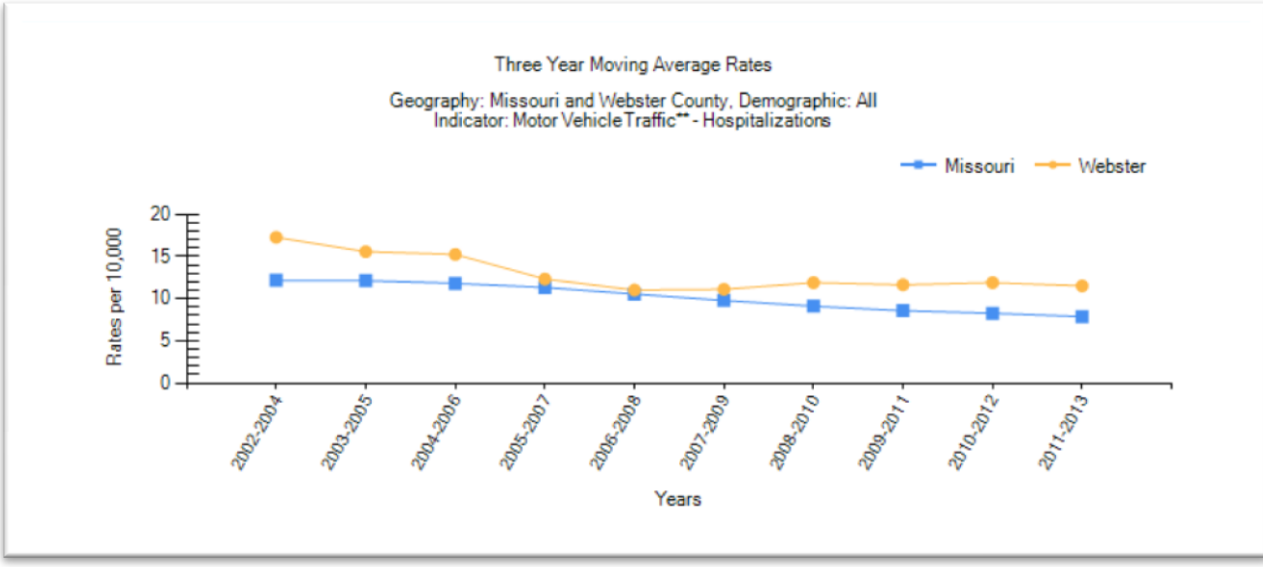


Figure 7.3: Unintentional Injury Profile for Webster County Hospitalizations: Motor Vehicle Traffic 2002-2013
Source: MO Department of Health and Senior Services, 2017

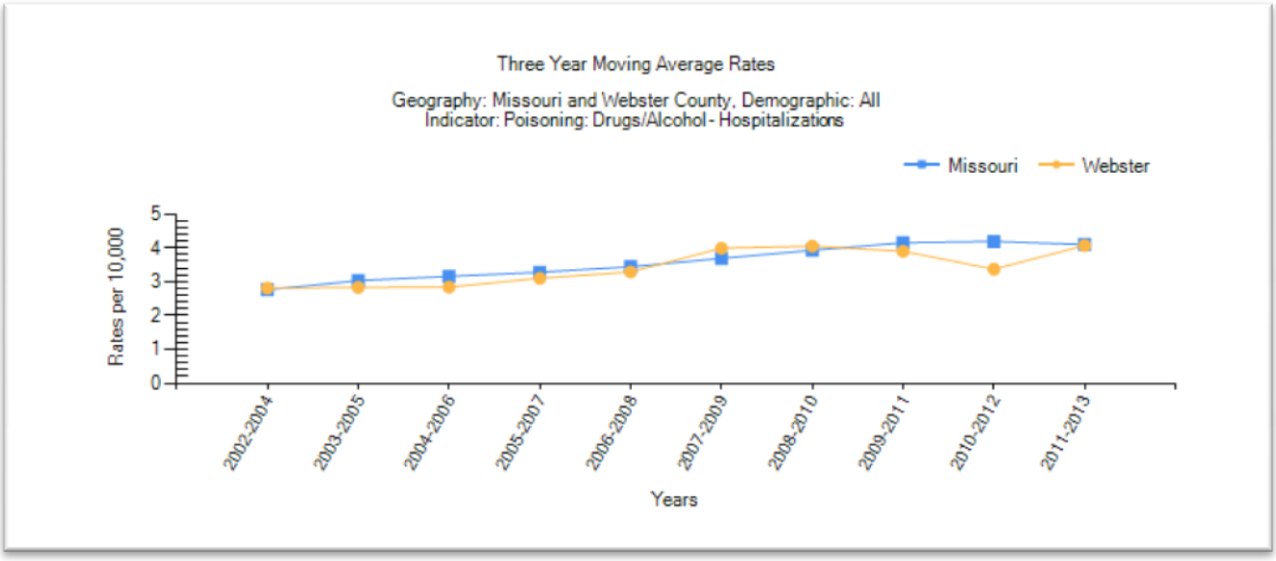


Figure 7.4: Unintentional Injury Profile for Webster County Hospitalizations: Poisoning (Drugs/Alcohol) 1994-2012
Source: MO Department of Health and Senior Services, 2017

Figure 7.5 and Table 7.1 show the number of deaths, hospitalizations, and ER visits for total unintentional injuries, firearms in Webster County, 2005 – 2015 and the total unintentional injury profile, 2005 – 2015. The rates of deaths, hospitalizations, and ER visits are less in Webster County when compared to the state.

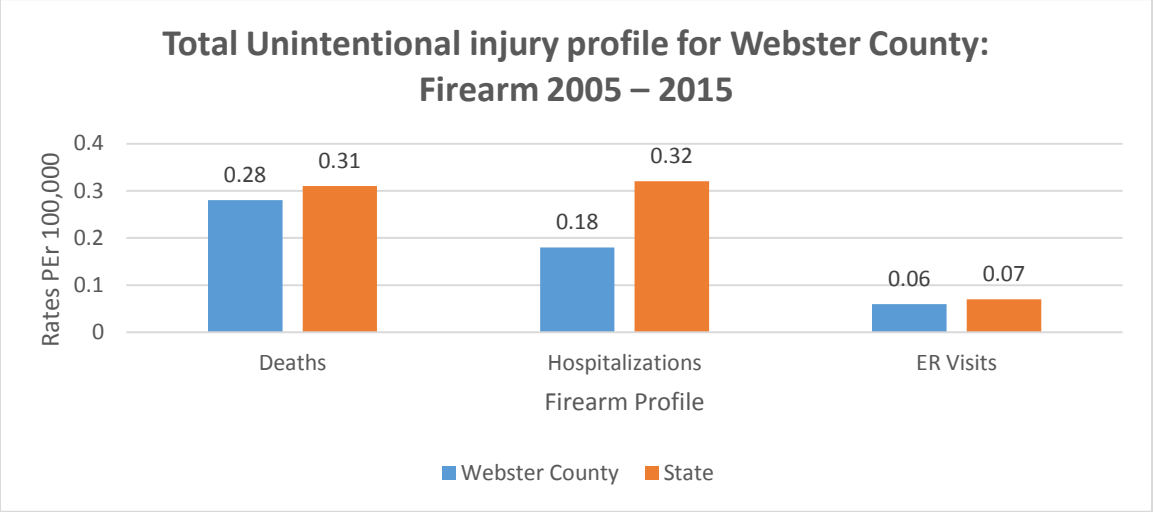


Figure 7.5: Total Unintentional Injury Profile for Webster County: Firearm 2005 – 2015
Source: MO Department of Health and Senior Services, 2017

Table 7.1: Total Unintentional Injury Profile 2005-2015, * Deaths 2006-2016

Fall	Webster County	Missouri
Deaths	8.01	10.05
Hospitalization	25.93	26.97
ER Visits	19.82	25.19
Poisoning Gas/Cleaner/Caustic		
Deaths	0	0.41
Hospitalization	0.17*	0.21
ER Visits	0.16	0.23
Fire/Burn		
Deaths	2.84*	1.33
Hospitalization	1.99	1.18
ER Visits	1.25	1.44
Drowning		
Deaths	0.52*	1.17
Hospitalization	0.05*	0.07
ER Visits	0.02*	0.02
Injury at Work		
Deaths	1.68*	1.33

Source: MO Department of Health and Senior Services, 2017

Table 7.2 shows the self-inflicted injury profile for 2005 – 2015. The data shows that the number of deaths and hospitalization for self-inflicted injuries is more in Webster County when compared to the state. The number of self-inflicted deaths is more in the age group of 36 – 64 when compared to the other age groups.

Table 7.2: Self-Inflicted Injury Profile, 2005 – 2015, * Deaths 2006-2016

Total	Count	Rate	State
Deaths	78	19.91	15.01
Hospitalization	338	9.14	7.24
ER Visits	109	0.30	0.61
Under 15			
Deaths	1	1.10	0.66
Hospitalization	5	0.55	0.74
ER Visits	11	0.12	0.22
15-19			
Deaths	1	3.48	9.94
Hospitalization	38	13.26	10.54
ER Visits	25	0.87	1.87
20-34			
Deaths	14	20.49	18.19
Hospitalization	89	13.18	11.79
ER Visits	32	0.47	1.11
35-64			
Deaths	48	30.50	21.26
Hospitalization	198	12.66	8.96
ER Visits	39	0.25	0.45
65-74			
Deaths	4	12.53	14.61
Hospitalization	6	1.94	1.90
ER Visits	2	0.06	0.06
75+			
Deaths	10	44.91	19.94
Hospitalization	2	0.92	1.30
ER Visits	0	0.00	0.04

Source: MO Department of Health and Senior Services, 2017

Table 7.3 shows the number of deaths, hospitalizations, and ER visits of total assault injury in Webster County for 2005 – 2015. The rate of deaths, hospitalizations, and ER visits are less in Webster County when compared to the state. Deaths due to firearms are more in the county and the number of children that died due to child abuse is one, the number of hospitalizations was three, and ER visits were 11.

Table 7.3: Total Assault Injury Profile 2005 – 2015, * Deaths 2006-2016

Total Assault Injuries	Count	Rate	State
Deaths	7	1.82	7.79
Hospitalization	45	1.16	2.84

ER Visits	707	1.95	3.81
Cut-Pierce			
Deaths	0	0.00	0.56
Hospitalization	3	0.08	0.42
ER Visits	12	0.03	0.20
Firearm			
Deaths	5	1.40	5.85
Hospitalization	6	0.16	0.82
ER Visits	2	0.00	0.10
Fight			
Deaths	0	0.00	0.04
Hospitalization	13	0.32	0.55
ER Visits	368	1.02	1.70
Spouse-Partner Abuse			
Deaths	0	0	0
Hospitalization	0	0.00	0.02
ER Visits	14	0.05	0.08
Adult Abuse			
Deaths	0	0	0.01
Hospitalization	1	0.03	0.06
ER Visits	45	0.16	0.26
Child Abuse			
Deaths	1	0.23	0.08
Hospitalization	3	0.27	0.83
ER Visits	14	0.13	0.49
Blunt Object			
Deaths	0	0	0.05
Hospitalization	10	0.27	0.33
ER Visits	69	0.19	0.40
Other Assault			
Deaths	1	0.19	1.20
Hospitalization	9	0.23	0.45
ER Visits	183	0.50	1.00

Source: MO Department of Health and Senior Services, 2017

Figure 7.6 shows the risky behaviors of Missouri high school youth. The percentage of students who never or rarely wore helmets has increased from 80% to 86.7% from 2009 to 2013. Eighty-four percent of the students did not use birth control pills in 2009, but the percentage has decreased to 80% in 2013.

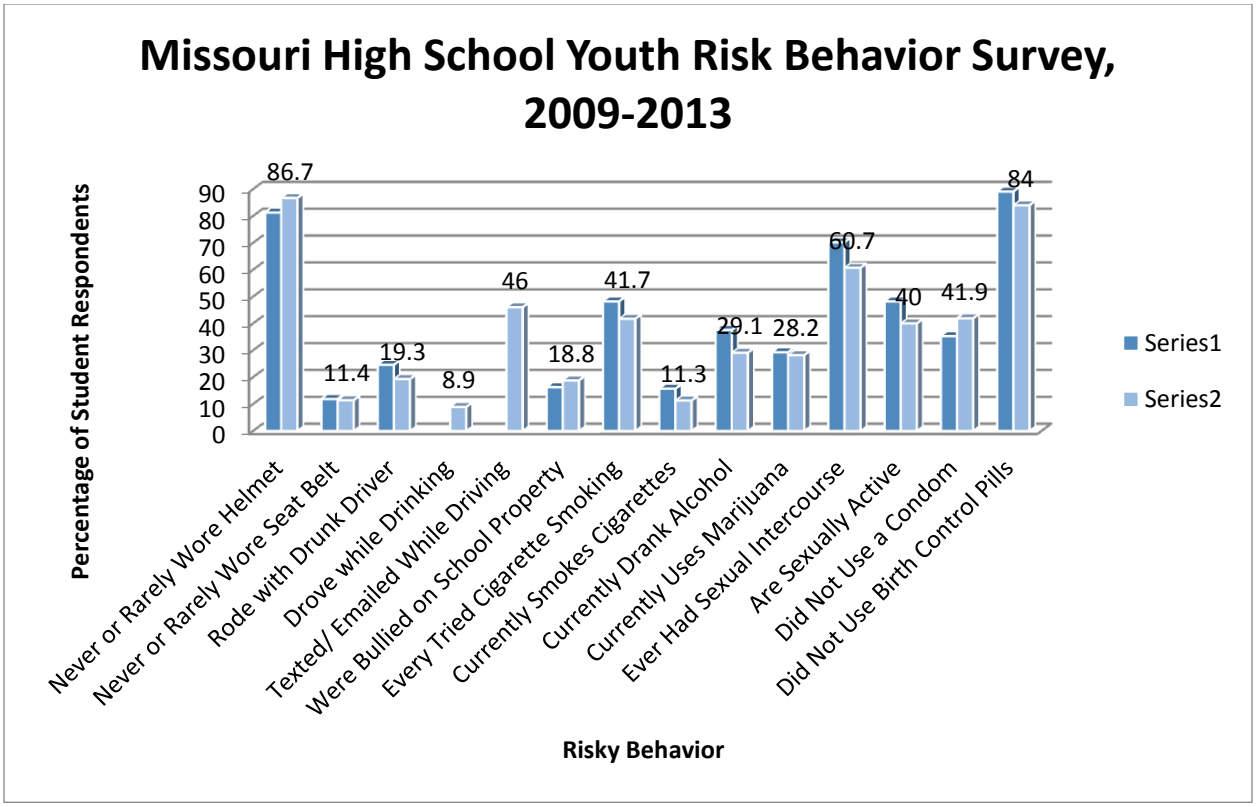


Figure 7.6: Missouri High School Youth Risk Behavior Survey, 2009-2013
Source: Centers for Disease Control and Prevention, Behavior Risk Factor Survey, 2013

Chronic Diseases

Leading Causes of Mortality

Chronic diseases such as diabetes, cardiovascular disease, cancer, etc., are the leading causes of death and disability worldwide. Disease rates from these conditions are accelerating globally, advancing across every region, and pervading all socioeconomic classes. The World Health Report 2002, indicates that the mortality, morbidity, and disability attributed to the major chronic diseases currently account for almost 60% of all deaths and 43% of the global burden of disease. By 2020, their contribution is expected to rise to 73% of all deaths and 60% of the global burden of disease. Moreover, 79% of the deaths attributed to these diseases occur in the developing countries.

Four of the most prominent chronic diseases – cardiovascular disease, cancer, chronic obstructive pulmonary disease and type 2 diabetes mellitus – are linked by common and preventable biological risk factors, notably high blood pressure, high blood cholesterol and overweight, and by related major behavioral risk factors: unhealthy diet, physical inactivity, and tobacco use. Action to prevent these major chronic diseases should focus on controlling these and other key risk factors in a well-integrated manner.

Development of an integrated approach that will target all major common risk factors of cardiovascular disease, diabetes mellitus, cancer and chronic respiratory diseases is the most cost-effective way to prevent and control them.

Figures 7.7 and 7.8 show the mortality rates due to chronic diseases for Webster County compared to the state of Missouri for the period 2006 – 2017. Heart disease, stroke, cancer, and chronic obstructive pulmonary disease are listed as the top four diseases that are attributed to mortality in residents of Webster County. Diseases related to smoking also contribute immensely to disease burden.

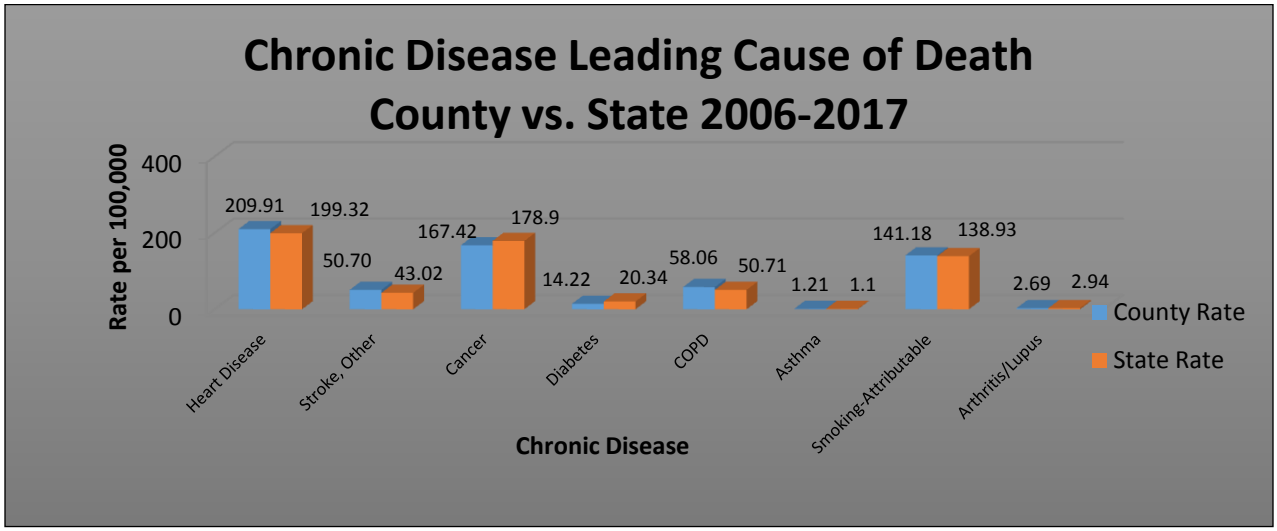


Figure 7.7: Leading Cause of Death from Chronic Disease, 2006-2017
Source: Missouri Department of Health and Senior Services, 2018

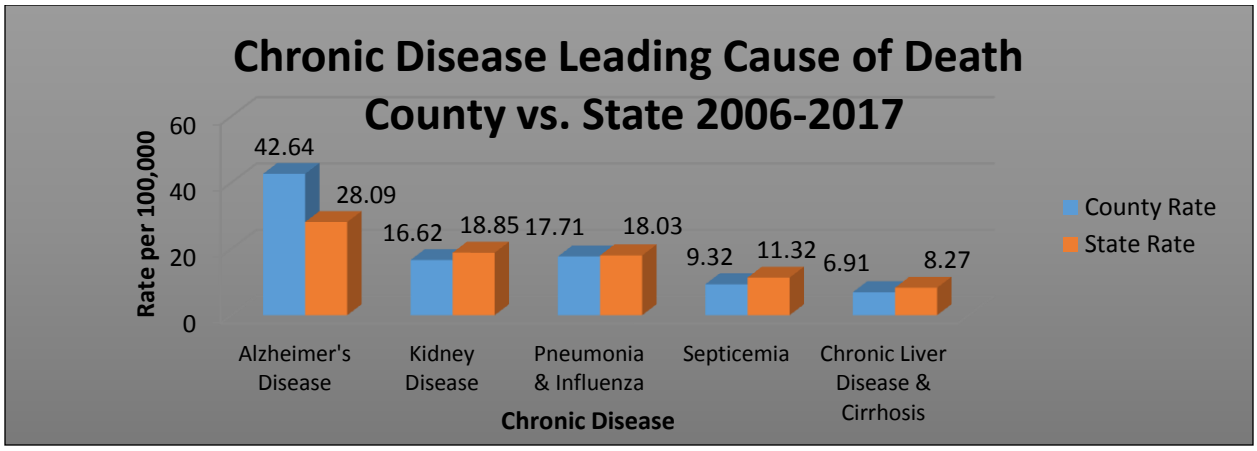


Figure 7.8: Leading Cause of Death from Chronic Disease, 2006-2017
Source: Missouri Department of Health and Senior Services, 2018

Figure 7.9 shows the mortality rates for the top four diseases affecting residents in Webster County for the period 2006 – 2017. Rates for stroke, cancer, and COPD remain generally the same throughout this period; however, heart disease shows a gradual decline with its rate.

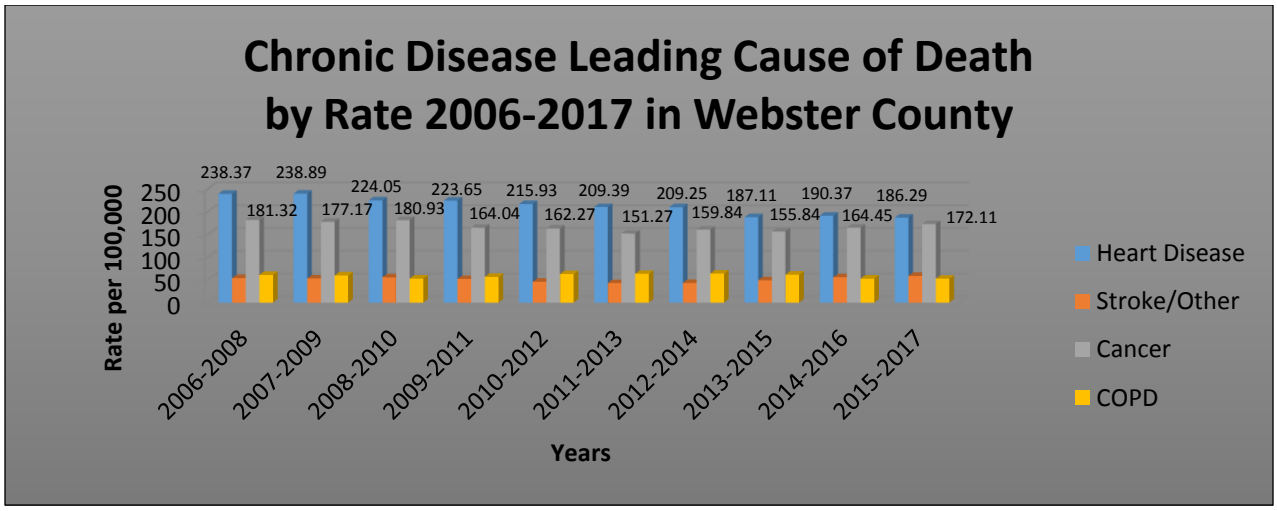


Figure 7.9: Mortality Rates by Disease, 2006-2017
Source: Missouri Department of Health and Senior Services, 2018

Cardiovascular Disease

Cardiovascular diseases, conditions of the heart and blood vessels, are leading causes of morbidity and mortality throughout the world. Largely diseases of lifestyle and affluence, they account for a majority of deaths in some industrialized countries. They are a coming epidemic in the developing world as communities and individuals attain richer and less healthy lifestyles.

The leading cardiovascular diseases are coronary heart disease, hypertension, stroke, and heart failure. They are frequently interconnected with the underlying pathology atherosclerosis, a condition damaging medium and large arteries. There are also other important diseases which, while less common, present considerable health burden including rheumatic heart disease, peripheral artery disease, cardiomyopathy, and congenital heart disease.

Figure 7.10 illustrates the mortality of heart disease in Webster County in comparison to the state. Overall, the rate for Webster County has been higher than the state.

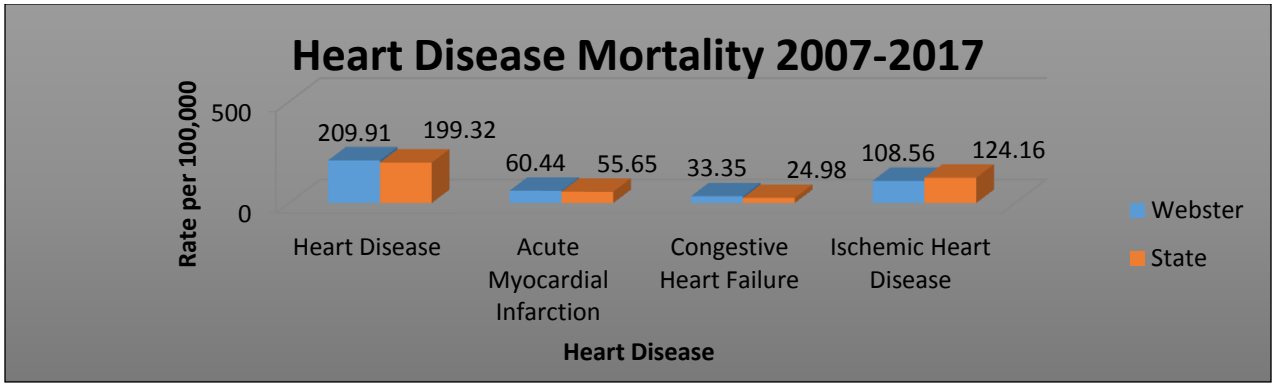


Figure 7.10: Mortality of Heart Disease, 2007–2017
Source: Missouri Department of Health and Senior Services, 2018

Figures 7.11 and 7.12 show hospitalization rates for heart disease events are much lower than for deaths. Hospitalizations are also lower than the state as opposed to mortality which is higher than the state rate. This could be due to the rural nature of Webster County. Treatment for such events can take much longer due to the distance to the nearest emergency room or hospital.

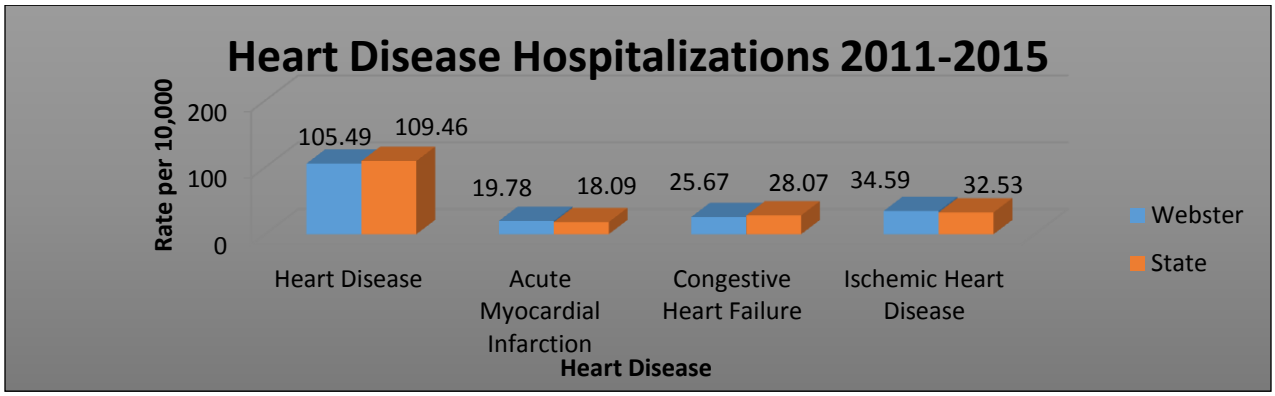


Figure 7.11: Hospitalizations for Heart Disease, 2011–2015
Source: Missouri Department of Health and Senior Services, 2018

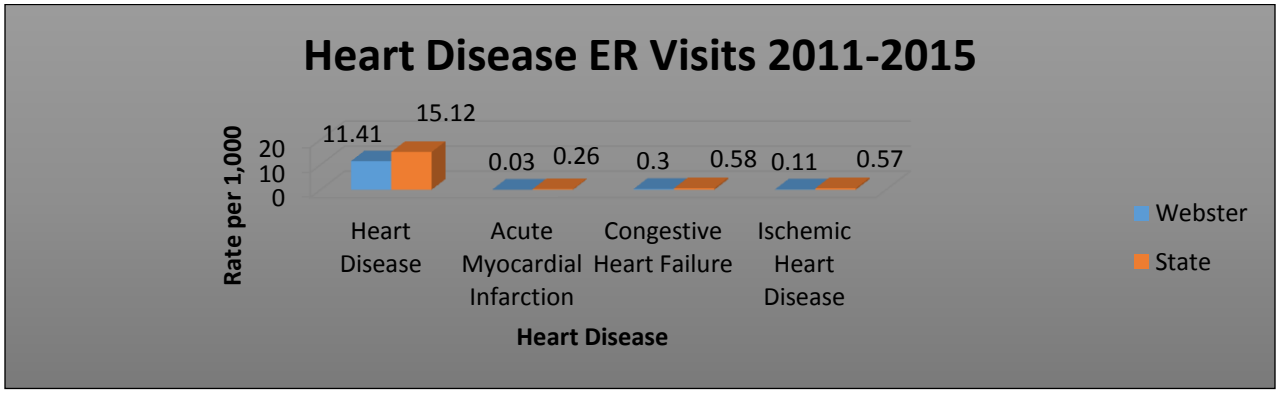


Figure 7.12: ER Visits for Heart Disease, 2011–2015
Source: Missouri Department of Health and Senior Services, 2018

Unlike many lifestyle related conditions, the causes or risk factors for the leading cardiovascular diseases are well known. They are diet resulting in hyperlipidemia, elevated blood pressure leading to hypertension, diabetes mellitus, physical inactivity, and cigarette smoking. There are also other identified characteristics but this group of risk factors underlies the epidemic. As well studied conditions, much is known about the pathophysiology of risk factors and cardiovascular disease. In addition, knowledge from clinical trials dictates treatment of risk for primary and secondary prevention.

Figure 7.13 lists risks factors for heart disease and their prevalence in Webster County. The factors that are listed are all preventable or can be controlled through healthy diet and effective exercise. Treatments are also available for high blood pressure and cholesterol, however, obesity and being overweight are better controlled through a change in diet and increased exercise.

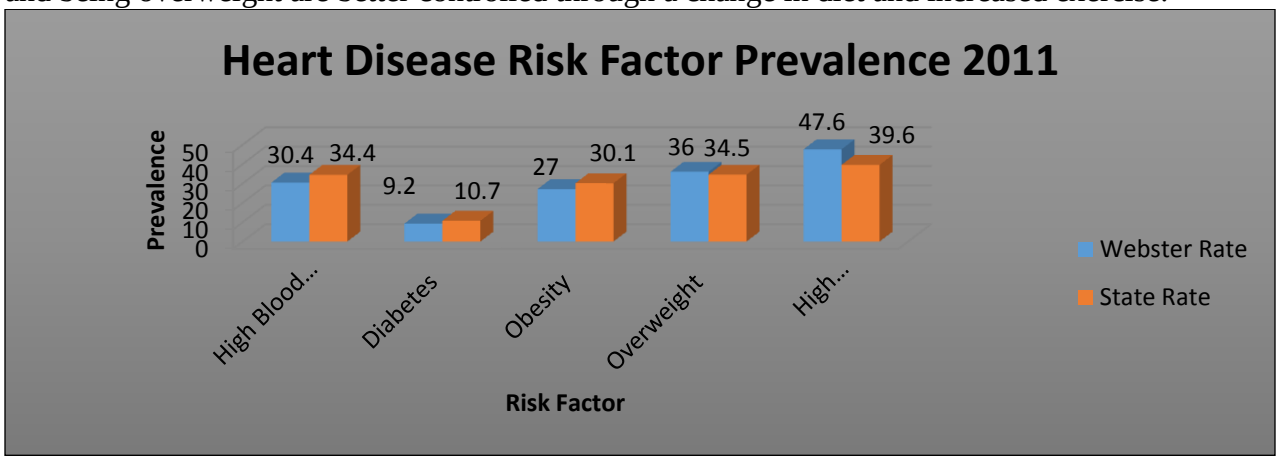


Figure 7.13: At Risk for Heart Disease in Webster County, 2011
Source: Missouri Department of Health and Senior Services, 2018

Figure 7.14 lists more risks that can lead to heart disease. These risks can all be controlled through behavioral changes, although advocacy toward policy change in the workplace or community may be needed for those exposed to second hand smoke in the work place. The largest barrier to good heart health is the lack of fruits and vegetables in the diet. Nearly all survey participants suggested very little intake of fruits and vegetables with less than 9% maintaining a healthy diet.

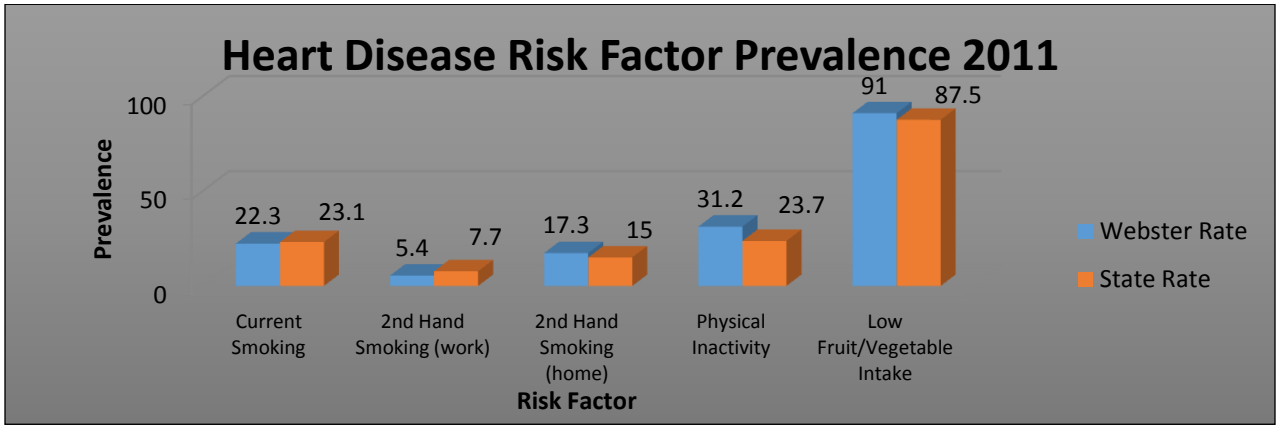


Figure 7.14: At Risk for Heart Disease in Webster County, 2011
Source: Missouri Department of Health and Senior Services, 2018

Prevention starts at the community level where unhealthy diets, smoking, and physical inactivity can be confronted and reduced. Clinical presentations of individual risk factors such as hypertension, hyperlipidemia, and diabetes mellitus can be treated with lifestyle modification and/or medication. The implementation of prevention programs at the community and clinic level results in population-wide changes and disease reduction.

Stroke/Other Cerebrovascular Disease

Cerebrovascular disease refers to a group of conditions that can lead to a cerebrovascular event, such as a stroke. These events affect the blood vessels and blood supply to the brain. Stroke, transient ischemic attack, aneurysms, and vascular malformations are all types of cerebrovascular disease. In the United States, cerebrovascular disease is the fifth most common cause of death. In 2014, it caused 41.7 fatalities per 100,000 people or 133,103 deaths in total.

Atherosclerosis is one type of cerebrovascular disease. It occurs when high cholesterol levels together with inflammation in the arteries of the brain, cause cholesterol to build up in the vessel as a thick, waxy plaque that can narrow or block blood flow in the arteries. This plaque can limit, or completely obstruct, blood flow to the brain. In time, this can cause a cerebrovascular attack, such as a stroke or a transient ischemic attack.

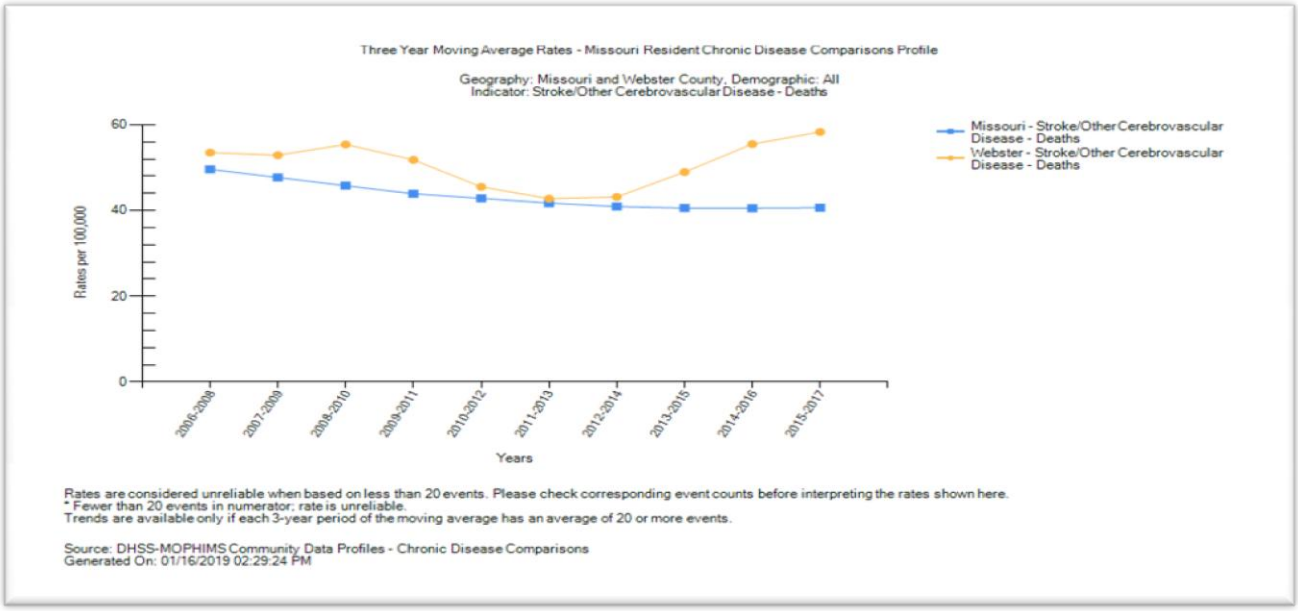


Figure 7.15: Stroke/Other Cerebrovascular Disease in Webster County, 2006-2017
Source: Missouri Department of Health and Senior Services, 2018

Figure 7.15 shows that from 2006 – 2017, Missouri had a steady decline in cerebrovascular events. Webster County, however, remained above the state rate during that time and has even shown a sharp increase in the last 5 – 6 years. Rates are currently at their highest and are much higher than ten years ago for Webster County.

Risk factors

Stroke is the most common type of cerebrovascular event. It is more likely among males aged over 65 years, and especially if they or a close relative have previously had a stroke. Factors that increase the risk of stroke and other types of cerebrovascular disease include:

- Hypertension, or blood pressure of 140/90 mm Hg or above
- Smoking
- Obesity
- Poor diet, and lack of exercise
- Diabetes
- High blood cholesterol of 240 milligrams per deciliter (mg/dL) or over

Some of these can be prevented by making healthy lifestyle choices.

Figure 7.16 covers specific risk factors and their rates that contribute to these outcomes in Webster County. Physical inactivity, being overweight, low fruit and vegetable – intake, and high cholesterol are the top four risk factors that contribute to stroke events. These factors also have higher rates in the county than in the state which may contribute to the higher rates of stroke in the county.

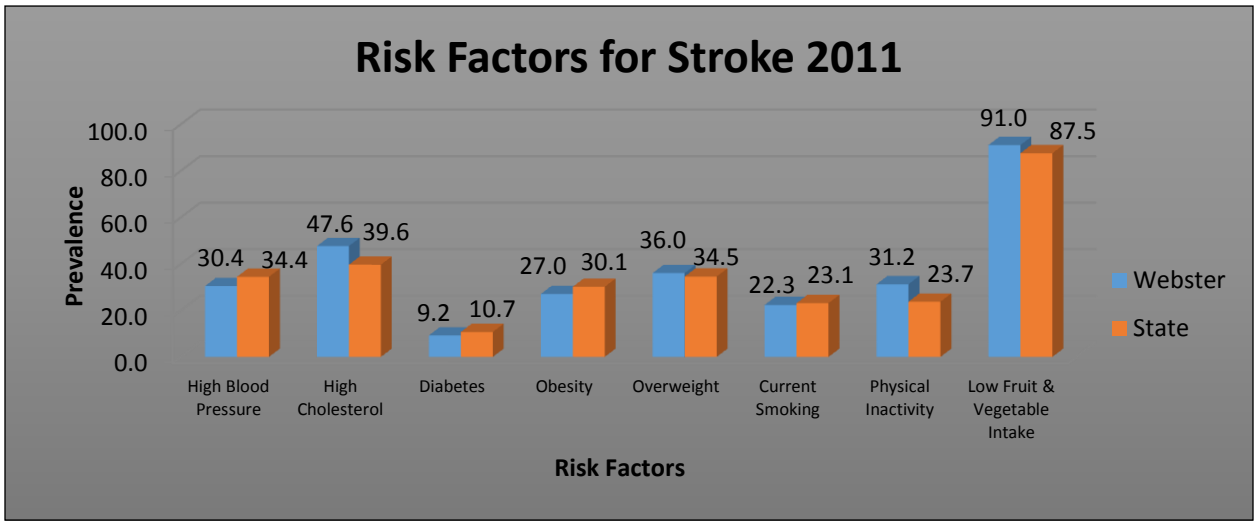


Figure 7.16: Stroke Risk Factors, 2011

Source: Missouri Department of Health and Senior Services, 2018

Ways to reduce the risk of cerebrovascular disease include:

- Not smoking
- Getting regular physical exercise
- Eating a low-fat diet
- Maintaining a healthy weight
- Controlling blood pressure
- Lowering blood cholesterol with diet and medications if necessary

Stroke and other cerebrovascular events can be fatal, but with rapid medical attention, a full or partial recovery is possible. People with cerebrovascular disease should follow healthy lifestyle tips and their doctor's instructions to reduce the chance of an attack.

Cancer

Cancer is a collection of related diseases in which some of the body's cells begin to divide without stopping and spread into surrounding tissues. Different cancers can require different treatments, i.e., chemotherapy, radiation therapy, or immunotherapy. Lung, prostate, and breast are a few of the most common cancers in the United States.

Figure 7.17 shows the proportions of deaths in Webster County by the common cancer types. The top three cancer types affecting residents are lung, colon-rectal, and breast. The lung cancer rates were higher in Webster County than the other different common types of cancer.

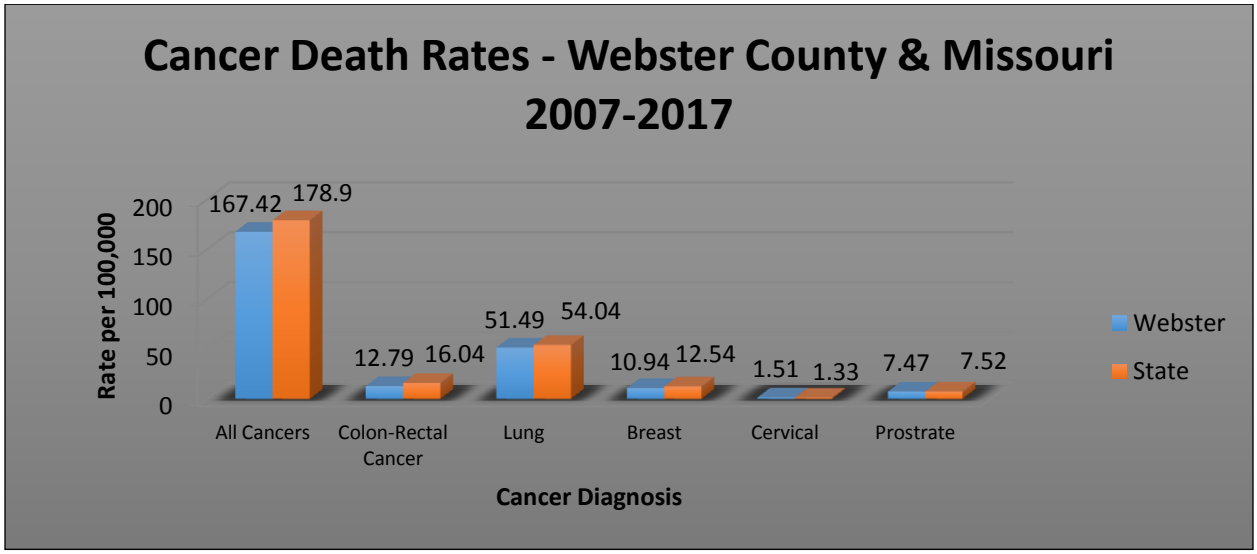


Figure 7.17: Rate of Total Cancer Deaths, 2007–2017
Source: Missouri Department of Health and Senior Services, 2018

Figure 7.18 shows death rates for all types of cancer. There is a steady decline in deaths throughout the state over the years; however, Webster County, while maintaining a lower rate of deaths than the state throughout the period, shows a gradual decline with a recent spike in numbers of deaths.

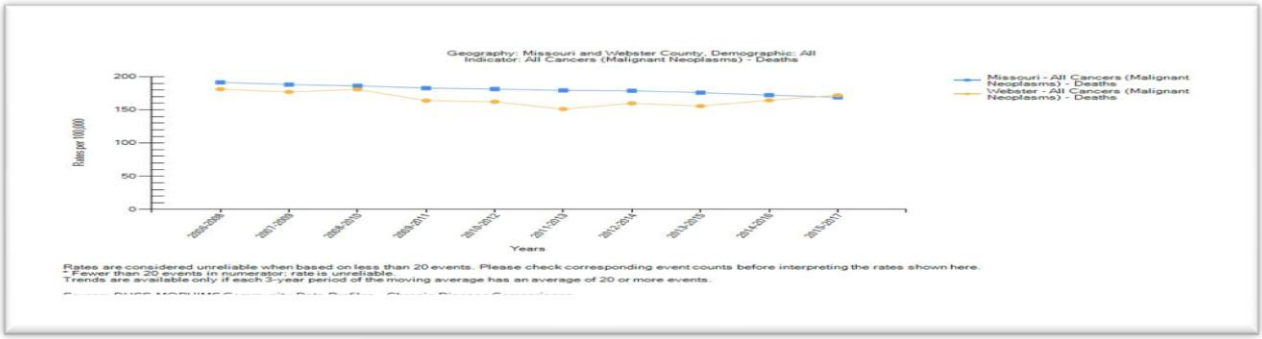


Figure 7.18: Rate of Total Cancer Deaths, 2006 – 2017
Source: Missouri Department of Health and Senior Services, 2018

Prevention
Being proactive in prevention will help in reducing the chances of developing cancer. There are many risky behaviors and lifestyle changes that can assist in reducing risk. These include:

1. **Avoid tobacco use**
Smoking has been linked to various types of cancer – including lung, mouth, throat, larynx, pancreas, bladder, cervix, and kidney. Chewing tobacco has been linked to cancer of the oral cavity and pancreas. Even if you don't use tobacco, exposure to secondhand smoke might increase your risk of lung cancer.

2. **Healthy diet**
Although eating healthy does not guarantee a cancer – free life, it might reduce your risk. Consider these prevention tips:

- Eat plenty of fruits and vegetables
- Avoid obesity
- If you choose to drink alcohol, do so only in moderation
- Limit processed meats

3. **Maintain a healthy weight and be physically active**
Maintaining a healthy weight might lower the risk of various types of cancer, including cancer of the breast, prostate, lung, colon, and kidney.

Physical activity counts, too. In addition to helping control weight, physical activity on its own might lower the risk of breast and colon cancer.

4. **Protect yourself from the sun**
Skin cancer is one of the most common kinds of cancer – and one of the most preventable. Try these tips:

- **Avoid midday sun.** Stay out of the sun between 10 a.m. and 4 p.m. when the sun's rays are strongest.
- **Stay in the shade.** When you're outdoors, stay in the shade as much as possible. Sunglasses and a broad-brimmed hat help too.
- **Cover exposed areas.** Wear tightly woven, loose fitting clothing that covers as much of your skin as possible. Opt for bright or dark colors, which reflect more ultraviolet radiation than do pastels or bleached cotton.
- **Don't skimp on sunscreen.** Use a broad-spectrum sunscreen with an SPF of at least 30, even on cloudy days. Apply sunscreen generously, and reapply every two hours – or more often if you're swimming or perspiring.
- **Avoid tanning beds and sunlamps.** These are just as damaging as natural sunlight.

5. **Get vaccinated**
Cancer prevention includes protection from certain viral infections. Talk to your doctor about vaccination against:

- **Hepatitis B (HBV).** HBV can increase the risk of developing liver cancer. The hepatitis B vaccine is recommended for certain adults at high risk – such as adults who are sexually active but not in a mutually monogamous relationship, people with sexually transmitted infections, people who use intravenous drugs, men who have sex with men, and health care or public safety workers who might be exposed to infected blood or body fluids.
- **Human papillomavirus (HPV).** HPV is a sexually transmitted virus that can lead to cervical and other genital cancers as well as squamous cell cancers of the head and neck. The HPV vaccine is recommended for girls and boys ages 11 and 12. The U.S. Food and Drug Administration recently approved the use of vaccine Gardasil 9 for males and females ages 9 to 45.

6. **Avoid risky behaviors**

Another effective cancer prevention tactic is to avoid risky behaviors that can lead to infections that, in turn, might increase the risk of cancer. For example:

- **Practice safe sex.** Limit your number of sexual partners and use a condom when you have sex. The more sexual partners you have in your lifetime, the more likely you are to contract a sexually transmitted infection – such as HIV or HPV. People who have HIV or AIDS have a higher risk of cancer of the anus, liver, and lung. HPV is most often associated with cervical cancer, but it might also increase the risk of cancer of the anus, penis, throat, vulva, and vagina.
- **Don't share needles.** Sharing needles with people who use intravenous drugs can lead to HIV, as well as hepatitis B and hepatitis C – which can increase the risk of liver cancer. If you're concerned about drug misuse or addiction, seek professional help.

7. **Get regular medical care**

Regular self-exams and screenings for various types of cancers – such skin, colon, cervix, and breast – can increase your chances of discovering cancer early, when treatment is most likely to be successful. Ask your doctor about the best cancer screening schedule for you.

Diabetes Mellitus

Diabetes is one of the most common diseases today and attributed to many factors – genetics, diet, inactivity, and failure of other organ systems in the body. Figure 7.19 compares the mortality rates and hospitalization rates for diabetes mellitus for Webster County and the state. The mortality rates and hospitalization rates for diabetes in Webster County is less than the state.

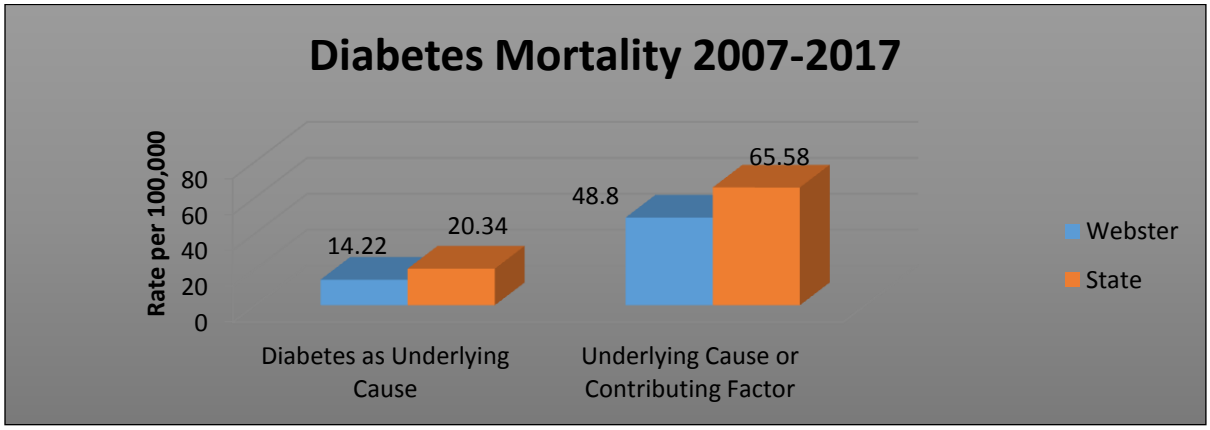


Figure 7.19: Mortality and Rate for Diabetes Mellitus, 2007 – 2017
Source: Missouri Department of Health and Senior Services, 2017

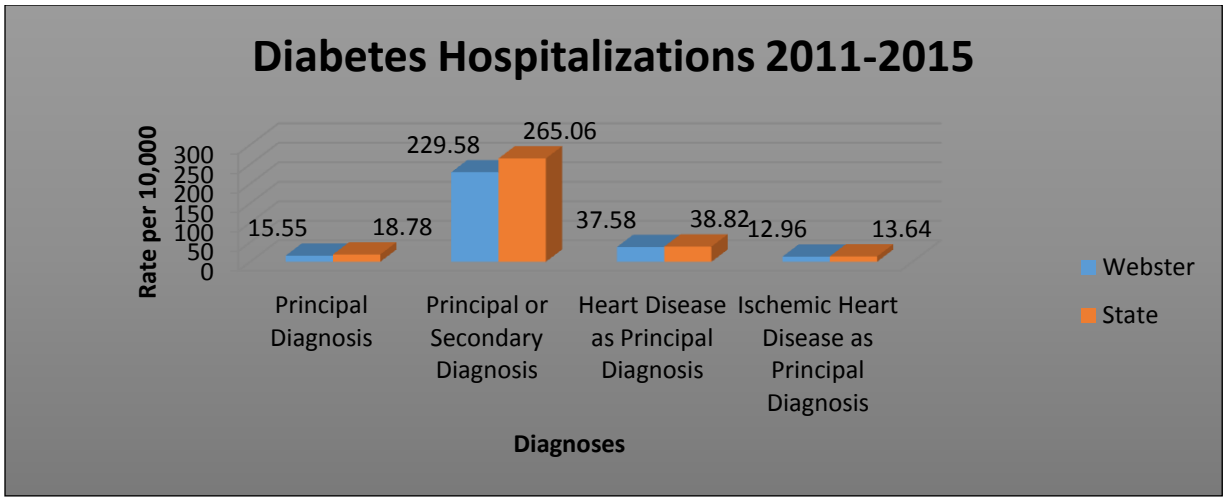


Figure 7.20: Hospitalizations for Diabetes Mellitus, 2011 – 2015
Source: Missouri Department of Health and Senior Services, 2018

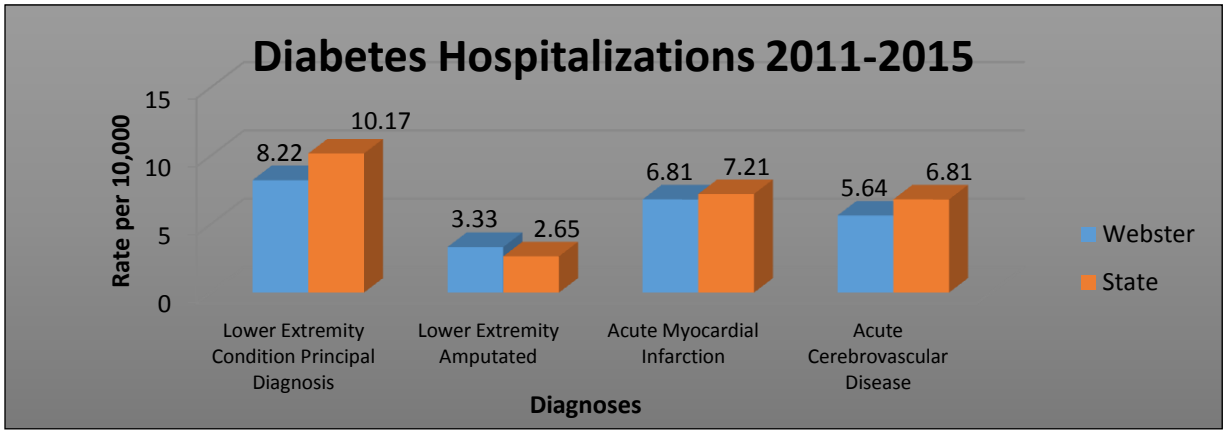


Figure 7.21: Hospitalizations for Diabetes Mellitus, 2011 – 2015
Source: Missouri Department of Health and Senior Services, 2018

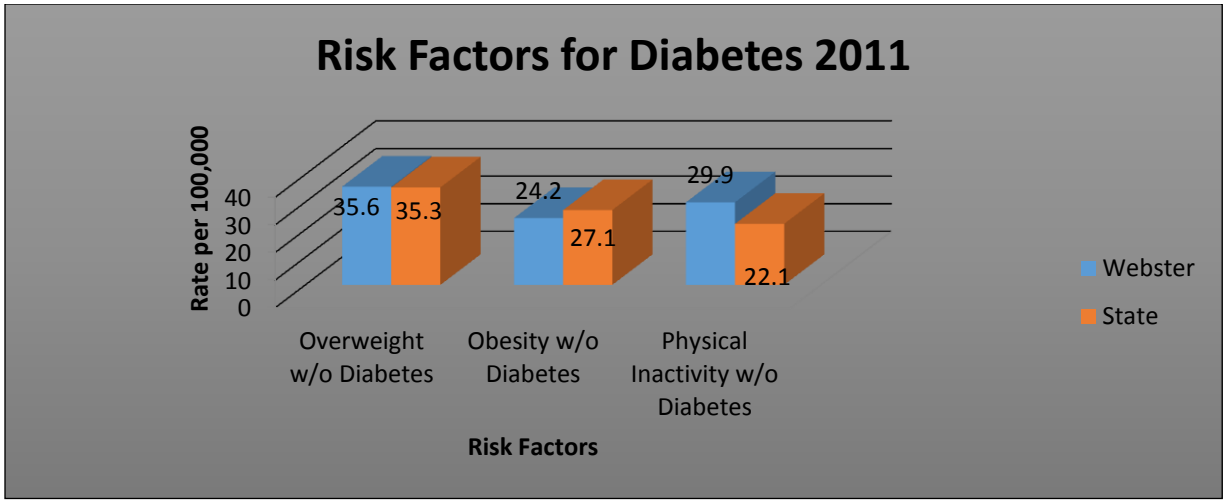


Figure 7.22: Diabetes Risk Factors, 2011
Source: Missouri Department of Health and Senior Services, 2018

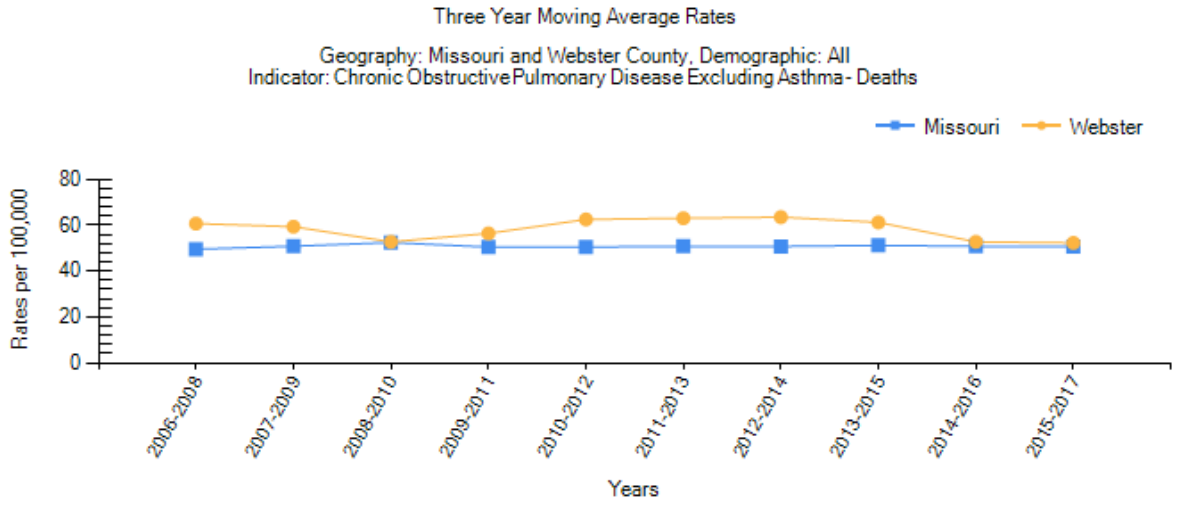


Figure 7.23: Hospitalizations for Diabetes Mellitus, 2011 – 2015
Source: Missouri Department of Health and Senior Services, 2018

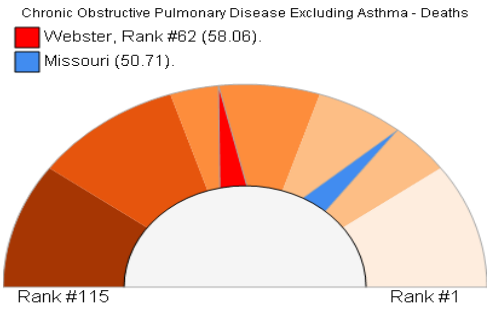


Figure 7.24: Mortality and Hospitalization Rate of COPD, 2005-2015
Source: Missouri Department of Health and Senior Services, 2018

Figure 7.24 shows the rate of difference for chronic obstructive pulmonary disorder, reflecting that the hospitalization rate in Webster County is also lower than that of the state.

Chapter 8: Infectious/Communicable Disease

Infectious or communicable diseases are those that are transmitted from person to person or animal to person and involve microorganisms such as bacteria, viruses, fungi, or parasites. Specific modes of transmission are required for each pathogen to spread. Preventing the continued spread of these diseases involves breaking the chain of transmission. Identification of specific diseases in the population is one step in disease surveillance and prevention. This chapter will focus on the information and prevalence of certain diseases in Webster County reported by area hospitals, labs, and physicians as required by law. This list of diseases is not exhaustive, but it will focus on those reportable diseases that are a common threat to public health.

Pertussis
Pertussis is a highly contagious bacterial infection that may start with cold symptoms or a dry cough, followed by episodes of severe coughing. It is spread through droplet transmission and, if untreated, can be spread by an infected person for several weeks.

Campylobacter
Campylobacter is a zoonotic bacterial enteric disease caused most commonly by *Campylobacter jejuni*. This illness is characterized by diarrhea, abdominal pain, malaise, fever, nausea, and vomiting. The disease occurs worldwide and is a common source of "traveler's diarrhea". The mode of transmission occurs orally through contaminated food, water, or contact with infected pets and farm animals.

Giardiasis (Giardia enteritis)
Giardiasis is a protozoan infection caused by *Giardia lamblia*. This infection may cause severe intestinal symptoms including diarrhea, abdominal cramps, fatigue, and weight loss. This disease occurs worldwide, with children usually infected more often than adults. The primary mode of transmission is fecal – oral with large-scale outbreaks sometimes occurring in day care centers or institutional settings. Outbreaks are attributed to groundwater contamination related to the breakdown of old septic systems in the county.

Hepatitis A
Approximately 30% of those infected with the hepatitis A virus (HAV) do not have signs or symptoms of infection. Symptoms of HAV infection include fatigue, abdominal pain, nausea, vomiting, joint pain, jaundice, and loss of appetite. Death rarely occurs in those who are infected with the virus. HAV is transmitted through the blood and body fluids of an infected person. HAV is spread primarily through the fecal – oral route.

Higher incidents of HAV could be attributed to the increased use of methamphetamine because users who are infected often share a common drinking vessel. Another factor influencing the incidence of HAV in the summer could also be related to poor sanitation and training of seasonal workers in food establishments. Transmission has also been noted in sharing of joints, as well.

Hepatitis B
Approximately 30% of those infected with the Hepatitis B virus (HBV) do not have signs or symptoms of infection. Symptoms of HBV infection include fatigue, abdominal pain, loss of appetite, nausea, vomiting, joint pain, and jaundice. Death occurs in 15 – 25% of those who are chronically infected with the virus. Children who are infected rarely exhibit signs or symptoms. HBV is transmitted through the blood and body fluids of an infected person. Methods of transmission include unprotected sex, sharing of intravenous needles and from mother to child during pregnancy.

Hepatitis C
Approximately 80% of those infected with the Hepatitis C virus (HCV) do not have signs or symptoms of infection. Symptoms of HCV infection include fatigue, abdominal pain, decreased appetite, nausea, dark urine and jaundice. Death occurs in <3% of those who are chronically infected with the virus. However, 70 – 85% of those initially infected will develop a chronic infection with 70% of those individuals eventually developing chronic liver disease. Chronic HCV infection is the leading cause of liver transplants. The virus is transmitted through blood and body fluids of an infected person. Common methods of transmission include sharing of intravenous needles, tattoos, body piercing, or sharing of items such as razors or toothbrushes that might have had blood on them. HCV is a hearty virus and can survive up to four weeks outside the body in certain conditions. Unlike HBV, the risk of transmission of HCV through sex is considered low.

Salmonella
Salmonella is a bacterial disease transmitted through the fecal – oral route and can be foodborne. Major risk factors include cross contamination and improper temperature handling during food preparation. Common incidents are from ingestion of undercooked poultry, ground beef, and eggs and sometimes eating or drinking food that contain raw or unpasteurized milk. The symptoms include fever, headache, abdominal pain, diarrhea, nausea, and sometimes vomiting. Dehydration in infants and the elderly can be severe. The incubation period is from 6 – 72 hours, usually 12 – 36 hours.

Tuberculosis
Tuberculosis is a respiratory disease caused by the bacteria *Mycobacterium tuberculosis.* This disease is a major public health threat causing many deaths and disabilities worldwide. Initial infection usually goes unnoticed and results in lifelong risk of reactivation of disease. If untreated, approximately 50% of those infected will die within five years and usually within 18 months. This disease is treatable with antibiotics, but failure to complete the treatment may result in the development of antibiotic-resistant strains of the bacteria, which are more difficult to treat.

Table 8.1: Reported Cases of Tuberculosis

Reported Cases of Tuberculosis	2018	2017	2016	2015	2014	2013	2012
Tuberculosis Latent	5	3	6	3	1	8	3
Tuberculosis Active	0	0	1	0	0	0	0

Source: Missouri Department of Health and Senior Services, 2018

Influenza

Influenza is more commonly referred to as the "flu" and is caused by a number of influenza viral types. The severity of the disease varies from mild to severe illness, with life threatening complications and death occurring quite frequently. The Centers for Disease Control and Prevention (CDC) estimates that 10 – 20% of the U.S. population contracts the disease annually, resulting in 36,000 deaths nationwide. Symptoms usually include fever, headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Symptoms such as nausea, vomiting, and diarrhea are associated more with children than adults. Those people who are at increased risk for developing severe illness include seniors**,** people who have chronic medical conditions, pregnant women, and children**.**

The best method of protection against the flu is by vaccination each fall. In addition to being vaccinated, there are other ways to protect yourself and others from the virus including:

- Avoiding close contact with people who are sick;
- Staying home when you are sick;
- Covering your nose and mouth with a tissue when sneezing or coughing;
- Washing your hands often;
- And avoiding hand contact with your eyes, nose, or mouth.
-

Table 8.2: Case Counts of Selected Communicable Diseases- Missouri (1997-2011)

Case Counts	2018	2017	2016	2015	2014	2013
Campylobacteriosis	15	11	15	8	4	6
Cryptosporidiosis	6	2	3	3	1	4
Giardiasis	4	0	1	3	1	1
Hepatitis C	1	7	1	7	4	29
Legionellosis	2	4	1	4	1	0
Meningococcal Disease	0	0	0	0	0	0
Mumps	0	7	0	1	0	0
Pertussis	5	13	0	1	1	5
Ricketsia	0	0	0	0	1	
Salmonellosis	6	3	10	4	3	2
Shigellosis	1	1	2	4	3	0
Strep	15	8	2	1	1	0
Varicella			3	1		0
Yersinia	1		1	0		0

Source: Missouri Department of Health and Senior Services, 2018

Vector-borne Diseases

Vector-borne diseases are those that involve an insect or animal in the mode of transmission. A few examples of vectors include mosquitoes, ticks, fleas, and rodents. Vector-borne diseases are combated through disease surveillance and vector control.

Table 8.3: Case Counts of Selected Communicable Diseases- Missouri (2013 – 2018)

	2018	2017	2016	2015	2014	2013
Animal Bites	39	40	19	28	53	
Rabies	0	0	0	0	0	0
West Nile Fever	0	0		0		0
Lyme Disease	0	0	0	0	0	0
Rocky Mountain Spotted Fever	9	8	1	2	2	2
Tularemia	1	2	3	1	2	2
Ehrlichiosis	6	6	2	2	3	8
Q Fever	0	11	0	0	0	0

Source: Missouri Department of Health and Senior Services, 2018

Sexually Transmitted Diseases

According to the Centers for Disease Control and Prevention (CDC), in 2017, there were nearly 2.3 million cases of chlamydia, gonorrhea, and syphilis diagnosed in the U.S. This was an increase from 2016 by more than 200,000 cases, marking the fourth consecutive year of sharp increases in sexually transmitted diseases (STDs). Chlamydia remained the most common STD reported in 2017; however, gonorrhea increased 67%, and syphilis increased 31% in the U.S.

Chlamydia

Chlamydia is a sexually transmitted infection caused by the bacteria *Chlamydia trachomatis.* Infection can occur in the anus, oral cavity, female cervix, and male urethra. If untreated, severe complications can occur.

Gonorrhea

Gonorrhea is a sexually transmitted infection caused by the bacteria *Neisseria gonorrhoeae.* The disease is characterized by a purulent discharge 2 – 7 days after exposure. If left untreated, females can develop pelvic inflammatory disease that can result in infertility.

HIV and AIDS

HIV is the causative agent that leads to AIDS. Better treatments are available to slow the progression to AIDS, but a cure still does not exist. According to the 2013 Epidemiologic Report for STD/HIV in Missouri, between 1982 and 2013, there are 447 living HIV Cases and 444 living AIDS cases in the Southwest HIV region.

Table 8.4: Case Counts for STDs – Webster County 2012 – 2018

STDs	2018	2017	2016	2015	2014	2013	2012
Chlamydia	119	106	89	93	74	65	71
Gonorrhea	25	28	25	23	20	11	7
Syphillis	1	4	2	1	0	3	0
HIV	0	0	0	0	0		

Source: Missouri Department of Health and Senior Services, 2018

Resources/ References

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- *City-Data.com,2012*
- *DFAS, 2014*
- *Division of Behavioral Health Southwest Region, 2012*
- *Enroll America, 7/30/2014*
- *Missouri Census Data Center 2007-2011*
- *Missouri Census Data Center, ACS Profile Report 2007-2011*
- *Missouri Department of Health and Senior Services, 2011*
- *Missouri Department of Health and Senior Services, MICA, 2011*
- *Missouri Department of Social Services, Child Abuse/Neglect, 2011*
- *Missouri Economic Research and Information Center, 2013*
- *MobileHomeParkStore.com 2013*
- *OATS Transit, 2015*
- *Robert Wood Johnson Foundation/ Missouri Department of Health and Senior Services, 2013*
- *SAMHSA. National Survey on Drug Use and Health. Estimates are 3-year averages.*
- *U.S. Bureau of the Census, Summary File 1, Census 2010*
- *U.S. Bureau of the Census. 2010 Census, 2010 Demographic Profile Data; 2007-2011 American Community Survey*
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- *U.S. Census Bureau, 2010, and MU Extension Service, 2010*
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- *US Census Bureau, 2009-2011 American Community Survey*
- *US Department of Health and Human Services; Health Resources and Services Administration; 2014*
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- *US Environmental Protection Agency, 2015*
- *USA.Com – Based on 2006-2010 data*
- *Mayo Clinic*