



Public Health
Prevent. Promote. Protect.



2019 Community Health Assessment

A Health Network Partnering Project

Report Research & Preparation
November 2018 – April 2019

Partnering Agencies

- Great Mines Health Center
- Washington County Health Department
- Washington County Community Partnership
- Washington County Memorial Hospital
- Washington County Ambulance District

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Mission & Vision

Washington County

Rural Health Network

Washington County's tax funded entities that provide health and social services have organized to participate in a Rural Health Network. This network serves as a platform to share a collective mission, vision, and effort to improve health outcomes and rankings for Washington County.

The community health improvement (CHI) process brings together health care, public health, and other stakeholders to identify and address the health needs of communities—to have a greater impact on health and economic vitality.



The Mission of the Rural Health Network is to identify current community strengths, resources, needs, and gaps to help focus our community's efforts and abilities on the most important issues to achieve the greatest impact on health.

The Vision of the Rural Health Network is to build on existing strengths to:

- Enhance the quality of services provided by our network members.
- Create new and innovative approaches to effectively improve the health status of our community.
- Improve the patient experience of care, improve the population health of Washington County and reduce the per capita cost of healthcare.

Process & Methods

Work Teams and Stakeholders

The Washington County Health Department, Washington County Community Partnership, Great Mines Health Center, Washington County Memorial Hospital, and the Washington County Ambulance District each assigned staff to participate and contribute to this assessment report. Led by the Washington County Health Department, participants were assigned portions that related to their agencies' services and responsibilities. As work progressed, it was compiled and organized into this comprehensive report.

Strategies

In order to provide an updated measurement of the general health of Washington County, the Rural Health Network utilized two major approaches to data collection. The first approach involved the member organizations compiling the most up-to-date data from county, state and federal sources. All sources of data are referenced and cited in this document. The second approach to measure the county's health was to conduct a county-wide survey to get input from the residents of Washington County on the health issues they felt were most important or most in need of addressing.

Surveys

In February/March 2019, a public survey was conducted in Washington County to assess the general public opinions on the health of the community as a whole. The survey and its purpose were published in the local newspaper, participating agencies' websites, Facebook, paper copies were available to area residents at each of the Washington County Rural Health Network offices and online via an online survey tool. Subsequently, all paper surveys were uploaded to the online survey tool for the purposes of data collection and result presentation. There was a total of 337 surveys completed. Some respondents skipped some questions. The results are included starting on page 44.

Demographics

Age, Gender, and Race Ethnicity

The U.S. Census population estimate for Washington County on July 1, 2017 was 25,022. This is a slight increase from the 2013-2017 American Community Survey (ACS) average of 24,968 and a slight decrease (-0.7%) from the 2010 Census. The 2017 U.S. Census QuickFacts estimates for Washington County show a relatively even gender division; 51.4% male and 48.6% female. The county is largely racially homogenous with the following categorical percentages: 95.4% White only, 2.4% Black or African American, 1.4% Two or More Races, 1.4% Hispanic or Latino, 0.5% American Indian and Alaska Native and 0.3% Asian.

The ACS 2013-2017 estimates that 0.3% of the county is foreign born and we have 1,983 veterans in Washington County.

Children under 5 years old account for 5.9% of the county population, persons under 18 account for 23.1% and persons 65 years and over represent 16.3%. ACS estimates show the 45 to 54-year-old residents make up the largest age group at 14.6% of the total county population; 35 to 44-year-old age group is next highest at 12.6% and 25 to 24-year-old third largest at 12.1%. The smallest age group are children under 5.

Socio-Economic Characteristics

Employment & Income

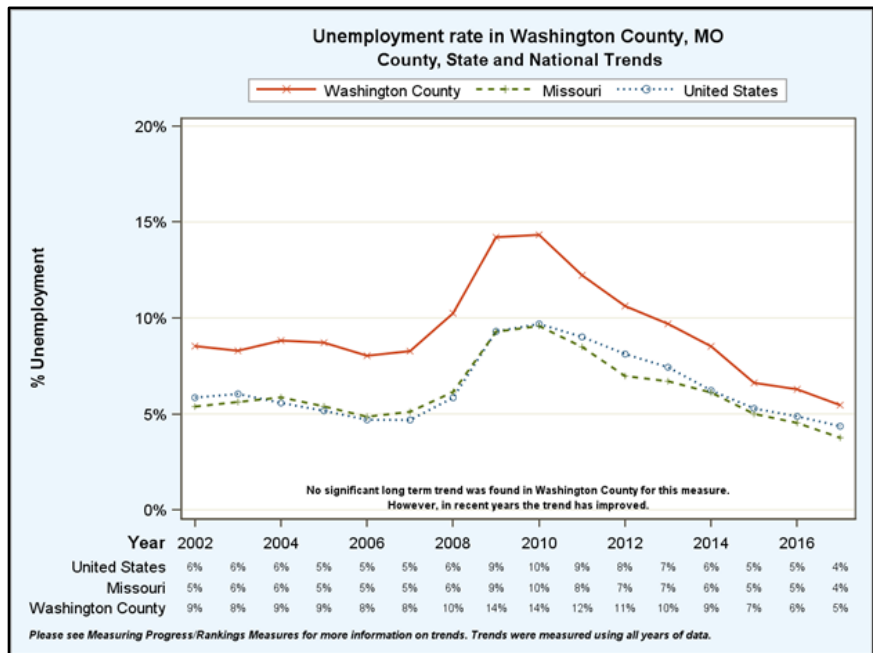
Many Americans spend nearly half their waking hours at work. Working in a safe environment with fair compensation often provides not only income, but also benefits such as health insurance, paid sick leave, and workplace wellness programs that, together, support opportunities for healthy choices.¹

These opportunities, however, are greater for higher wage earners - usually those with more education. The estimated 10 million workers who are part of the "working poor" face many challenges: they are less likely to have health insurance and access to preventive care than those with higher incomes, and are more likely to work in hazardous jobs. Working poor parents may not be able to afford quality childcare, and often lack paid leave to care for their families and themselves². Table 01 shows that Washington County has historically had higher unemployment rates than both the United States and the state as a whole.

Table 01: Unemployment Rate in Washington County

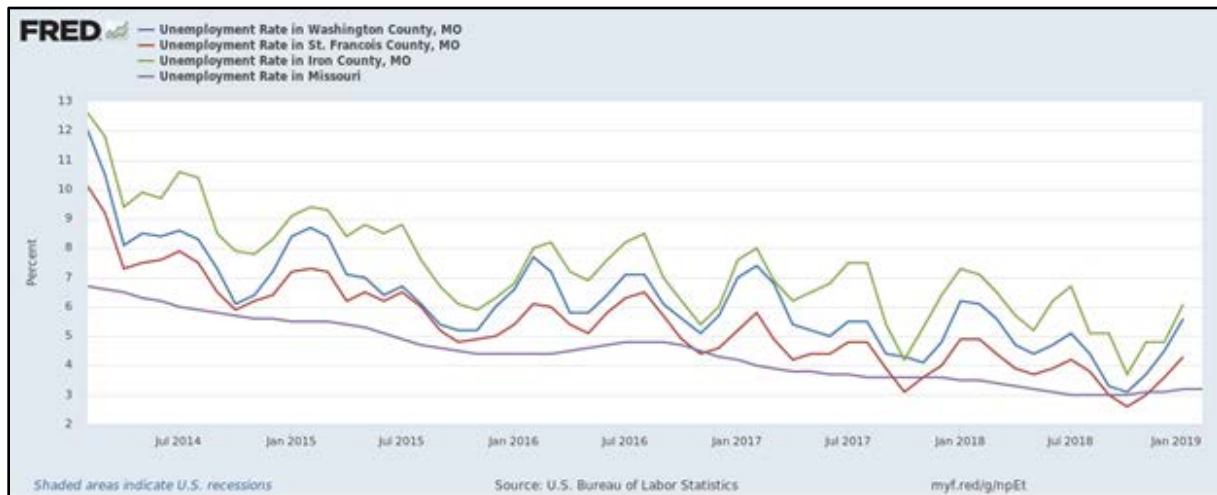
[1] An J, Braveman P, Dekker M, Egerter S, Grossman-Kahn R. [Work, workplaces and health](#). Princeton: Robert Wood Johnson Foundation (RWJF); 2011. *Exploring the Social Determinants of Health Issue Brief No. 4.*

[2] Robert Wood Johnson Foundation. [How does employment - or unemployment - affect health?](#) Princeton; March 2013. *Health Policy Snapshot Issue Brief.* Accessed March 8, 2018.



A comparison of unemployment rates in the area over the past 5 years show Washington, Iron and St. Francois County rates all higher than the state but following similar trend lines. Table 02 demonstrates the comparison with peer counties.

Table 02: Unemployment Rate – Peer County Comparison



The ACS 5-year (2013 – 2017) estimates indicate median household income in Washington County to be \$37,810 compared to \$51,542 for the state. In 2017, per capita income was the lowest for Washington County residents at \$18,314 compared to Iron County at \$19,414, St. Francois at \$20,944 and Missouri at \$51,542.

Low per capita income is tied to unemployment, low paying jobs and educational attainment. Economic and social insecurity often are associated with poor health. Poverty, unemployment, and lack of educational achievement affect access to care and a community’s ability to engage in healthy behaviors. Without a network of support and a safe community, families cannot thrive. Ensuring access to social and economic resources provides a foundation for a healthy community.

Education

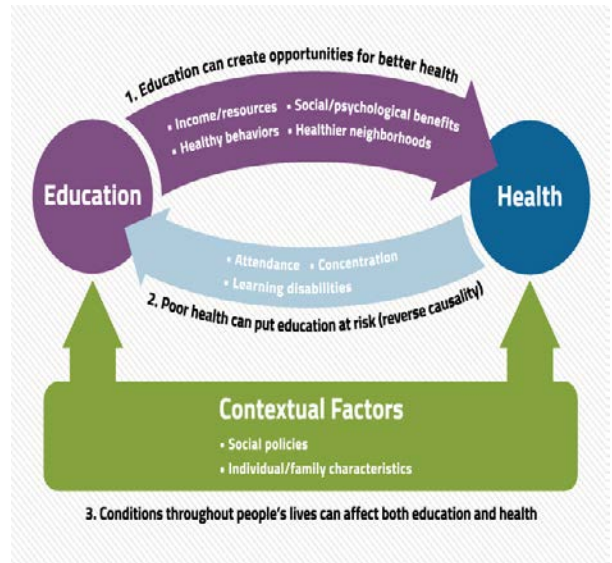
Better-educated individuals live longer & healthier lives than those with less education. This is true even when factors like income are taken into account.

<https://societyhealth.vcu.edu/.../why-education-matters-to-health-exploring-the-causes>.

How are health and education linked? There are three main connections:

1. **Education can create opportunities for better health:** Being better educated today means getting better employment. Families with higher incomes can more easily purchase healthy foods, have time to exercise regularly, and pay for health services and transportation. Conversely, the job insecurity, low wages, and lack of assets associated with less education can make individuals and families more vulnerable during hard times; which can lead to poor nutrition, unstable housing, and unmet medical needs.

2. Poor health can put educational attainment at risk (reverse causality): The relationship between education and health is never a simple one. Poor health not only results from lower educational attainment, it can also cause educational setbacks and interfere with schooling. For example, children with asthma and other chronic illnesses may experience recurrent absences and difficulty concentrating in class.
3. Conditions throughout people's lives, beginning in early childhood, can affect both health and education: A third way that education can be linked to health is by exposure to conditions, beginning in early childhood, which can affect both education and health. Throughout life, conditions at home, socioeconomic status, and other contextual factors can create stress, cause illness, and deprive individuals and families of resources for success in school, the workplace, and healthy living.



Source: <https://societyhealth.vcu.edu/.../why-education-matters-to-health-exploring-the-causes>.

Education - High School Graduation Rate

Within the report area 96.2% of students are receiving their high school diploma within four years. Data represents the 2015-16 school year. See Table 03.

This indicator is relevant because research suggests education is one the strongest predictors of health (Freudenberg & Ruglis, 2007).

Current data for Washington County high school graduation rates are high; higher than state or US. However, only 8.9% of county residents have college degrees compared to 28.2% of Missourians overall. See Table 04.

Table 03

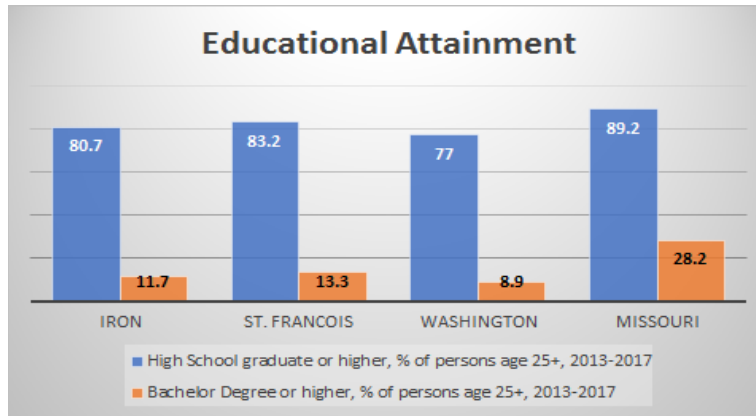
Report Area	Total Student Cohort	Estimated Number of Diplomas Issued	Cohort Graduation Rate
Washington County, MO	286	275	96.2
Missouri	64,203	58,434	91
United States	3,135,216	2,700,120	86.1

Note: This indicator is compared to the state average.

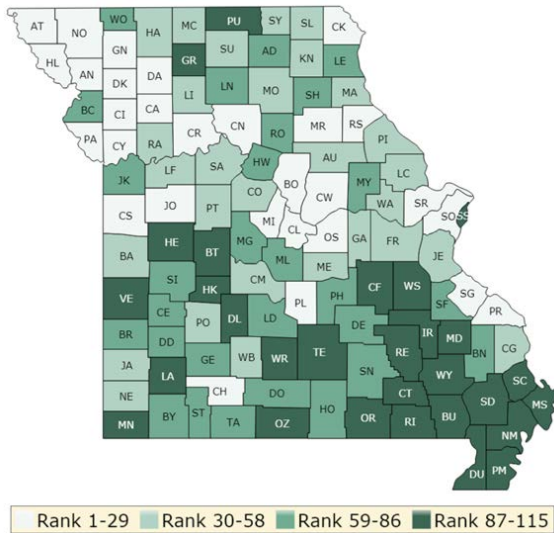
Data Source: US Department of Education, [EDFacts](#). Accessed via [DATA.GOV](#). Additional data analysis by [CARES](#). 2015-16. Source geography: School District [Show more details](#)

Created with Highcharts 7.0.1 Cohort Graduation Rate Washington County, MO ... Missouri (91) United States (86.1) 0100

Table 04



Quality of Life



Source: County Health Rankings 2019 Summary Report
www.countyhealthrankings.com

Using the methodology developed in the *County Health Rankings & Roadmaps/Building a Culture of Health, County by County*², Washington County data is ranked among the 114 Missouri counties and organized into two broad categories; **Health Outcomes and Health Factors**.

Health Outcomes

Health outcomes represent how healthy a county is. There are two indicators for health outcomes: how long people live (length of life) and how healthy people feel while alive (quality of life). In the overall ranking for Health Outcomes, Washington County ranked 107 out of the 114 Missouri counties. In 2015, Washington County ranked 99th.

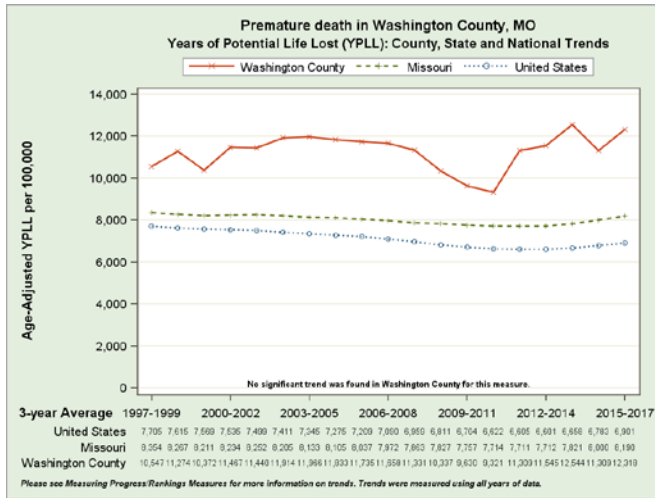
Length of Life (Mortality)

Mortality (or death) data shows how long people live. More specifically, measurements are taken for what is considered premature death, which are deaths before age 75. The years of potential life lost (YPLL) is a measure of premature death, based on all deaths occurring before the age of 75. Each of these deaths contributes to the total number of years of potential life lost. For example, a person dying at age 50 would contribute 25 years of life lost to the YPLL index. YPLL constitutes 50% of the health outcomes ranking.

The YPLL trend graph in Table 05 below shows premature death in Washington County from 1997 through 2017.

Table 05

Source: National Center for Health Statistics-Mortality Files



The latest 3-year average (2015-2017) shows Washington County losing 12,318 years of potential life, compared to the State loss of 8,190 years. In Premature death, Washington County ranked 111 out of 114 Missouri counties. In 2015, Washington County ranked 85th.

According to Missouri Department of Health & Senior Services, life expectancy data from 2008-2016 indicate an average age for Washington County females=76, males=72, with a combined average of 73.9. <https://health.mo.gov/data/lifeexpectancy/>

Quality of Life (Morbidity)

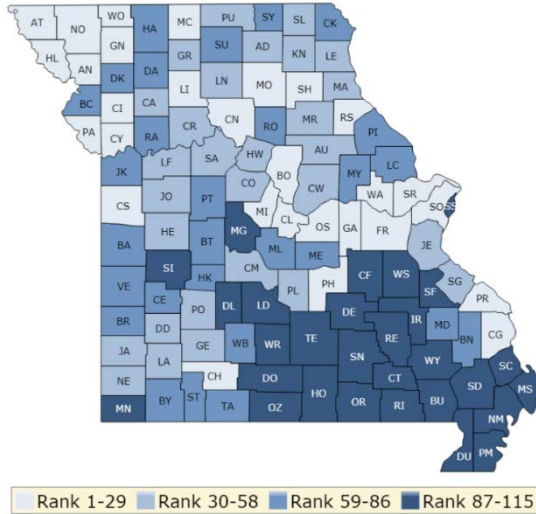
Quality of life refers to how healthy people feel using measures of people’s reported health status and how often they feel healthy each month. The final measure of health outcomes is the percentage of the community’s youngest members that have an unhealthy start to life: babies born with low birthweight. Washington County’s low birthweight percentage of 10% compares with Iron County at 9% and St. Francois County at 8%. In the Quality of Life chart below (Table 06), Washington County ranks 104 out of 114 Missouri counties. This ranking remains the same from 2015.

Table 06 Source: County Health Rankings 2019

	Washington County	Error Margin	Top U.S. Performers	Missouri	
Quality of Life (Rank)					104
Poor or fair health	21%	21-22%	12%	19%	
Poor physical health days	5.0	4.8-5.2	3.0	4.2	
Poor mental health days	4.6	4.4-4.9	3.1	4.4	
Low birthweight	10%	9-12%	6%	8%	
					2019

Health Factors

2019 Missouri Health Factors Map



This map shows the distribution of Missouri's health factors based on weighted scores for healthy behaviors (tobacco use, diet & exercise alcohol & drug use, sexual activity), clinical care (access to care, quality of care), social and economic factors (education, employment, income, family & social support, community safety), and the physical environment (air & water quality, housing & transit).

Source: County Health Rankings 2019 Summary Report
www.countyhealthrankings.com

http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2019_MO.pdf

Health Behaviors

Health Behaviors include a community's rate of alcohol related driving deaths, smoking rates, obesity rates, access to exercise opportunities, lack of exercise, sexually transmitted disease rates, and teen birth rates.

Washington County ranks 100 out of 115 counties regarding overall health factors, indicating that Washington County has made some improvement in its ranking, yet still indicating poor health factors, ranking 112 out of 114 counties in 2012 (a combination of health behaviors, clinical care, social and economic factors, and physical environmental factors). See Table 07.

Table 07: Health Behaviors

Health Behaviors	Washington County	Trend	Error Margin	Top U.S. Performers	Missouri Rank (of 115)
Health Behaviors					100
Adult smoking	25%		24-26%	14%	22%
Adult obesity	30%		23-38%	26%	32%
Food environment index	7.1			8.7	6.8
Physical inactivity	29%		22-37%	19%	25%
Access to exercise opportunities	60%			91%	76%
Excessive drinking	17%		16-18%	13%	19%
Alcohol-impaired driving deaths	27%		19-35%	13%	29%
Sexually transmitted infections	242.1			152.8	507.0
Teen births	51		44-57	14	28

Source:
<http://www.countyhealthrankings.org/app/missouri/2019/rankings/washington/county/outcomes/overall/snapshot>

Social and Economic Factors

For Social & Economic Factors, Washington County ranked low among neighboring counties at 106 of 114 Missouri Counties. Only Iron County ranks lower at 107th. See Table 08. However, for the subcategory, Physical Environment, Washington County ranks 98, in front of (Jefferson Co. 114) and (St. Francois Co. 107). Crawford Co. and Iron Co. ranked better than Washington County.

For more details visit www.countyhealthrankings.org.

	Missouri	Washington (WS), MO X	Crawford (CF), MO X	St. Francois (SF), MO X	Jefferson (JE), MO X	Iron (IR), MO X
	PEER COUNTY					
Social & Economic Factors		106	98	76	20	107
High school graduation	88%	94%	92%	94%	92%	100%
Some college	66%	45%	37%	51%	67%	44%
Unemployment	3.8%	5.5%	4.7%	4.4%	3.6%	6.5%
Children in poverty	19%	31%	28%	24%	14%	36%
Income inequality	4.6	4.3	4.6	4.3	3.7	4.1
Children in single-parent households	33%	31%	33%	31%	30%	30%
Social associations	11.6	10.5	12.3	13.7	7.5	20.0
Violent crime	481	375	163	294	192	276
Injury deaths	83	114	102	97	102	116
Physical Environment		98	57	107	114	60
Air pollution - particulate matter	9.7	9.9	9.8	10.3	11.3	9.8
Drinking water violations		Yes	No	Yes	Yes	No
Severe housing problems	14%	13%	16%	15%	11%	14%
Driving alone to work	82%	82%	80%	84%	87%	82%
Long commute - driving alone	32%	46%	36%	26%	55%	43%
2019						
Note: Blank values reflect unreliable or missing data						

Table 08: Social & Economic Factors

Peer Counties

2015 CHSI Peer County Comparison for Washington County

For Health Factors, Washington County ranked 107, which was worse than the neighboring counties of Crawford, St. Francois, Jefferson and Iron. For the category of Healthy Behaviors, Washington County ranked second worse among neighboring counties. In the category of

Clinical Care, Washington County ranked worse at 111, while St. Francois ranked best at 15. For several subcategories, the Missouri percentages are displayed for comparison. See Table 09: Peer Counties

Table 09: Peer Counties

http://www.countyhealthrankings.org/sites/default/files/state/downloads/CHR2019_MO.pdf

	Missouri	Washington (WS), MO X	Crawford (CF), MO X	St. Francois (SF), MO X	Jefferson (JE), MO X	Iron (IR), MO X
Health Factors		107	95	87	44	96
Health Behaviors		100	87	107	57	43
Adult smoking	22%	25%	23%	24%	23%	22%
Adult obesity	32%	30%	37%	36%	32%	34%
Food environment index	6.8	7.1	7.7	7.5	7.9	6.7
Physical inactivity	25%	29%	28%	32%	19%	24%
Access to exercise opportunities	76%	60%	62%	69%	63%	80%
Excessive drinking	19%	17%	16%	19%	21%	16%
Alcohol-impaired driving deaths	29%	27%	21%	25%	28%	8%
Sexually transmitted infections	507.0	242.1	285.4	347.3	257.4	256.8
Teen births	28	51	36	43	23	43
Clinical Care		111	73	15	23	81
Uninsured	11%	14%	14%	11%	9%	13%
Primary care physicians	1,420:1	3,100:1		1,310:1	4,310:1	
Dentists	1,760:1	2,780:1	8,030:1	2,780:1	2,830:1	3,410:1
Mental health providers	550:1	1,920:1	2,410:1	410:1	1,260:1	1,020:1
Preventable hospital stays	4,743	8,324	4,180	3,916	5,188	5,106
Mammography screening	43%	35%	41%	35%	42%	33%
Flu vaccinations	44%	31%	28%	41%	51%	33%

Environmental Health

Air Quality

OUTDOOR AIR: Washington County’s outdoor air quality is good and daily air quality reports are available on the Missouri Department of Natural Resource’s Air Quality website at:

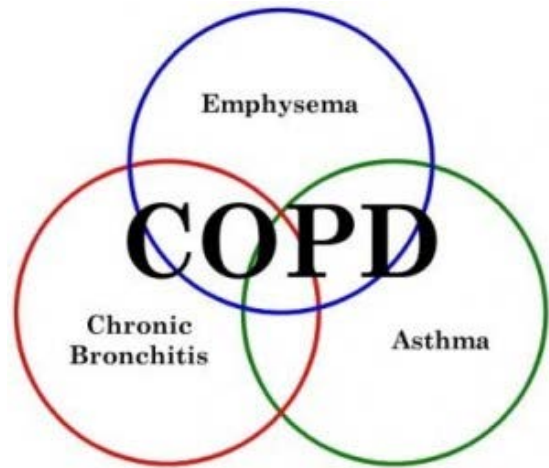
<https://dnr.mo.gov/env/apcp/airquality.htm>

INDOOR AIR: Indoor air quality is a concern because it is a point of prevention for those having asthma or COPD. Prior to Missouri’s asthma prevention programs, Washington County’s childhood asthma statistics were among the highest. Since 2009, prevention programs in Washington County have statistically improved childhood asthma. However, Washington County statistics for COPD and other respiratory illnesses remain high for adults. See pages 37 & 43.

Indoor air quality refers to the air within a building; limiting and controlling indoor air pollutants can greatly reduce you or your child's health risk. Children are at high risk of lung damage and illness from inhaled smoke. Studies have shown a clear link between secondhand smoke and asthma in children. However, the studies have not proven that secondhand smoke causes asthma in children.

According to the US CDC, secondhand smoke can cause serious health problems in children.

- Studies show that older children whose parents smoke get sick more often. Their lungs grow less than children who do not breathe secondhand smoke. They also get more bronchitis and pneumonia.
- Wheezing and coughing are more common in children who breathe secondhand smoke.
- Secondhand smoke can trigger an asthma attack in a child. Children with asthma who are around secondhand smoke have worse and frequent asthma attacks.
- More than 40 percent of children who go to the emergency room for asthma live with smokers.
- Children whose parents smoke around them get more ear infections. They have fluid in their ears more often. They also have more operations to put in ear tubes for drainage.



Improving indoor air quality and limiting possible triggers can be addressed through Project CALM at Washington County Memorial Hospital.

Water Quality

All public water sources are regulated and are required to meet the EPA's standards for the Safe Drinking Water Act. In Missouri, and for Washington County, the Missouri Department of Natural Resources regulates municipal and water utilities according to safe drinking water standards. For Washington County, the Health Department requires food establishments and lodging facilities located in non-incorporated areas, and having their own well, to provide safe drinking water and meet bacteriological and chemical drinking water standards. In addition, drinking water at child care facilities, whether in-town or out-of-town, are also required to pass public health standards.

As a result of years of testing private wells in Washington County, the EPA has identified many private wells containing hazardous heavy metals. Primarily the contaminant is lead, but other heavy metals have been detected. Please see Exhibit A EPA Fact Sheet

Food Safety

There are approximately 100 regulated permanent food establishments in Washington County. There are also a number of temporary food establishments which operate only during the annual county fair and other seasonal community festivals. These food establishments are inspected under the current version of the Missouri Food Code. Inspection frequency is determined by public health priority. The purpose of these inspections is to safeguard public health and provide consumers with food that is safe, unadulterated and honestly presented.

Since many Washington County residents utilize wildlife as a food source, it is important to note the following: (1) fish advisory and (2) Missouri counties having positive results for chronic wasting disease (CWD) in deer. Although, Washington County is not among the listed counties for CWD, some neighboring counties are listed. According to the US Center for Disease Control, “to date, there is no strong evidence for the occurrence of CWD in people, and it is not known if people can get infected with CWD prions.”

(1) Fish Advisory - Big River

Contaminant: Lead

Species Affected: Carp, Sunfish*, and Suckers.

Sizes Affected: All Sizes

Recommendation: Do Not Eat

*For this advisory, Sunfish specifically refers to longear sunfish, green sunfish, bluegill, warmouth, and rock bass

(Source: Missouri Department of Health & Senior Services)

2017-2018 SAMPLING RESULTS

- Last season, MDC tested nearly 24,500 deer for CWD and found 33 new cases for a total of 75 cases in Missouri.
- Of the 33 new cases, 16 were from hunter-harvested deer, 1 was from a road-killed deer, and 16 were found through post-season targeted culling.

CWD CASES FOUND IN FREE-RANGING DEER

This table shows the number of CWD cases found in Missouri free-ranging deer by year and county prior to the current testing season.

CWD Detections Through April 6, 2018

County	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	County Totals
Adair				6	3	1	3	13
Cedar							1	1
Cole			1					1
Franklin					1	3	4	8
Jefferson						1	1	2
Linn					1		7	8
Macon	5	5	0	9	2	2	3	26
Perry							1	1
Polk							3	3
St. Clair						2	4	6
Ste Genevieve							6	6
Totals	5	5	0	16	7	9	33	75

Table 10: Chronic Wasting Disease in Deer

(2) Wild Deer and Chronic Wasting Disease – Table 10

<https://huntfish.mdc.mo.gov/hunting-trapping/wildlife-diseases/chronic-wasting-disease-cwd>

Lead in Washington County

Historically, Washington County was mined primarily for barite, lead, and iron. Since the 1700’s mining activities have occurred throughout the county. By the late 1920’s, mechanized mining strategies began changing the landscape for some areas of the county. Over time, these mining activities, smelting, and the use of mining byproducts have resulted in ground and water contamination for many areas of the county. In addition, other natural occurring heavy metals are also present such as cadmium and chromium. Consequently, the US EPA placed much of Washington County on the National Priorities List (NPL) for clean-up; sites on this list are also known as a Superfund Sites. Initially, these clean-up sites included more than 4 sites and were separated by boundaries with some areas of the county not included. As more sampling results were obtained, and as the EPA saw need to organize the scope of work, some NPL sites were consolidated and their boundaries expanded by the EPA to accommodate. This can be seen in the sequence of several EPA annual reports prepared for each of Washington County’s NPL sites. Today, the boundaries of these 4 NPL Superfund Sites includes all of Washington County. Exhibit A is the most recent EPA Fact Sheet that explains Washington County’s current status for sampling, testing, and remediation.



FACT SHEET

LEAD TESTING & CLEANUP OPPORTUNITY RESIDENTIAL SOILS & PRIVATE DRINKING WATER WELLS

Remedial Actions for Washington County Lead District National Priorities List Sites
including Furnace Creek, Old Mines, Potosi and Richwoods
Washington County, Missouri – March 2019

REGION 7: Iowa, Kansas, Missouri, Nebraska, and Nine Tribal Nations

OVERVIEW

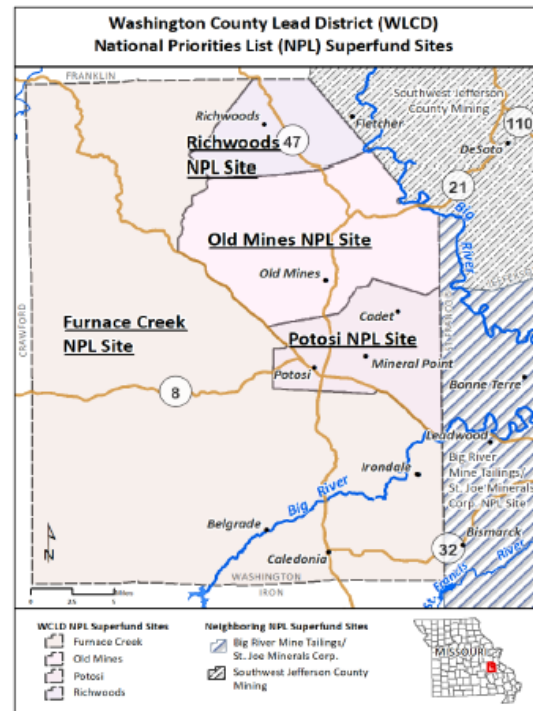
The U.S. Environmental Protection Agency (EPA) Region 7 is remediating (cleaning up) lead-contaminated soil in residential yards within the Washington County Lead District (WCLD) National Priorities List (NPL) Superfund Sites, whose boundaries cover the entire county (see map at right). Lead is a toxic metal that is harmful if inhaled or swallowed; it is the main contaminant of concern. Lead is classified by EPA as a probable human carcinogen and is a cumulative toxicant. **Lead exposure can pose serious health risks, particularly for young children 7 years old and younger, pregnant women, and nursing mothers.** Pregnant women and nursing mothers should avoid exposure to lead to protect their children. (See additional information on Page 2.)

EPA requests that residential property owners grant access to EPA, or EPA's field support contractor (**Tetra Tech**), to test residential properties for lead contamination. If your property has been tested and is eligible for remediation (400 parts per million lead or higher), EPA is also seeking access for A&M Engineering, EPA's new remediation contractor, to perform cleanup. Residential properties also include child high-use areas (childcare facilities, parks and playgrounds). If your property or private well has not been tested or remediated, this is your opportunity. **Sampling and remediation is performed at no cost to property owners.** Please see EPA contacts on Page 2.

BACKGROUND AND SITE UPDATE

The WCLD sites are part of the Old Lead Belt in southeastern Missouri, which was one of the world's largest lead mining districts, where mining began in the early 1700s and produced more than 9 million tons of lead. Extensive lead and barite mining, milling and smelting activities were conducted in the WCLD for over 200 years, where contaminated soil, sediment, surface water, and groundwater with elevated levels of heavy metals, primarily lead, prompted the need for state and

EPA involvement. Some county residents have unknowingly purchased lead-contaminated soil and/or gravel for use in yards, driveways, parking areas, and playgrounds.



To protect human health and the environment from the dangers of lead in the WCLD, EPA has sampled (tested) over 6,300 residential yards for lead levels and over 600 yards have been cleaned up. Many more properties are eligible for remediation. EPA aims to sample as many residential and child high-use areas as possible for potential lead contamination. In addition, since 2006, approximately 4,200 private drinking water wells have been tested for elevated lead levels in the groundwater. EPA has provided filter systems or bottled water to prevent residents from drinking elevated levels of lead in their well water.

LEAD HEALTH RISKS & TESTING FOR CHILDREN

Lead exposure can cause a range of adverse health effects, from behavioral disorders and learning disabilities to seizures and death, putting young children at the greatest risk because their brains and nervous systems are still developing. **Children 7 years old and younger are most at risk from developing health effects from exposure to lead.** It is important that children in this age range be tested annually. The only way to know if your child has elevated blood lead levels is to have his or her blood tested. Talk to your pediatrician, general physician, or local health agency about what you can do and about testing your child. Your doctor can do a simple blood test to check your child, or you, for lead exposure. To arrange for lead screening of your children, please contact the **Washington County Health Department**, 520 Purcell Dr., Potosi, Missouri; phone: 573-438-2164. **You may also feel free to contact EPA about testing your residential yard and/or private drinking water well at no cost.**

EPA CONTACT INFORMATION

-Daniel Kellerman, Remedial Project Manager; 913-551-7603; email: kellerman.daniel@epa.gov
-Katy Maynard, Remedial Project Manager; 913-551-7896; email: maynard.katy@epa.gov
-Steve Sturgess, Remedial Project Manager; 913-551-7913; email: sturgess.steven@epa.gov
-Elizabeth Kramer, Community Engagement Specialist; 913-551-7186; email: kramer.elizabeth@epa.gov

FOR ADDITIONAL LEAD AND SITE INFORMATION

-Visit each WCLD NPL Superfund Site's page at:
www.epa.gov/superfund/washingtoncountyfurnacecreek
www.epa.gov/superfund/washingtoncountyoldmines
www.epa.gov/superfund/washingtoncountypotosi
www.epa.gov/superfund/washingtoncountyrichwoods
-EPA posts Fact Sheets for Missouri cleanup sites online at: www.epa.gov/mo/missouri-cleanups
-CDC's ATSDR Lead ToxFAQs™: www.atsdr.cdc.gov/toxfaqs/tf.asp?id=93&tid=22
-CDC's Lead page: www.cdc.gov/nceh/lead
-EPA's Lead pages: www.epa.gov/lead and www.epa.gov/lead/learn-about-lead
-EPA's Protect Your Family from Lead in Your Home: www.epa.gov/lead/protect-your-family-lead-your-home

HOW WILL EPA CLEAN UP MY PROPERTY?

If your residential property qualifies for cleanup (also known as remediation), EPA will include an **access agreement** with a sampling results letter. By **signing** and **returning** the **access agreement**, owners are taking the first step in the process to allow the EPA contractor to clean up the affected areas of the yard. This work is being conducted **at no cost to the property owner.**

Step 1: The EPA contractor will schedule a time to meet with the homeowner, review the affected areas of the yard, answer any questions, and address any concerns.

Step 2: The EPA contractor will ask the owner to sign the checklist and give them final permission to start the work. Once utilities are located, the cleanup can begin within a few weeks, weather permitting. The contractor's checklist of items to discuss will include the location of private utilities installed by the homeowner at the property and determining the best way to move equipment in and out. It is the sole responsibility of the contractor to have utilities marked and work around them as necessary. If the contractor damages utilities, they will repair the utilities **at no cost to the property owner.**

Step 3: The cleanup generally includes excavating up to one foot of soil from areas that qualify for cleanup, unless it is a garden. If a garden is still above the EPA "action level" at one foot of depth, it will be excavated to two feet. Prior to backfilling, a highly visible barrier will be placed at depth. If the soil is disturbed in the future, it warns people of contaminated soil below the barrier.

Step 4: The EPA contractor will then replace these areas with clean soil, return the grade to the original contours, and restore the lawn. *Note: The contractor is only permitted to restore the property to its original condition, and is required to repair or replace any items damaged during the cleanup process.*

Step 5: Once the restoration work is complete, the EPA contractor will request a final meeting with you to review the work and sign a final checklist to confirm satisfactory completion.

Child Blood-Lead Levels

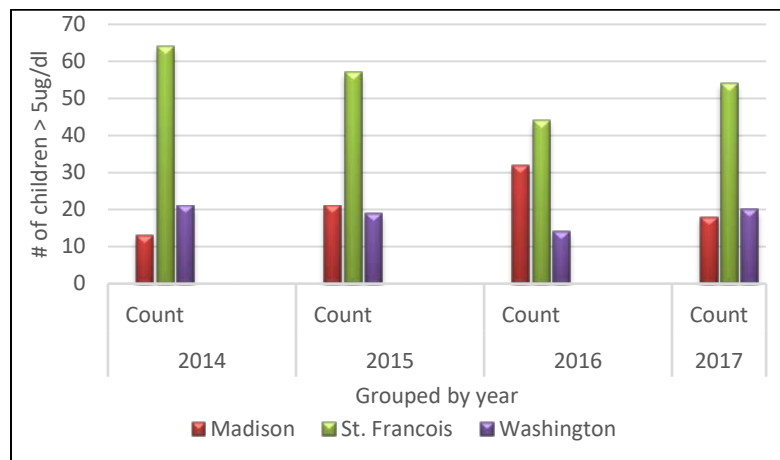
The state of Missouri requires that children living in high-risk areas and aged 6 months to ≤ 72 months be tested for lead. Test intervals are based on initial results, geographic risk area, environmental conditions, and other criteria. Washington County is located in the “lead belt” having a greater risk for exposure and intake of lead. The EPA has identified much of Washington County to be included on their National Priorities List for remediation. An EPA fact sheet appears in this section that explains the status of their work (see Exhibit A). Displayed in Table 11, are the statistics demonstrating the child blood-lead levels for the counties of St. Francois, Madison, and Washington. The statistics for Missouri appear at the bottom and one can see that the three

counties are recognizably higher than the state’s rate for children testing at $\geq 5\text{ug/dl}$. When count is $<20^*$ in relation to the population size, the lower count (or variable) falls below the measurability of statistical significance. This is indicated by the asterisk at the bottom of chart. It is important to note that in 2012 the US CDC lowered the “level of concern (*term out of use*)” from $\geq 10\text{ug/dl}$ to “no safe level.” However, many test devices will not register below 3ug/dl . Realistically, the US CDC has identified 5ug/dl as a “reference value” to identify those children having elevated levels.

Table 11: Child Blood Lead Statistics

Title: Missouri EPHT Blood Lead						
Data selected in addition to rows and columns below:						
	Client Type: 0-5 Years (< 72 Months); Test Outcome: $\geq 5 \text{ ug/dl}$					
Year:	2014	2015	2016	2017	Total for selection	Total for selection
Statistics:	Count	Count	Count	Count	Count	Percent of Population
County						
Madison	13 *	21	32	18 *	84	2.39
St. Francois	64	57	44	54	219	1.25
Washington	21	19 *	14 *	20	74	1.05
Total for selection	98	97	90	92	377	1.34
Missouri	3,439	3,096	3,153	2,749	12,437	0.69
Percent of Population: Numerator: Number Tested /						
Source: DHSS - MOPHIMS - EPHT Blood Lead						
* Percent of Population is unreliable;						

Table 11a - Data displayed in bar graph



Maternal and Child Health

Prenatal Care

The goal of prenatal care is to monitor the pregnancy and identify potential problems for the mother and baby, as well as educate the mother about issues such as nutrition, physical activity, the birth process and caring for a newborn. Visits typically become more frequent as the due date gets closer. Women who receive adequate prenatal care typically have healthier babies, are less likely to deliver prematurely and are less likely to have other serious pregnancy-related problems. Beginning prenatal care early – in the first trimester of pregnancy – is an important aspect of receiving adequate prenatal care.

Among maternal child health indicators, Washington County ranks very high for the following indicators:

- Late Prenatal Care (2nd/3rd Trimester) – *Sub-chart A*
- Inadequate Prenatal Care – *Sub-chart B*
- Mother Smoked During Pregnancy – *Sub-chart C*
- Weight Gain less than 15 pounds – *Sub-chart D*

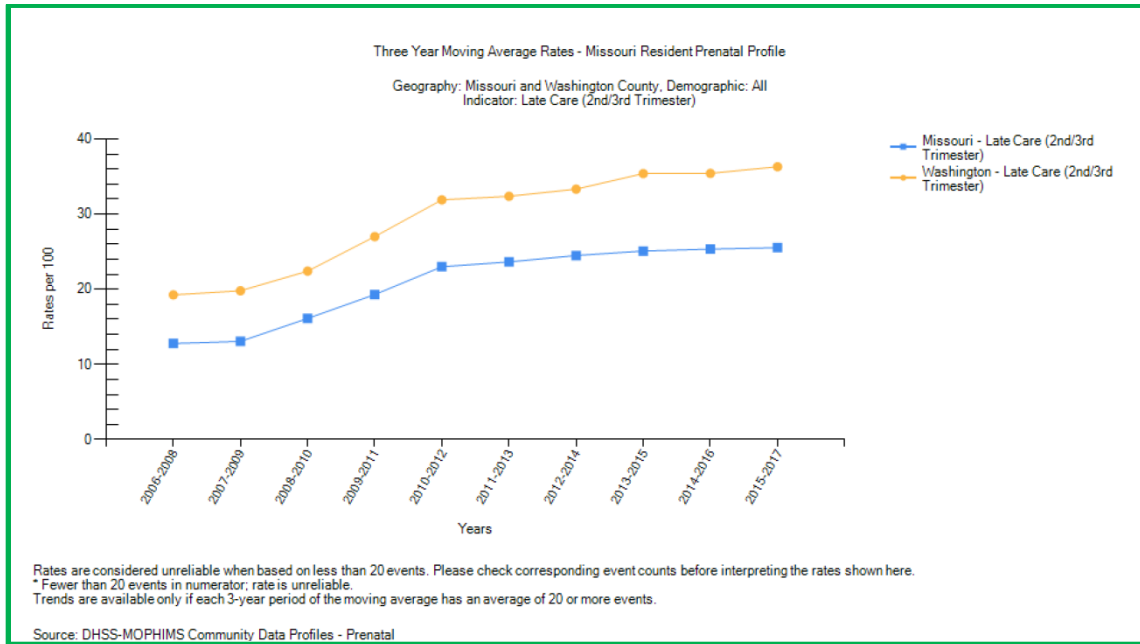
Table 12 demonstrates both counts and rates for Washington County's maternal child health indicators. The H = higher than state rate and L= lower than state rate. However, some "H" designations are not necessarily indicating a poor statistic. For example, the fact that WIC enrollment is higher when compared to the State also communicates that efforts are in place that address maternal-child nutrition.

Table 12: Prenatal Profile for Washington County
Source: MO DHSS Community Data Profiles [Prenatal]

County: Washington						
^Prenatal						
	Data Years	Count	Rate	State Rate	Significantly Different	
Care Began First Trimester	2017	169	63.77	72.46	L	
Late Care (2nd/3rd Trimester)	2017	95	35.85	26.16	H	
No Prenatal Care	2017	1	0.38 *	1.38	L	
Inadequate Prenatal Care - Missouri Index	2017	78	30.23	19.96	H	
Inadequate Prenatal Care - Kotelchuck Index	2017	65	25.49	16.63	H	
Prenatal Medicaid	2017	164	58.36	38.78	H	
Prenatal WIC	2017	205	71.18	37.46	H	
Prenatal Food Stamps	2017	132	47.14	27.44	H	
Weight Gain less than 15 Pounds - Term Singleton	2013 - 2017	207	17.25	12.30	H	
Weight Gain greater than or equal to 45 Pounds - Term Singleton	2013 - 2017	257	21.42	21.00	N/S	
Gestational Diabetes	2017	20	6.92	6.66	N/S	
Pre-Pregnancy Diabetes	2017	4	1.38 *	0.92	N/S	
Mother Smoked During Pregnancy	2017	89	31.23	14.46	H	

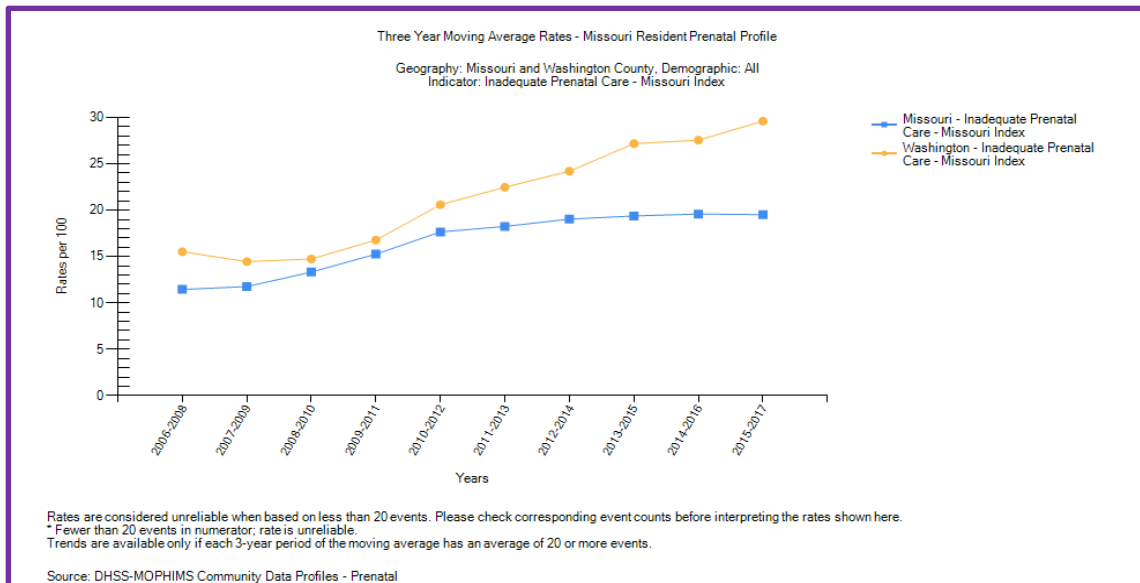
Indicator constants and denominators for this Profile can be found here
* Fewer than 20 events in numerator; rate is unreliable.
Trends are available only if each 3-year period of the moving average has an average of 20 or more events.

Sub-chart A: Late Care



When viewing the trends for prenatal care in Sub-Chart A and B, one sees an increase for both the State and Washington County. One factor that may have attributed to this increase was the diminishing of funding to Missouri’s Division of Family Services (DFS) that assisted and

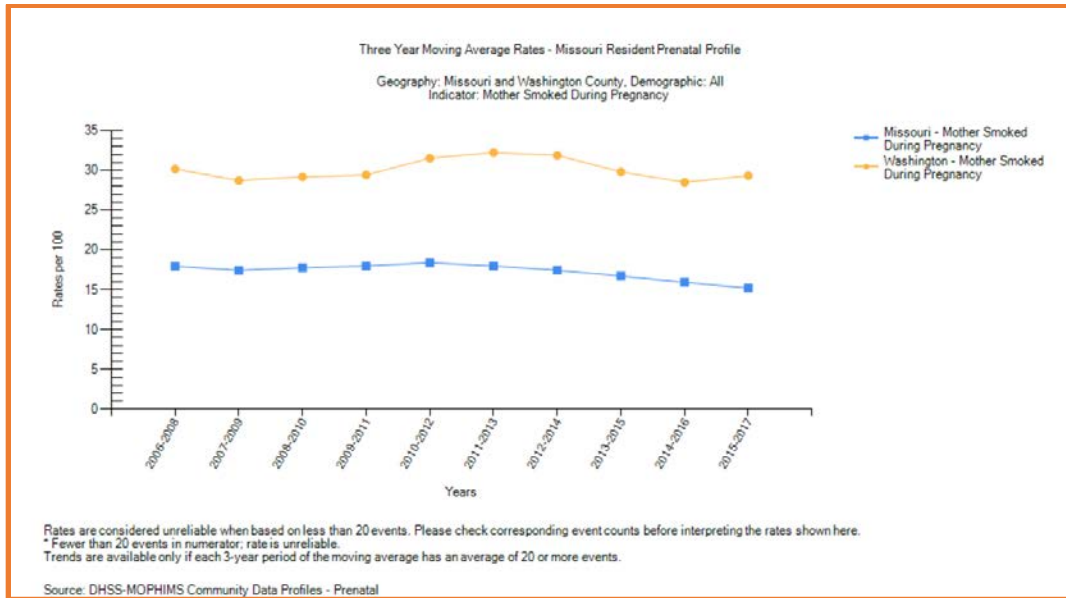
Sub-Chart B: Inadequate Prenatal Care



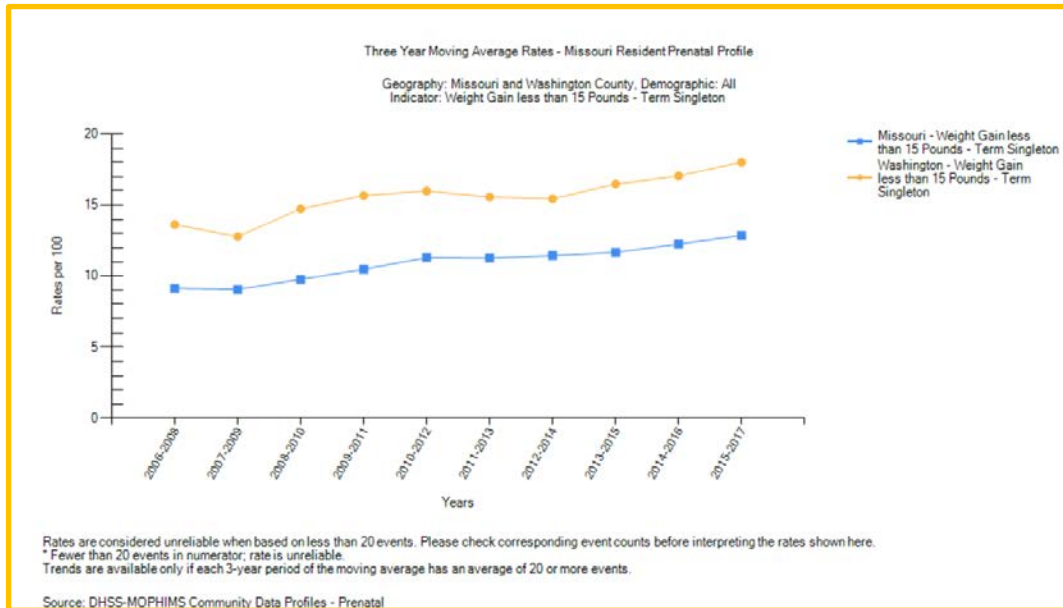
processed temporary Medicaid applications of expectant mothers. By 2015, Missouri’s local DFS offices were scheduled to eliminate this service. This included the Potosi DFS office. When this occurred, public health agencies took action at the state level and many health departments eventually adopted the service of processing applications for eligible women seeking temporary Medicaid for prenatal care. Washington County Health Department was among the first to adopt the service, nevertheless, the disruption in service had its impact.

Another factor contributing to Washington County's inadequate prenatal care is access to services. Since 2012, Washington County's prenatal services have been unavailable, intermittent, and/or underserved.

Sub-Chart C: Mother Smoked During Pregnancy



Sub-Chart D: Weight Gain less than 15 Pounds



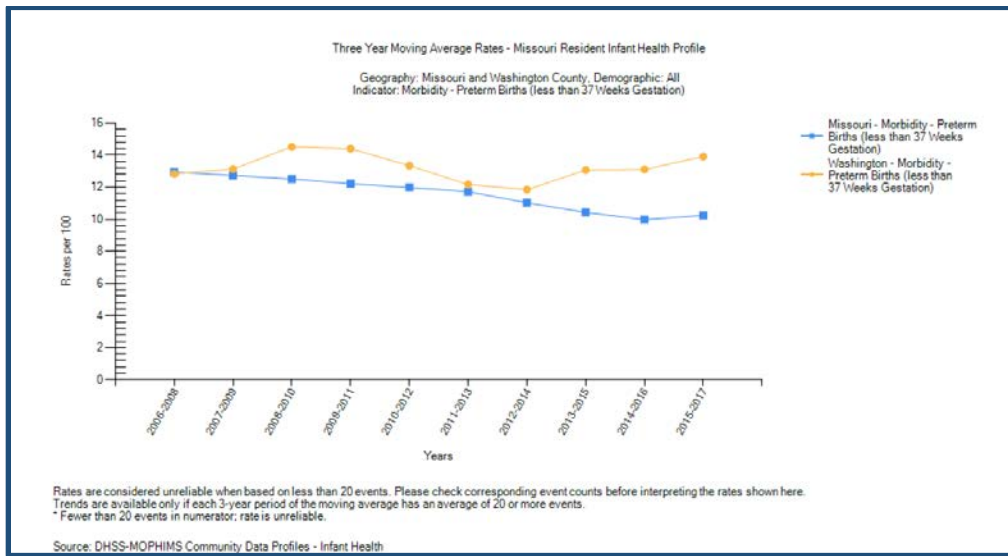
Consequently, prenatal indicators such as those described above can impact infant health. Displayed in Table 13 and Sub-chart E are Washington County's rates for Preterm Births and Low Birth Weight. These rates coincide with, and can be attributed to, the prenatal indicators described above.

Table 13: Infant Health

Source: MO DHSS Community Data Profiles [Infant Health]

Infant Health						
	Data Years	Count	Rate	State Rate	Significantly Different	
Morbidity						
Preterm Births (less than 37 Weeks Gestation)	2013 - 2017	197	13.44	10.41	H	
Low Birth Weight	2013 - 2017	167	11.43	8.41	H	
Low Birth Weight and Term	2013 - 2017	51	3.48	2.66	N/S	
Very Low Birth Weight	2013 - 2017	19	1.30 *	1.46	N/S	
Small for Gestational Age	2013 - 2017	145	10.42	8.86	N/S	

Sub-Chart E: Preterm Births



Teen Pregnancy

Table 14, displays seven years of pregnancy data. Age brackets begin at age 10 -14. Washington County has no reported pregnancies for this age group for all years reported. Prior to 2008, the number of pregnancies among 15 -17 year-olds was averaging >20/year. Since then, the counts [for 15-17] have lowered and are trending closer to the state's rate. Some years are higher, some lower (2013 & 2017). A prevention program began in 2008 in Washington County and continues today.

Table 14: Teen Pregnancy

Title: Missouri Resident Pregnancies								
Data selected in addition to rows and columns below:								
	Indicator: Pregnancies County: Washington							
Year:	2011	2012	2013	2014	2015	2016	2017	Total for selection
Statistics:	Count	Count	Count	Count	Count	Count	Count	Count
Age								
10 - 14	0	0	0	0	0	0	0	0
15 - 17	13	15	7	14	14	13	6	82
18 - 19	30	27	37	16	29	35	20	194
Total for selection	43	42	44	30	43	48	26	276

Source: DHSS - MOPHIMS - Pregnancy MICA

Mental Health

Diagnostic Categories

Mental Health Data for Washington County

Individuals struggling with serious mental illness are at a higher risk for homicide, suicide, and accidents, as well as chronic conditions including cardiovascular and respiratory diseases and substance abuse disorders. In state fiscal year 2017, 703 Washington County residents received treatment for serious mental illness at publicly funded facilities. See table 15 for details. While there is data on those who receive treatment, data on mental health in the general population is very limited. This is especially true at the local level.

Table 15

Numbers Served in Washington County		
	FY2016	FY2017
Total	790	703
Adjustment Disorder	5	7
Anxiety Disorder	43	68
Developmental Disorder	6	*
Impulse Control Disorder	30	27
Mood Disorder	108	140
Psychotic Disorder	52	56

These numbers indicate the number of clients seen with each diagnosis per year. An individual client may have more than one admission within a year.

*Counts under 5 suppressed to protect identities

In Southeast Missouri, 20.7% of those 18 and older had a mental illness in the past year, with 6.1% having a serious mental illness. Serious mental illness is defined as any of the mental disorders asked about and “these disorders resulted in substantial impairment in carrying out major life activities”.

Approximately 7.5% of Southeast Missouri residents ages 18+ had at least one major depressive episode in the past year. A major depressive episode is characterized by an extended period of depressed mood, loss of interest or pleasure, and impaired functioning. Typically, females are more likely to report having had a major depressive episode.

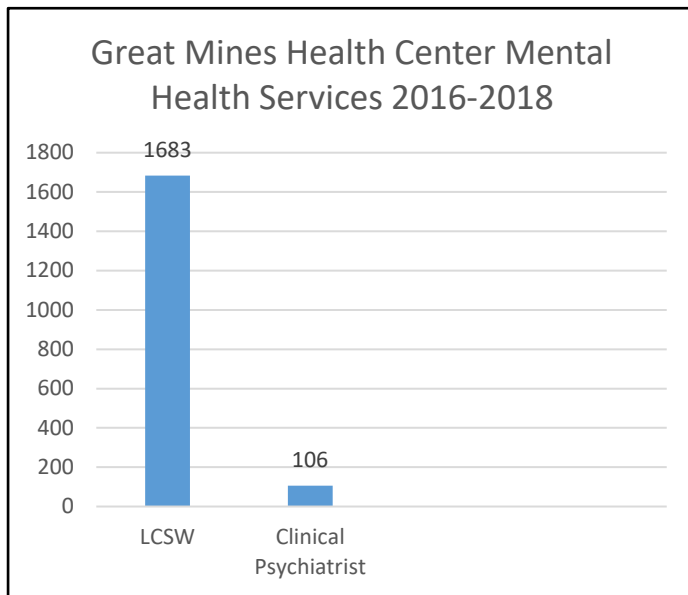
In 2016, seven Washington County residents died by suicide. Typically, males and whites are most likely to die by suicide.

Developed with support from the Missouri Division of Behavioral Health and the Substance Abuse and Mental Health Services Administration.

For more information: <http://dmh.mo.gov/ada/mobhew/>

Source: <https://dmh.mo.gov/docs/ada/commprofile2018-washington.pdf>

Table 16



Between 2016 and 2018, Great Mines Health Center had 1,789 mental health visits. Of these visits, 1,683 were to a Licensed Clinical Social Worker (LCSW), and the remaining 106 visits were to a Clinical Psychiatrist via Telehealth services. Telehealth services began mid-2018. See Table 16.

Source: *Great Mines Health Center, Potosi, Missouri. 01/31/2019.*

Suicide

In 2016, seven Washington County residents died by suicide. Then, in 2017, five suicides occurred. *Source: DHSS - MOPHIMS - Death MICA*

In 2017, Washington County Memorial Hospital saw 144 patients for suicide attempt or suicidal ideation, which resulted in 26 admissions, 97 transfers, and 21 discharges.

The age range of the patients in 2017 were as young as 7 to 64 years of age, 74 of these were female and 70 male.

Statistics show a continual rise in emergency room patients seeking treatment for suicide ideation or attempt, 2016 – 93, 2017-144, and 2018 – 151.

Source: Washington County Memorial Hospital, 2017.

National and State Data

According to NSDUH, Missouri is slightly lower than the national average for having serious thoughts about suicide in the last year. The Missouri rate for 2014-15 was 3.92% and 2015-16 was 3.47%. This compares to the national average of 3.99% and 4.04% respectively.

Missouri has been higher than the national average for rate of deaths due to suicide for the last decade, and the rate continues to climb. See Tables 17 and 18.

Table 17: Rates of Suicides per 100,000 Pop; U.S. and Missouri 1998-2016

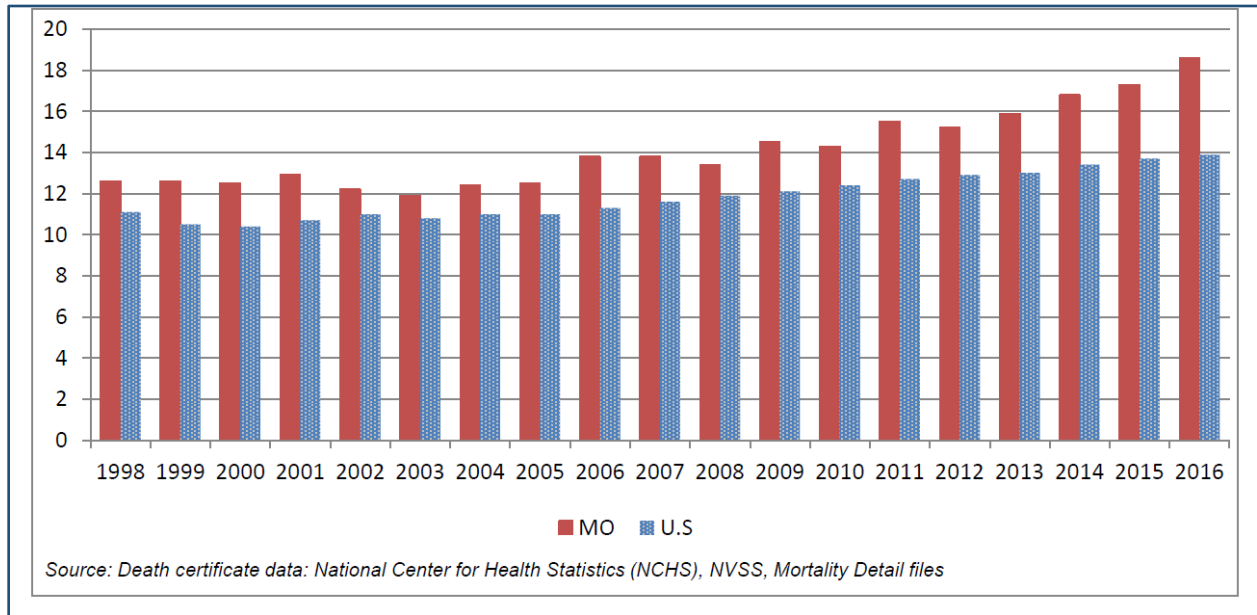
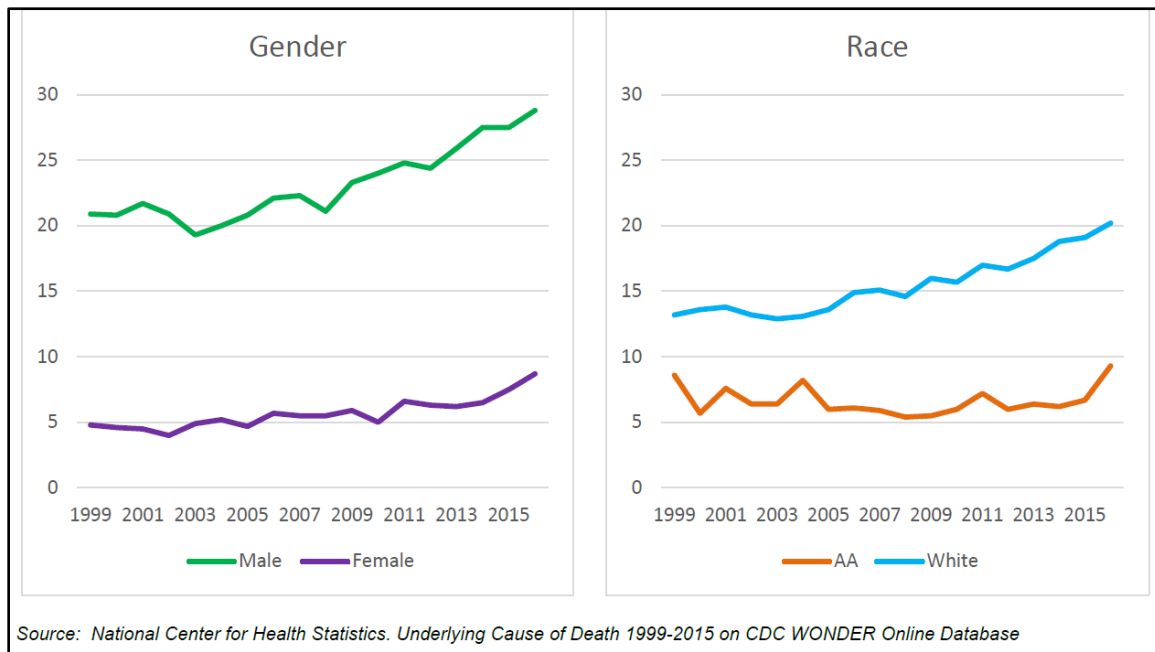


Table 18: Rate of Deaths due to suicide by demographics per 100,000 Pop; MO only 1998-2015



Source: <https://dmh.mo.gov/ada/mobhew/documents/missouristateepiprofile2018.pdf>

Local Hospitalization Data

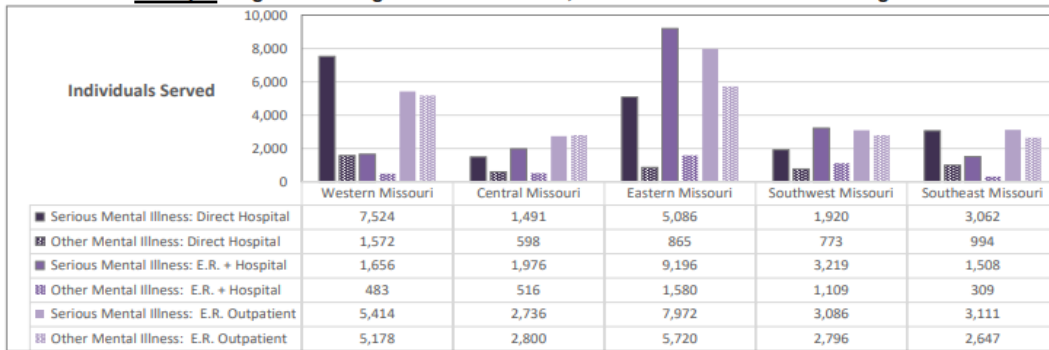
Washington County is located in Southeast Missouri. According to Missouri Department of Health and Senior Services data in 2016, serious and other mental health illnesses were the principal direct hospitalization diagnoses for 23,885 individuals, with 4,056 of those individuals coming from Southeast Missouri. See Table 19.

Source: <https://dmh.mo.gov/ada/rpts/documents/status2018-f04.pdf>

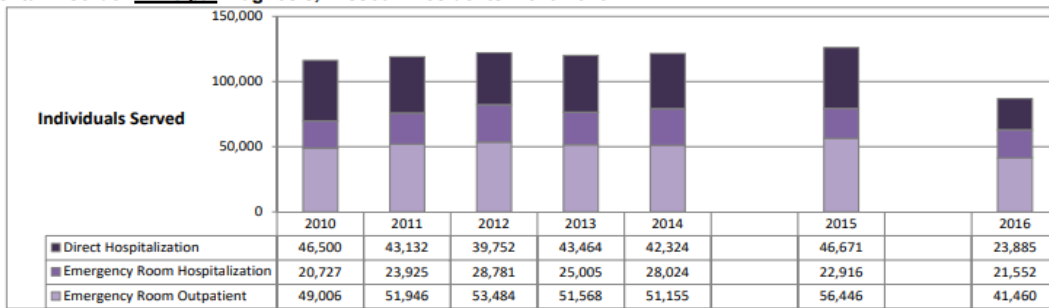
Table 19 Data source: Missouri Department of Health and Senior Services

HOSPITAL AND EMERGENCY DEPARTMENT EPISODES FOR MENTAL DISORDERS

Mental Disorder Principal Diagnosis among Missouri Residents, Division of Behavioral Health Regions: 2016

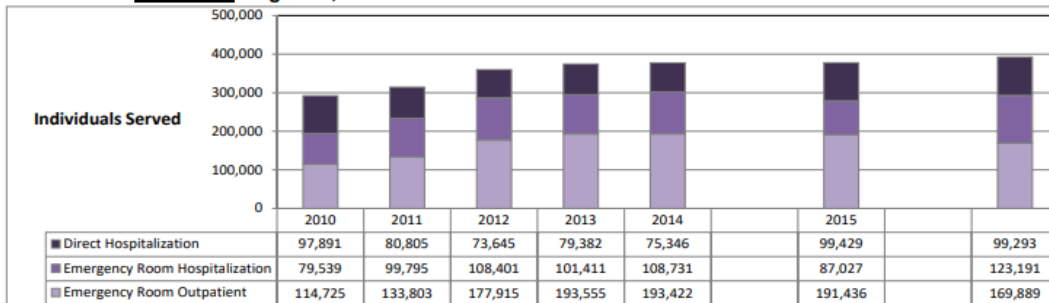


Mental Disorder Principal Diagnosis, Missouri Residents: 2010-2016



Serious Mental Illness and Other Mental Illness are combined in each of the three service categories on this chart.

Mental Disorder Secondary Diagnosis, Missouri Residents: 2010-2016



Serious Mental Illness and Other Mental Illness are combined in each of the three service categories on this chart.

Hospital and emergency room records used ICD-9 diagnosis codes prior to October 2015 and ICD-10 codes beginning October 2015. Alcohol, drug, and mental disorder counts in this report are based on sets of ICD-9 and ICD-10 diagnosis codes selected by the Healthcare Cost and Utilization Program (HCUP). Due to changes in ICD coding and changes in the selection of codes for mental disorders, hospital and E.R. counts beginning in 2016 are not fully comparable to counts in prior years. Each individual is counted only once regardless of the number of hospital or E.R. services received during the year for a mental disorder.

Substance Abuse

County Rankings

Much of this community health assessment is devoted to the opioid epidemic and the alternative drugs pervasive among those who use drugs in Washington County. Table 20 and 21 display five-year statistics for opioid overdose deaths and opioid ER hospital visits. For deaths due to opioid overdose, Table 20 below demonstrates that Washington County was ranked 9th.

Table 20

Deaths Due to Opioid Overdoses by County of Residence 2013-2017											
County	Counts	Rate	County	Counts	Rate	County	Counts	Rate	County	Counts	Rate
St. Louis City	658	41.80	Harrison County	4	9.29*	Taney County	13	4.79*	Carrroll County	1	2.24*
Jefferson County	324	29.11	Gentry County	3	8.97*	Stoddard County	7	4.72*	Caldwell County	1	2.21*
Franklin County	114	22.26	Jackson County	308	8.95	Pemiscot County	4	4.61*	Ozark County	1	2.14*
Worth County	2	19.48*	Clay County	98	8.30	Wayne County	3	4.49*	St. Clair County	1	2.13*
St. Louis County	931	18.63	Stone County	13	8.25*	Holt County	1	4.45*	Jasper County	11	1.86*
Crawford County	22	18.04	Webster County	15	7.99*	New Madrid County	4	4.44*	Oregon County	1	1.86*
Lincoln County	49	17.88	Lewis County	4	7.94*	Mississippi County	3	4.31*	Barton County	1	1.67*
Hickory County	8	17.11*	Ray County	9	7.87*	Lafayette County	7	4.29*	Randolph County	2	1.6*
Washington County	21	16.82	Texas County	10	7.78*	Pettis County	9	4.25*	Cape Girardeau County	6	1.54*
Pulaski County	43	16.19	Vernon County	8	7.74*	Scotland County	1	4.1*	Macon County	1	1.31*
St. Francois County	53	16.00	Christian County	31	7.47	Howard County	2	3.94*	Andrew County	1	1.15*
St. Charles County	301	15.63	Cass County	38	7.46	Ralls County	2	3.92*	Cooper County	1	1.14*
Maries County	7	15.63*	Callaway County	16	7.14*	Atchison County	1	3.75*	McDonald County	1	0.88*
Dent County	12	15.42*	Howell County	14	6.98*	Bates County	3	3.66*	Johnson County	2	0.74*
Livingston County	11	14.64*	Lawrence County	13	6.82*	Saline County	4	3.48*	Laclede County	1	0.56*
Warren County	24	14.31	Buchanan County	30	6.71	Barry County	6	3.39*	Bollinger County	0	0*
Greene County	205	14.30	Adair County	8	6.29*	Shelby County	1	3.29*	Carter County	0	0*
Iron County	7	13.61*	Reynolds County	2	6.29*	Pike County	0	0			
Gasconade County	10	13.54*	Platte County	29	5.99	Perry County	0	0			
Grundy County	6	11.87*	Morgan County	6	5.97*	Sullivan County	1	0			
Marion County	17	11.85*	Boone County	51	5.84	Osage County	2	0			
Phelps County	25	11.14	Ripley County	4	5.79*	Clark County	1	0			
Camden County	24	10.70	Polk County	9	5.74*	Cedar County	2	0			
Benton County	10	10.57*	Miller County	7	5.61*	Newton County	0	0			
Montgomery County	6	10.33*	Henry County	6	5.5*	Dade County	1	0			
Scott County	20	10.29	Butler County	11	5.14*	Nodaway County	0	0			
Ste. Genevieve County	9	10.07*	Knox County	1	5.03*	Dallas County	2	0			
Madison County	6	9.81*	Cole County	19	4.95*	Daviss County	1	0			
			Clinton County	5	4.88*	Audrain County	0	0			

* Rate is unreliable; numerator is less than 20
 Crude Rate per 100,000 population
 Source: Bureau of Vital Statistics, Missouri Department of Health and Senior Services

This table ranks all Missouri counties based on their 2013-2017 crude death rate (per 100,000 population) due to opioid-involved overdoses. The top three counties with the highest mortality rates are in the St. Louis metropolitan area.

The map appearing in the lower right of the table is placed there to demonstrate that Washington County is among several contiguous counties impacted by opioid addiction more so than other Missouri counties.

Table 21 below, demonstrates that from 2013-2017 Washington County ranked 15th among all Missouri counties for hospital ER visits for opioid abuse.

Table 21

**ER Visits Due to Opioid Abuse
by County of Residence
2012-2016**

County	Counts	Rate	County	Counts	Rate	County	Counts	Rate	County	Counts	Rate
St. Louis City	7,227	4.59	Pike County	104	1.12	Randolph County	101	0.81	Andrew County	46	0.53
St. Francois County	1,203	3.63	Montgomery County	65	1.12	Hickory County	37	0.79	Chariton County	26	0.53
Iron County	168	3.27	Dallas County	90	1.09	Miller County	98	0.79	Carroll County	22	0.49
Franklin County	1,166	2.28	Jasper County	645	1.09	Webster County	146	0.78	Scotland County	12	0.49*
Madison County	102	2.28	Pulaski County	285	1.07	St. Clair County	36	0.77	Holt County	11	0.49*
Crawford County	252	2.07	Howell County	215	1.07	Reynolds County	24	0.75	Worth County	5	0.49*
Barton County	113	1.89	Henry County	116	1.06	Shannon County	31	0.75	Johnson County	130	0.48
Warren County	293	1.75	Stone County	166	1.05	Christian County	310	0.75	Carter County	15	0.48*
Jefferson County	1,941	1.74	Buchanan County	460	1.03	Clay County	879	0.74	Shelby County	14	0.46*
Phelps County	389	1.73	Vernon County	104	1.01	Sullivan County	23	0.72	Livingston County	34	0.45
Lincoln County	468	1.71	Lafayette County	162	0.99	Cape Girardeau County	278	0.71	Ralls County	23	0.45
St. Louis County	7,888	1.58	Putnam County	24	0.99	Morgan County	69	0.69	Caldwell County	20	0.44
Taney County	418	1.54	Linn County	60	0.98	Wright County	62	0.68	New Madrid County	39	0.43
Marion County	163	1.43	Benton County	91	0.96	Harrison County	29	0.67	Ozark County	20	0.43
Washington County	178	1.43	Cole County	369	0.96	Laclede County	119	0.67	Bollinger County	26	0.42
Dade County	54	1.42	Callaway County	214	0.96	Saline County	77	0.67	Adair County	51	0.40
Dent County	109	1.40	Mississippi County	66	0.95	Monroe County	29	0.67	Moniteau County	31	0.39
Greene County	1,962	1.37	Camden County	212	0.95	Newton County	193	0.66	Davies County	15	0.36*
Cedar County	92	1.33	Perry County	88	0.92	Platte County	318	0.66	Clark County	12	0.35*
Ste. Genevieve County	116	1.30	Boone County	801	0.92	Grundy County	33	0.65	Knox County	7	0.35*
Barry County	229	1.29	Pettis County	194	0.92	Texas County	83	0.65	DeKalb County	22	0.35
Ripley County	87	1.26	Cass County	459	0.90	Cooper County	54	0.61	Douglas County	22	0.33
Gasconade County	90	1.22	McDonald County	68	0.89	Audrain County	76	0.59	Mercer County	6	0.33*
Polk County	189	1.21	Scott County	171	0.88	Dunklin County	91	0.59	Howard County	15	0.3*
Ray County	137	1.20	Oregon County	47	0.87	Pemiscot County	51	0.59	Nodaway County	33	0.29
St. Charles County	2,263	1.18	Jackson County	2,908	0.84	Osage County	40	0.59	Atchison County	6	0.22*
Lawrence County	224	1.17	Gentry County	28	0.84	Stoddard County	84	0.57	Schuyler County	5	0.22*
Bates County	95	1.16	Macon County	50	0.82	Wayne County	37	0.55	Maries County	30	0.21
			Butler County	175	0.82	Clinton County	56	0.55	Lewis County	4	0.08*

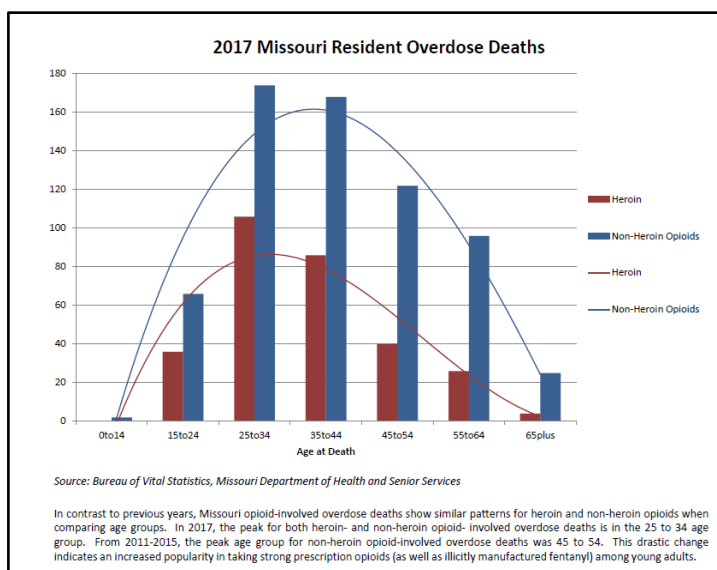
* Rate is unreliable; numerator is less than 20
Crude Rate per 1,000 population
Source: Bureau of Health Core Analysis and Data Dissemination, Missouri Department of Health and Senior Services

When rates are sorted high to low, it is apparent that areas around and south of St. Louis feature most of the highest opioid-involved misuse emergency room visit rates. While rates are most useful for comparison purposes, it is notable that the sheer number of discharges to St. Louis City and St. Louis County residents dwarf all other areas of the state. Users will notice far fewer asterisks in this table compared to the corresponding death statistics for opioid-involved overdoses. This is because more counties have ER discharge frequencies above 20, which is the threshold for reliable rates. One other caveat: counts for ER data are not unique counts of individuals, rather they are based upon number of visits to the ER. While a single person can go to the ER multiple times in a year, that is decidedly not the case for deaths.

Reaction to Changes in Supply and Access

As awareness of the opioid epidemic grew, government actions began to address the ease-of-access to opioids. By 2016, nearly all states had adopted a prescription drug monitoring program, however, Missouri legislators did not adopt a state-wide program at that time. Nevertheless, the overall access to prescribed opioids was reduced as physicians and pharmacies considered potential liability, and/or the patient's wellbeing, when prescribing and dispensing pain medicines. Consequently, the supply and access to prescribed opioids was altered to a degree that other drug choices became pervasive among drug users. In particular, heroine, methamphetamines, fentanyl, and similar narcotics. Table 22 compares Missouri deaths attributed to both non-heroin opioids and heroin. For Washington County, Table 23

Table 22



demonstrates the number of deaths due specifically to heroin overdose from 2013 to 2017. The accompanying map also demonstrates Washington County is ranked 28th among other counties specifically for fatal heroin overdoses.

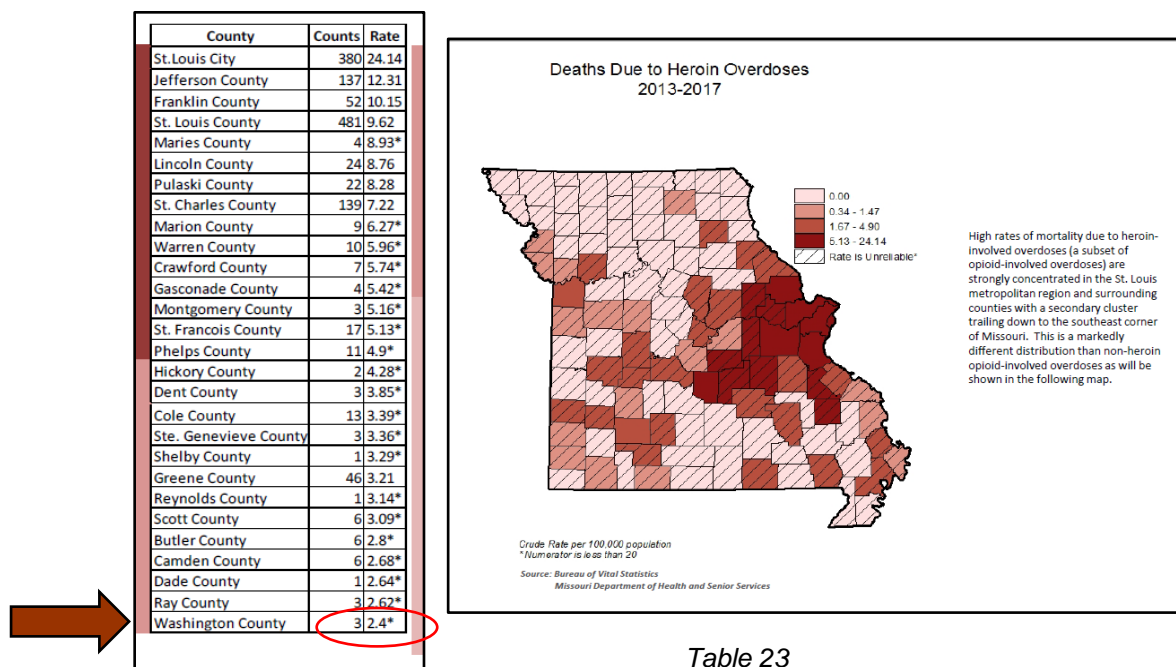
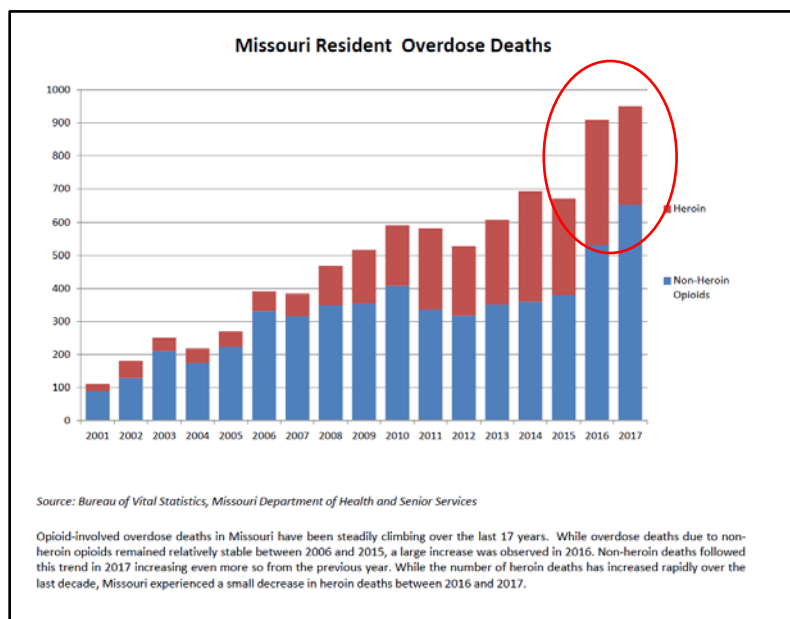


Table 23

Statistics: Facts and Consequences

While Missouri was experiencing some of its highest rates-of-death due to opioids, the Missouri Department of Health and Senior Services issued a press release on June 27, 2018 announcing a decrease in the rate of deaths. They were pointing out that the 2017 rate did not have such a significant rise. Despite this reduced rate, the fact that the number of deaths actually increased

Table 24



from 2016 to 2017 offered no consolation. See Table 24

This decreased rate is attributed to both the availability of Naloxone and law enforcement’s crack-down on “pill-mills.” Naloxone is a nasal spray that counteracts the effects of an overdose immediately upon use, thus saving one’s life from overdosing. For Washington County, this can be seen in Table 25 that displays hospital ER visits from 2012 to 2017 in which the years following 2015 demonstrate a significant drop in counts. Consequently, inpatient

visits also dropped as seen in Table 26. It is important to note that a nationwide downward trend in E.R. visits is evident and is attributed to increasing urgent care visits as another option. However, considering that narcotic overdose has immediate life-threatening symptoms, it is unlikely that statistics for urgent care visits will include overdose treatment.

Table 25: MO DHSS custom prepared data by request – crude rate (per/1,000) is based on population

Washington County Opioid Misuse ER Visits		
Year	Count	Crude Rate (Per 1,000)
2012	28	1.12
2013	36	1.43
2014	41	1.63
2015	46	1.86
2016	27	1.09
2017*	15*	0.6*

*2017 ER Data is provisional and may be subject to change in the future

Table 26: MO DHSS custom prepared data by request – crude rate (per/1,000) is based on population

Washington County Opioid Misuse Inpatient Visits		
Year	Count	Crude Rate (Per 1,000)
2012	39	1.55
2013	46	1.83
2014	67	2.67
2015	51	2.06
2016	27	1.09
2017*	23	0.92

*2017 Inpatient Data is provisional and may be subject to change in the future

Treatment & Recovery Statistics

The Missouri Department of Mental Health reports that 112,000 Missouri residents accessed treatment for illicit drug use disorder during fiscal years 2013-2017. Statistically, Missouri's 5-year average annual rate was 37 admissions per 10,000 population.¹ Washington County was identified among the counties having a 5-year range of 43.00 – 58.71 admissions per 10,000 population.¹ To explore illicit drug use per individual year, the Missouri Department of Mental Health's 2018 Status Report lists the problem-counts/year by drug type. See Table 27: 2017 Missouri Treatment Statistics. For comparison, there are three primary drug problems corresponding with Washington County. These include Stimulant (total), Heroin, and Analgesics (pain killers) to which the Missouri problem-count is 14,753 which is approximately ~0.23% of the 2017 Missouri population.

¹Missouri Department of Mental Health; 2018 Status Report on Missouri's Substance Use and Mental Health Page A-26

Table 27: 2017 Missouri Treatment Statistics

Source: 2018 Status Report on Missouri's Substance Use and Mental Health Section G

PRIMARY DRUG PROBLEM	FY2017	FY2016	FY2015
Alcohol	10,229	10,672	11,989
Marijuana / Hashish	6,783	7,044	7,591
Cocaine (total)	1,135	1,192	1,216
- Crack	746	793	819
Stimulant (total)	8,027	6,872	6,153
- Methamphetamine	7,625	6,415	5,973
Heroin	4,629	4,681	4,062
Analgesic except Heroin	2,097	2,205	2,172
- Non-Prescription Methadone	28	34	28
PCP, LSD, other Hallucinogen	226	248	248
Tranquilizer	269	297	296
Inhalant	29	12	23
Sedative	32	23	31
Other Medication or Illicit Drug	118	160	184
Average Age at First Use of Drug	19.0	18.8	18.5

Data in Table 28 is specific to Washington County residents treated for substance abuse. To compare to the three problem types described above, in **2017 – 80** were treated and for **2016 – 84** were treated. To communicate as a rate, the Missouri overall population-based rate is ~ 0.23% and the Washington County population-based rate is ~ 0.32%. This overall higher rate of treatment, specific for only three illicit drug-types, in 2017 demonstrates that Washington County's drug problem persists despite drops in overdose deaths and E.R. visits.

For this report, crude data counts were compiled (See Table 29) for those individuals transported by ambulance to facilities in which substance abuse was a factor. The majority of Washington County's behavioral and substance abuse patients are transported first to the local hospital for medical clearance and then transported elsewhere according to criteria and availability. While collecting data, it was discovered that both transporters and receiving

entities do not necessarily distinguish or otherwise track clients based upon the circumstance of (1) substance abuse or (2) behavioral. Both entities report that it is often a mix and specific data is not readily available or reliable. According to Washington County EMS data and other sources, eighty-two individuals received inpatient treatment for mental/behavioral health disorders with many having co-occurring substance abuse disorders in 2018. See Table 29

PRIMARY DRUG PROBLEM	FY2017	FY2016	FY2015
Alcohol	23	31	33
Marijuana / Hashish	34	29	34
Cocaine (total)	0	0	*
- Crack	0	0	*
Stimulant (total)	40	42	45
- Methamphetamine	40	41	42
Heroin	17	10	19
Analgesic except Heroin	28	32	27
- Non-Prescription Methadone	*	0	0
PCP, LSD, other Hallucinogen	0	*	0
Tranquilizer	*	5	*
Inhalant	*	0	0
Sedative	0	*	0
Other Medication or Illicit Drug	*	*	*
Average Age at First Use of Drug	18.8	20.0	19.7

Table 28: 2017 Washington County Treatment Statistics

Source: 2018 Status Report on Missouri's Substance Use and Mental Health (page E-442)

Washington County EMS Transports Inpatient Treatment Program Facilities 2018 Data

Table 29

Receiving Entity	Facility Specialization	Washington County Clients
CenterPointe St. Charles, MO	Co-occurring addiction and behavioral (adults)	12
Heartland Behavioral Nevada, MO	Pediatric behavioral	3
Hyland Behavioral St. Louis, MO	Co-occurring addiction and behavioral (adults)	2
Lakeland Behavioral Springfield, MO	Behavioral issues for children, adolescents, and senior adults	1
Missouri Psychiatric Care Columbia, MO	intensive inpatient treatment services for adults, adolescents and children	1
Pemiscot Memorial Hayti, MO	Co-occurring addiction and behavioral	7
Poplar Bluff Regional Medical Center – <i>satellite facility</i> Poplar Bluff, MO	Co-occurring addiction and behavioral	10
Southeast Health Center of Stoddard County Dexter, MO	Co-occurring addiction and behavioral (adults)	12
SSM-DePaul Hospital St. Louis, MO	Full range of treatment options for children, adolescents, adults and seniors with mental health disorders, including dementia and substance abuse disorder	13
St. Alexis St. Louis, MO	Co-occurring addiction and behavioral (adults)	2
SEMO Behavioral Health (<i>bank building</i>) Poplar Bluff, MO	Co-occurring addiction and behavioral	4
SEMO Behavioral Health (Aquinas) Farmington, MO	Co-occurring addiction and behavioral	15
Total		82
<i>*Received, but not by ambulance (law enforcement or other non-ambulance transport)</i>		

For inpatient treatment programs, one can see that many transports are to places outside the region. Except for 2 to 3-day inpatient medical monitoring for withdrawal, Washington County does not have inpatient substance abuse treatment facilities. Nearby places such as SEMO Behavioral Health (*Potosi and other satellite locations*) are outpatient substance abuse treatment facilities. New Vision™ (*at Sullivan and St. Genevieve*) contract with their respective hospitals to provide 3 to 5-day inpatient withdrawal management, and then clients are referred elsewhere for treatment. SEMO Behavioral Health's inpatient facilities in Farmington (Aquinas) and Poplar Bluff do not meet EMS criteria for ambulance service. Nevertheless, they are included in Table 29 to capture their 2018 inpatient residency data. BJC Behavioral Health, in Potosi, only provides outpatient services for those having a mental health disorder, but some patients may have co-occurring substance abuse disorders.

Table 30: Outpatient Treatment Facilities

2018 Substance Abuse Treatment Admissions Washington County Residents <i>Specific to illicit drug use/excludes alcohol and marijuana</i>	
Treatment Facility	Washington County Clients
SEMO Behavioral Health Potosi, MO	193
SEMO Behavioral Health Farmington & St. Genevieve	37
SEMO Behavioral Health* Pilot Knob, Cuba, and Salem	9*
BJC Behavioral Health Potosi, MO	20**
New Vision™ Sullivan, MO (3)	<i>manages withdrawal then refers</i>
New Vision™ St. Genevieve, MO (16)	<i>manages withdrawal then refers</i>
Total	259
*data combined from listed locations ** County residency is probable but not verified	

The link between mental health disorders and substance abuse can happen in various ways. First, one could have pre-existing mental health disorder making them prone to illicit drug use. Second, one could develop a mental health disorder after habitual drug use. Third, an overdose circumstance could result in a mental health disorder.

The treatment facilities listed in Table 30 provide outpatient services only. It excludes New Vision™, since they only manage withdrawal then refer clients elsewhere for treatment. The data in Table 30 is specific for illicit drug use and excludes alcohol and marijuana. This 2018 preliminary data is intended to provide better insight to what is happening presently and locally concerning illicit drug use.

To compare this crude data to the Missouri rate of admissions for treatment, the following formula is applied:

$$[24,943 \text{ pop.} \div 10,000 = 2.494] [259 \div 2.494 \sim \mathbf{104 \text{ people/10,000 population}}]$$

This rate excludes the data in Table 27 due to the varying mix of diagnoses, type of substance abuse, and age groups

As referenced at the beginning of this section, Missouri's 5-year average rate of admissions for illicit drug abuse treatment = 37 per 10,000 population and Washington County's 5-year range = 43.00 – 58.71 admissions per 10,000 population. For 2018, Washington County has a rate of admissions for illicit drug abuse treatment much higher than official data sources are demonstrating. This rate would be remarkably higher if applicable data from Table 29 could be differentiated accordingly. Possible reasons for this comparably higher rate include (1) the state's data may be limited to those treatment centers contracted by the Missouri Department of Mental Health, (2) state data may be based on facility location and not patient residency, (3) clientele repeating a treatment program, and (4) co-occurring mental health disorders may be categorized by primary diagnosis. Overall, this may be the first time all data sources and county residency are being utilized to convey the full scope of the problem for Washington County.

Law Enforcement Statistics

Table 31: 2017 Drug Arrests for Possession, Sale, and Manufacturing
Source: Missouri Highway Patrol

2017 Part II Arrests		
by Crime Type and Political Subdivision		
Jurisdiction by County	Drug Sale/Manuf.	Drug Poss.
Crawford		
BOURBON PD	8	33
CRAWFORD COUNTY SO	2	25
CRAWFORD STATE AGENCY DATA	13	183
CUBA PD	11	126
STEELVILLE PD	0	31
SULLIVAN PD	6	62
Iron		
ARCADIA PD	0	0
IRON COUNTY SO	0	3
IRON STATE AGENCY DATA	0	6
IRONTON PD	0	2
PILOT KNOB PD	0	9
VIBURNUM PD	0	3
St. Francois		
BISMARCK PD	0	8
BONNE TERRE PD	5	52
DESLOGE PD	18	122
FARMINGTON PD	1	49
IRON MOUNTAIN LAKE PD	0	1
LEADINGTON PD	0	29
LEADWOOD PD	0	0
MINERAL AREA COLLEGE DPS	0	1
PARK HILLS PD	9	99
ST FRANCOIS COUNTY SO	8	50
ST. FRANCOIS STATE AGENCY DATA	3	45
TERRE DU LAC PD	5	36
Washington		
POTOSI PD	9	21
WASHINGTON COUNTY SO	1	7
WASHINGTON STATE AGENCY DATA	1	5

Table 31 displays drug arrests according to the Missouri Highway Patrol specific to drug possession, sales, and manufacturing. It does not necessarily include individuals arrested for behavioral offenses while under the influence of drugs. For this, both the Potosi PD and the Washington County Sheriff's Office were contacted for drug related arrests that excluded marijuana and focused only on narcotics. The results are as follows:

Potosi PD:

2017 drug arrests excluding marijuana- **112**

2018 drug arrests excluding marijuana- **174**

Sheriff's Office:

2017 Narcotic arrests - **27**

2018 Narcotic arrests – **50**

2019 Narcotic arrests – **49** as of May

This local arrest data is further evidence of Washington County's high rankings for substance abuse **For 2018, a total of 224 arrests were made on drug related offenses.**

Washington County's Juvenile Office reports that for 2017 there was 1 charge for possession of a controlled substance, 1 charge for possession of marijuana, and 2 charges for unlawful possession of pharmaceuticals on school property. For 2018 the reports are as follows: 2 charges for controlled substance, 2 charges for marijuana possession, and 1 charge for unlawful possession of drug paraphernalia.

Substance Abuse Prevention

In 2018, Washington county organized and formed a consortium to combat drug abuse. This consortium was made possible by a federal grant from the US Department of Health and Human Services. The Washington County Memorial Hospital leads this consortium and partners include the Washington County Health Department, Washington County Community Partnership, Washington County Ambulance District, Great Mines Health Center, and several other stakeholders. Its aim is to improve access to substance abuse treatment, augment existing outpatient recovery services, assist with prevention strategies aimed at school-aged kids, and assist those recovering from substance abuse obtain employment and “get back on their feet.”

Communicable & Chronic Disease

Communicable Diseases

Measles

The majority of people who got measles were unvaccinated. Measles is still common in many parts of the world including some countries in Europe, Asia, the Pacific, and Africa. Travelers with measles continue to bring the disease into the U.S. Measles can spread when it reaches a community in the U.S. where groups of people are unvaccinated.

From January 1 to April 4, 2019, 465 individual cases of measles have been confirmed in 19 states. This is the second-greatest number of cases reported in the U.S. since measles was eliminated in 2000.

The states that have reported cases to CDC are Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Michigan, Missouri, Nevada, New Hampshire, New Jersey, New York, Oregon, Texas, and Washington.¹

Missouri measles cases are low, perhaps one confirmed case, and are among those who have traveled elsewhere. Washington County has had zero cases to date.

[1] <https://www.cdc.gov/measles/cases-outbreaks.html>

Sexually Transmitted Disease (STD)

Sexually Transmitted Diseases that are commonly tested for include Chlamydia and Gonorrhea. For 2018, Washington County tested 70 individuals; 38 men and 32 women. Results are as follows: Chlamydia 9 males 2 females Total = 11. Gonorrhea 11 males 3 females Total = 14. One person had a dual diagnosis of both Chlamydia and Gonorrhea.

Source: MO DHSS 2018 Program Quarterly Report Card Quarter 4 with year-to-date

Hepatitis A

Since September 2017, the Missouri Department of Health and Local Public Health Agencies (LPHAs) have received increased reports of hepatitis A linked to an ongoing outbreak in Missouri [*predominately in the southeast*]. As of April 9, 2019, 278 cases of hepatitis A virus infection have been linked to the outbreak. No common sources of food, beverages, or drugs have been identified as a potential source of the infection. Transmission appears to be through direct person-to-person spread. Based on current information, persons who use injection and non-injection illicit drugs are at increased risk for hepatitis A during this outbreak. Several other states are also experiencing similar outbreaks of hepatitis A. Public health officials in Missouri continue working to identify cases and their contacts, provide education, and to provide vaccination of close contacts to cases and others identified to be at increased risk for hepatitis A infection.¹ As of April 9, 2019, Washington County has had no cases of Hepatitis A. This could be attributed in part to having higher immunization rates than peer counties and the City of Potosi's Hep A ordinance requiring all food handler's to be vaccinated. Both of these circumstances increases immunity for Washington County's population.

[1] <https://health.mo.gov/living/healthcondiseases/communicable/hepatitisa/index.php#outbreak>

Tick-Borne Illnesses

Tick-borne diseases currently present in Southeast Missouri include Rocky Mountain Spotted Fever, Ehrlichiosis, Anaplasmosis, Bourbon Virus, Tularemia, and Heartland Disease. Lyme disease is not among the list of diseases due to Missouri not having any documented cases for several years that can be linked to ticks in Missouri. Technically, cases attributed to Missouri do not meet the US CDC's full case definition of the disease. Instead, persons afflicted are diagnosed with a Lyme-like disease with a condition referred to as the Southern Tick Associated Rash Illness (STARI).¹

In 2017, Washington County was impacted by the outbreak of *Bourbon Virus* attributed to Meramec State Park located at the Northwest tip of Washington County. *Bourbon Virus* was first discovered in 2014 in Bourbon County, Kansas. The US CDC responded to the incident at Meramec State Park by collecting and testing ticks. Also, parallel with this study, the CDC has conducted blood tests on many individuals since the disease's discovery in 2014. However, the small sample size and personal information of individuals for this circumstance prevented the publication of results. None of the 7,000 ticks collected tested positive for the virus. This does not mean the virus is not present in some ticks in the park. Instead, it means none of the ticks that might have been infected at the time of this investigation were trapped and tested. *Heartland Virus* was detected in one group of ticks.² People testing positive for *Bourbon Virus* suffer symptoms similar to *Ehrlichiosis* and *Heartland Virus*. Most people have a full recovery from tick-borne disease. However, DHSS statistics indicate that people over age 50 and those with chronic health problems are more likely to develop a serious illness that can lead to complications.²

Another tick-bite outcome that has recently emerged is the allergy to red meat also referred to as Alpha-gal allergy. Currently, the Lone Star tick is considered to be the most likely carrier for

this outcome. The US CDC is not necessarily linking this condition to a particular tick-borne disease listed above, but as an emerging outcome from a tick-bite.

For members of the public worried about the possibility of tick-borne diseases, the best way to prevent infection is to avoid being bitten by a tick. Instructions on how to prevent exposure while outdoors are as follows:

- Apply insect repellents containing at least 20% DEET, picaridin, or IR3535 (no more than 30% DEET in children) to exposed skin according to label instructions.
- Apply a permethrin solution to clothing according to label instructions. This will last through several washings. Do not allow people or pets to have contact with treated surfaces until spray has dried.
- Stay on marked and paved trails.
- Wear light-colored long sleeve shirts and pants.
- Immediately perform a thorough tick inspection after being outdoors.
- If a tick is found, remove as soon as possible. Grasp the base of the head of the tick with a pair of tweezers and pull off with a straight motion, making sure to avoid twisting and jerking motions.

If a person begins developing a fever, muscle aches, fatigue, headaches, anorexia, diarrhea, or a rash after exposure to a tick bite or tick habitat, they should seek treatment from a medical professional and inform them of recent tick exposure

[1] Missouri Department of Health & Senior Services website information April 8th 2019:

<https://health.mo.gov/living/healthcondiseases/communicable/tickscarrydisease/index.php>

[2] Missouri Department of Health & Senior Services Press release issued December 13, 2017.

Zika Status

The Zika virus (Zika) is spread to people primarily through the bite of an infected *Aedes aegypti* or *Aedes albopictus* species of mosquito. Mosquito transmission of the Zika virus is found in over 50 countries and territories worldwide, including North, Central and South America, the Caribbean, Pacific Islands and Africa.

There have been travel-related cases of Zika virus infection in Missouri, but there have been no reported cases of Zika infection due to a local mosquito bite. Surveys are being conducted to determine if the types of mosquitoes found in Missouri can carry and spread Zika virus. We know that mosquitoes that transmit West Nile virus are present in our state, so people should take precautions to protect themselves and their families even if Zika virus mosquitoes are not found.¹

[1] Missouri Department of Health & Senior Services website information April 8th 2019:

<https://health.mo.gov/living/healthcondiseases/communicable/zika/index.php>

Chronic Diseases

Table 32 displays a comparison of Washington County to Missouri in regard to prevalent chronic diseases. For this comparison, three years of inpatient hospitalization rates were compiled. These rates are expressed as annualized per 10,000 residents and are age adjusted to the U.S. 2000 standard population.

Compared to the state, Washington County is excessively high for (1) heart disease, (2) Chronic Obstructive Pulmonary Disease (COPD), (3) cerebrovascular disease (stroke), and (4) Atherosclerosis (hardening of the arteries). Washington County has slightly higher rates of malignant neoplastic cancer than the state.

Source: DHSS - MOPHIMS - Chronic Disease Inpatient Hospitalization MICA

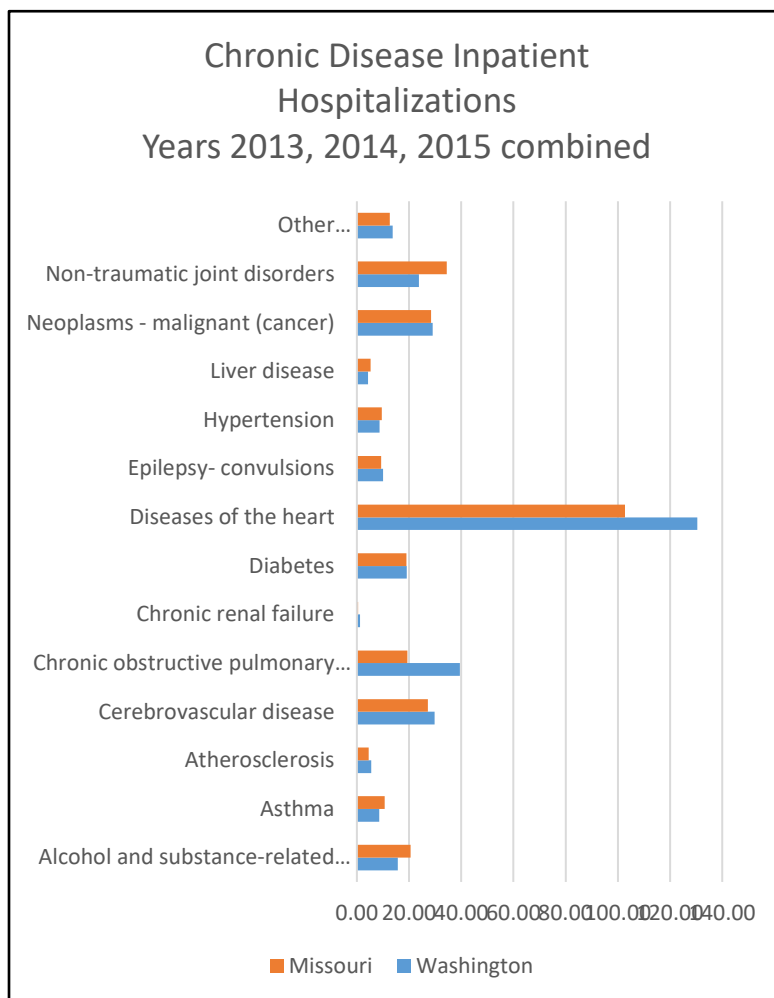


Table 32

Cancer Rates

The following two tables display cancer rates by type for Washington County compared to Missouri rates (Table 33). Washington County cancer rates affecting the respiratory system exceed the state-rate by far. The second highest rate of cancer, for Washington County, are those affecting the digestive system with statistics highest for colon & rectal cancer; however, other target organs among the statistics include the liver and pancreas. See Table 34.

For gender specific cancers in Washington County, the male genital cancer listed below is nearly 100% for prostate cancer. The female specific cancers are statistically highest for uterine and cervix cancer. Breast cancer counts for Washington County appear high, but are trending lower than the state rate.

Table 33 Source: DHSS - MOPHIMS - Cancer Incidence MICA

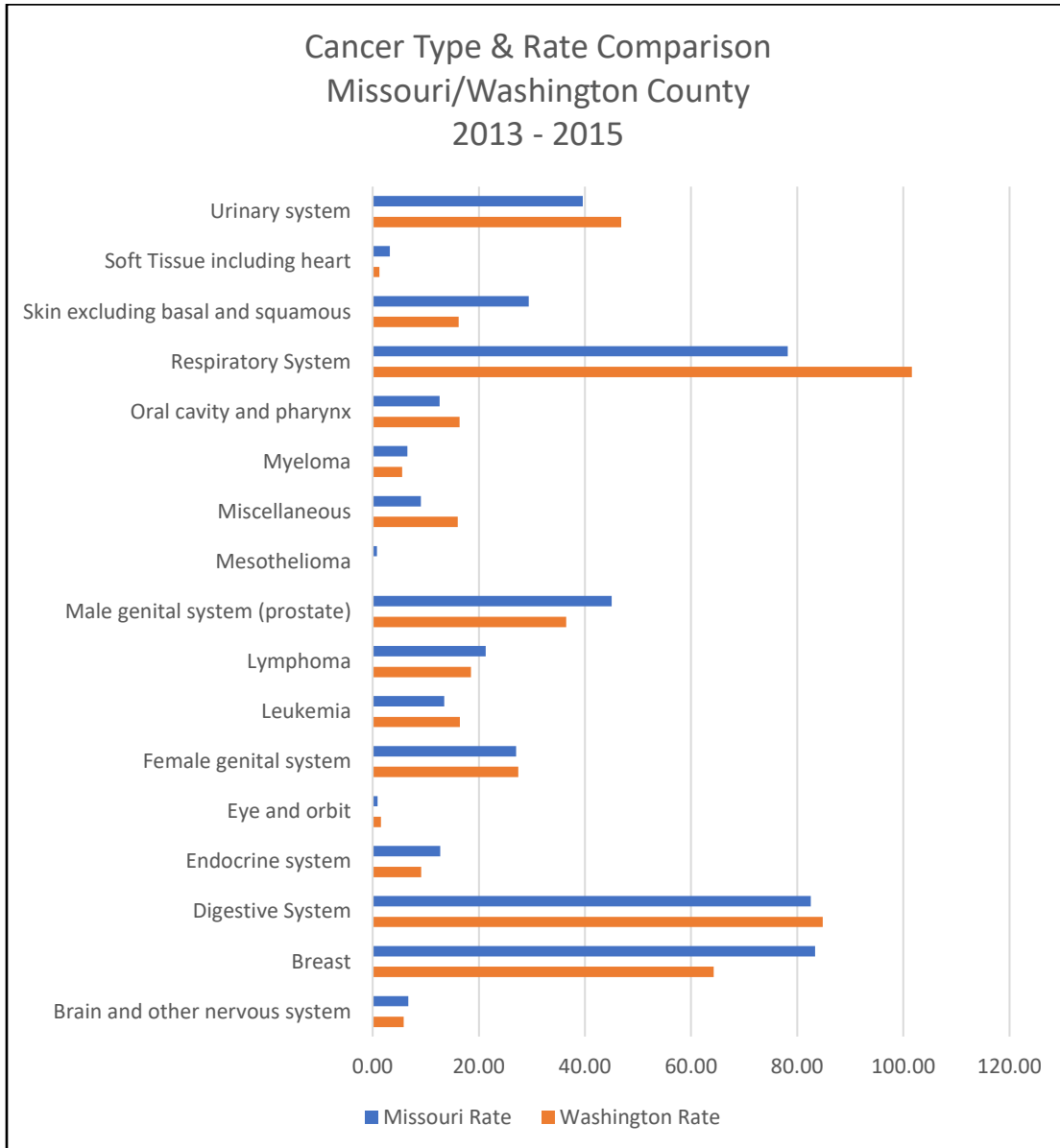
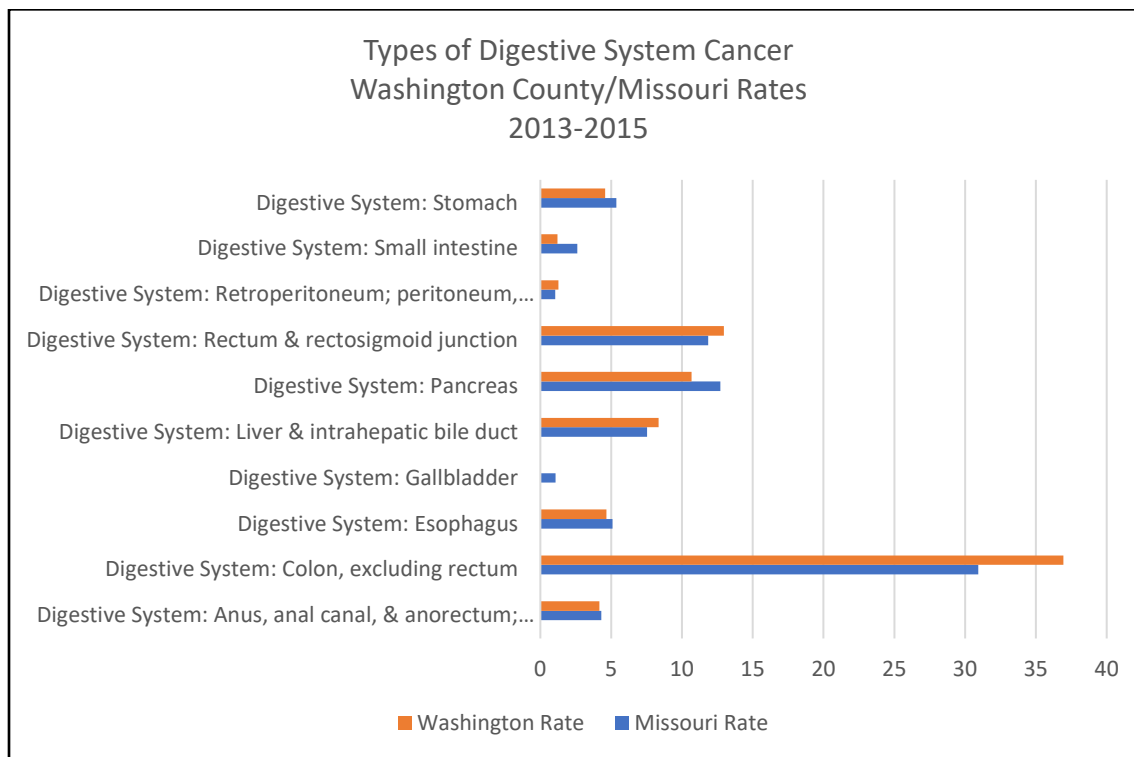


Table 34 Source: DHSS - MOPHIMS - Cancer Incidence MICA



Hospitalizations and Injury

Hospitalizations

Washington County has one hospital, a 25 bed critical access hospital that accounted for 1,060, admissions in 2015 (Washington County Memorial Hospital, 2019). According to MICA in 2015, residents of Washington County were hospitalized 2,989 times with a rate of 1,118.17 compared with a state rate of 1,072.54, which is of high significance. See Table 35 below:

- The top causes of inpatient hospitalizations of Washington County residents are consistent with those in the state of Missouri. The highest ranking causes of hospitalization were heart and circulation problems followed by respiratory causes, pregnancy-childbirth-reproduction, and mental disorders.
- According to WCMH, in 2015 there was an average length of stay of 4.23 days.
- Medicare and Medicaid were the top payment sources of Washington County resident hospitalizations, while Medicare and Commercial payment was the top payment source for the state residents.

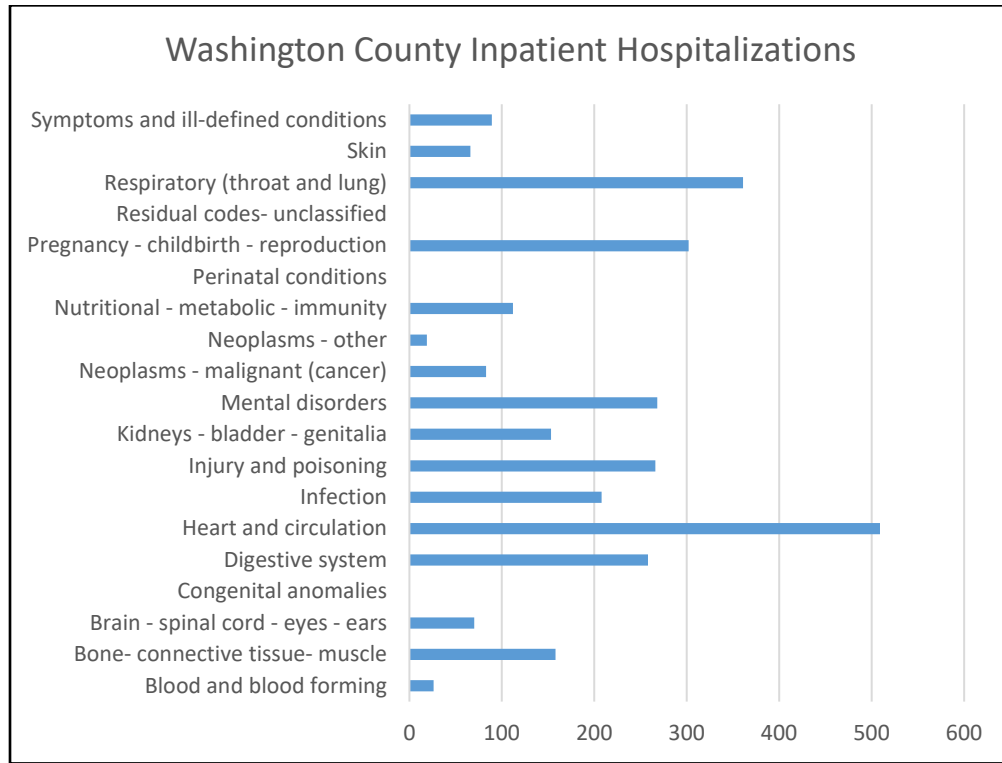
- According to the most recent data available (MICA 2015), Washington County had a preventable hospitalization rate of 149.01 while the state of Missouri had a rate of 128.84 which has been declining since 2013.
- Many hospitalizations often require more advanced care and treatment than is provided by Washington County Memorial Hospital. In addition, a number of WCMH patients are swing-bed patients that require skilled nursing care that often requires a longer length of stay.

Table 35: Resident Inpatient Hospitalizations

Missouri Resident Inpatient Hospitalizations										
Type of Data: Hospital Discharges; Single Year(s): 2015;										
Diagnosis	County									
	Washington		Iron		Jefferson		St. Francois		Missouri	
	# of Disch	Rate	# of Disch	Rate	# of Disch	Rate	# of Disch	Rate	# of Disch	Rate
Blood and blood forming	26	10.23	6	4.72	159	6.75	81	11.03	8,048	12.36
Bone- connective tissue-muscle	158	52.70	92	71.42	1,794	68.45	530	66.82	46,637	64.05
Brain - spinal cord - eyes - ears	70	26.73	50	45.48	741	31.99	226	32.05	19,210	29.68
Congenital anomalies	x	x	x	x	x	x	x	x	2,295	3.94
Digestive system	258	94.99	151	123.02	2,434	103.41	830	111.94	68,517	102.25
Heart and circulation	509	170.97	283	201.37	3,645	148.46	1,472	186.62	110,929	153.66
Infection	208	71.38	117	86.06	1,648	68.81	792	102.05	40,765	58.19
Injury and poisoning	266	102.88	178	150.01	2,211	94.50	816	112.28	61,754	91.86
Kidneys - bladder - genitalia	153	55.82	73	60.94	1,048	45.76	381	50.21	31,185	45.50
Mental disorders	268	116.75	288	334.22	2,970	139.14	1,241	188.76	79,611	135.14
Neoplasms - malignant (cancer)	83	27.02	57	39.20	666	25.72	266	33.13	19,660	26.94
Neoplasms - other	19	7.15	13	11.18	251	10.29	72	10.76	6,563	10.21
Nutritional - metabolic - immunity	112	42.49	72	59.10	981	41.94	335	47.14	27,456	42.16
Perinatal conditions	x	x	x	x	x	x	x	x	3,277	6.00
Pregnancy - childbirth - reproduction	302	142.11	124	157.10	2,410	118.06	801	125.53	77,367	134.75
Residual codes- unclassified	x	x	x	x	x	x	x	x	2,019	3.03
Respiratory (throat and lung)	361	121.79	168	120.15	2,275	93.98	892	117.50	70,593	101.62
Skin	66	25.20	26	23.84	597	25.54	191	27.02	13,779	21.20
Symptoms and ill-defined conditions	89	33.44	42	35.98	605	25.48	228	30.41	20,721	29.99
Total for selection	2,989	1,118.17	1,754	1,540.11	24,634	1,058.11	9,250	1,269.37	710,386	1,072.54
<p>Confidentiality: The "x" symbol indicates the confidentiality rule has been triggered. Inpatient hospitalization rates are annualized per 10,000 residents and are age adjusted to the U.S. 2000 standard population. * Rate is unreliable; numerator less than 20 Source: DHSS - MOPHIMS - Inpatient Hospitalization MICA</p>										

Washington County's data is also displayed as a bar graph in Table 35a below for quick reference.

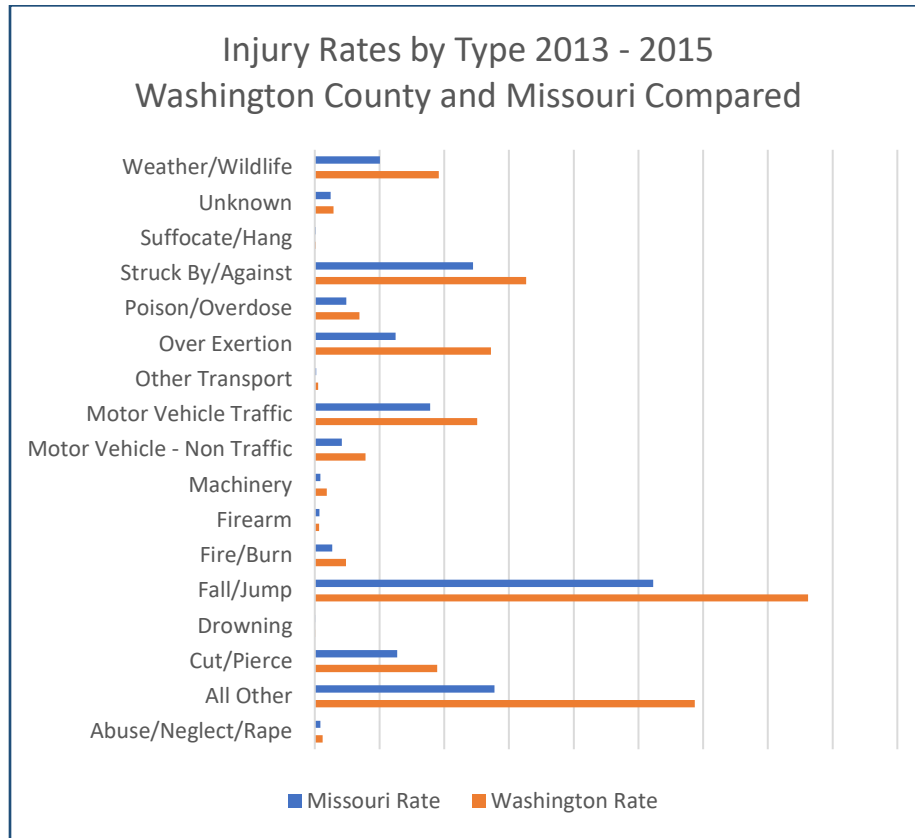
Table 35a – Data displayed as bar graph



Injuries

Table 36 displays injury rates by type for both Washington County and Missouri. When compared to the state, injury rates for Washington County are highest for fall/jump, over exertion, weather/wildlife, motor vehicle, and struck-by/against. Another category Washington County ranks high for is “All Other Injury Types.” According to the Missouri Department of Health and Senior Services, this category includes many injury types. Among the list are sprains/strains, superficial injuries, crushing/contusions, eye injuries, and early complications from trauma. MO DHSS staff report that this higher rate is due to utilizing unspecific diagnosis codes and that this practice is particularly high for Washington County. This “All Other” category also places Washington County at a disadvantage to identify the causes and to work towards prevention. However, the promotion of safe lifting practices and personal protective equipment such as gloves and safety glasses could reduce some of these injury types in the “All Other” category.

Table 36: Source: MODHSS MICA Data



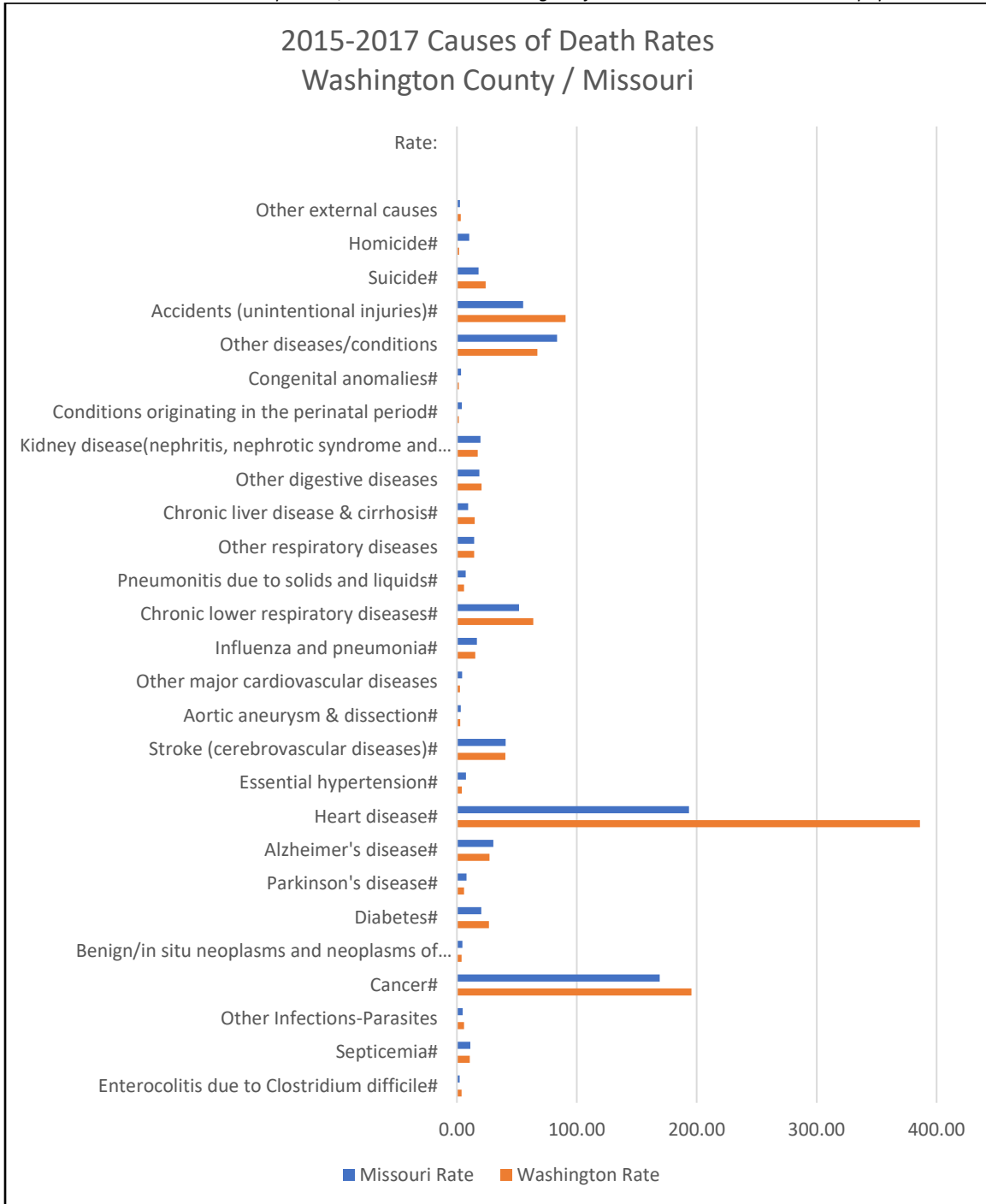
Death and Mortality

Causes

Table 37 demonstrates that heart disease and cancer are the highest-ranking causes of death in Washington County followed by respiratory diseases and accidents.

Table 37 Source MODHSS MICA Data

Death rates are annualized per 100,000 residents and are age adjusted to the U.S. 2000 standard population



Washington County Health Survey

Survey Results

In February/March 2019, a public survey was conducted in Washington County to assess the general public opinions on the health of the community as a whole. The survey and its purpose were published in the local newspaper, participating agencies' websites, Facebook, paper copies were available to area residents at each of the Washington County Rural Health Network offices and online via an online survey tool. Subsequently, all paper surveys were uploaded to the online survey tool for the purposes of data collection and result presentation. There was a total of 337 surveys completed. Some respondents skipped some questions. The responses are as follows.

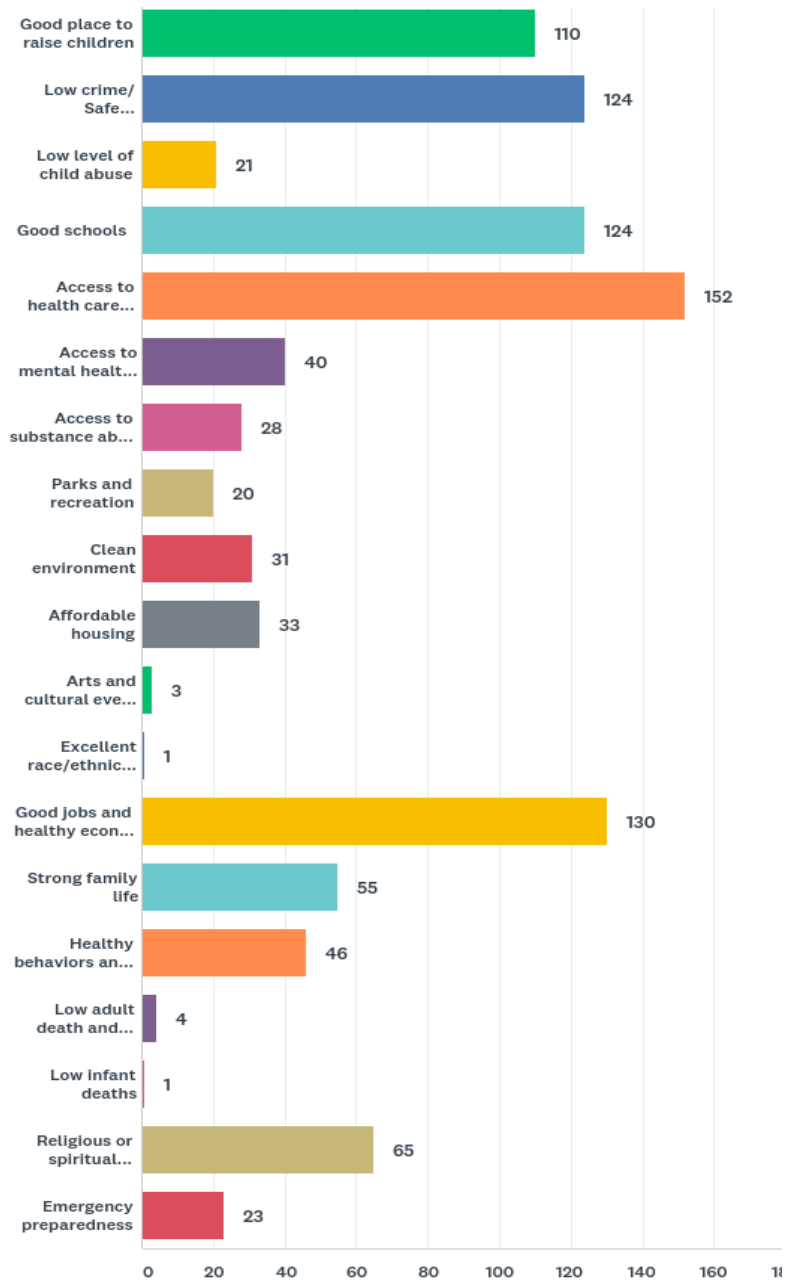
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2019 Community Health Assessment

Survey Results

Q1- In the following list, what do you think are the three most important factors for a “Healthy Community”? (Those factors which most improve the quality of life in a community.) Check only three.

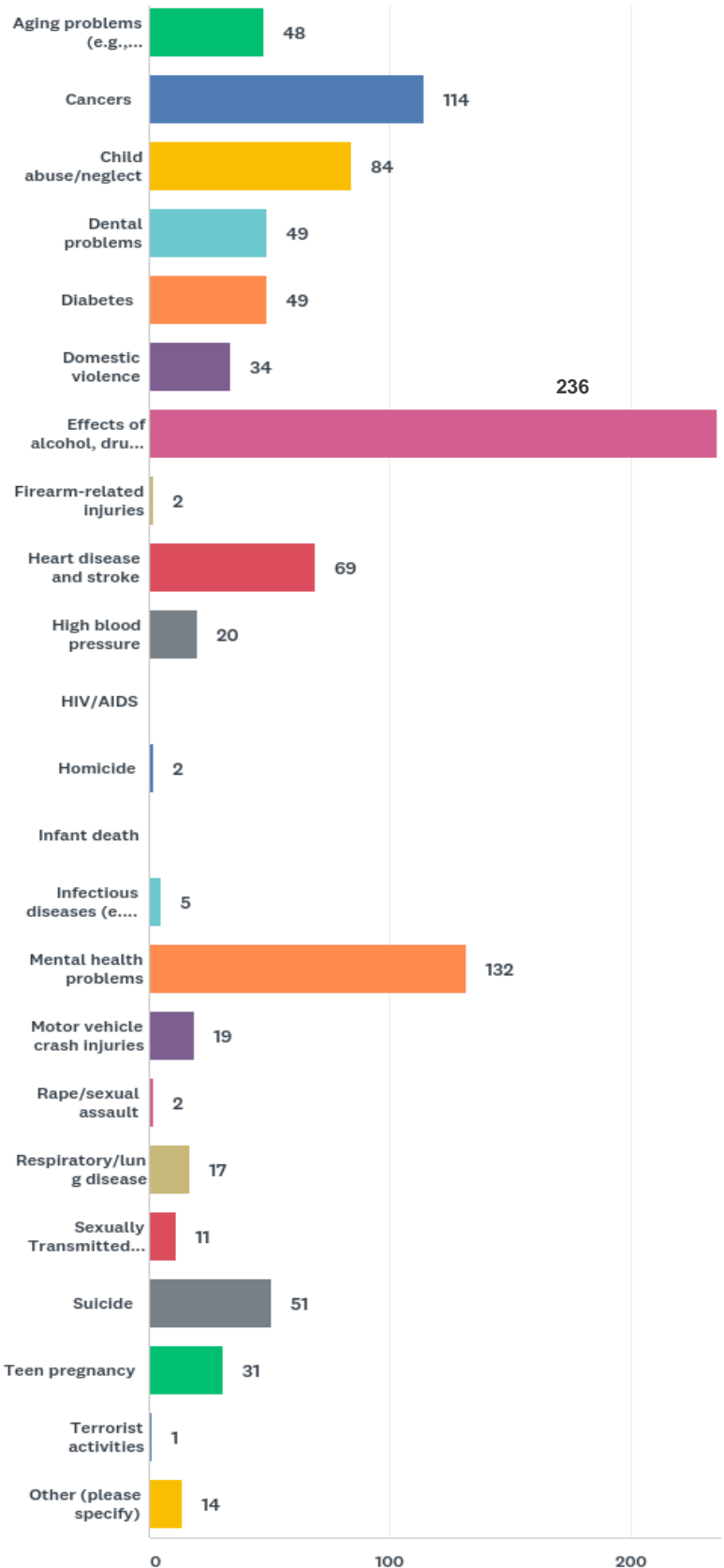
Answer Choices	Responses	#
Good place to raise children	32.64%	110
Low crime/safe neighborhoods	36.8%	124
Low level of child abuse	6.23%	21
Good schools	36.8%	124
Access to health care	45.10%	152
Access to mental health services	11.87%	40
Access to substance abuse services	8.31%	28
Parks and recreation	5.93%	20
Clean environment	9.20%	31
Affordable housing	9.79%	33
Arts and cultural events	0.89%	3
Excellent race/ethnic relations	0.30%	1
Good jobs and healthy economy	38.58%	130
Strong family life	16.32%	55
Healthy behaviors and lifestyles	13.65%	46
Low adult death and disease rates	1.19%	4
Low infant deaths	0.30%	1
Religious or spiritual values	19.29%	65
Emergency preparedness	6.82%	23
TOTAL RESPONDENTS		337



Comments under “other”: Care providers who live here so we know who is coming into our homes.

Q2-In the following list, what do you think are the three most important “health problems” in our community? (Those problems which have the greatest impact on overall health.) Check only three.

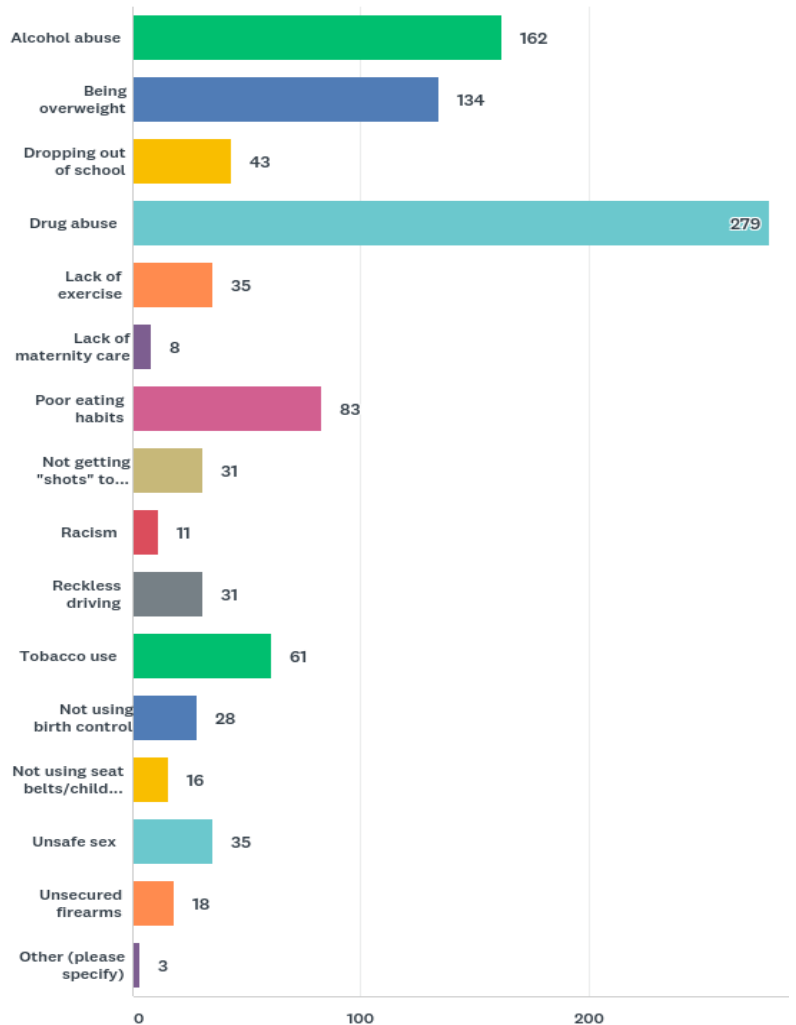
Answer Choices	Responses	#
Aging problems	14.55%	48
Cancers	34.55%	114
Child abuse / neglect	25.45%	84
Dental problems	14.85%	49
Diabetes	14.85%	49
Domestic Violence	10.30%	34
Effects alcohol/drug/substance abuse	71.52 %	236
Firearm-related injuries	0.61 %	2
Heart disease and stroke	20.91 %	69
High blood pressure	6.06 %	20
HIV / AIDS	0 %	0
Homicide	0.61 %	2
Infant Death	0 %	0
Infectious Diseases	1.52 %	5
Mental health problems	40.00%	132
Mental health problems	5.76 %	19
Rape / sexual assault	0.61%	2
Respiratory / lung disease	5.15%	17
Sexually Transmitted Diseases	3.33 %	11
Suicide	15.45%	51
Teenage pregnancy	9.39%	31
Terrorist activities	0.30%	1
Other	4.24	14
TOTAL RESPONDENTS		330



Comments under “other”: Obesity, Chronic diseases as the result of poor lifestyle choices (COPD, CHF, diabetes, drugs), Generational welfare abuse, Access to adequate health insurance, Obesity, Obesity, Poverty, Obesity, No ambition to be healthier, Drugs, Poverty, Obesity, Poor dietary habits, Offenders and drug pushers not being arrested and tried.

Q3-In the following list, what do you think are the three most important “risky behaviors” in our community? (Those behaviors which have the greatest impact on overall community health.)

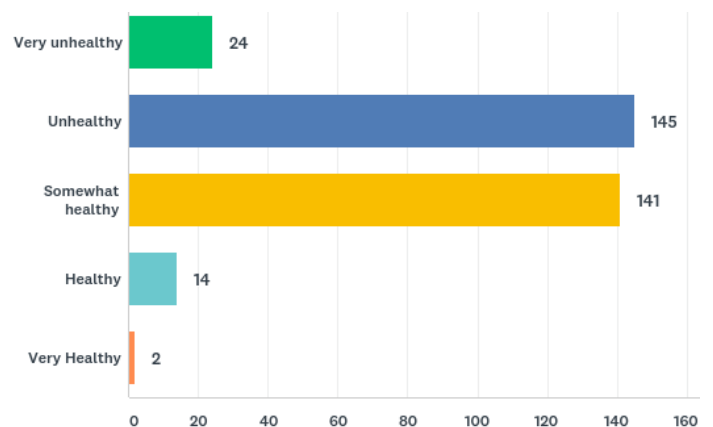
Answer Choices	Responses	#
Alcohol abuse	49.69%	162
Being overweight	41.10%	134
Dropping out of school	13.19%	43
Drug abuse	85.58%	279
Lack of exercise	10.74%	36
Lack of maternity care	2.45%	8
Poor eating habits	25.46%	83
Not getting “shots”	9.51%	31
Racism	3.37%	11
Reckless driving	9.51%	31
Tobacco use	18.71%	61
Not using birth control	8.59%	28
Not using seat belts / child safety seats	4.91%	16
Unsafe sex	10.74%	36
Unsecured firearms	5.52%	18
Other	0.92%	3
TOTAL RESPONDENTS		326



Comments under “other”: Not being given full informed consent about vaccinations, Brat children, and Lack of jobs.

Q4-How would you rate the overall health of our community?

Answer Choices	Responses	#
Very unhealthy	7.36%	24
Unhealthy	44.48%	146
Somewhat healthy	43.25%	141
Healthy	4.29%	14
Very healthy	0.61%	2
TOTAL RESPONDENTS		326

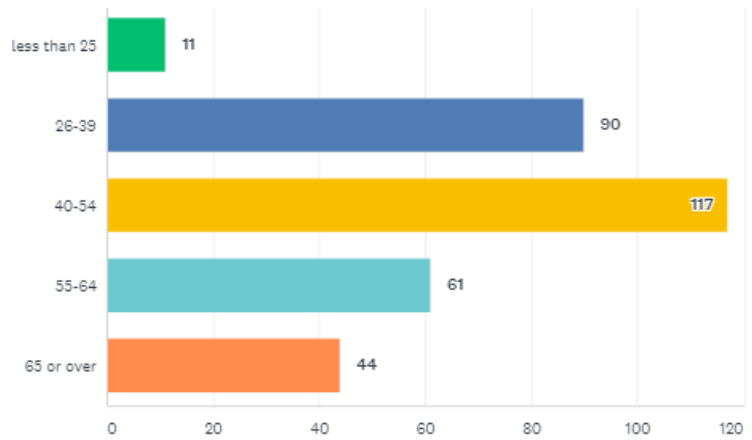


Q5-Gender:

263 Females (82%) and 58 Males (18%) completed the survey.

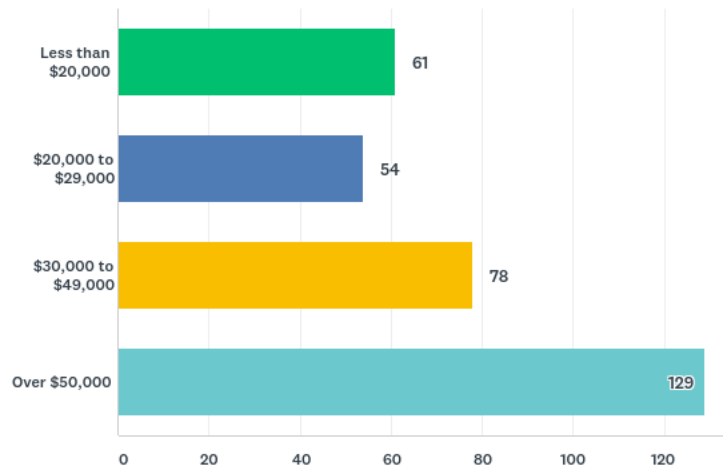
Q6-What is your age?

Answer Choices	Responses	#
Less than 25	3.41%	11
26-39	27.86%	90
40-54	36.22%	117
55-64	18.89%	61
65 or over	13.62%	44
TOTAL RESPONDENTS		323



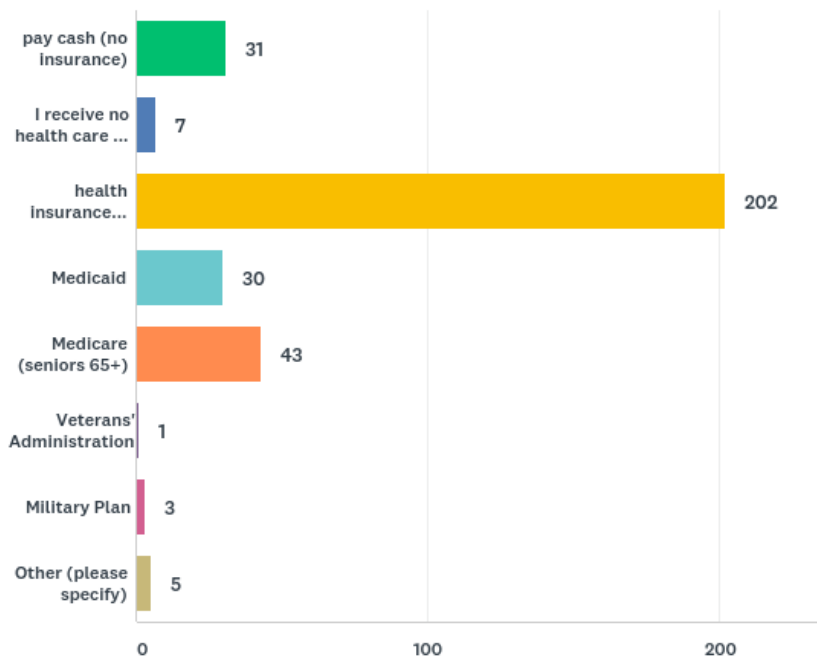
Q7- What is your household income?

Answer Choices	Responses	#
Less than \$20,000	18.94%	61
\$20,000-29,000	16.77%	54
\$30,000-\$49,000	24.22%	78
Over \$50,000	40.06%	129
TOTAL RESPONDENTS		322



Q8- How do you pay for health care?

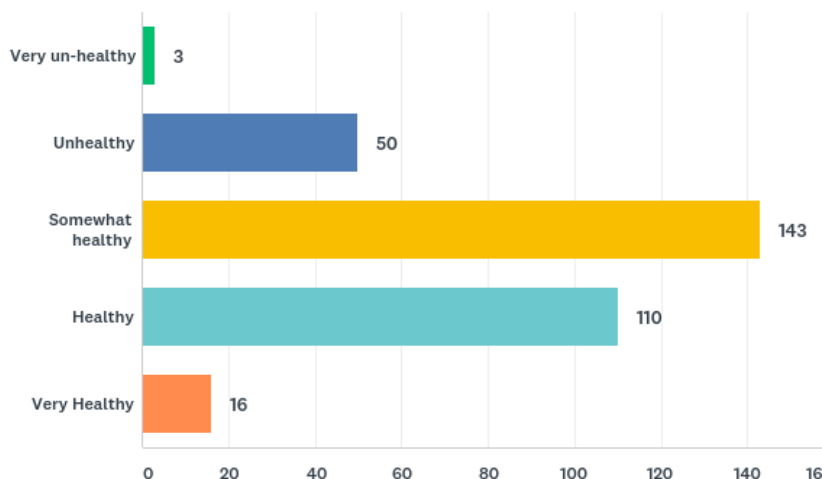
Answer Choices	Responses	#
Pay cash/no ins.	9.63%	31
No healthcare	2.17%	7
Health insurance	61.49%	198
Medicaid	9.32%	30
Medicare (seniors)	12.73%	41
Veterans' Administration	0.31%	1
Military plan	0.62%	2
Other	3.73%	12
TOTAL RESPONDENTS		322



Comments under “other”: nine were unspecified, Christian healthcare, Women’s uninsured, High deductible insurance and HAS, and I have insurance with very high deductibles so mostly out of pocket.

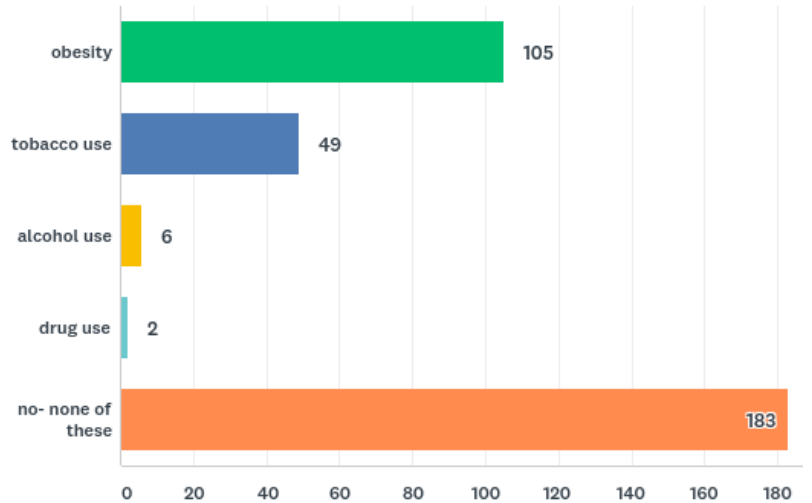
Q9-How would you rate your own personal health?

Answer Choices	Responses	#
Very un-healthy	0.93%	3
Unhealthy	15.53%	50
Somewhat healthy	44.41%	143
Healthy	34.16%	110
Very healthy	4.97%	16
TOTAL RESPONDENTS		322



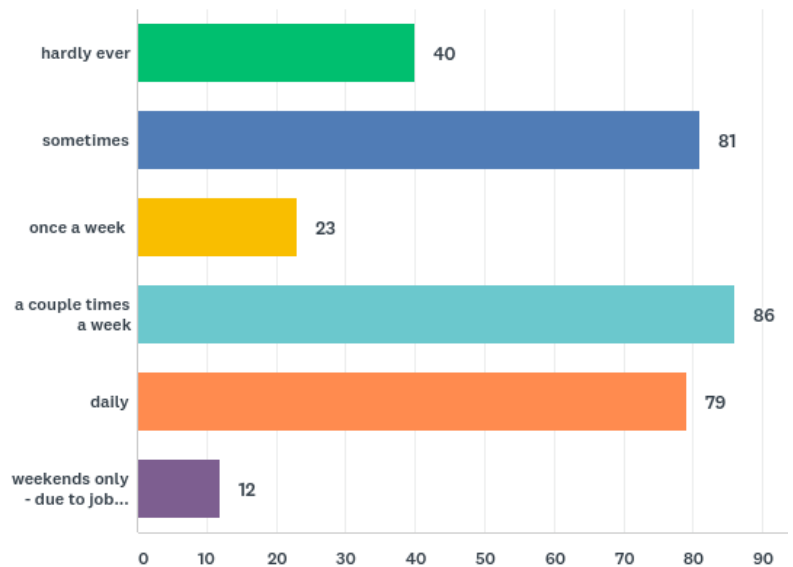
Q10- Do you have any health issues that can be attributed to (check all that apply)...

Answer Choices	Responses	#
Obesity	32.71%	106
Tobacco use	15.26%	49
Alcohol use	1.87%	6
Drug use	0.62%	2
No- none of these	57.01%	183
TOTAL RESPONDENTS		321



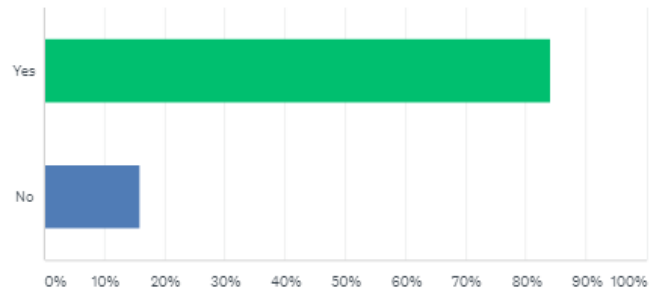
Q11-How often do you engage in physical activity such as exercise, walking, biking, or other?

Answer Choices	Responses	#
Hardly ever	12.46%	40
Sometimes	25.23%	81
Once a week	7.17%	23
A couple times a week	26.79%	86
Daily	24.61%	79
Weekends only	3.74%	12
TOTAL RESPONDENTS		321



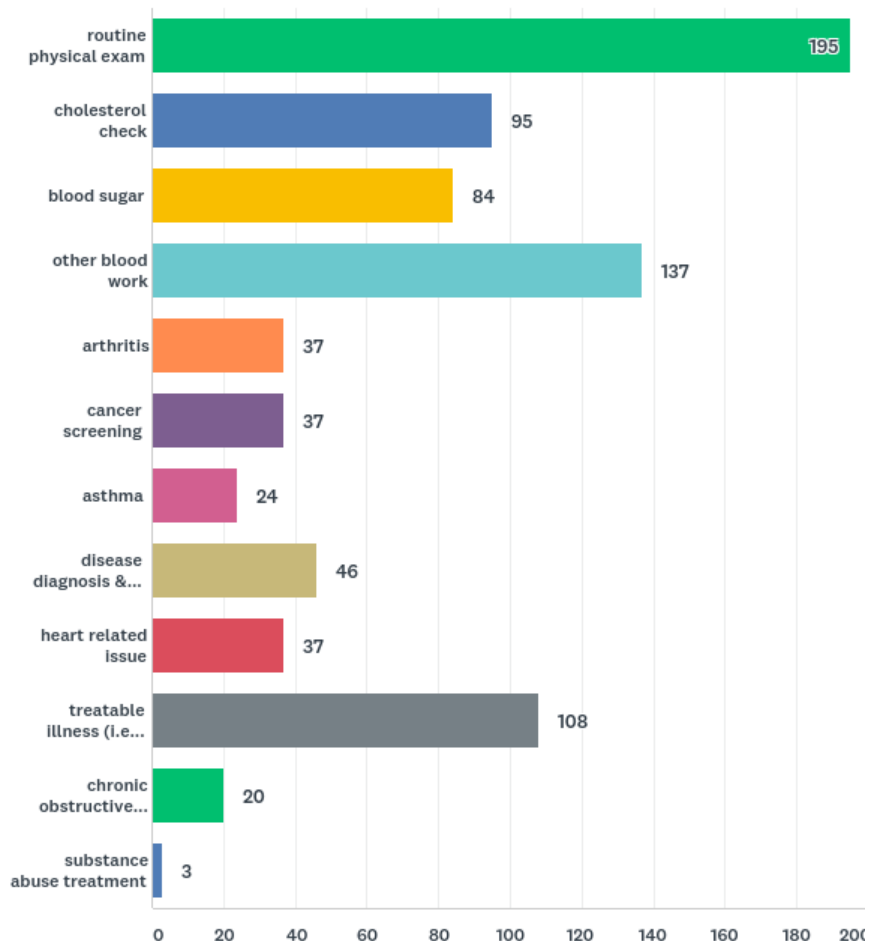
Q12-Have you visited a physician in the past 12 months for any condition or emergency?

Answer Choices	Responses	#
Yes	84.11%	270
No	15.89%	51
TOTAL RESPONDENTS		321



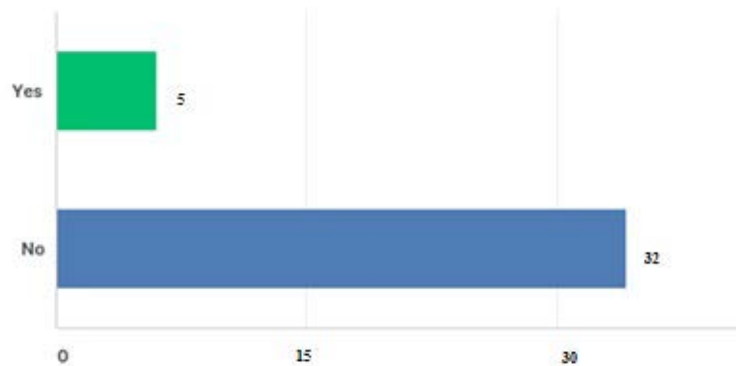
Q13-Because you answered yes, that you have visited a physician in the past 12 months, please check all that apply...

Answer Choices	Responses	#
Routine physical exam	72.12%	195
Cholesterol check	35.32%	95
Blood sugar	31.23%	84
Other blood work	50.93%	137
Arthritis	13.75%	37
Cancer screening	13.75%	37
Asthma	8.92%	24
Disease diagnosis & treatment	17.10%	46
Heart related issue	13.75%	37
Treatable illness	40.15%	108
COPD	7.43%	20
Substance abuse treatment	1.12%	3
TOTAL RESPONDENTS		269



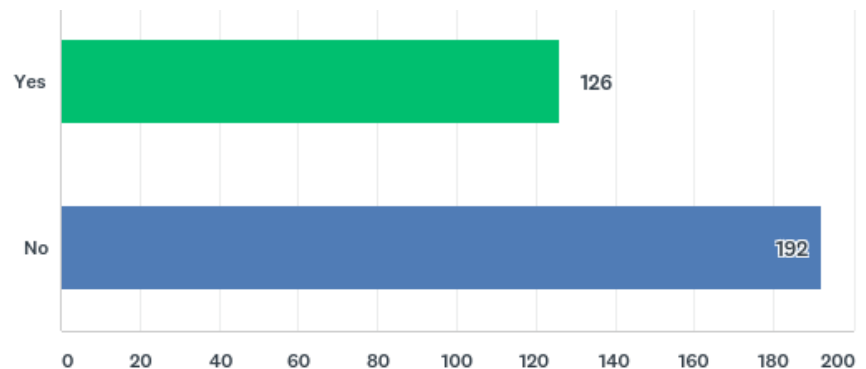
Q14-If you selected “cancer screening” in the previous question, was it gender specific?

Answer Choices	Responses	#
Yes	13.12%	5
No	86.88%	32
TOTAL RESPONDENTS		37



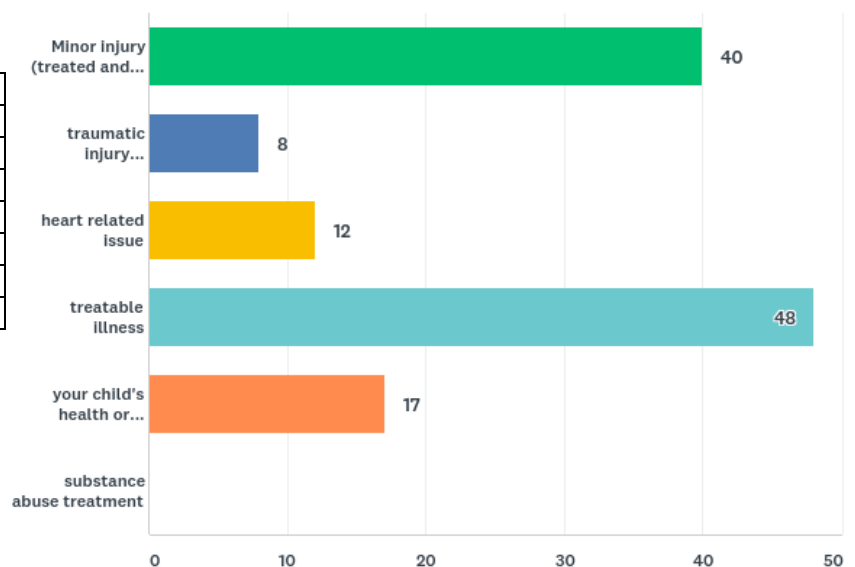
Q15-Have you visited the emergency room or urgent care in the past 12 months?

Answer Choices	Responses	#
Yes	39.62%	126
No	60.38%	192
TOTAL RESPONDENTS		318



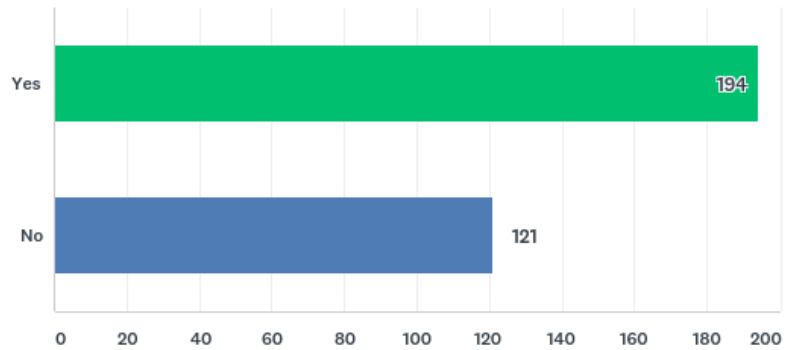
Q16-Because you answered yes to the previous question (that you have visited the emergency room or urgent care in the past 12 months) please choose the reasons why.

Answer Choices	Responses	#
Minor injury	32.00%	40
Traumatic injury	6.40%	8
Heart related issue	9.60%	12
Treatable illness	38.40%	48
Your child's health	13.60%	17
Substance Abuse treatment	0%	0
TOTAL RESPONDENTS		125



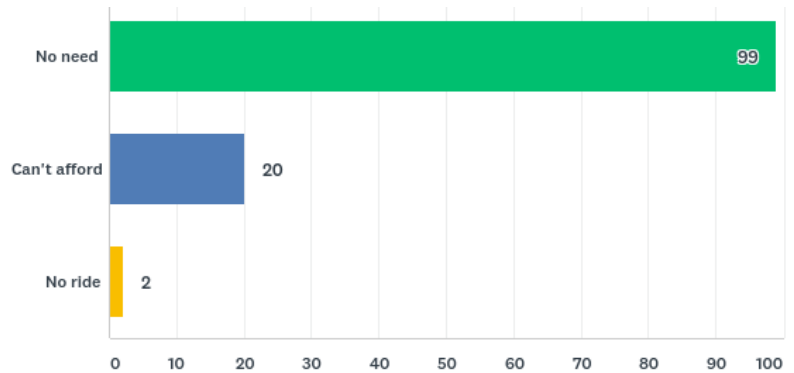
Q17-Have you had to travel outside of Washington County in the past 3 years to see a health specialist physician?

Answer Choices	Responses	#
Yes	61.59%	194
No	38.41%	121
TOTAL RESPONDENTS		315



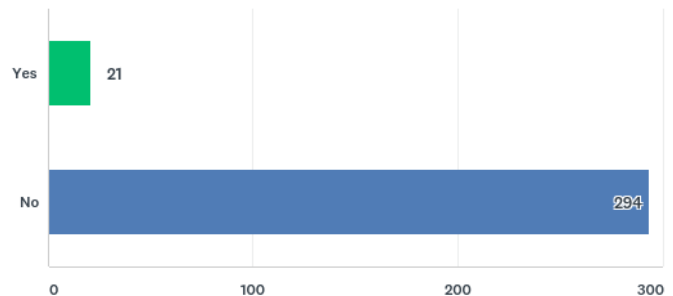
Q18-Since you answered “no” that you have not had to travel outside of Washington County in the past 3 years to see a health specialist physician, can you tell us why not?

Answer Choices	Responses	#
No need	81.82%	99
Can't afford	16.52%	20
No ride	1.65%	2
TOTAL RESPONDENTS		121



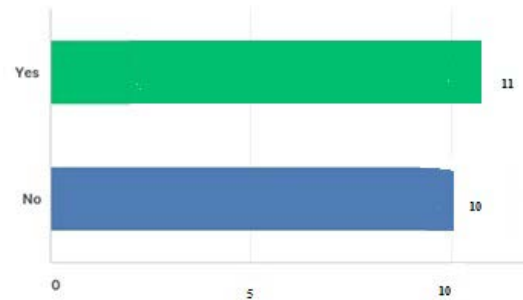
Q19-Have you been transported by ambulance in the past 12 months?

Answer Choices	Responses	#
Yes	6.67%	21
No	93.33%	294
TOTAL RESPONDENTS		315



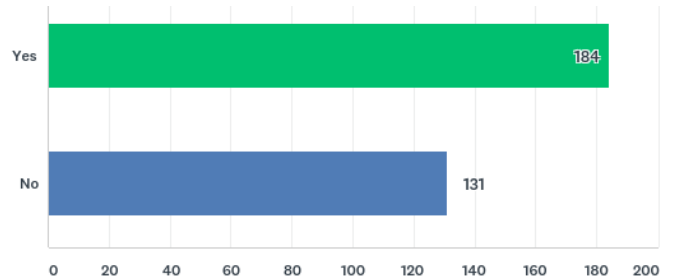
Q20-Of those who were transported by ambulance, was the destination to a hospital in Washington County?

Answer Choices	Responses	#
Yes	52.38%	11
No	47.62%	10
TOTAL RESPONDENTS		21



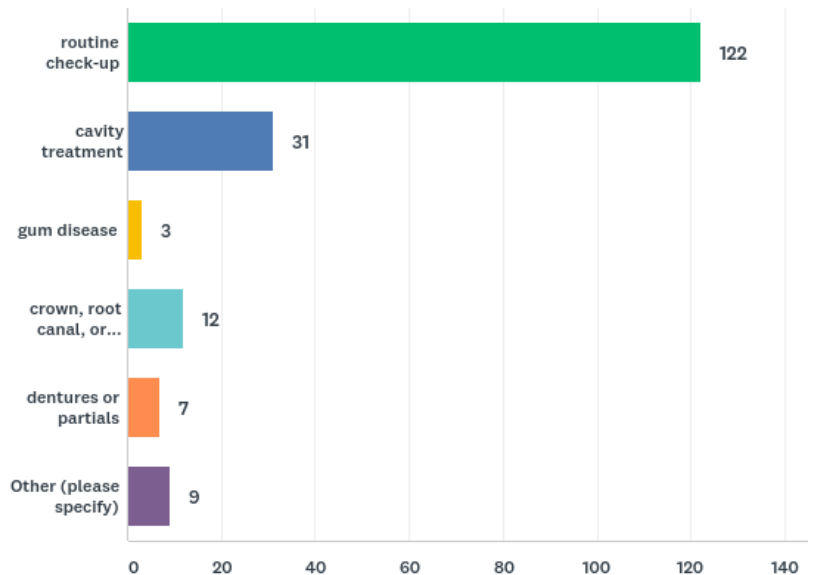
Q21-Have you visited a dentist in the past 12 months?

Answer Choices	Responses	#
Yes	58.41%	184
No	41.59%	131
TOTAL RESPONDENTS		315



Q22-For those who selected “yes” they have seen a dentist in the past year. Please select what procedure was done.

Answer Choices	Responses	#
Routine checkup	66.30%	122
Cavity treatment	16.85%	31
Gum disease	1.63%	3
Crown, root canal or bridgework	6.52%	12
Dentures or partials	3.80%	7
Other	4.89%	9
TOTAL RESPONDENTS		184

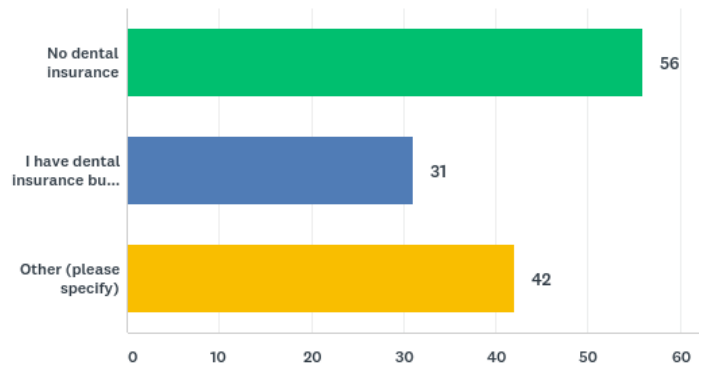


Comments under “other” included: 3 “extractions”, 1 “replace filling that came out”, 3 “wisdom teeth removed”, 1 “all of the above” and 1 unspecified

Q23-For those who selected “no”, they have not seen a dentist in the past year. Please select why you have not seen a dentist in the past 12 months.

Answer Choices	Responses	#
No dental insurance	43.40%	56
I have dental insurance but still cant afford	24.02%	30
Other	32.58%	42
TOTAL RESPONDENTS		129

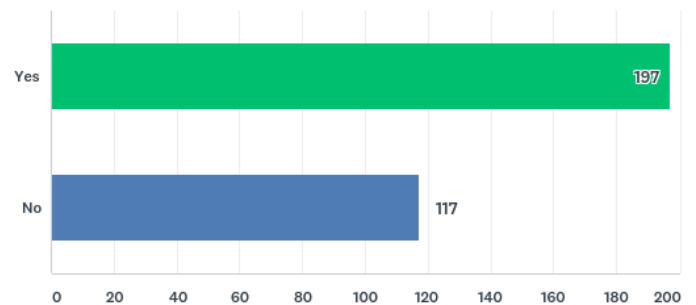
Comments under “other” include: 10 “Dentures, 5



“Unspecified”, 3 “Anxiety”, 3 “No time”, 3 “No need”, “Lack of money and time”, “Didn’t want to”, “Inertia”, “I put myself last”, “Health concerns”, “Just haven’t”, “Haven’t been able to see a dentist in 20 years.”, “Very good teeth”, “Long wait list”, “I hate the dentist”, “Only go when I have to”, “My own fault, busy with life”, “Don’t like dentists”, “Forgot to make an appointment then dentist retired”.

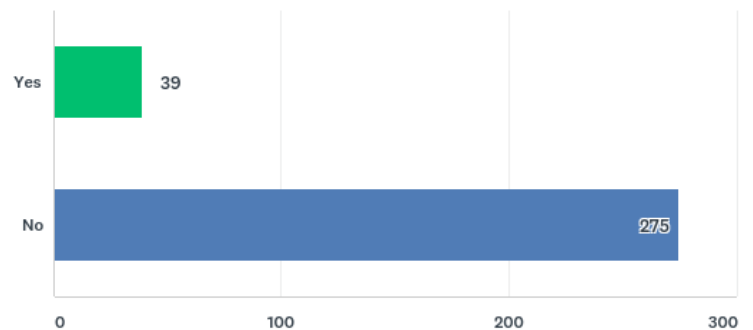
Q24-Have you visited an eye doctor or ophamologist in the past 12 months?

Answer Choices	Responses	#
Yes	62.74%	197
No	37.26%	117
TOTAL RESPONDENTS		314



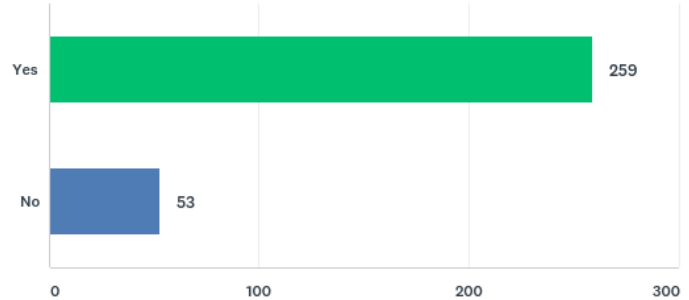
Q25-Have you visited any of the following in the past 12 months? Counselor, Therapist, Psychologist, Psychiatrist, LCSW, LPC or any other mental health professional?

Answer Choices	Responses	#
Yes	12.42%	39
No	87.58%	275
TOTAL RESPONDENTS		314



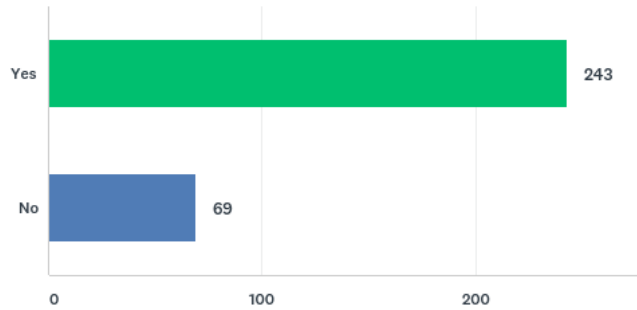
Q26-Did you know that Washington County Memorial Hospital has visiting specialists (internal medicine, urology, nephrology, cardiology, pulmonology, orthopedic, gastroenterology, psychiatry and a general surgeon) providing such services as outpatient general surgery, wound care, sleep studies, colonoscopy, and others?

Answer Choices	Responses	#
Yes	83.01%	259
No	16.99%	53
TOTAL RESPONDENTS		312



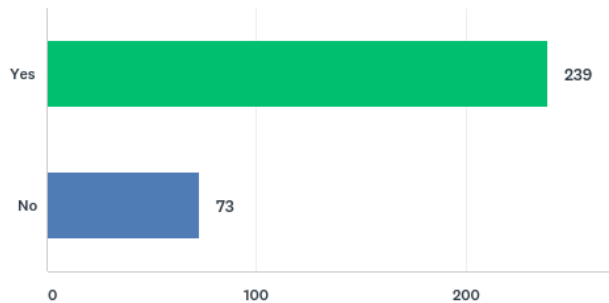
Q27-Did you know that Washington County Memorial Hospital has an Inpatient Swing-bed program that provides nursing care, physical therapy, occupational therapy, wound care, and IV therapy that may follow a hip replacement, coronary bypass, and illness recovery among others?

Answer Choices	Responses	#
Yes	77.88%	243
No	22.12 %	69
TOTAL RESPONDENTS		312



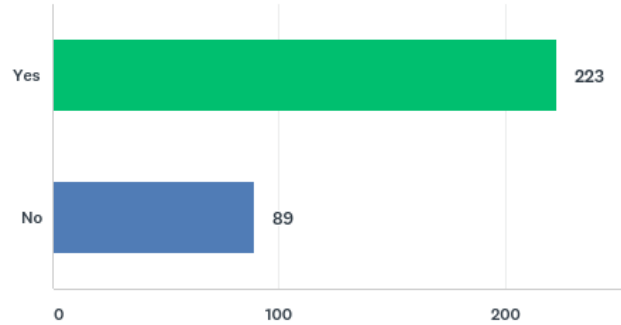
Q28-Did you know that Great Mines Health Center offers the following specialty services: radiology (x-ray and DEXA) chiropractic, tele-psychiatry, counseling, cardiology, and pediatrics?

Answer Choices	Responses	#
Yes	76.60%	239
No	23.40%	73
TOTAL RESPONDENTS		312



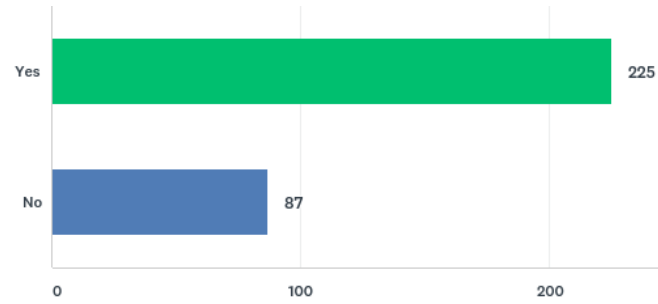
Q29-Did you know that Great Mines Health Center has an additional location in Farmington that provides Family Practice and Pediatric care services?

Answer Choices	Responses	#
Yes	71.47%	223
No	28.53%	89
TOTAL RESPONDENTS		312



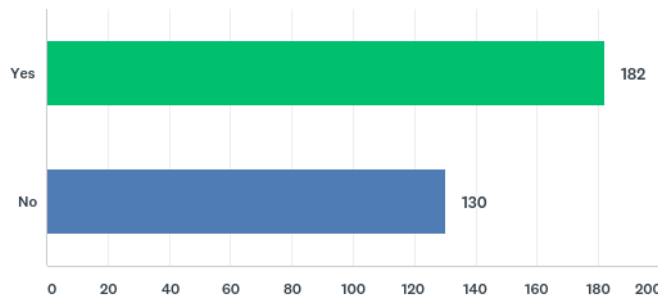
Q30-Did you know that Washington County Health Department accepts private insurances for immunizations?

Answer Choices	Responses	#
Yes	72.11%	225
No	27.89%	87
TOTAL RESPONDENTS		312



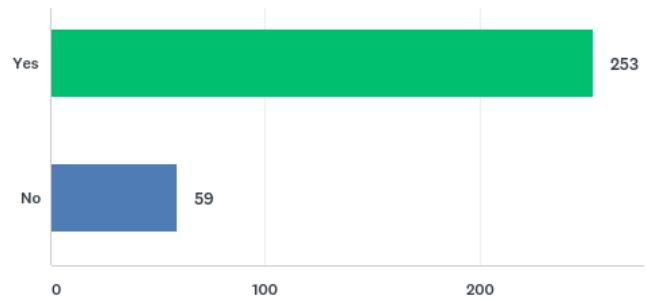
Q31-Did you know that Washington County Health Department operates a women’s health clinic for eligible women aged 35-64 that screens for the cancers that affect women at no cost; and if diagnosed, up to 100% of financial assistance is available for treatment?

Answer Choices	Responses	#
Yes	58.33%	182
No	41.67%	130
TOTAL RESPONDENTS		312



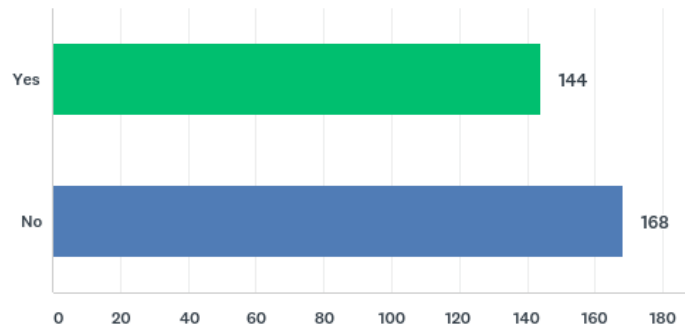
Q32-Did you know that the Washington County Community Partnership sponsors an annual Back-to-School Fair, Christmas for Kids and Farm Tour?

Answer Choices	Responses	#
Yes	81.09%	253
No	18.91%	59
TOTAL RESPONDENTS		312



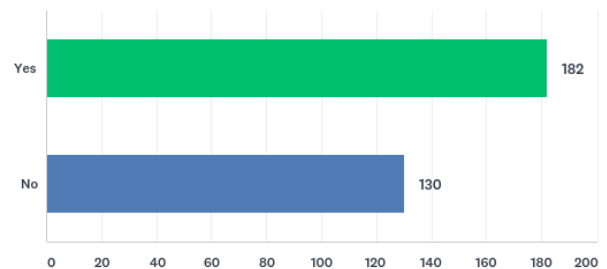
Q33-Did you know that Washington County Community Partnership provides ongoing court approved parenting classes, Cars for Careers, and provides info and referral for free women’s exams to eligible women agges 35-64?

Answer Choices	Responses	#
Yes	46.15%	144
No	53.85%	168
TOTAL RESPONDENTS		312



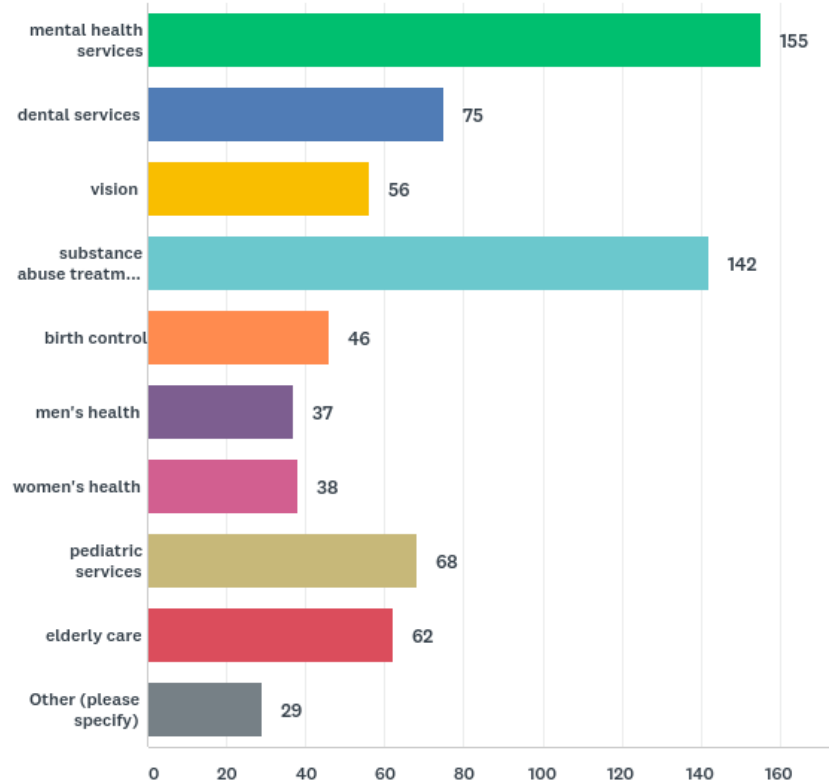
Q34-Did you know that Washington County Ambulance District offers CPR classes to the public and to local businesses and organizations?

Answer Choices	Responses	#
Yes	58.33%	182
No	41.67%	130
TOTAL RESPONDENTS		312



Q35-Please check from the examples listed or write in those health services that you feel are currently unavailable or under-served in Washington County.

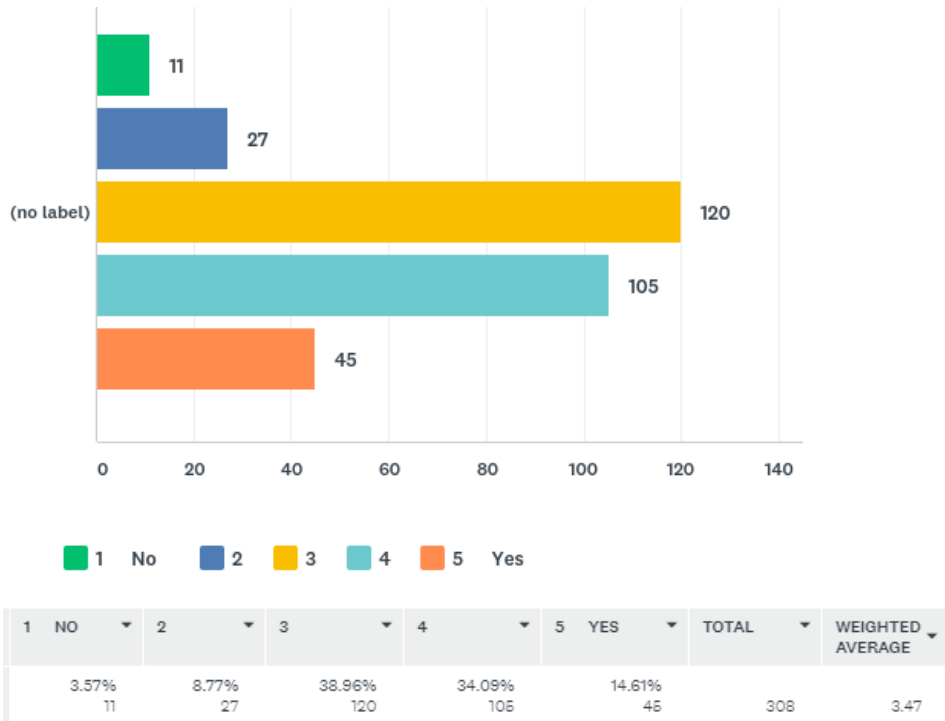
Answer Choices	Responses	#
Mental health services	21.90%	155
Dental services	10.59%	75
Vision	7.90%	56
Substance abuse treatment	20.06%	142
Birth control	6.50%	46
Men’s health	5.23%	37
Women’s health	5.37%	38
Pediatric services	9.60%	68
Elderly care	8.80%	62
Other	4.10%	29
TOTAL RESPONDENTS		312



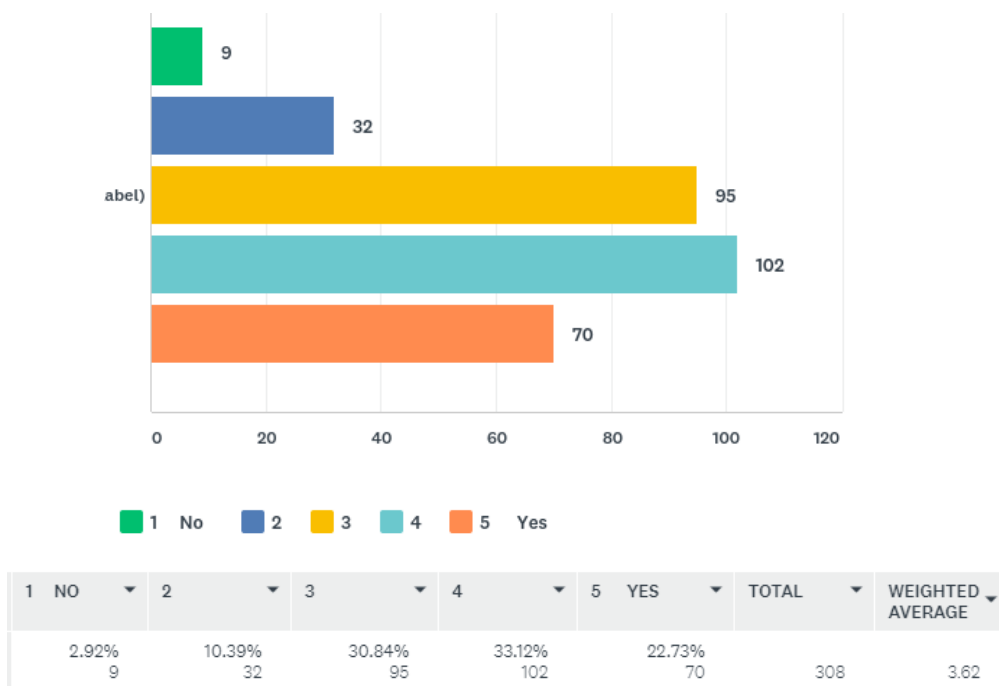
Comments under “Other” included: Doctors to fix broken bones, affordable care, endocrinologist, GMHC has all services and is amazing, accupuncture services, rheumatology, therapists has too long of waiting list, dental doesn’t have a denture program, EMDR, Art & Music therapy, in-house mental health care, quality private practice pcp, something for those overweight/eating/diet issues, Endocrinology, dermatology and podiatrist, a good ambulance service since new administrator took over, most services are available but not affordable to the public, prenatal care, endocrinology, dermatology, maternity care, not enough choices, The counselors are only for substance and court and the hours of counselor clinic is not late enough or on Saturday for people that work and need services, clinic hours for working people is needed. Additional specialists for those who need and can travel to city for appointments, hearing, emergency placement (help) for abused families, specialists such as neurologist, oral surgeons, etc. dermatology, children’s mental health, lupus and RA doctors.

The next four questions of the survey were based on a 5 point Likert scale from 1 to 5 with 1 representing a hard “No” and 5 representing a hard “Yes”.

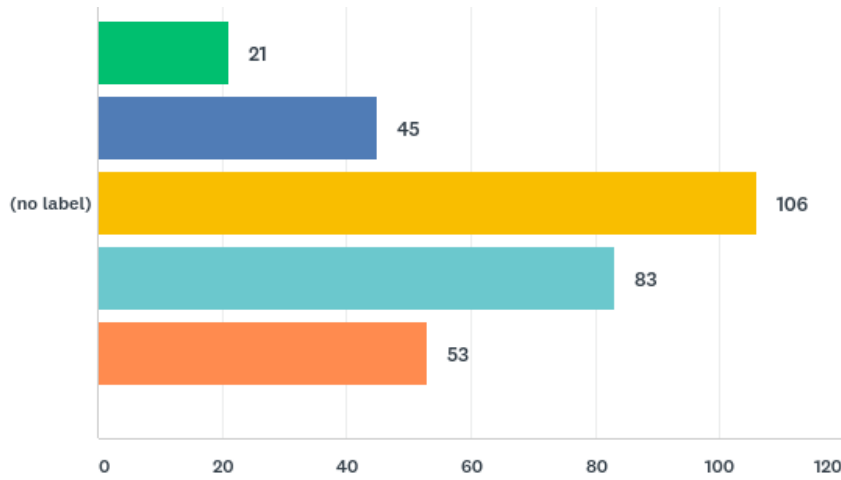
Q36- Are you satisfied with the quality of life in our community? (Consider your sense of safety, well being, participation in community life and associations, etc.)



Q37-Is this community a good place to raise children? (Consider school quality, day care, after school programs, recreation, etc.)



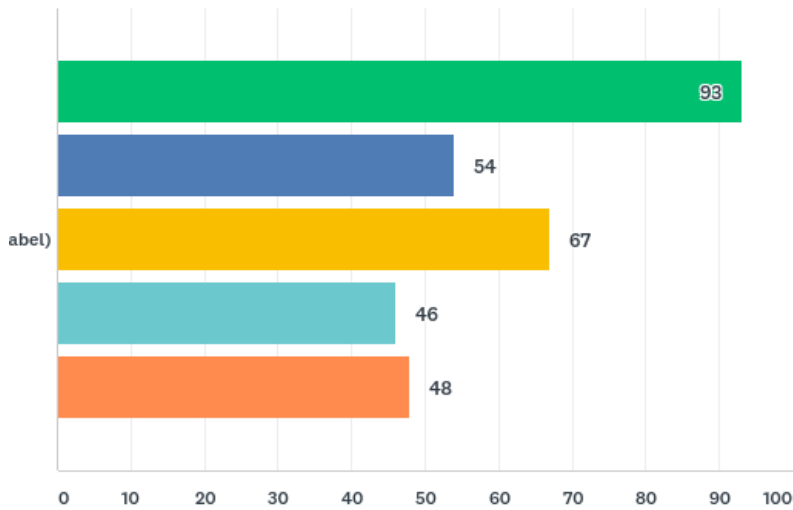
Q38-Is this community a good place to grow old? (Consider elder-friendly housing, transportation to medical services, churches, shopping; elderly day care, social support for the elderly living alone, meals on wheels, etc.)



1 No 2 3 4 5 Yes

1 NO	2	3	4	5 YES	TOTAL	WEIGHTED AVERAGE
6.82%	14.61%	34.42%	26.95%	17.21%	308	3.33
21	45	106	83	53		

Q39-Does the community have sufficient sidewalks, walking/hiking trails, biking trails, or other pathways for physical activity?

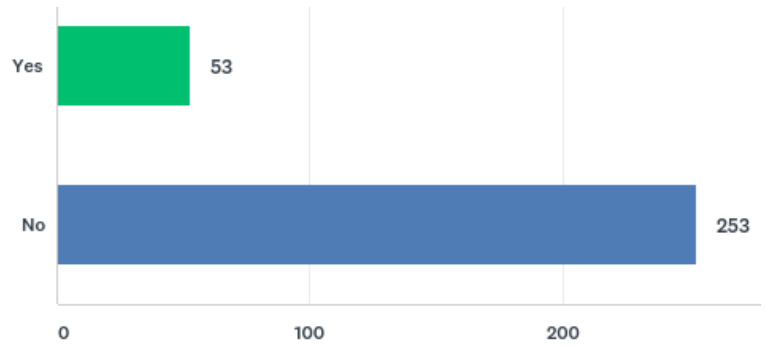


1 No 2 3 4 5 Yes

1 NO	2	3	4	5 YES	TOTAL	WEIGHTED AVERAGE
30.19%	17.53%	21.75%	14.94%	15.58%	308	2.68
93	54	67	46	48		

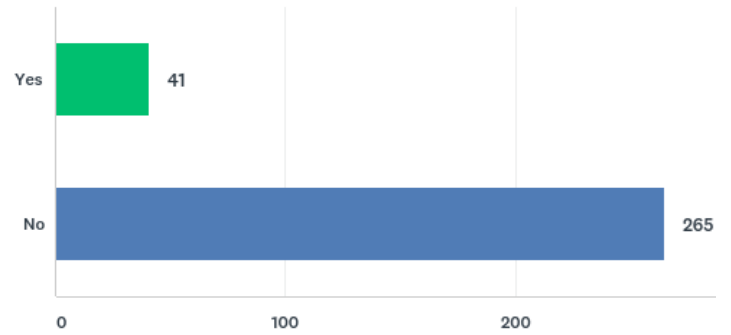
Q40-Is your property or your health currently impacted by a Washington County environmental issue regulated by the U.S. EPA?

Answer Choices	Responses	#
Yes	17.32%	53
No	82.68%	253
TOTAL RESPONDENTS		306



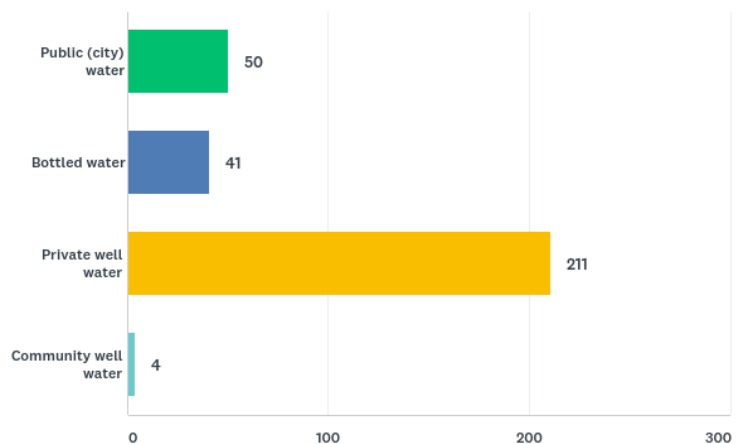
Q41-In the past 12 months, has your drinking water ever been deemed unsafe to drink by the Missouri Department of Natural Resources, Health Department, or municipality?

Answer Choices	Responses	#
Yes	13.40%	41
No	86.60%	265
TOTAL RESPONDENTS		306

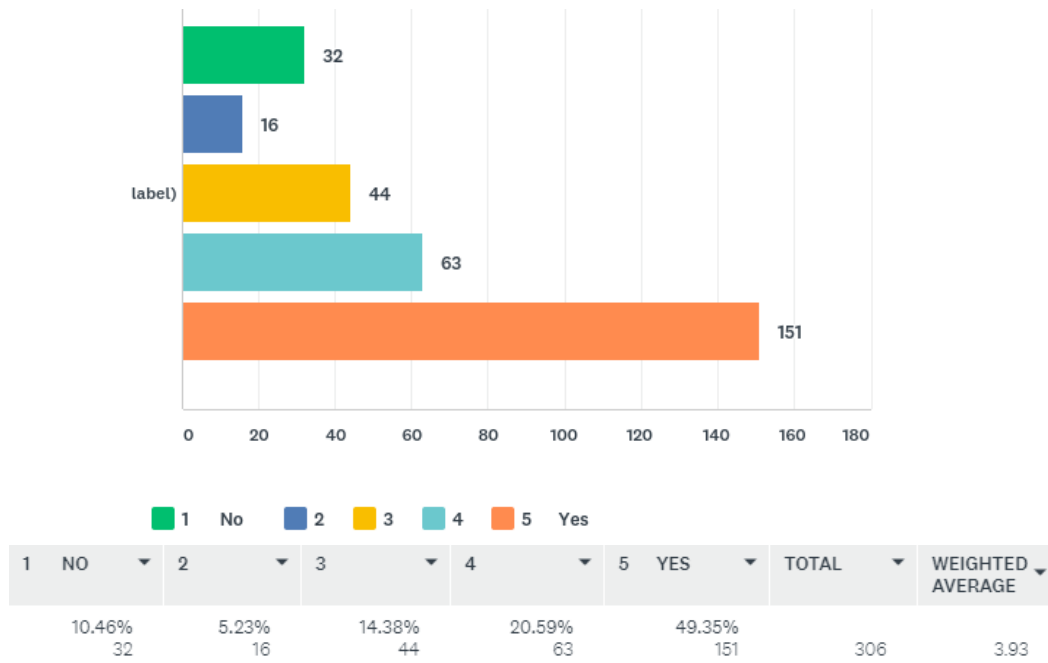


Q42-What kind of water do you use?

Answer Choices	Responses	#
Public (city water)	16.33%	50
Bottled water	13.40%	41
Private well water	68.95%	211
Community well water	1.32%	4
TOTAL RESPONDENTS		306



Q43-Overall, do you consider your drinking water to be of good quality?



Q44-Do you consider Washington County food sources safe? (such as restaurants and grocery stores)

