



WARREN COUNTY  
**HEALTH**  
DEPARTMENT

# Community Health Assessment 2015



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Throughout the handbook Audrain Co is used as a comparable county in Missouri to better understand the data and gauge where Warren Co ranks on various health indicators.

# Demographic Characteristics

## Population

	2009	2010	2011	2012	2013
<b>Warren County</b>	32,320	32,513	32,629	32,807	33,002
<b>Missouri</b>	5,961,088	5,988,927	6,010,065	6,024,522	6,044,880

(Source: Community Commons, 2015)

## Population of Warren Co by Age from 2009-2013

	2009	2010	2011	2012	2013	% change from 2009-2013
<b>Under 15</b>	6,701	6,747	6,677	6,654	6,725	+4%
<b>15 to 24</b>	3,948	3,923	3,888	3,882	3,779	-4.2%
<b>25 to 44</b>	7,853	7,826	7,732	7,761	7,764	-1.1%
<b>45 to 64</b>	9,175	9,268	9,337	9,305	9,337	+1.8%
<b>65 and over</b>	4,643	4,749	4,995	5,205	5,394	+16%

(Source: MICA, 2015)

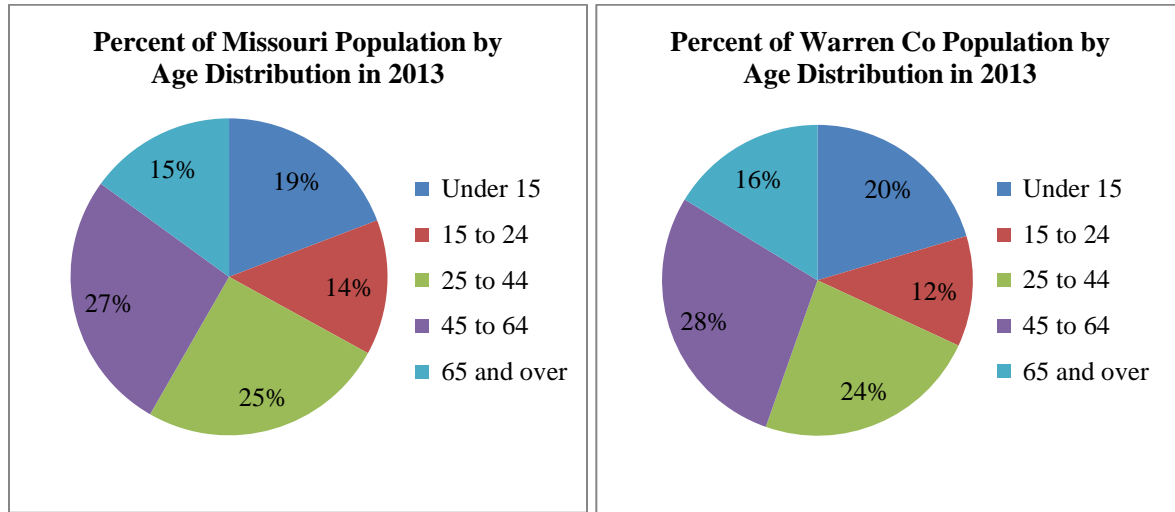
## Population of Warren County by Sex and Age in 2013

Age	Male	Female	All
<b>Under 15</b>	3,384	3,341	6,725
<b>15 to 24</b>	1,961	1,818	3,779
<b>25 to 44</b>	3,870	3,894	7,764
<b>45 to 64</b>	4,644	4,693	9,337
<b>65 and over</b>	2,521	2,873	5,394
<b>All ages</b>	16,380	16,619	32,999

(Source: MICA Population, 2015)

The population of Warren Co has been on a steady incline from 2009 to 2013, seeing a 2% increase over 4 years, where the state has only seen a 1.4% increase. In 2013 males represented 49.6% of the population and females represented 50.4%. Also in 2013, people between the ages of 45-64 make up the largest percentage of their population (28.3%) where people between the ages of 15-24 make up the smallest (11.5%). Related, the population of 15-24 year olds has seen the largest decline in percent change (-4.2%). While their largest population is consistently ages 45-64, they saw a 16% increase from 2009 to 2013 in age 65+ while ages 15-24 and 25-44 both saw a decrease over the same period. This suggests an aging population and a need to ensure proper care taken to address this population.

## Population (Continued)



(Source: MICA, 2015)

In 2013, the age distribution for Warren Co is similar to the age distribution for the state of Missouri with ages 45-64 making up the greatest percent of the population and ages 14-24 making up the smallest percent.

## Race and Ethnicity

	Audrain Co	Warren Co	Missouri
<b>Non-Hispanic White</b>	87.9%	92.7%	80.8%
<b>Hispanic</b>	2.7%	3%	3.6%
<b>Non-Hispanic African American</b>	6.8%	2%	11.5%
<b>Asian</b>	.5%	0.4%	1.7%
<b>Native Hawaiian/Other Pacific Islander</b>	0%	0%	0.1%
<b>American Indian and Alaskan Native</b>	.4%	0.5%	.5%

(Source: County Health Rankings, 2014)

Warren Co has a predominately Non-Hispanic White population, which is greater than Audrain Co and Missouri. Their Non-Hispanic African American Population is also much lower when compared to Audrain and Missouri. The Asian population is similar to Audrain Co, but lower than Missouri. However, the Hispanic, Native Hawaiian/Other Pacific Islander, and American Indian and Alaskan Native populations are similar in all three areas.

## Households and Families

	<b>Total Households</b>	<b>Total Family Households</b>	<b>Families with Children (Under Age 18)</b>	<b>Families with Children (Under Age 18), Percent of Total Households</b>
<b>Warren County, MO</b>	12,572	9,085	4,122	32.79%
<b>Missouri</b>	2,360,131	1,540,854	731,384	30.99%
<b>United States</b>	115,610,216	76,744,360	37,741,108	32.65%

(Source: Community Commons: Data Source: 2009-2013 US Census Bureau, [American Community Survey](#))

According to 2009-2013 American Community Survey estimates, 32.79% of all occupied households in Warren Co are family households with one or more child(ren) under the age of 18. This percent is similar to the US (32.65%) and slightly higher than Missouri (30.99%).

A family household is any housing unit which the householder is living with one or more individuals related to him or her by birth, marriage, or adoption. Non-family households are any households occupied by the householder alone, or by the householder and one or more unrelated individuals.

## Language

According to Missouri Kids Count, the number of children in Warren County with limited English proficiency increased by 1/3 from 2009 to 2013 (2014). In 2013, the number was 116, and in 2009 it was 87 (Missouri Kids Count, 2014).

Between 2009 and 2013, just over 1% of the Warren County population age 5 and older have limited English proficiency compared to just over 2% for Missouri (Community Commons, 2015). However, nearly ¾ of the 1% Warren Co residents who have limited English proficiency are Hispanic/Latino (US Census Bureau, [American Community Survey](#), via Community Commons, 2015). Not being able to communicate due to language barriers can hamper access to employment, education, medical care, and social services.

## *Life Expectancy*

### Life Expectancy 2000- 2008

	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Warren</b>	77.2	74.7	79.9
<b>Audrain</b>	77.5	74.1	80.5
<b>State of Missouri</b>	76.9	74.2	79.6

(Source: MICA: These life expectancy calculations were prepared using: (1) 2000-2008 Missouri birth certificate data (2) 2000-2008 Missouri death certificate data, and (3) 2008 final population estimates for Missouri)

### Life Expectancy 2004-2012

	<b>Total</b>	<b>Male</b>	<b>Female</b>
<b>Warren</b>	78.3	75.6	81.1
<b>Audrain</b>	77.2	73.3	80.7
<b>State of Missouri</b>	77.2	74.6	79.7

(Source: MICA: These life expectancy calculations were prepared using: (1) 2004-2012 Missouri birth certificate data (2) 2004-2012 Missouri death certificate data, and (3) 2008 final population estimates for Missouri)

Warren County's life expectancy is similar to Audrain County and Missouri for 2000-2008. Between 2004-2012, Warren County's life expectancy is even higher than the state average suggesting an overall healthy county. Between 2000-2008 and 2004-2012, Warren Co saw an increase in overall life expectancy and for each gender, which is consistent with Missouri.

Life expectancy at birth provides an estimate of the number of years a person is expected to live. It is a good measure of the overall health of an area.

## Geographic Mobility

	<b>White</b>	<b>Black or African American</b>	<b>Native American / Alaska Native</b>	<b>Asian</b>	<b>Native Hawaiian / Pacific Islander</b>	<b>Some Other Race</b>	<b>Multiple Race</b>	<b>Total In-Migration</b>
<b>Warren Co, MO</b>	1,880	166	0	0	9	13	146	2,214
<b>Missouri</b>	334,315	53,865	2,946	13,910	1,117	6,382	13,468	426,003
<b>United States</b>	13,194,685	2,448,022	170,896	1,247,802	38,646	748,197	657,201	18,505,449

(Source: Community Commons: Data Source: 2009-2013 US Census Bureau, [American Community Survey](#). Source geography: Tract)

Geographic mobility reports information about population in-migration by assessing changes in residence within a one year period. Of the 32,264 persons residing in Warren Co, an estimated 6.86% relocated to the area, according to the latest American Community Survey 5-year estimates. Nearly 85% of the 6.86% in-migration to Warren Co was white, 7.5% was black, 6.6% was multiple races and around .5% was either Native Hawaiian/Pacific Islander or some other race. They saw no in-migration of Native American/Alaska Native or Asian.

Persons who moved to a new household from outside of their current county of residence, from outside their state of residence, or from abroad are considered part of the in-migrated population. Persons who moved to a new household from a different household within their current county of residence are not included.



# Socioeconomic and Education Characteristics

## Income

### 2009 Income Warren Co

	Households	Families	Married Couple Families	Nonfamily Households
<b>Median Income</b>	\$49,722	\$62,480	\$67,779	\$24,985
<b>Mean Income</b>	\$61,849	\$71,522	N	\$32,803

(Source: US Census Bureau, 2015)

### 2013 Income Warren Co

	Households	Families	Married Couple Families	Nonfamily Households
<b>Median Income</b>	\$50,830	\$64,196	\$71,766	\$30,586
<b>Mean Income</b>	\$64,428	\$74,250	\$82,952	\$35,038

(Source: US Census Bureau, 2015)

### Per Capita Income By Race/Ethnicity Disparity Index

	<b>Disparity Index Score</b> (0 = No Disparity; 1 - 40 = Some Disparity; Over 40 = High Disparity)
<b>Warren County, MO</b>	34.62
<b>Missouri</b>	26.04
<b>United States</b>	29.2

(Source: Community Commons, US Census Bureau, American Community Survey. 2009-2013 Source geography: Tract)

	<b>Percent Families with Income Over \$75,000</b>
<b>Warren County, MO</b>	40.22%
<b>Missouri</b>	37.72%
<b>United States</b>	42.82%

(Source: Community Commons US Census Bureau, American Community Survey. 2009-2013 Source geography: Tract)

Warren Co. saw an increase for all types of households in regards to median and mean income from 2009 to 2013. However, they have the highest disparity between race/ethnicity compared to Missouri and the US. Additionally, they have a higher percentage of families with income over \$75,000 compared to Missouri.

*Income (Continued)*

Percent and Total Number of Families with Income Over \$75,000 by Race

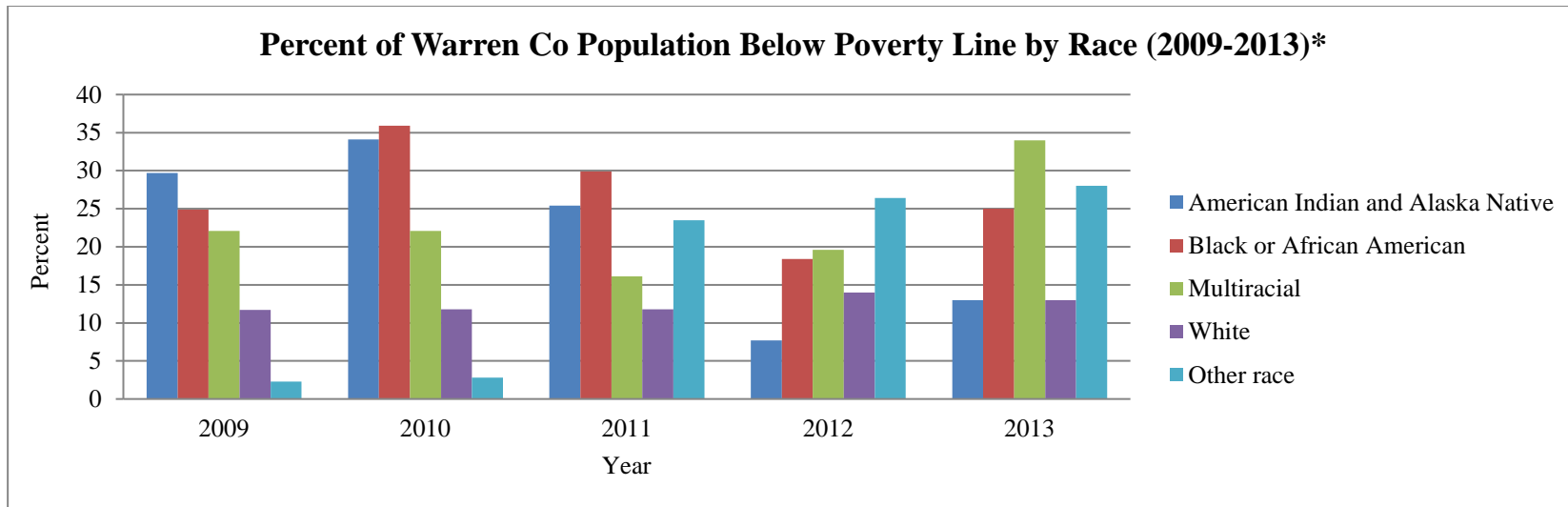
	White		Black or African American		Native American / Alaska Native		Asian		Native Hawaiian / Pacific Islander		Some Other Race		Multiple Race	
	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total
<b>Warren County, MO</b>	41.1%	3,591	16.7%	20	100%	11	15%	3	No data	0	7%	7	22.9%	22
<b>Missouri</b>	39.9%	528,469	20.7%	32,486	28.2%	1,582	51.8%	11,031	23.6%	253	15.8%	1,959	26.8%	5,398
<b>United States</b>	46%	27,340,900	26%	2,285,806	25.5%	142,022	54.6%	1,931,624	21.4%	39,355	21.4%	656,678	35.8%	462,189

(Source: Community Commons US Census Bureau, American Community Survey. 2009-2013 Source geography: Tract)

This table further shows the income disparities with over 40% of whites making over \$75,000, while all other races (excluding Native American/Alaska Native), have less than 23%. Compared to Missouri and the US overall, every race, excluding White and Native American/Alaska Native, has a higher percentage of families with income over \$75,000 than Warren Co.

In 2012 the median household income for Warren County was \$50,830 (US Census Bureau, 2015). This is slightly above the median household income for Missouri at \$47,380, but below the US at \$53,046 (US Census Bureau, 2015).

## Poverty



(Source: US Census Bureau: American Community Survey, 2009-2013)

\*Asian and Native Hawaiian and Other Pacific Islander had 0% every year so they were not included on the graph.

### Percent of Warren Co Population Below Poverty Line by Race (2009-2013)\*

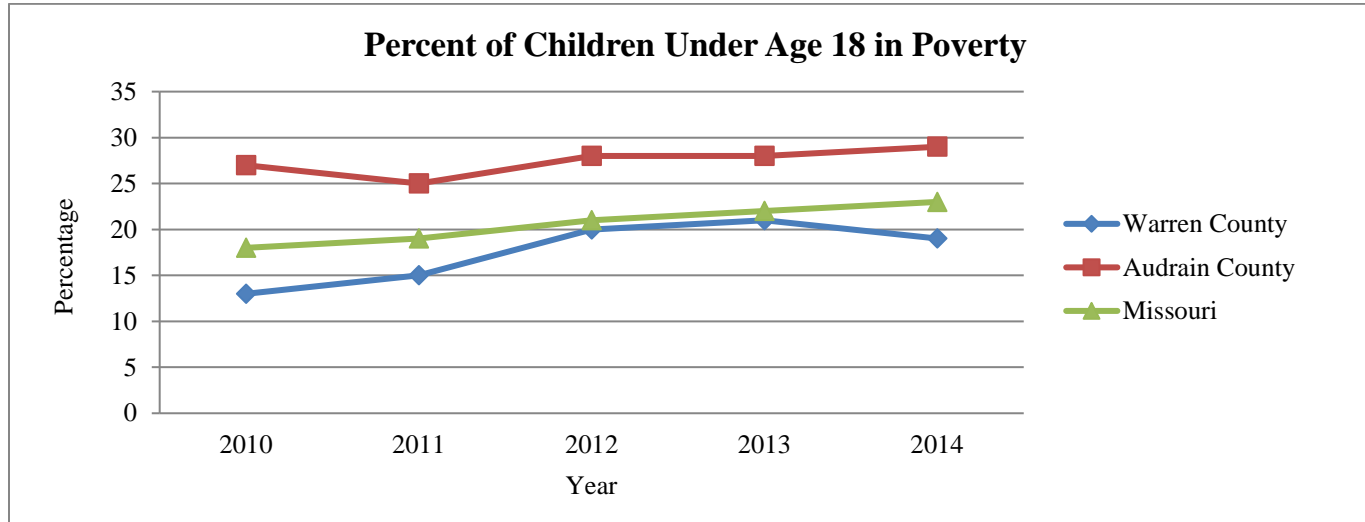
	2009	2010	2011	2012	2013	Average
<b>American Indian and Alaska Native</b>	30	34	25	8	13	22
<b>Black or African American</b>	25	36	30	18	25	27
<b>Multiracial</b>	22	22	16	20	34	23
<b>White</b>	12	12	12	14	13	13
<b>Other race</b>	2	3	24	26	28	11

(Source: US Census Bureau: American Community Survey, 2009-2013)

\*Asian and Native Hawaiian and Other Pacific Islander had 0% every year so they were not included on the graph

The percentage of the white population below poverty line from 2009-2013 is the only race that stays relatively similar, averaging between 12-14% each year. Asian and Native Hawaiian and Other Pacific Islander had 0% every year so they were not included in the graph or table. While Other has the lowest average, they have seen a 1,300% increase since 2009.

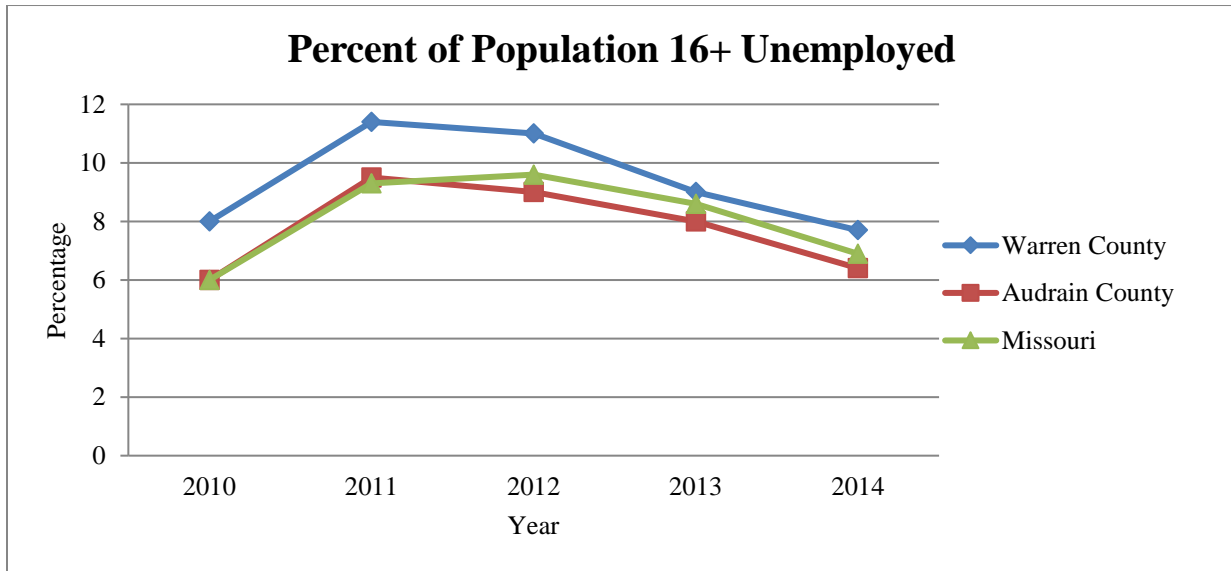
Poverty (Continued)



(Source: County Health Rankings, 2015)

The percent of children under age 18 in poverty in Warren Co is consistently lower than Audrain Co and Missouri. However, Warren Co has seen the largest increase from 2010-2014. Between 2010-2014 Warren Co averaged 18%, Audrain averaged 27%, and Missouri averaged 21%.

## Employment



(Source: County Health Rankings, 2015)

In 2013 the range of unemployment in Missouri counties was 4.5-10% with overall unemployment for Missouri at 6.5%, Audrain Co at 6.4% and Warren Co at 7.7% (County Health Rankings, 2014). While Warren Co unemployment is higher than Audrain Co and Missouri, they are seeing their lowest percentage of unemployment in the last 4 years (County Health Rankings, 2014).

According to the Census Bureau, in 2012, there were 604 employer establishments in Warren County. To clarify, they define an establishment as “a single physical location at which business is conducted or where services or industrial operations are performed.” However, in 2013, nearly 2/3 of Warren County residents worked outside of county of residence while only around 1/3 worked in Warren County (US Census Bureau, 2009-2013).

## Education

There are two school districts in Warren County:

- **Wright City R-II:** There are 2 elementary schools, 1 middle school, 1 high school and Academy
- **Warrenton R-III:** There are 3 elementary schools, 1 middle school, 1 high school and Alpha Academy.

*Washington School District has one elementary school in Warren Co, Marthasville Elementary. However the district resides in Franklin Co so data on the school has been omitted.*

	Total Student Cohort	Estimated Number of Diplomas Issued	Cohort Graduation Rate
<b>Warren Co, MO</b>	354	325	91.76
<b>Missouri</b>	66,138	57,469	86.9
<b>United States</b>	3,351,452	2,754,352	82.2

(Source: Community Commons US Department of Education, [EDFacts](#). Accessed via [DATA.GOV](#). Additional data analysis by [CARES](#). Source geography: School District)

In Warren County between 2011-2012, 91.76% of students received their high school diploma within four years (Community Commons, 2015). Compared to Missouri and the US, Warren County has a higher percentage of 4-year High School diplomas. This is important to note because education is an important factor in determining health of a population.

### Drop-Out Rates for School Districts in Warren Co between 2007-2011

	2007	2008	2009	2010	2011
<b>Warren Co. R-III</b>	4.5	3.1	4.0	3.1	0.5
<b>Wright City R-II</b>	3.1	5.4	2.4	3.0	1.5

(Source: Missouri Dept. of Elementary and Secondary Education, 2007-2011)

Comparing 2007 to 2011, both Warren Co R-III and Wright City R-II school districts have seen a decrease their drop-out rates. However, these numbers have not been stable over the past 4 years, with fluctuation throughout 2007-2011.

### Graduation Rates for School Districts in Warren Co between 2007-2011

	2007	2008	2009	2010	2011
<b>Warren Co R-III</b>	85.6	84.6	89.9	87.5	87.9
<b>Wright City R-II</b>	86.4	83.8	87.4	88.9	84.6

(Source: Missouri Dept. of Elementary and Secondary Education, 2007-2011)

Between 2007-2011, Warren Co R-III had an average graduation rate of 87.1 while Wright City R-II had an average rate of 86.22. Similar to their drop-out rates, their graduation rates, while staying above 80%, have fluctuated throughout the years.

*Education (Continued)*

2014-2015 Enrollment Numbers for Elementary Schools in Warren County

		<b>Grade PK</b>	<b>Grade K</b>	<b>Grade 01</b>	<b>Grade 02</b>	<b>Grade 03</b>	<b>Grade 04</b>	<b>Grade 05</b>
<b>Warren Co. R-III</b>	Daniel Boone Elem.	21	73	72	80	88	69	79
<b>Warren Co. R-III</b>	Rebecca Boone Elem.	21	82	93	87	80	77	65
<b>Warren Co. R-III</b>	Warrior Ridge Elem.	23	82	83	107	92	74	84
<b>Wright City R-II</b>	Wright City West Elem.	53	0	0	141	115	118	120
<b>Wright City R-II</b>	Wright City East Elem	0	122	120	0	0	0	0

(Source: Missouri Dept. of Elementary and Secondary Education, 2015)

2014-2015 Enrollment numbers for Middle Schools in Warren County

		<b>Grade 06</b>	<b>Grade 07</b>	<b>Grade 08</b>
<b>Warren Co. R-III</b>	Black Hawk Middle	266	249	235
<b>Wright City R-II</b>	Wright City Middle	109	113	120

(Source: Missouri Dept. of Elementary and Secondary Education, 2015)

2014-2015 Enrollment numbers for High Schools in Warren County

		<b>Grade 09</b>	<b>Grade 10</b>	<b>Grade 11</b>	<b>Grade 12</b>
<b>Warren Co. R-III</b>	Warrenton High	247	251	227	249
<b>Wright City R-II</b>	Wright City High	140	113	101	96

(Source: Missouri Dept. of Elementary and Secondary Education, 2015)

For 2014-2015 enrollment, Wright City R-II tends to have more students in their district for elementary school than Warren Co R-III. However, for middle school and high school, Warren Co R-III district has more students.

## Education (Continued)

### Warren Co. R-III Demographic Data 2009-2014

	2009	2010	2011	2012	2013	2014
<b>Grades K-12</b>	3,001	2,986	2,986	2,959	3,112	3,151
<b>Lunch Count Free/Reduced</b>	1,241.7	1,423.8	1,457.3	1,564.5	1,705.3	1,719.3
<b>January Membership</b>	2,960.3	2,929.15	2,895.91	2,947.85	3,049.06	3,070.08
<b>Asian</b>	16	17	13	12	15	11
<b>Black</b>	101	108	91	85	82	90
<b>Hispanic</b>	100	102	112	117	139	152
<b>Indian</b>	25	25	18	17	16	15
<b>White</b>	2,759	2,734	2,715	2,683	2,787	2,787
<b>Multiracial</b>	0	0	36	43	68	93
<b>Pacific Islander</b>	0	0	1	2	5	3
<b>Asian Pacific Islander</b>	16	17	14	14	20	14

(Source: Missouri Dept. of Elementary and Secondary Education, 2015)

From 2009-2014, Warren Co R-III school district has averaged 3,033 students with an average of 1,518 receiving free/reduced lunch, which is half of their enrollment. The number of students receiving free/reduced lunch has been steadily increasing while the enrollment has stayed about the same. Similar to their overall population in Warren Co, their school district is predominantly white students. Warren Co R-III has seen a decrease in their black and Indian population, while they have seen an increase in their Hispanic and multiracial population. Asian, Pacific Islander, and Asian Pacific Islander have fluctuated throughout 2009-2014.



## Education (Continued)

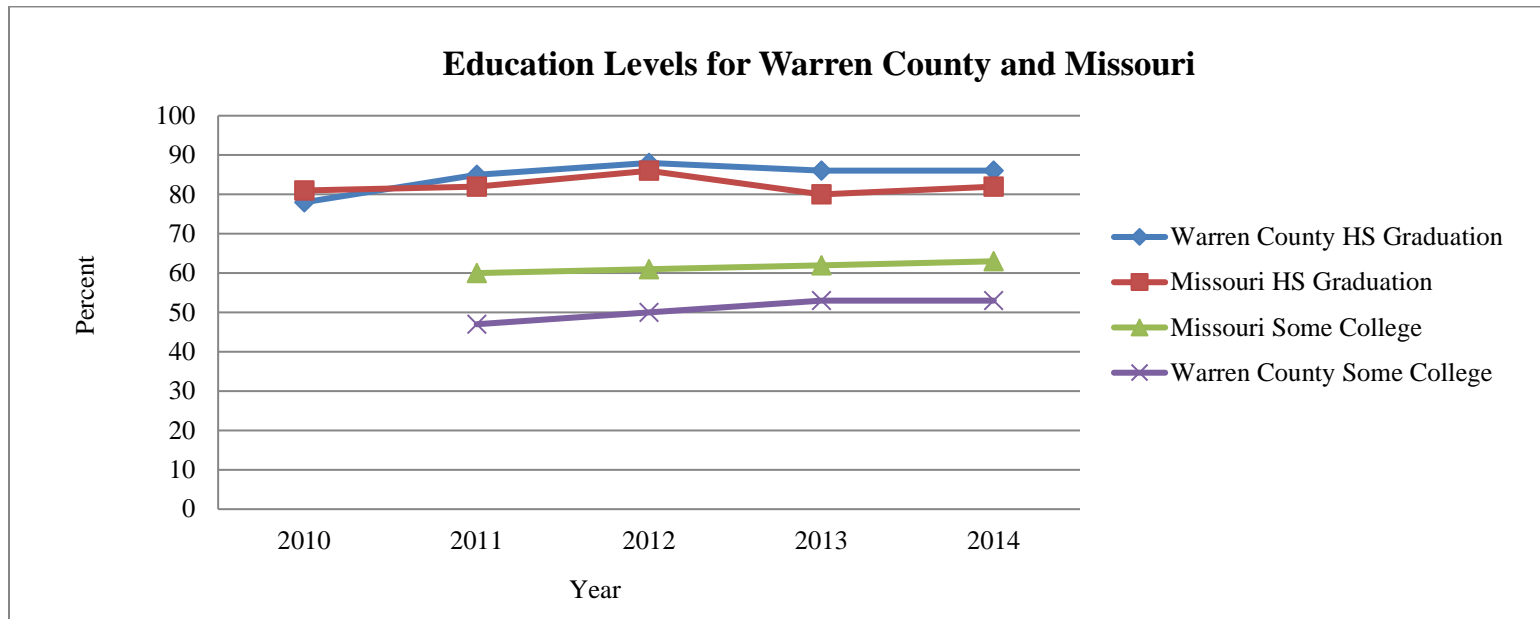
### Wright City R-II Demographic Data 2009-2014

	2009	2010	2011	2012	2013	2014
<b>Grades K-12</b>	1,480	1,471	1,505	1,481	1,472	1,482
<b>Lunch Count Free Reduced</b>	633.8	700.9	742.2	748	806.2	834.3
<b>January Membership</b>	1,436.51	1,429.4	1,476.43	1,441.93	1,481.05	1,487.81
<b>Asian</b>	9	9	10	8	6	10
<b>Black</b>	104	101	109	105	105	102
<b>Hispanic</b>	62	63	76	77	94	95
<b>Indian</b>	6	6	10	5	5	2
<b>White</b>	1299	1292	1299	1271	1223	1218
<b>Multiracial</b>	0	0	0	15	38	55
<b>Pacific Islander</b>	0	0	1	0	1	0
<b>Asian Pacific Islander</b>	9	9	11	8	7	10

(Source: Missouri Dept. of Elementary and Secondary Education, 2015)

From 2009-2014, Wright City R-II school district has averaged 1,482 students with an average of 744 receiving free/reduced lunch, which is half of their enrollment. The number of students receiving free/reduced lunch has been steadily increasing while the enrollment has stayed about the same. Similar to their overall population in Warren Co, their school district is predominantly white students. Wright City R-II's Black, Asian, Pacific Islander, and Asian Pacific Islander have stayed relatively similar throughout 2009-2014. Their Hispanic and multiracial population have been on the rise since 2009.

Education (Continued)



(Source: County Health Rankings, 2015)

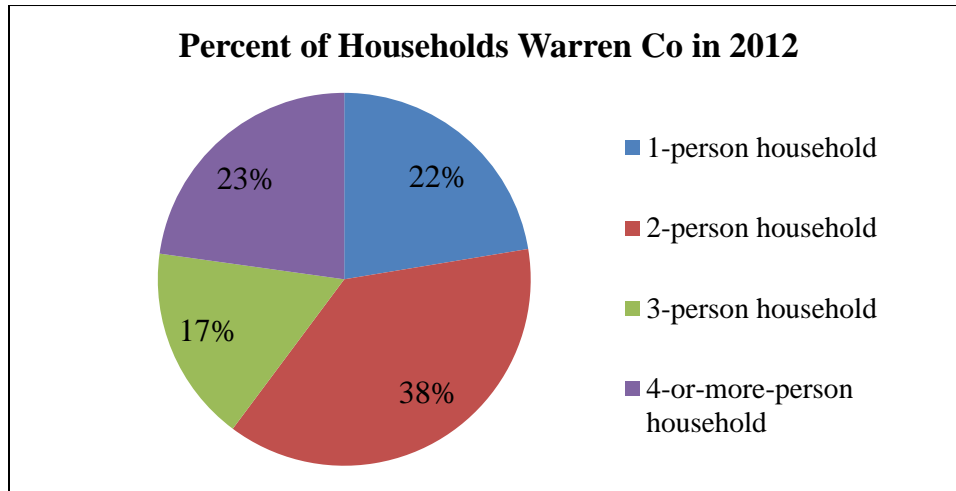
\*2010 data definition was “College Degree: Percent of population age 25+ with 4 year college degree or higher” (11% WC / 22% MO) \*\*2010 isn’t included because of this change in measurement\*\*

\*2011-2014 data definition is “Some College: Percent of adults aged 25-44 years with some post-secondary education”

\*HS Graduation: Percent of ninth grade cohort that graduates in 4 years

Over 2010-2014, Warren Co has seen a slight increase in the percent of 9<sup>th</sup> grade cohorts that graduate in 4 years. From 2011-2014, Warren Co had a higher percentage than Missouri overall for the same indicator. However, the percent of Warren Co.’s population with a college degree is consistently lower when compared to Missouri overall. In 2010, Warren Co had 11% of their population age 25+ with a 4-year college degree or higher while Missouri had 22%. From 2011-2014, Warren Co has seen an increase in the percent of adults age 25-44 with some post-secondary education but they are still below Missouri.

## Households and Housing



(Source: US Census Bureau, 2013)

According to the US Census Bureau (2013), in 2012 in Warren Co:

- The majority of households were 2-person at 30%, and 3-person households were the least common at 17%
- 72% of households were considered family households, 28% were nonfamily, and 14% were other family.
- Just over 77% of total housing units were 1-unit, detached, with mobile homes coming in second with just over 13% of total housing.
- 80% of occupied housing units were owner-occupied as opposed to 20% being renter-occupied.
- Just over 82% of houses were built 1970 or later and nearly 54% were built between 1970 and 1999.

# Health Resources

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## *Healthcare Facilities and Resources*

As of March 2015, 100% of Warren County lives in a Health Professional Shortage Area (HPSA) (Community Commons). A HPSA is defined as having a shortage of primary medical care, dental or mental health professionals.

In 2014, in Warren County the ratio of the population to primary care physicians was 6,503:1 and the ratio of the population to dentists was 5,459:1 (County Health Rankings, 2015). Warren Co residents generally travel to Columbia, MO (an hour plus drive) or Washington, MO (up to 30 minute drive) for healthcare. This is relevant because a shortage of health professionals contributes to access and health status issues.

Between 2011 and 2012, nearly 12% of Warren County adults age 18 and older, self-reported they do not have at least one person who they think of as their personal doctor or health care provider (Community Commons, 2015). This is a low percentage compared to Missouri (20%) and the US (22%) (Community Commons, 2015).

## *Health Department*

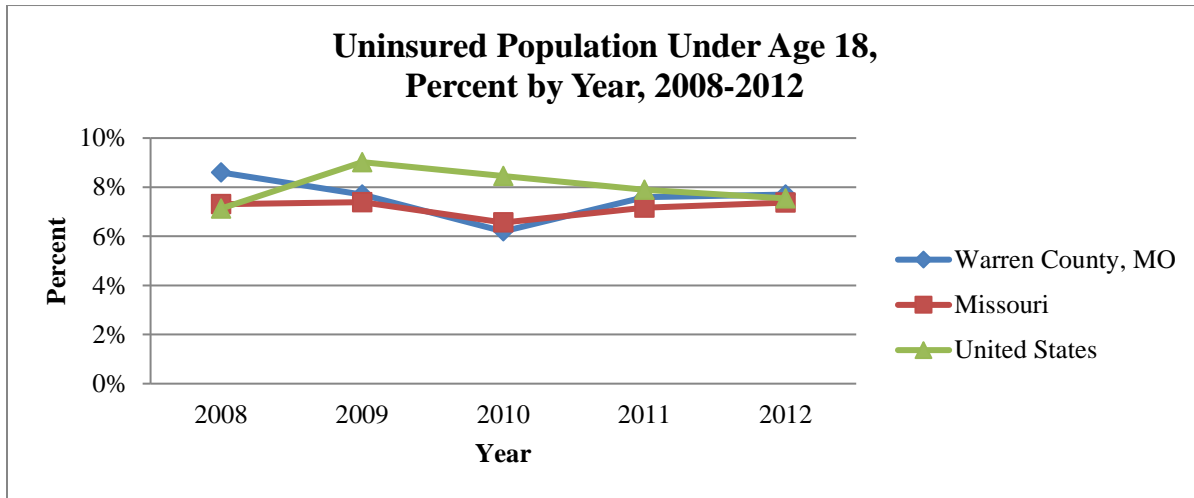
The Warren Co recently moved into a new location in 2012. This building is home to health and environmental services including; birth and death certificates, blood pressure screening, communicable disease investigation and tracking (we don't test any CDs except tuberculin skin test which you list below but we do track and investigate CDs), food inspections, immunizations, flu shots, tuberculosis skin test, and more. They provide many health promotion/disease prevention programs such as; educational wellness luncheons, community gardens and extensive classes and opportunities for exercise at their community fitness center. For more information visit their website <http://www.warrencountyhealth.com/>

## *Long-Term Care and Assisted Living Facilities*

The Missouri Department of Health and Senior Services list three long-term care facilities in Warren County.

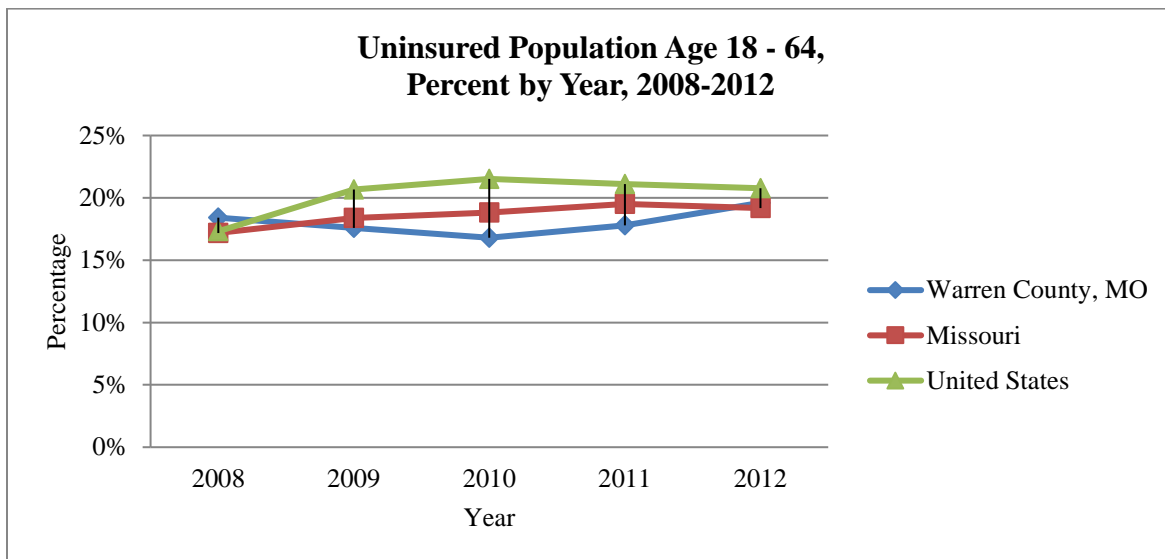
1. Bristol Manor of Warrenton is a Residential Care Facility in Warrenton, MO
  - a. 2012 – 6 residents
  - b. 2013 – 4 residents
  - c. 2014 – 4 residents
  - d. 2015 – 7 residents
2. Oak Pointe of Warrenton is an Assisted Living Facility in Warrenton, MO
  - a. Around 43 people on average from 2009-2015
3. Warrenton Manor is a Skilled Nursing Facility in Wright City, MO
  - a. 2015 – 82 residents; says numbers have been rising

## Health Insurance Coverage



(Source: Community Commons Citation: U.S. Census Bureau: A Compass for Understanding and Using American Community Survey Data (2009-2013).)

While there is some fluctuations from 2008-2012, on average, the percent of Warren Co residents under the age of 18 that were uninsured (7.8%) was similar to MO (7%) and US (8%).



(Source: Community Commons Citation: U.S. Census Bureau: A Compass for Understanding and Using American Community Survey Data (2009-2013).)

From 2008-2012, on average, the percent of Warren Co residents age 18-64 that were uninsured (18.2%) was similar to Missouri (18.6%) but lower than the US (20.4%).

Health insurance coverage reports the percentage of the total civilian non-institutionalized population without health insurance coverage. This is relevant because lack of insurance is a primary barrier to healthcare access including regular primary care, specialty care, and other health services that contributes to poor health status.

## Health Insurance Coverage (Continued)

### Uninsured Population by Ethnicity Alone (2009-2013 Data)

	<b>Total Hispanic / Latino</b>	<b>Percent Hispanic / Latino</b>	<b>Total Not Hispanic / Latino</b>	<b>Percent Not Hispanic / Latino</b>
<b>Warren Co, MO</b>	424	43.35%	2,705	8.59%
<b>Missouri</b>	62,288	28.97%	714,627	12.59%
<b>United States</b>	15,127,729	29.62%	30,441,940	11.92%

(Source: Community Commons Citation: U.S. Census Bureau: A Compass for Understanding and Using American Community Survey Data (2009-2013.)

While the total number of Hispanic/Latino uninsured (424) is lower than total non-Hispanic/Latino uninsured (2,705), the percentage of the Hispanic/Latino population is much higher (43.35%), when compared to non-Hispanic (8.59%).

### Population Receiving Medicaid by Age (2009-2013 Data)

	<b>Under Age 18</b>	<b>Age 18 - 64</b>	<b>Age 65 +</b>	<b>Percent of Insured Population Receiving Medicaid</b>
<b>Warren Co, MO</b>	34.48%	8.60%	8.98%	16.73%
<b>Missouri</b>	32.84%	8.76%	11.13%	17.1%
<b>United States</b>	35.95%	10.57%	14.55%	20.21%

(Source: Community Commons: US Census Bureau, [American Community Survey](#). Source geography: Tract 2009-2013)

Nearly 17% of insured Warren Co residents receive Medicaid. People age 18 and under account for over 1/3 of that percentage while around 9% of people age 18-64 and 65+ are receiving Medicaid.

## Hospitalization Utilization and Statistics

### Top 10 Preventable Hospitalizations by Rate for Warren County 2009-2010

	2009		2010		Total for Selection	
	Number	Rate	Number	Rate	Number	Rate
1. Dehydration - volume depletion	84	29.1	84	27.2	168	28.2
2. Cellulitis	45	15.4	63	23.7	108	19.5
3. Bacterial pneumonia	37	11.7	59	19.3	96	15.5
4. Kidney/Urinary infection	30	10.7	20	7.1	50	9
5. Asthma	26	8.8	25	8.8	51	8.8
6. Diabetes	22	7.8	22	8.2	44	8
7. Chronic obstructive pulmonary	25	8	26	7.2	51	7.7
8. Congestive heart failure	26	7.8	26	7.2	52	7.5
9. Epilepsy	15	5.3 *	18	6.8 *	33	6
10. Gastroenteritis	10	3.5 *	18	6.9 *	28	5.2

(Source: MICA, Preventable Hospitalizations, 2013) \*Rates are unstable because count is below 20.

### Preventable Hospitalizations with Highest Growth Between 2009-2010

	2009		2010		Total for selection	
	Number	Rate	Number	Rate	Number	Rate
Nutritional deficiencies	5	1.4 *	11	3.4 *	16	2.4 *
Hypertension	2	0.6 *	7	2.1 *	9	1.3 *
Dental conditions	1	0.4 *	5	1.7 *	6	1.1 *

(Source: MICA, Preventable Hospitalizations, 2013) \*Rates are unstable because count is below 20.

While the three above data's rates are unstable and not in the top 10 preventable hospitalizations, (numbers below 20) they could be health concerns to keep an eye on as the number of cases from 2009 to 2010 more than double (MICA Preventable Hospitalizations, 2013).

## Hospitalization Utilization and Statistics (Continued)

### Top 10 Emergency Room Visits by Total Number for Warren County from 2009-2012

Diagnosis	2009	2010	2011	2012	Total
1. Injury and poisoning	2521	2753	2975	3161	13941
2. Respiratory (throat and lung)	1304	1165	1360	1493	6591
3. Symptoms and ill-defined conditions	1289	1304	1431	1449	6547
4. Brain - spinal cord - eyes - ears	851	840	844	907	4314
5. Bone- connective tissue- muscle	805	849	877	896	4061
6. Digestive system	698	784	818	833	3846
7. Heart and circulation	630	647	657	659	3156
8. Kidneys - bladder - genitalia	401	465	534	619	2493
9. Mental disorders	306	335	392	382	1718
10. Skin	262	344	346	411	1602
<b>Total</b>	9067	9486	10234	10810	48269

(Source: MICA, 2015)

The total number of emergency room visits has risen 19% from 2009 to 2012. The number of ER visits due to injury and poisoning has risen over 25% from 2009 to 2012. Additionally, ER visits for skin have increased nearly 57%.

### Top 10 Injuries for Warren County by Total Number from 2009-2012

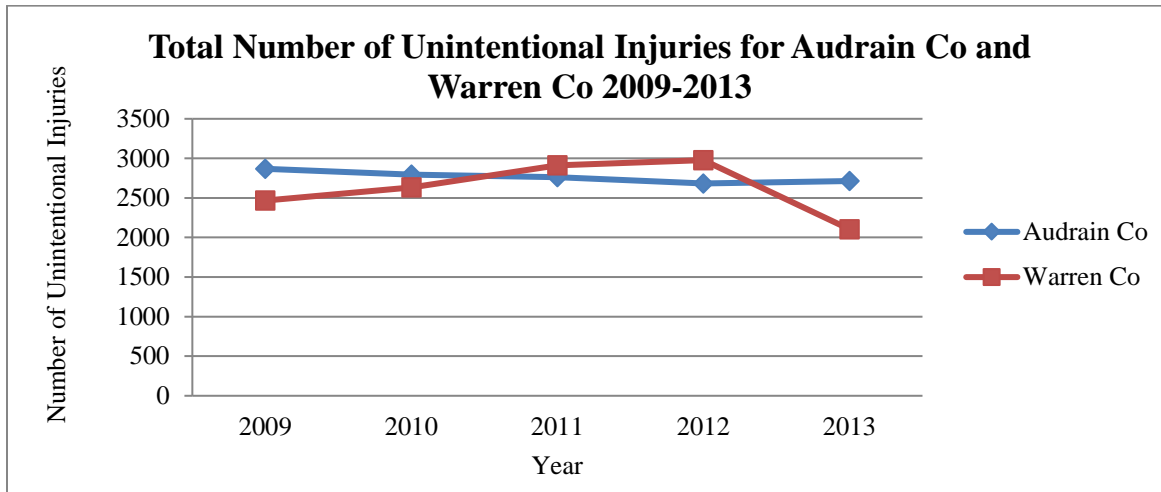
	2009	2010	2011	2012	Total
1. Fall/Jump	821	835	903	921	3480
2. Struck by/Against	322	429	454	444	1649
3. All Other	389	373	400	428	1590
4. Over-exertion	207	239	329	368	1143
5. Motor Vehicle Traffic	283	259	284	241	1067
6. Cut/Pierce	216	235	260	272	983
7. Weather/Wildlife	122	142	156	170	590
8. Poison/Overdose	82	120	133	133	468
9. Motor Vehicle-Non Traffic	97	96	97	98	388
10. Fire/Burn	41	41	52	54	188
<b>Total</b>	2580	2769	3068	3129	11546

(Source: MICA, 2015)

Fall/Jump has been the number 1 injury by nearly 2 fold compared to stuck by/against, which is number 2, from 2009-2012. Motor Vehicle Non-Traffic and Fire/Burn has stayed relatively consistent throughout the 4 years.



*Hospitalization Utilization and Statistics (Continued)*



(Source: MICA, 2015)

While the number of unintentional injuries had been on the rise from 2009 to 2012, it saw a decrease between 2012 and 2013.

**Top 5 unintentional injuries by total number for Audrain Co and Warren Co from 2009-2013**

<b>Audrain</b>	<b>Warren</b>
1. Fall/jump (4,518)	1. Fall/jump (4,196)
2. Struck by/against (1,914)	2. Struck by/against (1,713)
3. Cut/pierce (1,093)	3. Motor vehicle traffic (1,306)
4. Motor Vehicle Traffic (1,059)	4. Over-exertion (1,288)
5. Over-exertion (946)	5. Cut/Pierce (1,071)

(Source: MICA, 2015)

This order stays consistent from 2009-2013 for Audrain Co except in 2009 when over-exertion was 3<sup>rd</sup>, motor vehicle traffic was 4<sup>th</sup> and cut/pierce was 5<sup>th</sup> and in 2010 when over-exertion was 3<sup>rd</sup>, cut/pierce was 4<sup>th</sup>, and motor vehicle traffic was 5<sup>th</sup>.

This order stays consistent from 2009-2013 for Warren Co except in 2011 when over-exertion was 3<sup>rd</sup>, motor vehicle was 4<sup>th</sup>, and cut/pierce was 5<sup>th</sup> and in 2012 when over-exertion was 3<sup>rd</sup>, cut/pierce was 4<sup>th</sup>, and motor vehicle traffic was 5<sup>th</sup>.

## Hospitalization Utilization and Statistics (Continued)

### Top 10 Inpatient Hospitalization Discharges for Warren County from 2009-2012

Diagnosis	2009		2010		2011		2012		Total for Selection	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1. Heart and circulation	695	193.2	755	207	680	182.1	622	164	2752	186
2. Mental disorders	477	157.4	445	147.4	463	153.6	514	170.3	1899	157.2
3. Pregnancy - childbirth - reproduction	470	167.8	445	157.5	408	145	429	152.1	1752	155.6
4. Digestive system	433	126.4	417	119.8	429	124.2	410	115.9	1689	121.5
5. Injury and poisoning	372	108.8	370	110.9	405	118.3	339	95.8	1486	108.4
6. Respiratory (throat and lung)	302	87.2	352	98.4	353	97.8	345	95.1	1352	94.8
7. Bone- connective tissue- muscle	289	77.4	305	80.2	323	81.3	276	68.4	1193	76.8
8. Kidneys - bladder - genitalia	191	58.4	196	59.4	187	57	169	48.2	743	55.8
9. Infection	165	47.1	154	42.5	165	44.6	195	51.5	679	46.5
10. Symptoms and ill-defined conditions	135	38.7	157	44.5	169	47	107	29.6	568	39.8

(Source: MICA Hospital Discharges, Charges, and Days of Care, 2014)

Mental disorders, pregnancy/childbirth/reproduction, and infection were the only 3 that saw an increase in total number from 2011-2012, the rest saw a decrease. Heart and Circulation has consistently been the number 1 inpatient hospitalization discharge. From 2009-2012, this top 10 order has stayed relatively consistent with only a few minor exceptions.

# Quality of Life

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## *Parks and Recreation*

The City of Warrenton Parks Department consists of over 100 acres of public green space, including six parks and one 55-acre sports complex. The Warrenton Athletic Complex is 55 acre park which includes seven soccer fields, four lighted and two unlit baseball/softball fields, a playground area, a covered pavilion, restrooms, a concessions stand, and open green space. The 6 parks in Warrenton are: (1) Lakeview Park, (2) Paddock Fields Park, (3) Morgan Park, (4) Binkley Woods and Spector Lake, (5) Dyer Park, and (6) Khoury Park. These parks include tennis courts, basketball courts, soccer field, sand volleyball court, horseshoe pits, picnic tables, grills, water fountains, playground equipment, and walking trails. Morgan Park is also home to the Warrenton Municipal pool with spray ground, diving boards, slides, and a kiddie pool. Five of the six parks are on the south side of I-70.

Wright City Parks Department includes Diekroeger Bros. Park (7 acres) and Corwin S Ruge Memorial Park. The parks have a lighted softball, baseball and t-ball fields, basketball court, a pavilion, a walking trail, playground, and picnic areas. The parks are also home to "Concerts in the Park," Farmers Market, Spring and Fall Flea Markets, and other events.

Additionally, The Katy Trail runs through the southern portion of the county with access points in Marthasville and Dutzow.

## *Transportation*

In 2013, 93.9% of employees drove a car, truck, or van to work, and 81.5% drove alone. Only 1.9% walked, .1% used public transportation, 0% bicycled, and .4% used a motorcycle, taxicab or other means to commute to work (US Census Bureau, 2013). The average travel time to work in 2013 was 30.8 minutes (US Census Bureau, 2013). There is an airport about 1.5 miles south of Dutzow, Missouri called Washington Regional.

## *Voters*

In 2014 they had a voter turnout of 35.97% for the general election in November (US Census Bureau, 2013).

## *Child Services and Childcare*

As of 2015 there are approximately 15 licensed child care facilities in Warren Co; this number fluctuates throughout the years. In terms of rates, there are 50.1 licensed child care facilities per 1,000 in 2013, compared to 29.2 in 2009. This shows that the number of child care facilities has increased over the years. Further, in 2013 and 2009, there were no accredited child care facilities (Missouri Kids Count, 2014).

## Homelessness

### Homeless Individuals – Warren Co 2009-2014

	2009	2010	2011	2012	2013	2014
Number of Homeless - Individuals	51	60	43	43	38	68

(Agape Ministries, 2015)

The number of homeless individuals in Warren Co has fluctuated throughout the past five years. 2013 reported the lowest number of homeless individuals (38) while the following year, 2014, reported the highest (68).

## Crime

### Violent Crimes Between 2010-2012

	Total Population	Violent Crimes	Violent Crime Rate (Per 100,000 Pop.)
Warren County, MO	32,313	90	277.5
Missouri	6,002,985	27,141	452.2
United States	306,859,354	1,213,859	395.5

(Source: Federal Bureau of Investigation, [FBI Uniform Crime Reports](#), via Community Commons)

Violent Crime Rate is the rate of violent crime offenses reported by law enforcement per 100,000 residents. Warren Co has a lower rate (277.5) compared to Missouri (452.2) and US (395.5). Violent crime includes homicide, rape, robbery, and aggravated assault.

### Crimes in Warren County from 2008-2014

	2008	2009	2010	2011	2012	2013	2014
Violent Crimes	101	103	76	99	96	142	134
Property Crimes	895	887	677	761	843	710	700

(Source: [http://www.mshp.dps.mo.gov/MSHPWeb/SAC/data\\_and\\_statistics\\_ucr\\_query\\_backup.html](http://www.mshp.dps.mo.gov/MSHPWeb/SAC/data_and_statistics_ucr_query_backup.html))

Violent Crimes include murder (manslaughter), rape, robbery, and aggravated assault. Property Crimes include burglary, larceny-theft, motor vehicle theft, robbery and arson.

While Warren Co saw a decrease in violent crimes between 2013 and 2014, 2014 is higher when compared to 2008-2012. The number of property crimes in Warren Co has fluctuated throughout 2009-2014. From 2008-2014, aggravated assault and larceny theft were the top crimes in violent crimes and property crimes, respectively. Assessing crime is relevant because it assesses community safety.

# Environmental Health

## Water

Warren Co has 18 ground water sources to serve the community year round (EPA, 2015).

The City of Warrenton Water System consists of approximately 140 miles of water lines, 5 deep wells and 5 water towers that hold 1,450,000 gallons of water. One storage tank holds 1,000,000 gallons of water. The average daily use is 800,000 gallons per day (Warrenton, 2013). Wright City has 3 wells and towers (Wright City, 2013). City of Marthasville has 2 wells (Marthasville, 2013).

## Lead

In 2008 in Warren Co 13.1% of children were tested for blood lead levels (BLL) and there were 0 confirmed cases of elevated BLL in children (CDC, 2009). In 2012, 14.42% of children were tested for BLL and .04% had unconfirmed elevated BLLs between 15 and <20 µg/dL (Environmental Public Health Tracking Program, 2015).

## Radon

In Warren Co the average indoor radon levels were 3.9 pCi/L. 38% of their tests were under 2 pCi/L, 27% were between 2 and 3.9 pCi/L, and 35% were 4 pCi/L and over. The average national indoor radon level is 1.3 pCi/L (DHHS, 2015).

## Air Quality

Warren Co had 0 days that exceeded the emission standard of 75 parts per billion (ppb), the National Ambient Air Quality Standard.

	<b>Total Population</b>	<b>Average Daily Ambient Particulate Matter 2.5</b>	<b>Number of Days Exceeding Emissions Standards</b>	<b>% of Days Exceeding Standards, Crude Average</b>	<b>Percentage of Days Exceeding Standards, Pop. Adjusted Average</b>
<b>Warren County, MO</b>	32,513	8.8	0.6	0.16	0.14%
<b>Missouri</b>	5,988,927	9.93	0.92	0.25	0.25%
<b>United States</b>	312,471,327	10.65	4.17	1.14	1.19%

(Source: Community Commons: Centers for Disease Control and Prevention, 2008 [National Environmental Public Health Tracking Network](#). Source geography: Tract)

This indicator reports the percentage of days with particulate matter 2.5 levels above the National Ambient Air Quality Standard (35 micrograms per cubic meter) per year. This indicator is relevant because poor air quality contributes to respiratory issues and overall poor health.

# Health Behaviors

## Food Access

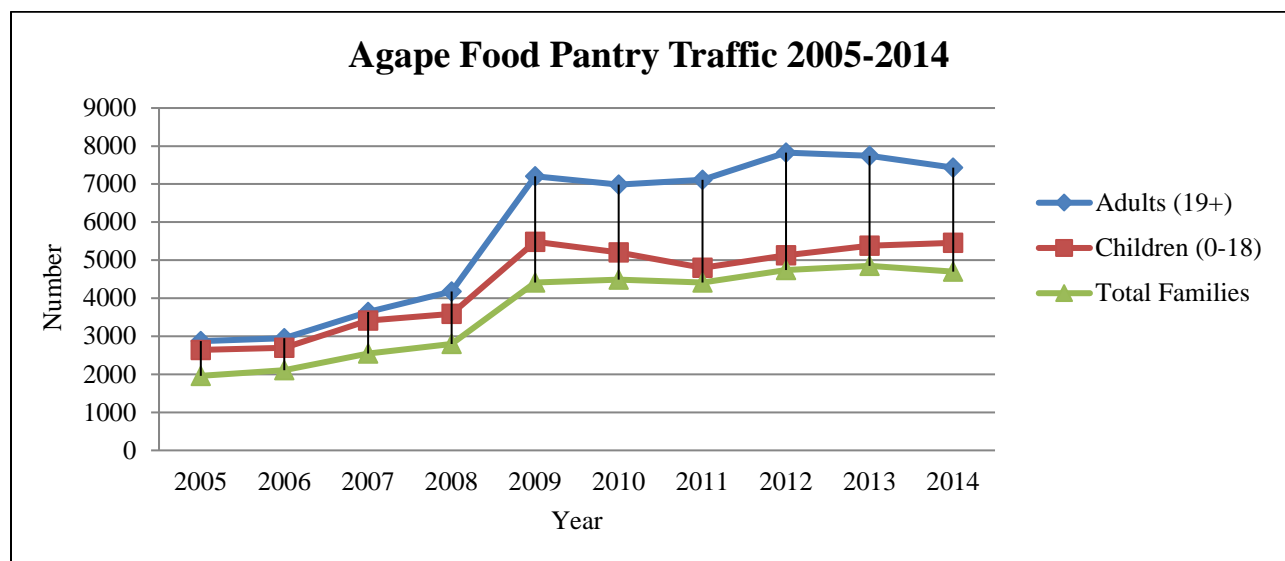
The Food Environment Index score was 8.3 in 2014 (County Health Rankings). According to Kansas Health Matters, the Food Environment Index is “the percentage of the population that is low-income and has low access to a grocery store, and the percentage of the population that did not have access to a reliable source of food during the past year (food insecurity). The index ranges from 0 (worst) to 10 (best) and equally weights the two measures.” This data suggests access to healthy foods is not a serious problem as the score is on the higher end of the spectrum. As of May 11, 2015, Warren Co started planting in their new community garden.

Warren County has two food pantries provided through the Agape Ministry of Warren County, a 501(c)3 nonprofit: (1) Warrenton Food Pantry and (2) Wright City Food Pantry. To receive food “a person must live in Warren County and must have a gross monthly income at or below 125% of federal poverty guidelines. This is a sliding scale based on family size, age and disability.”

### Agape Food Pantry Traffic 2005-2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Total People</b>	5513	5648	7056	7767	12689	12189	11920	12957	13125	12890
<b>% of children</b>	48%	48%	48%	46%	43%	43%	40%	40%	41%	42%

(Source: Agape Ministries, 2015)



(Source: Agape Ministries, 2015)

Over the last 10 years the number of individuals increased by 57%, the number of families increased by 58%, and the number of children increased by 52%. However, from 2009 to 2014, the numbers have stayed relatively consistent, with slight fluctuations throughout the five years. Over the last 10 years, the percent of children served has slightly decreased.

## *Food Access (Continued)*

### Individuals Receiving Additional Aid from Agape 2009-2014

	2009	2010	2011	2012	2013	2014
<b>Infant Kits - Individuals</b>	10	10	10	10	10	10
<b>Prescription Aid - Individuals</b>	64	41	33	20	13	24
<b>School Supplies - Individuals</b>	N/A	386	397	310	331	321
<b>Water - Families</b>	15	6	12	15	26	69

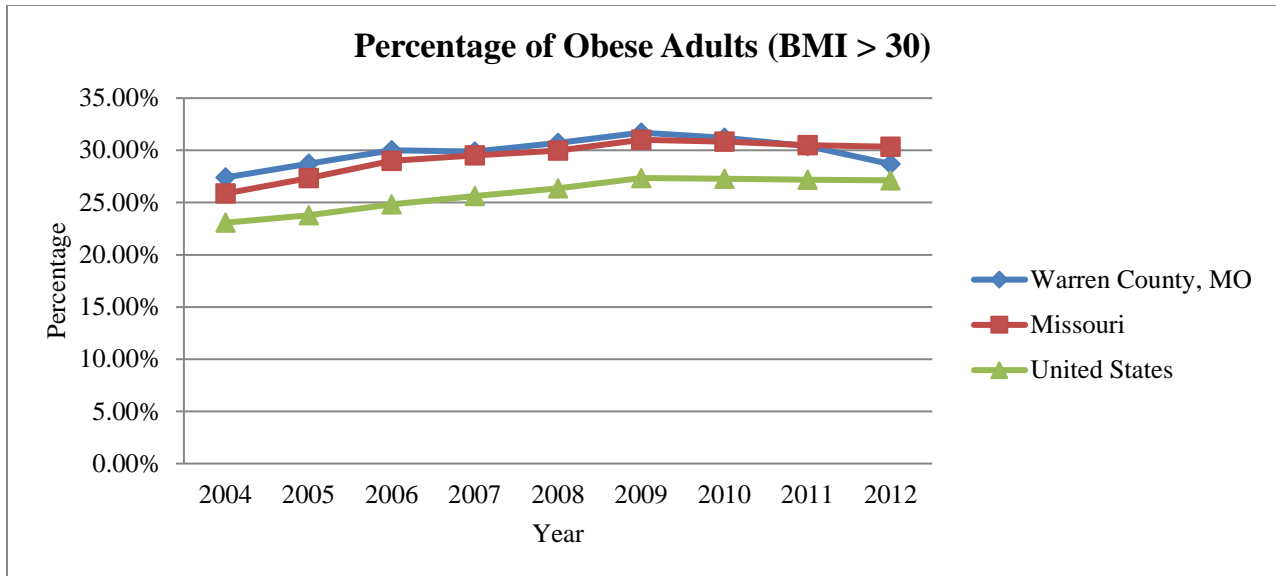
(Source: Agape Ministries, 2015)

From 2009 to 2013, the number of prescription aid was decreasing; unfortunately, in 2014, the number increased from 2013. However, comparing 2009 to 2014, prescription aid saw nearly a 63% decrease. From 2010 to 2014, the number of school supplies provided fluctuated but throughout the five years, they averaged 349. While the amount of families provided water stayed relatively similar from 2009-2013, they saw nearly a fivefold increase from 2009 to 2014.

There are two other food pantries in Warren Co, but data could not be gathered from them. Southern Warren Co and St. Charles Co Food Pantry is located at Charrette Baptist Church. To receive food here, residents must be of Augusta, Concord Hill, Dutzow, Femme Osage, Holstein, Marthasville or Treloar. Finally, Baptist Missions is located in Wright City, MO.

## Overweight and Obesity

Between 2011 and 2012, 31.51% of adults aged 18 and older self-report that they are overweight, or have a Body Mass Index (BMI) between 25.0 and 30.0, in Warren Co. This is lower than Missouri (35.33%) and the US (35.78%). Excess weight may indicate an unhealthy lifestyle and puts individuals at risk for further health issues.



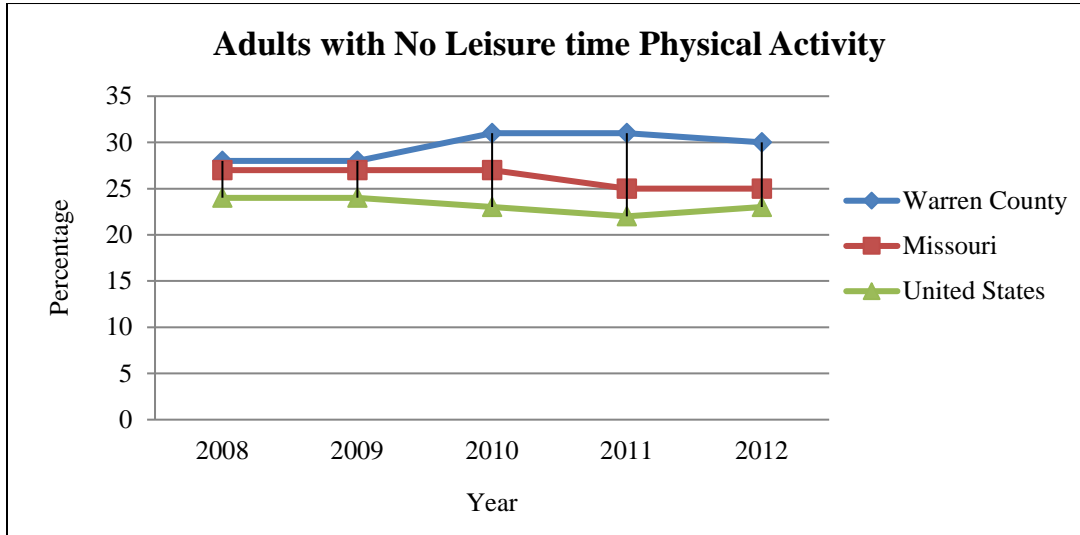
(Source: Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012).)

From 2004-2011 Warren Co has had higher or equal levels of obesity when compared to Missouri. In 2012, for the first time since, 2004, Warren Co had a lower percentage of obese adults than Missouri. However, Warren Co has a consistently higher percentage when compared to the US.

County Health Rankings estimates in 2013 the percentage of adults obese in Warren Co was 32% and in 2014 there were 31% of adults obese (Source: County Health Rankings). This data suggests the percentage of obese adults in Warren County is steadily between 27% and 32%. The target for obese adults in the United States for Healthy People 2020 is 30.6% so Warren County is close to meeting this goal (Healthy People 2020, 2015).



## Physical Activity



(Source: Centers for Disease Control and Prevention, Diabetes Data & Trends: Methods and References for County-Level Estimates and Ranks. (2012).)

Adults aged 20 and older self-report no leisure time for activity, based on the question: "During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?"

From 2008-2012 Warren Co consistently has a higher percentage of adults who report no leisure time physical activity when compared to Missouri and the US.

The CDC data regarding leisure time physical activity ends in 2012. However, according to County Health Rankings, in 2014, 33% of adults aged 20 and older received no leisure time physical activity, which is higher than 2012 percentage (County Health Rankings, 2014). For comparison, in the same year Audrain Co received a 31%.

In 2011 and 2012 the rate of recreational facilities per 100,000 population was 10 but in 2013 the number dropped to 9 (County Health Rankings, 2014). In 2014, County Health Rankings changed their reporting to percent of the population with adequate access to locations for physical activity, in which Warren County received a 28% (2015). For comparison, in the same year Audrain Co received a 71%.

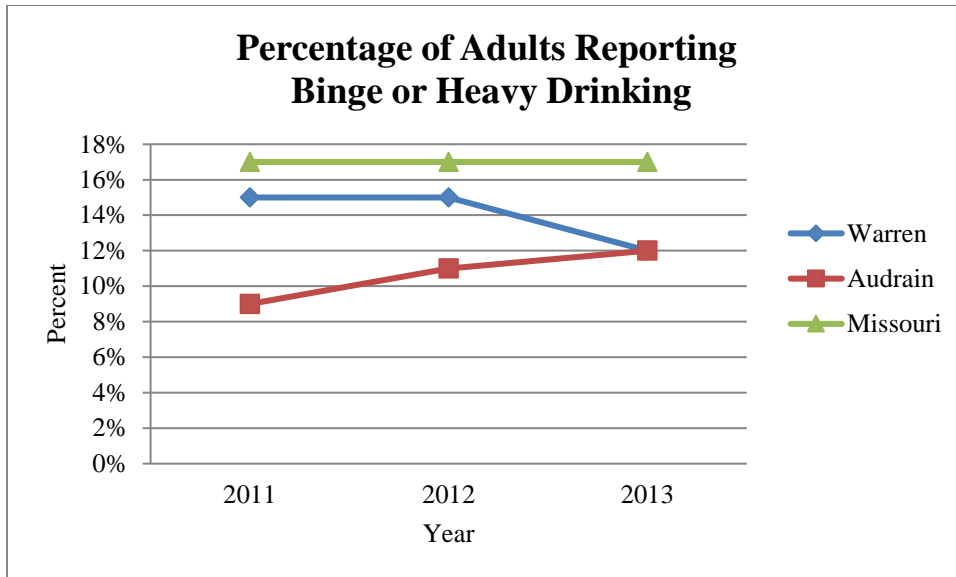
## *Physical Activity (Continued)*

To combat the low levels of physical activity and increase the health of the community, the Warren Co Health Dept has begun offering a variety of exercises classes paid for by the Ready Set Fit and HEAL grants. From January to April the group exercise classes saw 1,725 people, with an average of 150 people per week. They offer Pilates, yoga, Zumba, classes for elderly and children and more.

Ready Set fit is a grant-funded program with a two-prong approach to increasing physical activity and health in the community. The first part is a 12 week individual physical activity, nutrition, and support program. It also includes the group exercise classes that we offer. The curriculum for the 12 week session is a successful tool that United Healthcare agreed to share with us for this program. They expanded to partner with the Extension Center to offer more healthy eating/cooking classes, nutrition classes, etc. They also moved the program services to a community site vs. the administration building which allows us more space, extended hours of operation and a greater visibility. So far, they have had 34 individuals go through the one-on-one more intense program and over 1000 have participated in the group programs which include group exercise, group nutritional education offerings and motivation/support interventions.

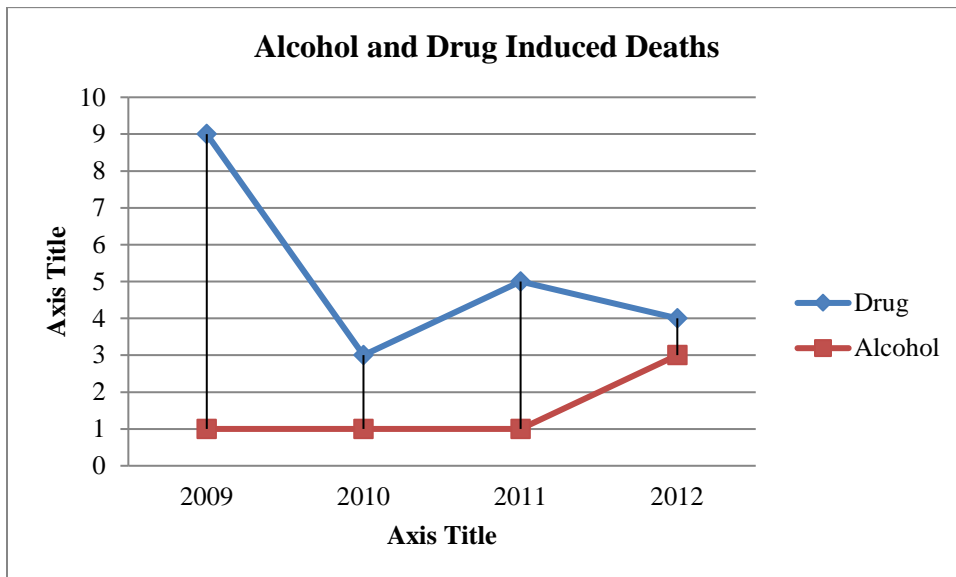
The second part of Ready Set Fit is workplace wellness. They work local businesses that want to either implement a worksite wellness policy or enhance an existing one. The businesses complete a pre-survey to determine interest, what they are willing to do, and the demographics of their employee pool. The employees are surveyed to find out what worksite wellness topics and interventions they are interested in. From that data, they create a custom report with suggestions, resources and sample policies, and offer technical assistance to implement whatever they feel is the best fit. So far, they have had 22 businesses that are participating, some of which has multiple sites.

## Substance Use and Abuse



(Source: County Health Rankings, 2015)

While Missouri has stayed consistent in the percent of adults who self-report binge or heavy drinking, Warren Co saw a decrease from 2012 to 2013. From 2011-2013, Audrain Co has continued to see an increase in this indicator.



(Source: Missouri Institute of Mental Health, 2012 and 2014)

While drug induced deaths have declined from 2009 to 2012, alcohol induced deaths saw a small increase from 2011-2012. However, heroin use and abuse has been on the rise in Warren Co in the past year. Since 2014, there have been 3 deaths to heroin overdose in 3 months.

## *Substance Use and Abuse (Continued)*

### Alcohol-Related Crashes in Warren Co from 2009-2012

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Total Alcohol-Related Crashes</b>	31	32	34	39
<b>Alcohol-Related Crash Fatalities</b>	3	3	3	3
<b>Alcohol-Related Crash Injuries</b>	17	11	12	19
<b>Alcohol-Related Crash Property Damage</b>	11	18	19	17

(Source: Missouri Institute of Mental Health, 2012 and 2014)

### Drug-Related Crashes in Warren Co from 2009-2012

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Total Drug-Related Crashes</b>	4	5	5	6
<b>Drug-Related Crash Fatalities</b>	1	0	1	2
<b>Drug-Related Crash Injuries</b>	1	4	1	1
<b>Drug-Related Crash Property Damage</b>	2	1	3	3

(Source: Missouri Institute of Mental Health, 2012 and 2014)

Since 2009, the number of crashes involving alcohol or drugs has slowly been rising in Warren Co. From 2009-2012 there was an average 3 alcohol-related fatalities, of just under 15 injuries and just over 16 property damages. From 2009-2012, there was an average of 1 drug-related fatality, almost 2 injuries, and just over 2 property damages.

In 2014, Warren Co had 41% of driving deaths with alcohol involvement, while Audrain had 29% and Missouri had 34% (County Health Rankings, 2015).

### Out-of-Home Placements Related to Parental Drug/Alcohol Use

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Alcohol</b>	1	5	6	2
<b>Drugs</b>	8	7	5	9
<b>Both</b>	0	2	11	1
<b>Other</b>	18	16	22	24
<b>Total</b>	27	30	44	36

(Source: Missouri Institute of Mental Health, 2012 and 2014)

Parental alcohol and drug use accounted for 33% of out-of-home placements in 2009, 47% in 2010, 50% in 2011, and 33% in 2012. While it had been on the rise from 2009-2011, 2012 saw a decrease in the percent of out-of-home placement due to parental alcohol and drug use.

## *Substance Use and Abuse (Continued)*

### Police Reports for Warren Co Related to Drugs and Alcohol 2009-2012

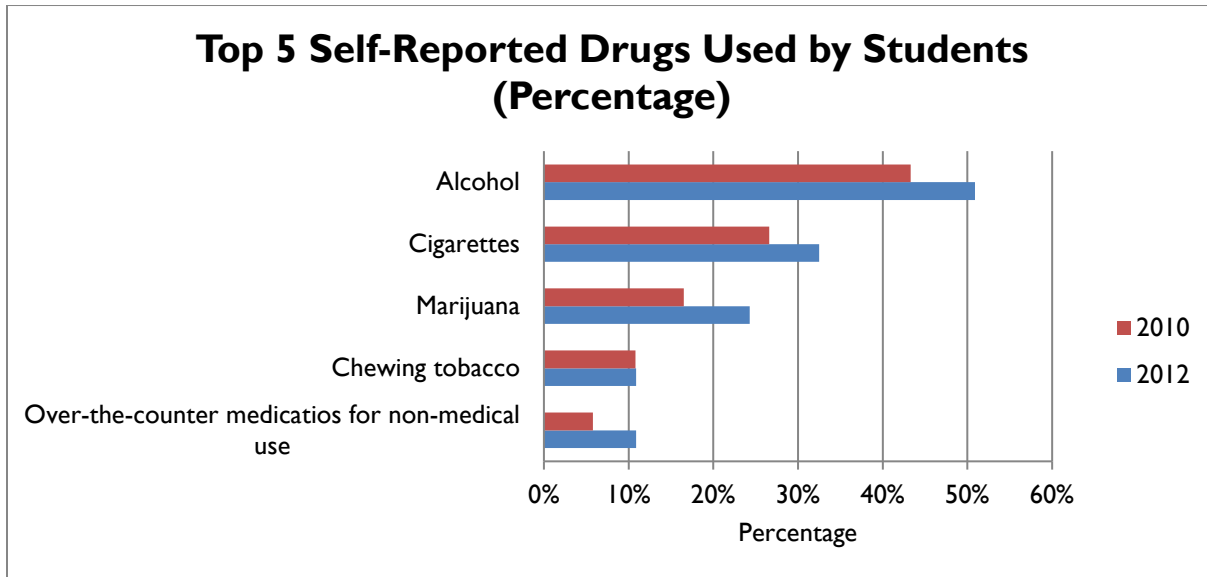
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>DUI Arrests</b>	207	225	236	182
<b>Liquor Law Arrests</b>	38	45	54	73
<b>Drug Arrests</b>	169	204	242	305
<b>Methamphetamine Lab Incidents</b>	26	32	32	27

(Source: Missouri Institute of Mental Health, 2012 and 2014)

While DUI arrests had been on the rise from 2009-2011, Warren Co saw a decrease in 2012. Unfortunately, liquor law arrests and drug arrests have been rising since 2009. The manufacture of methamphetamine has been particularly problematic for rural Missouri. Specifically, labs tend to be clustered primarily in the counties surrounding St. Louis and secondarily in the southwest and southeast areas of the state.

- In 2011, Warren County residents had a total of 85 alcohol-related and 103 drug-related hospitalizations. In 2009, those numbers were 330 and 271. Additionally, in 2011 there were 98 alcohol-related and 233 drug-related ER visits that did not include a hospital stay. In 2009, those numbers were 87 and 93.
- In 2012, 25.1% of mothers in Warren County reported smoking during their pregnancy. This is an increase from 2011 (20.9%). From 2009-2012, the average number of women who report smoking during pregnancy was just under 100 (Missouri Institute of Mental Health, 2012).

*Substance Use and Abuse (Continued)*



(Source: Missouri Student Survey: 2014 Status Report on Missouri’s Substance and Mental Health Problems)

From 2010 to 2012, the top 5 self-reported drugs used by students have stayed the same. However, the percentage of students using them has increased over the two-year period.

**Average Age of Warren County Students Self-Reported First Use 2010 and 2012**

	2010	2012
<b>Alcohol</b>	12.49	11.85
<b>Cigarettes</b>	12.24	11.91
<b>Marijuana</b>	13.76	13.25
<b>Inhalants</b>	13	11.55

(Source: Missouri Institute of Mental Health, 2010-2014 Missouri Student Survey)

For all 4 drugs, the self-reported first use age decreased. Inhalants saw the greatest change with an 11% decrease in the age of first use.

- In 2012, Warren County students self-reported using the following in the past 30 days: alcohol (22.7%), binge drank alcohol (5+ drinks on one occasion) (13.4%), cigarettes (12.9%), marijuana (12.6%). From 2010 to 2012, self-reported cigarette usage decreased, but alcohol and marijuana use increased (Missouri Institute of Mental Health, 2010-2014 Missouri Student Survey)
- In 2014, Warren County had a drug poisoning death rate of 15 per 100,000, compared to 12 for Audrain Co and 13 for Missouri overall (County Health Rankings, 2015).
- In 2015, the Warren County Alcohol/Drug Reduction System (W.A.R.S.) was formed to combat overall substance use and abuse. They meet on the 3<sup>rd</sup> Wednesday of the month.
- Additionally, there are plans to give educational talks to the Warren Co Middle and High Schools.

## Tobacco Use

### Population Currently Smoking Cigarettes (2006-2012)

	<b>Total Population Age 18+</b>	<b>Total Adults Regularly Smoking Cigarettes</b>	<b>% Population Smoking Cigarettes (Crude)</b>	<b>% Population Smoking Cigarettes(Age-Adjusted)</b>
<b>Warren Co, MO</b>	24,054	5,965	24.80%	24.50%
<b>Missouri</b>	4,532,155	1,024,267	22.60%	23.20%
<b>United States</b>	232,556,016	41,491,223	17.84%	18.08%

(Source: Community Commons, 2015; Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. Source geography: County)

### Adults Ever Smoking 100 or More Cigarettes (2011-2012)

	<b>Survey Population (Adults Age 18+)</b>	<b>Total Adults Ever Smoking 100 or More Cigarettes</b>	<b>Percent Adults Ever Smoking 100 or More Cigarettes</b>
<b>Warren Co, MO</b>	23,679	16,576	70.0%
<b>Missouri</b>	4,535,528	2,224,446	49.0%
<b>United States</b>	235,151,778	103,842,020	44.2%

(Source: Community Commons, 2015; Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. Source geography: County)

### Smokers with Quit Attempt in Past 12 Months (2011-2012)

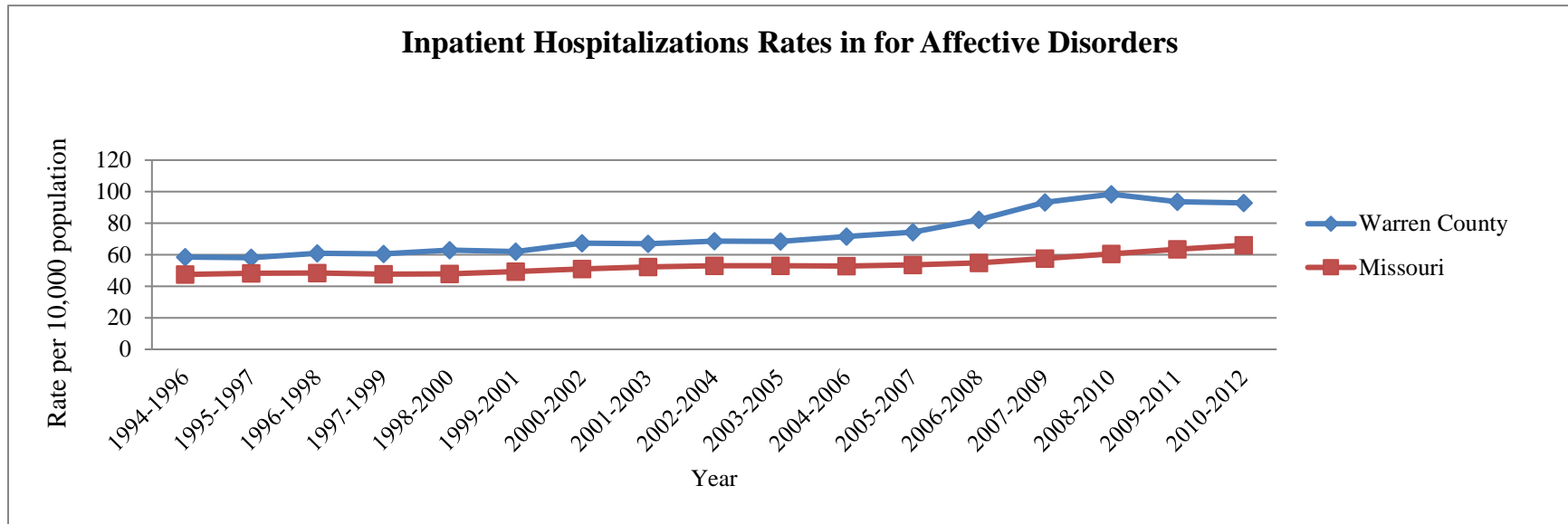
	<b>Survey Population (Smokers Age 18+)</b>	<b>Total Smokers with Quit Attempt in Past 12 Months</b>	<b>Percent Smokers with Quit Attempt in Past 12 Months</b>
<b>Warren Co, MO</b>	7,450	4,038	54.2%
<b>Missouri</b>	1,109,658	596,738	53.8%
<b>United States</b>	45,526,654	27,323,073	60.0%

(Source: Community Commons, 2015; Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. Source geography: County)

In Warren County an estimated 5,965, or 24.8% of adults age 18 or older self-reported currently smoking cigarettes some days or every day. Additionally, Warren Co has 70% of their population who have smoked 100 or more cigarettes. Compared to Missouri and the US, Warren Co both of these statistics are higher than Missouri and the US. However, from 2011-2012 data, nearly 55% of adults have attempted to quit smoking in the past 12 months. This percentage is higher than Missouri, but lower than the US. This indicator is relevant because tobacco use is linked to leading causes of death such as cancer and cardiovascular disease which are high in Warren Co.

# Social and Mental Health

## Adult Mental Health



(Source: MICA; Community Data Profiles - Missouri Department of Health and Senior Services, 1994-2012)

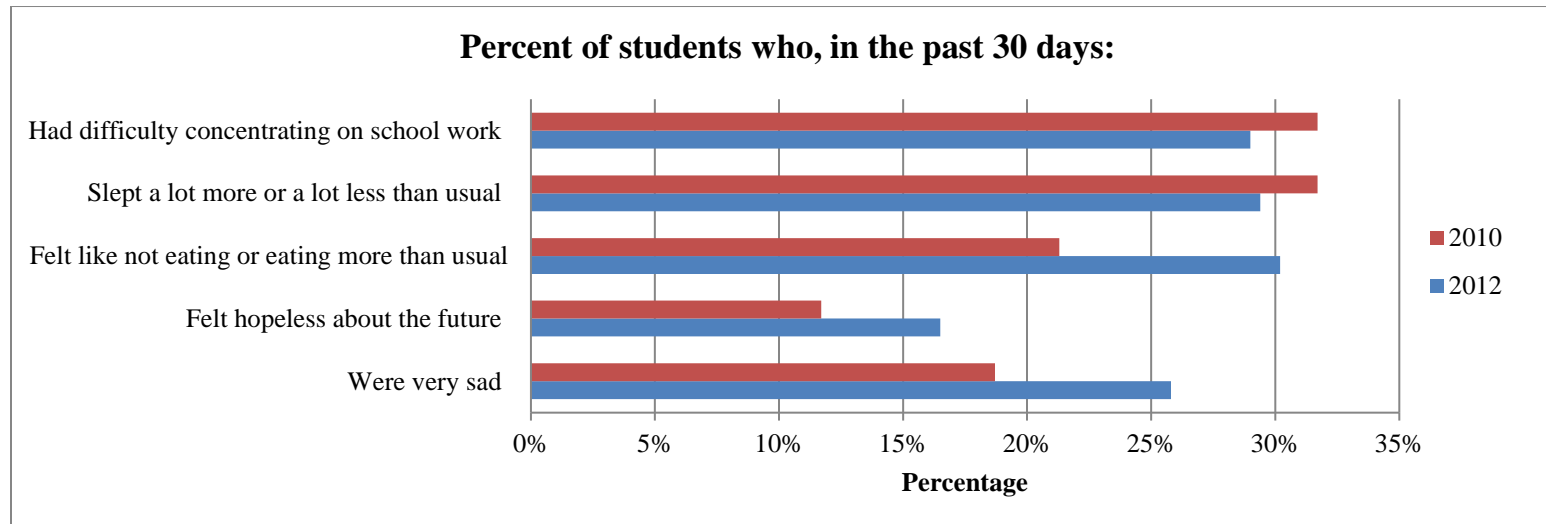
According to MICA, the Warren County rate trend shows a statistically significant increase for inpatient hospitalizations with a primary diagnosis for affective disorders which include affective psychosis, depression, and certain types of affective personality disorders (2015). These rates are per year per 10,000 population and are age-adjusted to the U.S. 2000 standard population. Warren Co consistently has higher rates for inpatient hospitalization for affective disorders compared to Missouri from 1994-2012.

In state fiscal year 2013, 548 Warren County residents received treatment for serious mental illness at publicly-funded facilities (Missouri Division of Behavioral Health and the Substance Abuse and Mental Health Services Administration, 2014).

In Warren County in 2014 the ratio of mental health care providers is 4,679:1, compared to 947:1 for the Missouri and 80:1 for Audrain County. With higher rates of affective disorder, more mental health care providers in Warren Co would be beneficial.



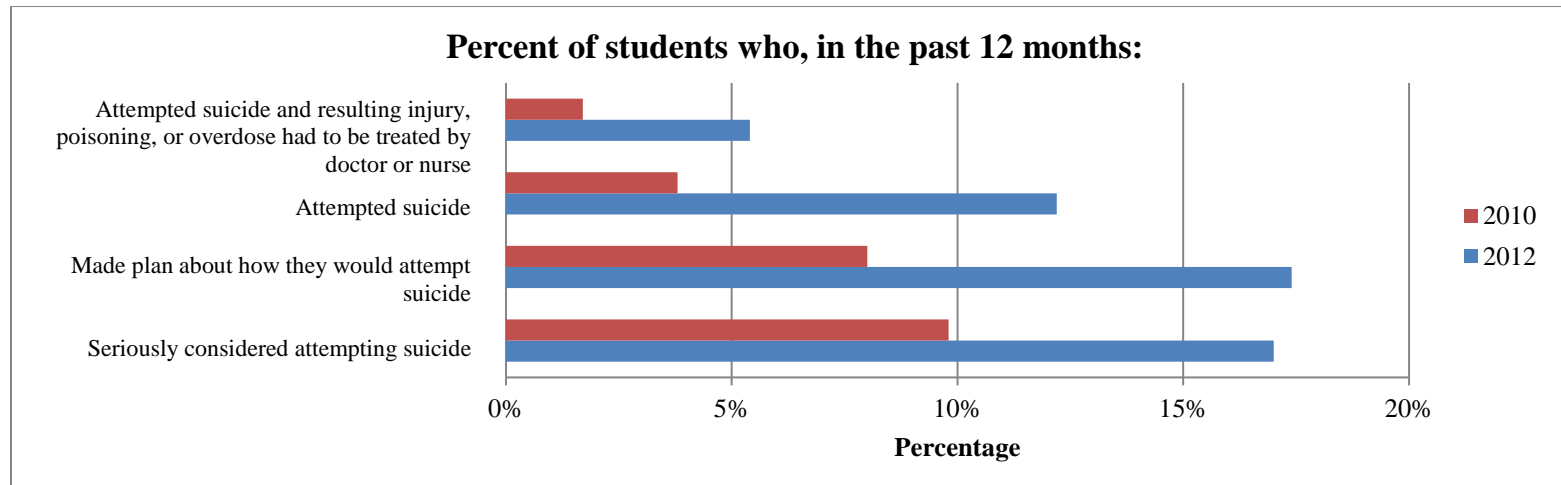
## Youth Mental Health



(Source: Missouri Student Survey from the 2010-2014 Status Report on Missouri's Substance and Mental Health Problems, Missouri Institute of Mental Health)

In Warren Co, the percent of students who, in the past 30 days, (1) felt like not eating or eating more than usual, (2) felt hopeless about the future, and (3) were very sad has increased from 2010 to 2012. Decreases were seen in (1) difficulty concentrating on schoolwork and (2) slept a lot more or a lot less than usual. However, while they did decrease, they are still in the top 2 highest self-reported indicators for mental health.

### Youth Mental Health (Continued)



(Source: Missouri Student Survey from the 2010-2014 Status Report on Missouri’s Substance and Mental Health Problems, Missouri Institute of Mental Health)

Of the 4 categories mentioned above, all but “seriously considered attempting suicide” more than doubled from 2010 to 2012. However, it still saw an increase of nearly 10% to 17%. The percent of students who attempted suicide saw slightly more than a threefold increase over the 2 year period.

In 2009, there were 88 children receiving public mental health services by 2013, that number was 206 (Missouri Kids Count, 2014).

# Maternal and Child Health

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## *Low Birth Weight*

Warren County saw a decrease in low birthweight infants from 2004-2008 to 2009-2013, 6.8% and 5.9%, respectively (Missouri Kids Count, 2014). In 2014 the percentage of live births with a low birth weight was 6.6%. Overall, in Missouri in the same year it was 8.1% with a range of 5.1-14% suggesting that Warren Co is on the lower end of the spectrum (County Health Rankings, 2015).

## *Infant and Child Mortality*

Warren County saw an increase in the infant mortality rate per 1,000 from 2004-2008 to 2009-2013, 4.5 and 5.3, respectively (Missouri Kids Count, 2014). However, this is below the state rate of 6.6. Warren County is ranked 35 in Missouri counties for infant mortality.

In 2014, the child mortality rate in Warren County was 59.1. The overall in Missouri was 64.7 with a range of 28.9-172.5 showing Warren County to be on the lowered end of the spectrum (County Health Rankings, 2015).

## Indicators for Child Health & Well-Being for Warren Co (2009 & 2013)

Economic Well-Being	2009	2013	Change
<b>Children in poverty</b>	1939	1926*	↓
<b>Percent children in poverty</b>	24.45%	24.4%*	↓
<b>Children under 6 in poverty</b>	718	471*	↓
<b>Percent children under 6 in poverty</b>	27.16%	18.5%*	↓
<b>Children in single-parent families</b>	1942	2650*	↑
<b>Percent children in single-parent families</b>	23.92%	33.1%*	↑
<b>Children receiving child care assistance</b>	58.3	22.8	↓
<b>Percent children receiving cash assistance</b>	4.6%	5.1%	↑
<b>Percent children receiving SNAP (food stamps)</b>	34.6%	37.4%	↑
<b>Health</b>			
<b>Children eligible for MO HealthNet for Kids</b>	2600	2866	↑
<b>Percent children eligible for MO HealthNet for Kids</b>	32.18%	35.70%	↑
<b>Children receiving public mental health services</b>	88	206	↑
<b>Education</b>			
<b>English language learners</b>	87	116	↑
<b>Licensed child care capacity</b>	236	452	↑
<b>Licensed child care capacity, per 1,000</b>	29.21	56.36	↑
<b>Accredited child care facilities</b>	0	0	↔
<b>Juvenile law violation referrals, ages 10-17</b>	160	43	↓
<b>Juvenile law violation referrals, ages 10-17, per 1,000</b>	44.79	12	↓

(Source: Missouri Kids Count, 2014) \* 2012 data

While the percent of children in poverty has decreased from 2009 to 2012, the percent of children in single-parent families, the percent of children receiving cash assistance, and the percent of children receiving SNAP have all increased from 2009 to 2013.

In terms of health, Warren Co has seen an increase in children eligible for MO HealthNet for Kids and the number of children receiving public mental health services from 2009 to 2013.

In terms of education, Warren Co has seen an increase in English language learners, and child care capacity over the four year period. However, there are still no accredited child care facilities. Comparing 2009 to 2013, they saw a 73% decrease in the number of juvenile law violation referrals for children age 10-17.

## Outcome Measures for Child Health & Well-Being for Warren Co (2009 & 2013)

Economic Well-Being	2009	2013	Change
<b>Students enrolled in free/reduced lunch</b>	1875	2506	↑
<b>Percent students enrolled in free/reduced lunch</b>	42.66%	55.30%	↑
<b>Births to mothers without high school diploma</b>	82	61	↓
<b>Percent births to mothers without high school diploma</b>	18.30%	15.30%	↓
<b>Child Protection &amp; Safety</b>			
<b>Child abuse/neglect and family assessments</b>	301	410	↑
<b>Child abuse/neglect and family assessments, per 1,000</b>	37.25	51.1	↑
<b>Child deaths, ages 1-14, per 100,000</b>	25.7+	14.9*	↓
<b>Out-of-home placement entries</b>	27	35	↑
<b>Out-of-home placement entries, per 1,000</b>	3.34	4.4	↑
<b>Violent deaths, ages 15-19</b>	3+	11*	↑
<b>Violent death rate, ages 15-19</b>	28.6+	105.6*	↑
<b>Education</b>			
<b>Annual high school dropouts</b>	48	18	↓
<b>Annual high school dropout rate</b>	3.3	1.3	↓
<b>Births to teens, ages 15-19</b>	60	31	↓
<b>Births to teens, ages 15-19, per 1,000</b>	56.34	32.5	↓

(Source: Missouri Kids Count, 2014) +2004-2008 Data; \*2009-2013 Data

Warren Co saw a decrease from 2009-2013 in births to mothers without high school diploma, birth to teens age 15-19, and annual high school dropouts. Birth to teens saw nearly a 50% reduction while the annual high school dropout rate decreased by more than 60%.

However, in the same four year period, there was an increase in students enrolled in free/reduced lunch, child abuse/neglect and family assessments, out-of-home placement entries, and violent deaths age 15-19. For example, violent deaths age 15-19 saw a nearly fourfold increase between 2004-2008 data and 2009-2013 data.

# Death, Illness, and Injury

## Leading Causes of Death

### Top 5 Causes of Deaths in Warren County in 2013

	Number	Rate (per 100,000)
<b>1. Cancer</b>	68	171.1
<b>2. Heart disease</b>	51	132.1
<b>3. Other diseases (residual) <sup>1</sup></b>	31	81.6
<b>4. All other accidents and adverse effects <sup>2</sup></b>	22	69.3
<b>5. Chronic lower respiratory diseases</b>	22	54.7

(Source: MICA Death, 2013)

Age adjustment uses 2000 standard population

<sup>1</sup> includes: neoplasms, anemias, Parkinson's disease, symptoms/ill-defined conditions, and all other diseases

<sup>2</sup> includes: falls, accidental discharge of firearms, accidental poisoning, and other nontransport accidents

### Top 5 Causes of Deaths in Warren County in 2009

	Number	Rate (Per 100,000)
<b>1. Heart disease</b>	78	232.0
<b>2. Cancer</b>	68	179.9
<b>3. All other accidents and adverse effects<sup>2</sup></b>	19	60.5 *
<b>4. Other diseases (residual)<sup>1</sup></b>	18	55.1 *
<b>5. Motor vehicle accidents</b>	13	43.7 *

(Source: MICA Death, 2013)

Age adjustment uses 2000 standard population | \* Rates are unstable: less than 20

<sup>1</sup> includes: neoplasms, anemias, Parkinson's disease, symptoms/ill-defined conditions, and all other diseases

<sup>2</sup> includes: falls, accidental discharge of firearms, accidental poisoning, and other nontransport accidents

Comparing 2009 to 2013, four of the top 5 causes of death are the same, with the exception of motor vehicle accidents being replaced by chronic lower respiratory disease. While cancer had similar rates both years, the rate of heart disease increased over 40%, causing it to be the number one cause of death instead of cancer in 2013. While all other accidents and adverse effects, and other diseases made the list both years, the rates increased for 2013. For example, the number of other diseases, which includes falls, accidental discharge of firearms, accidental poisoning, and other nontransport accident, saw an increase of over 70% from 2009 to 2013.

## Motor Vehicle Deaths

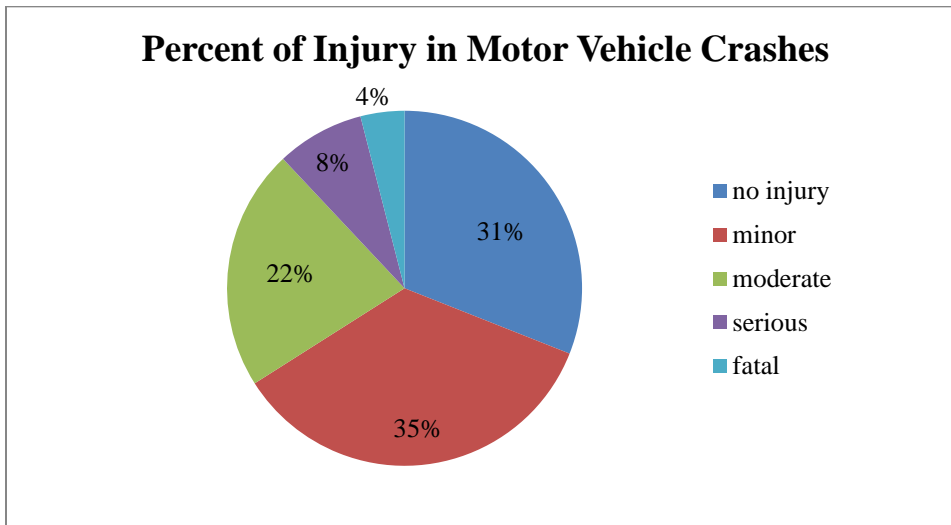
### Death Due to Motor Vehicle Crashes 2007-2011

	Total Population	Avg Annual Deaths, 2007-2011	Crude Death Rate (Per 100,000 Pop.)	Age-Adjusted Death Rate (Per 100,000 Pop.)
Warren Co, MO	32,095	5	15.58	16.56
Missouri	5,954,446	613	10.3	10.19
United States	306,486,831	23,559	7.69	7.55

(Source: Community Commons, 2015) 2007-2011 Centers for Disease Control and Prevention, [National Vital Statistics System](#). Accessed via [CDC WONDER](#). Centers for Disease Control and Prevention, [Wide-Ranging Online Data for Epidemiologic Research](#). Source geography: County

This reports the rate of death due to motor vehicle crashes per 100,000 population, which include collisions with another motor vehicle, a non-motorist, a fixed object, and a non-fixed object, an overturn, and any other non-collision. During 2007-2011, Warren Co had a higher age-adjusted death rate (16.56) compared to Missouri (10.19) and the US (7.55).

Between 2010 and 2014 Warren County averaged 25 motor vehicle deaths. Their average is higher than Audrain County (16) and Missouri (18.6) (County Health Rankings, 2015).



(Source: Missouri State Highway Patrol, 2015)

Between April 2014 and April 2015 there were 122 people involved in 60 crashes in Warren County (Missouri State Highway Patrol, 2015). The pie chart breaks down the 122 people's injuries into a percent based on no injury, minor, moderate, serious, and fatal. Over 60% of motor vehicles crashes resulted in either no injury or minor, while less than 15% were serious or fatal.

Between 2008-2010, Warren County only reported 1 pedestrian killed by a motor vehicle (Community Commons, 2015).

## Cancer

The rates of various types of cancer are relevant because cancer is one of the leading causes of death in Warren Co and it is important to identify cancers separately to better target interventions. Data from the following 4 tables was obtained from the National Cancer Institute courtesy Community Commons (2007-2011).

\*Adjusted to 2000 U.S. standard population age groups

### Female Breast Cancer Warren Co 2007-2011

	<b>Female Population</b>	<b>Average New Cases per Year</b>	<b>Annual Incidence Rate (Per 100,000 Pop.)*</b>
<b>Warren Co, MO</b>	16,104	23	122.9
<b>Missouri</b>	3,040,527	4,363	122.6
<b>United States</b>	155863552	216,052	122.7
<b>Healthy People 2020 Target</b>			<= 40.9

In 2007-2011 in Warren Co the age adjusted incidence rate (cases per 100,000 population per year) of females with breast cancer was 122.9. While this is similar to the rates in Missouri and the US, it's over 5 times higher than Healthy People 2020 Target of 40.9.

### Colon and Rectum Cancer Warren Co 2007-2011

	<b>Total Population</b>	<b>Average New Cases per Year</b>	<b>Annual Incidence Rate (Per 100,000 Pop.)*</b>
<b>Warren Co, MO</b>	32,104	15	42.9
<b>Missouri</b>	5,955,802	3,048	45.6
<b>United States</b>	306603776	142,173	43.3
<b>Healthy People 2020 Target</b>			<= 38.7

The age adjusted incidence rate (cases per 100,000 population per year) of colon and rectum cancer in Warren Co from 2007-2011 was 42.9. Once again, while this number is similar to Missouri (45.6) and the US (43.3), it is above the Healthy People 2020 Target (38.7).

### Lung Cancer Warren Co 2007-2011

	<b>Total Population</b>	<b>Average New Cases per Year</b>	<b>Annual Incidence Rate (Per 100,000 Pop.)*</b>
<b>Warren Co, MO</b>	32,104	28	73.9
<b>Missouri</b>	5,955,802	5,128	76.1
<b>United States</b>	306603776	212,768	64.9

The age adjusted incidence rate (cases per 100,000 population per year) of lung cancer in Warren Co from 2007-2011 was 73.9. This is less than Missouri (76.1), but higher than the US (64.9).



## Cancer (Continued)

### Male Prostate Cancer Warren Co 2007-2011

	Male Population	Average New Cases per Year	Annual Incidence Rate (Per 100,000 Pop.)*
<b>Warren County, MO</b>	16,000	24	123.9
<b>Missouri</b>	2,915,275	3,884	121.8
<b>United States</b>	150,740,224	220,000	142.3

The age adjusted incidence rate (cases per 100,000 population per year) of males with prostate cancer in Warren Co from 2007-2011 was 123.9. This is slightly higher than Missouri (121.8), but lower than the US (142.3).

### Total Numbers and Rates for Invasive Cancer during 2010-2012 in Warren Co

Site	Number	Rate
<b>1. Lung and bronchus</b>	101	83.8
<b>2. Prostate</b>	83	64.6
<b>3. Breast</b>	68	61.4
<b>4. Colon, rectum and rectosigmoid</b>	50	44.0
<b>5. Corpus and Uterus, NOS</b>	18	15.3*
<b>6. Urinary bladder</b>	17	14.1*
<b>Total for Selection</b>	341	288.6

(Source: MICA, 2015) \* Rates are unstable, less than 20

### Total Numbers and Rates for the Top Cancer Causing Deaths from 2009-2013

Cause of Death	Number	Rate
<b>1. Malignant neoplasms of trachea/bronchus/lung</b>	111	56.8
<b>2. All other and unspecified malignant neoplasms</b>	41	22.0
<b>3. Malignant neoplasms of pancreas</b>	27	14.1
<b>4. Malignant neoplasms of colon/rectum/anus</b>	25	13.1
<b>5. Malignant neoplasms of breast</b>	19	10.2 *
<b>6. Malignant neoplasms of liver and intrahepatic bile ducts</b>	15	7.7 *
<b>7. Malignant neoplasms of prostate</b>	15	8.2 *
<b>8. Leukemia</b>	13	6.9 *

(Source: MICA, 2015). \* Rates are unstable; number less than 20

Lung and bronchus cancer was the top site for cancer as well as the leading cause of cancer deaths in Warren Co. While prostate cancer the second most common type of cancer, it is 7<sup>th</sup> on the list for cause of death. Similarly, breast cancer is the 3<sup>rd</sup> most common type of cancer, but 5<sup>th</sup> on the list for cause of death. Finally, colon/rectum cancer is 5<sup>th</sup> on both the site and cause of death lists. Malignant neoplasms of the trachea, bronchus, or lung was consistently the leading cause of death from cancer from 2009 to 2013 in Warren Co. (MICA, 2013).

## Homicide and Suicide

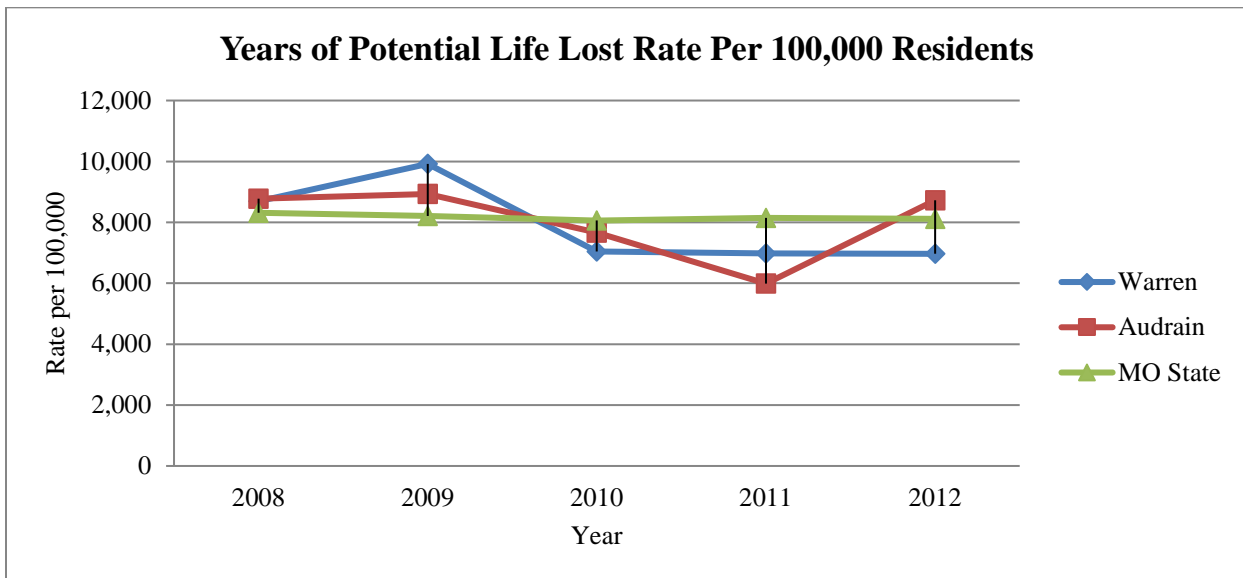
Number of Suicides and Homicides in Warren County from 2009-2013

	2009	2010	2011	2012	2013
<b>Suicide</b>	3	4	0	8	5
<b>Homicide</b>	3	0	2	1	1

(Source: MICA, 2015) \*Rate is unstable; numerator less than 20

The age-adjusted rate of death due to intentional self-harm (suicide) per 100,000 population for Warren County is 14.25. This rate is above Missouri (14.01), the US (11.82), and Healthy People 2020 (10.2) (Source: Community Commons, 2011.)

## Years of Potential Life Lost



(Source: MICA, 2013)

The years of potential life lost (YPLL) calculation estimates the number of life years lost to premature deaths. Similar to life expectancy, YPLL is a good measure of the overall health of an area. Like most federal and state agencies, Missouri uses age 75 as the benchmark for YPLL calculations. Unlike many other health statistics, YPLL places additional emphasis on deaths of younger residents. The YPLL statistics provided on MICA were calculated using data available in the Death MICA and the Population MICA as of March 27, 2014. These resources report aggregated totals rather than individual records.

Warren Co is currently seeing their lowest rate of YPLL since 2008 and it has been declining ever since 2009. From 2008 to 2012, Warren Co has a slightly lower YPLL average (7,921), when compared to Audrain Co (8,017) and Missouri (8,168).

# Communicable Diseases and Conditions

## *Tuberculosis*

Warren Co had 0 cases of tuberculosis from 2010-2014 (MICA, 2015).

## *Rabies*

Warren Co had 0 cases of animal rabies from 2009-2014 (Missouri Department of Health and Senior Services, 2015).

## *Influenza*

### Case Counts for Influenza in Warren Co 2009-2015; Confirmed and Probable

	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015*
<b>Influenza</b>	188	106	117	198	91	285

(Source: Missouri Department of Health and Senior Services, Bureau of Reportable Disease Informatics, Missouri Health Surveillance Information System 2015 (WebSurv))

\* Data for the 2014-2015 influenza season are incomplete and provisional. The figure includes data reported from Week 40 in 2014 through Week 17 in 2015.

Influenza seasons cross two calendar years beginning in the Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report (MMWR) Week 40 of the first year and ending in the CDC MMWR Week 20 of the second year.

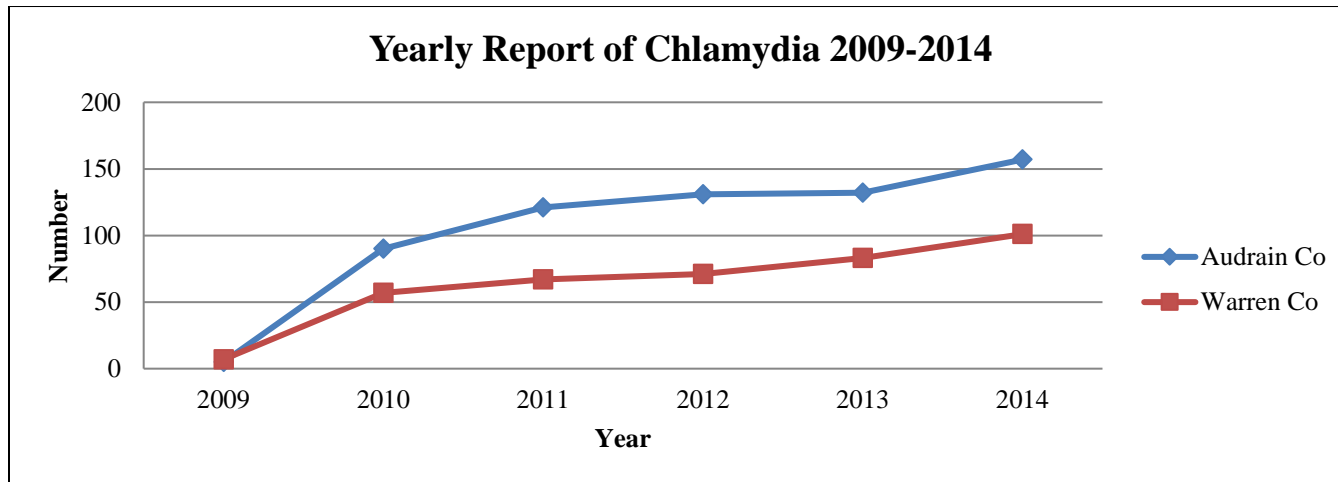
The number of cases of influenza in Warren Co has fluctuated from 2009-2015. Even with the 2014-2015 season not complete, Warren Co has already seen the highest case count than they've had in the past 5 years. The DHSS sites two reasons for the increase in cases (1) the strain of the influenza virus was different than what had been prepared for meaning the vaccine was not as effective (2) the H3 strain was circulating and they tend to see more cases when it is present.

## *Immunizations - Vaccine Preventable Outbreaks*

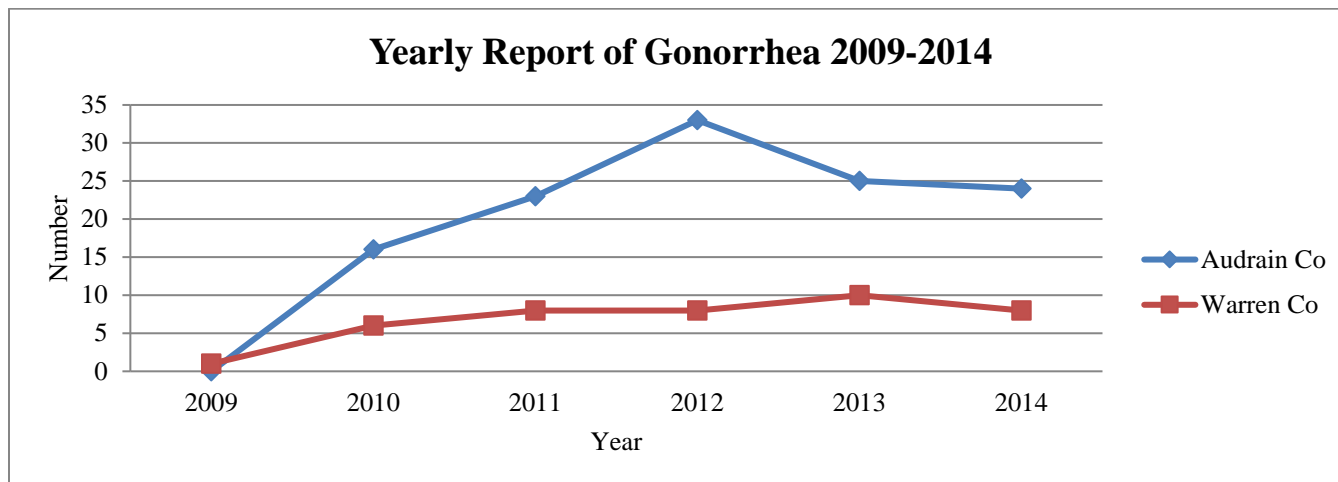
According to MICA Preventable Hospitalization records, in both 2009 and 2010 Warren County reported 0 preventable hospitalizations for immunization preventable diseases (2013).

For DTAP/DT/TD, Tdap, Polio, MMR, and Hepatitis B, the percentage of students fully immunized in Warren Co was 98.9% or higher (DHSS, 2014). Varicella was the exception with 96.2% of students fully immunized. Most of the students who were not fully immunized were exempt for medical or religious beliefs; only MMR and Varicella had a percentage of non-compliance, .5% and .3% respectively (DHSS, 2014).

## Sexually Transmitted Disease

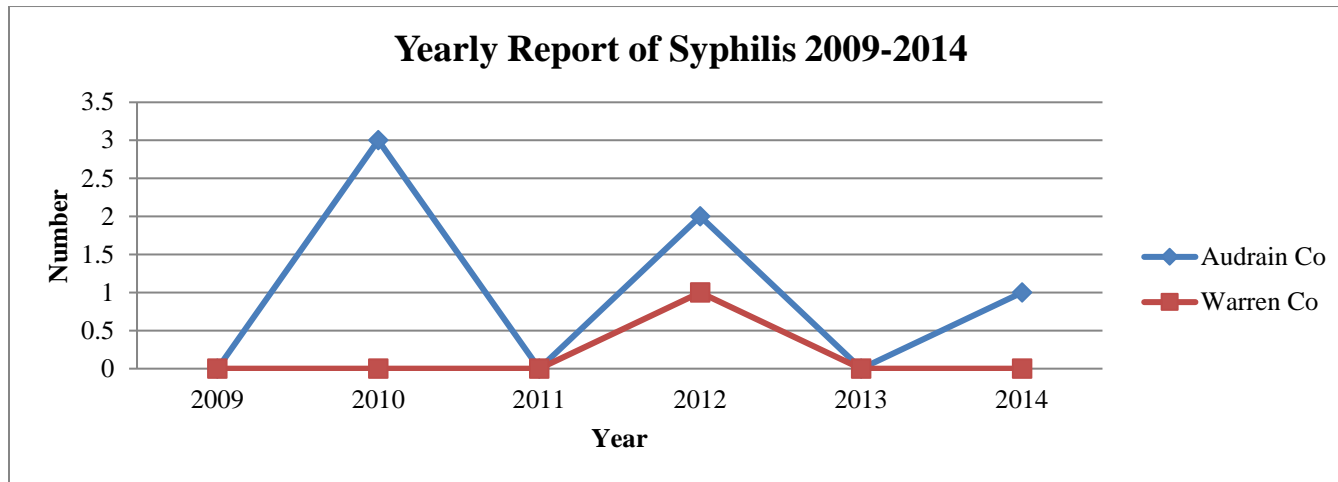


(Source: MICA, 2015)



(Source: MICA, 2015)

*Sexually Transmitted Disease (Continued)*



(Source: MICA, 2015)

Sexually transmitted diseases, especially Chlamydia, are on the rise for Warren Co. In 2009, Warren Co had 7 reported cases of Chlamydia, but in 2014, they had 101 cases. Gonorrhea has also risen for Warren Co, but at a much slower rate. In 2009, they had 1 case, but in 2014, they had 8. Syphilis isn't much of a concern with only 1 case in the last 5 years. However, compared to Audrain Co, Warren Co.'s cases are consistently lower.

# Health Priorities

Prioritization of Selected Risk Factors in Warren County	Prioritization of Selected Diseases and Conditions in Warren County
<ol style="list-style-type: none"> <li>1. Mother overweight</li> <li>2. Obese (BMI &gt; 30)</li> <li>3. No exercise</li> <li>4. Smoking</li> <li>5. No cervical cancer screening age 18 &amp; older</li> <li>6. No mammography age 40 and older</li> <li>7. High blood pressure</li> <li>8. High cholesterol age 35 and older</li> <li>9. Out-of-wedlock births</li> <li>10. Smoking during pregnancy</li> </ol>	<ol style="list-style-type: none"> <li>1. Heart disease</li> <li>2. Chronic obstructive pulmonary disease</li> <li>3. Motor vehicle accidents</li> <li>4. Alcohol and substance related</li> <li>5. Diabetes</li> <li>6. Falls</li> <li>7. Lung cancer</li> <li>8. Stroke/other cerebrovascular diseases</li> <li>9. Suicide and self-inflicted injury</li> <li>10. Arthritis/lupus</li> </ol>

(Source: MICA, 2015)

Based on the data gathered in this handbook, speaking with community members and Warren Co Health Department staff, and the above prioritization of risk factors and diseases, the following are the 5 priority health concerns for Warren County, Missouri. The following health priorities are in the order they appeared in this handbook. This order does not rank based on top priority.

## Top 5 Health Priorities for Warren Co

1. Access to Health Care
2. Drug Use and Abuse
  - a. Heroin
  - b. Tobacco Use
3. Obesity
4. Youth Mental Health
  - a. Suicide
5. Sexually Transmitted Disease
  - a. Chlamydia
  - b. Gonorrhea

## **Access to Health Care**

Access to Health Care is a concern for Warren Co because as of March 2015, 100% of Warren County lives in a Health Professional Shortage Area (HPSA) (Community Commons). A HPSA is defined as having a shortage of primary medical care, dental or mental health professionals. In 2014, the ratio of the population to primary care physicians was 6,503:1 and the ratio of the population to dentists was 5,459:1 (County Health Rankings, 2015).

In order to receive health care, Warren Co residents generally travel to Hermann, MO or Washington, MO (both up to 30 minute drive) or for more serious conditions, Columbia, MO or St. Louis, MO (both up to an hour drive). This is relevant because a shortage of health professionals contributes to access and health status issues. Many of their preventable hospitalizations or emergency room visits could have been avoided with regular check-ups with a primary care doctor or a local urgent care provider. For example, while the rates were unstable, hospitalizations for dental care rose from .4 to 1.7 from 2009 to 2010. With regular dental checkups, this preventable hospitalization could be avoided. Finally, with cancer as a leading cause of death, having a primary care doctor in Warren Co could increase the number of check-ups and screenings which might help decrease the rates and deaths from cancer with early detection.

## **Drug Use and Abuse**

A current concern for Warren Co officials and residents is the rise in heroin use and overdose. Since 2014 there have been 3 overdose deaths in 3 months. A group hopes to acquire a building downtown to establish a new recreation center called Jordan's Place, in memory of a student who overdosed on heroin. The recreation center, which would target 14-19 year olds, would have support groups and counseling for drugs, suicide, bullying, and obesity. The goal is to provide students with a safe place to find the help they need and socialize with other students. Methamphetamines are also a concern, predominately in rural areas. Additionally, the Warren County Alcohol/Drug Reduction System (W.A.R.S.) began in 2015 to combat all drug use. Overall, Warren Co saw an 80% increase in drug arrests from 2009 to 2012.

Tobacco use is another health concern for Warren Co. Nearly 25% of their adult population that smokes cigarettes and over 70% of the adult population has smoked 100 or more cigarettes. Compared to Missouri and the US, Warren Co both of these statistics are higher than Missouri and the US. However, over 50% of smokers have attempted to quit in the past 12 months. Smoking rates are relevant because tobacco use is linked to leading causes of death such as cancer and cardiovascular disease which are high in Warren Co.

## **Obesity**

Obesity is a nationwide problem and Warren Co is not exempt from this epidemic. From 2008-2012 Warren Co consistently had a higher percentage of adults who reported no leisure time physical activity when compared to Missouri and the US. Part of this could be due to the fact that in 2014, less than 30% of their population had adequate access to locations for physical activity.

For comparison, in the same year Audrain Co received a 71% (County Health Rankings, 2014). Further, between 2011 and 2012, nearly 32% of adults aged 18 and older self-reported they were overweight, and between 2004 and 2013, the percent of obese adults in Warren Co averaged 30%. The Healthy People 2020 target for obese adults in the United States is 30.6% so Warren County is close to meeting this goal (Healthy People 2020).

Warren Co is taking steps to help reduce obesity and increase physical activity. They are offering individual and group exercises classes, nutrition and cooking classes, worksite wellness, and recently dug ground on a community garden to increase access to fresh fruits and vegetables. Their Ready Set Fit Program has had 34 people, they've had 22 businesses participate in worksite wellness, and their group exercise classes saw nearly 2,000 people in a four month period.

### **Youth Mental Health**

In regards to thoughts and attempts of suicide for youth, the percent of students who, in the past 12 months, (1) Attempted suicide and resulting injury, poisoning, or overdose had to be treated by doctor or nurse, (2) Attempted suicide, and (3) Made plan about how they would attempt suicide more than doubled from 2010 to 2012. The percent of students who attempted suicide saw more than a threefold increase over the 2 year period. Seriously considered attempting suicide was the only indicator not to double, but it still saw an increase of nearly 10% to 17%.

In Warren Co, the percent of students who, in the past 30 days, (1) felt like not eating or eating more than usual, (2) felt hopeless about the future, and (3) were very sad increased from 2010 to 2012. While decreases were seen in (1) difficulty concentrating on schoolwork and (2) slept a lot more or a lot less than usual, they are still the top 2 highest self-reported indicators for poor mental health.

Additionally, in 2009, there were 88 children receiving public mental health services and by 2013, it had increased to 206 (Missouri Kids Count, 2014). Building Jordan's Place could help decrease these numbers as they plan to provide support and counseling for teenagers for suicide and bullying, as well as other issues.

### **Sexually Transmitted Diseases**

Sexually transmitted diseases, especially Chlamydia, are on the rise for Warren Co. In 2009, Warren Co had 7 reported cases of Chlamydia, but in 2014, there were 101 cases. Gonorrhea has also risen for Warren Co, but at a much slower rate. In 2009, they had 1 case, but in 2014, there were 8. Syphilis isn't much of a concern with only 1 case in the last 5 years. While Warren Co is seeing increases in two of the three aforementioned STDs, compared to Audrain Co, Warren Co.'s cases are consistently lower.



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