



Western Missouri
MEDICAL CENTER

Community Health Needs Assessment

2014 - 2016



JOHNSON COUNTY
COMMUNITY HEALTH SERVICES
Home Health • Public Health • Hospice

Acknowledgements

This Community Health Needs Assessment was undertaken by Western Missouri Medical Center, located in Warrensburg, Missouri. The project utilized qualitative and quantitative sources of information. Qualitative input was derived from three focus group sessions held at Western Missouri Medical Center and attended by representatives of community organizations and agencies. These participants and contributors are identified in the *Community Participants* section. All are thanked for their insight and generous donation of time and energy.

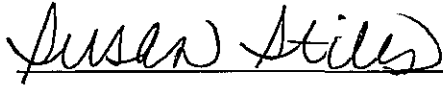
The authors relied on quantitative information from existing sources of data by published, credible sources. Namely, the Robert Wood Johnson Foundation, Claritas, the United States Census Bureau, the United States Center for Health Statistics, and the United States Centers for Disease Control, and other federal agencies.

Navigant Consulting, Inc., a Chicago-based strategic consulting company, authored the report at the commission of Western Missouri Medical Center. Navigant consultants also facilitated the focus group sessions for community participation.

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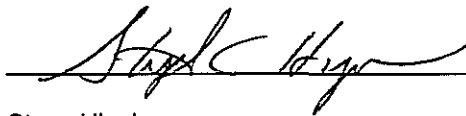
This document is a Community Health Needs Assessment undertaken by Western Missouri Medical Center in fulfillment of section 501 (r) (3) (B) for the taxable years 2014 to 2016.

This document was commissioned by the management of Western Missouri Medical Center.



Susan Stiles
Chief Executive Officer
Western Missouri Medical Center

This document was approved by the Board of Trustees of Western Missouri Medical Center on September 27, 2013.



Steve Higgins
Chairman of the Board
Western Missouri Medical Center

Table of Contents

Executive Summary..... 5

Community Participants..... 6

Community Served 8

Demographic Analysis 10

Inventory of Community Health Issues 21

Chronic Disease Profile 52

Identification of High Priority Community Health Needs 56

Get Fit Action Plan..... 60

Get Help Action Plan 62

Get Covered Action Plan 63

Primary Care Provider Action Plan 64

Appendices and Supplemental Material (not included)..... 65

Executive Summary

Western Missouri Medical Center, in collaboration with community members, agencies, and municipal entities, conducting a Community Health Needs Assessment in the first half of 2013. This report is the product of these meetings, documenting the quantitative information reviewed, the qualitative discussions and prioritization of issues, and culminating in the Action Plans and steps to be undertaken to improve the health Johnson County.

Community input was obtained from key opinion leaders including the Health Department, in several facilitated sessions. These sessions allowed each participant to discuss their particular area of emphasis and concern regarding the community's health. Information from the Robert Wood Johnson Foundation was presented and discussed. A prioritization exercise in which all community participants rank-ordered their top-five community health topics of concern was used to establish the "High Priority" issues facing the residents of Johnson County.

The list of high-priority health issues had several related topics. These topics were grouped into four Action Plans for implementation:

Get Fit

Addressing the community health issues of *obesity, cardiovascular health, and physical inactivity*, the Get Fit action plan will coordinate community resources to promote an activity lifestyle, decrease the number of obese individuals particularly children, and decrease cardiovascular disease.

Get Covered

Addressing the community health issue of inadequate access to care due to *lack of insurance* coverage, the Get Covered action plan will rely on federal and state of Missouri initiated programs: the expansion of Medicaid, and the creation of Health Insurance Exchanges.

Get Help

Addressing the community health issues of *inadequate social support* and the *availability of mental health providers*, the Get Help action plan will initiate in 2015.

Physician Recruitment

Addressing the community health issue of *access to primary care physicians*, Western Missouri Medical Center is continuously engaging in recruitment activities to bring high quality physicians to the Warrensburg and Johnson County communities.

The following community health issues were reviewed but felt to require resources and expertise beyond the scope of Western Missouri Medical Center: *Access to dental health professions* by low income residents; and the *non-medical needs of senior citizens*.

Community Participants

Western Missouri Medical Center hosted three input sessions on May 23rd and June 27th, 2013 with attendance by representatives of various community agencies, employers, and organizations. The individuals in attendance, their organization, and their focus areas for community health or vulnerable populations were as follows:

Alissa Karnes
Vice President, Northwest Operations
Pathways Community Health
1278 West US Highway 40
Odessa, MO 64076
Focus Area: Mental and Behavioral Health

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106 W. Young, PO Box 1078
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Focus Area: Senior Services

Shannon Ramey
Assistant City Manager
City of Warrensburg
102 S. Holden Street
Warrensburg, MO 64093
Focus Area: General Civic Participation

Asher Snook, Jr.
Lieutenant
Warrensburg Police Department
102 S. Holden Street
Warrensburg, MO 64093
Focus Area: Law Enforcement

Dr. Scott Patrick
Superintendent of Schools
Warrensburg R-VI School District
438 East Market
Warrensburg, MO 64093
Focus Area: Child Services, Juvenile Health and
Wellness, Nutrition

Dr. Kellie Griffith, M.D.
Psychiatrist, 509th Medical Group
Whiteman Air Force Base
331 Sijan Avenue
Whiteman AFB, MO 65305
Focus Area: Military Personal, Mental Health

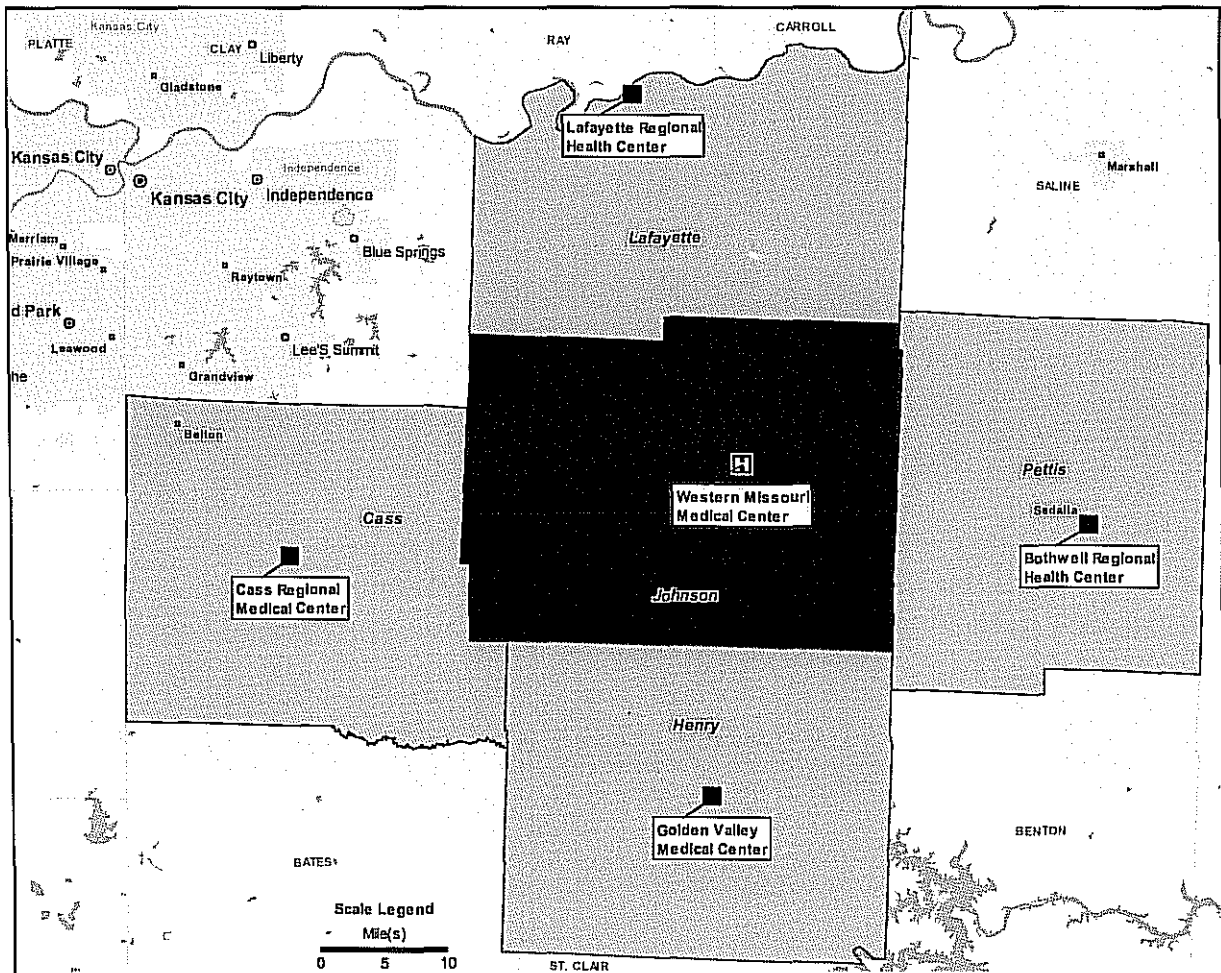
Dr. Shari Bax
Vice Provost, Student Experience and Engagement
University of Central Missouri
PO Box 800
Warrensburg, MO 64093
Focus Area: Student Population

Community Served

Western Missouri Medical Center ("WMMC") serves the community of Johnson County, Missouri. This definition is supported by three factors: statistical analysis of patient origin; the hospital district as established by the State of Missouri, and the availability of secondary research data.

Based on the billing address of patients treated by WMMC in Federal Fiscal 2012 (10/1/2011 through 9/30/2012), 74% of WMMC inpatients resided in Johnson County (2,530 of 3,398). For the same period, 80% of WMMC's Emergency Department patients lived in Johnson County (10,995 of 13,802) and 77% of Outpatient Ancillary Services were delivered to residents of Johnson County (16,849 of 21,931).

The 20% of WMMC patients that live outside Johnson County are not concentrated and are distributed in multiple adjacent counties. The market share of WMMC in these other counties is substantially lower than in its home county. Each of the adjacent counties has at least one hospital serving its community.



Hospital Activity				
Federal Fiscal Year 2012: October 1, 2011 to September 30, 2012				
	Inpatient Discharges	Emergency Department Visits	Outpatient Ancillary Services	Facilities
Cass County	Total: 12,140 WMMC: 2 WMMC Share: <1%	Total: 37,758 WMMC: 46 WMMC Share: <1%	Total: 55,248 WMMC: 28 WMMC Share: <1%	Served by multiple hospitals including Cass Regional, Harrisonville
Henry County	Total: 4,351 WMMC: 63 WMMC Share: 1%	Total: 10,717 WMMC: 113 WMMC Share: 1%	Total: 66,101 WMMC: 478 WMMC Share: 1%	Golden Valley Regional Medical Center, Clinton
Johnson County	Total: 6,013 WMMC: 2,525 WMMC Share: 42%	Total: 16,095 WMMC: 10,995 WMMC Share: 68%	Total: 30,762 WMMC: 16,849 WMMC Share: 55 %	Served by Western Missouri Medical Center, Warrensburg
Lafayette County	Total: 5,082 WMMC: 380 WMMC Share: 7%	Total: 15,677 WMMC: 776 WMMC Share: 5%	Total: 21,039 WMMC: 2,189 WMMC Share: 10%	Lafayette Regional Medical Center, Lexington
Pettis County	Total: 6,365 WMMC: 273 WMMC Share: 4%	Total: 17,427 WMMC: 689 WMMC Share: 4%	Total: 25,199 WMMC: 1,470 WMMC Share: 6%	Bothwell Regional Medical Center, Sedalia

Given the low penetration levels by Western Missouri Medical Center in counties other than Johnson, and given the presence of hospitals in these counties that will be conducting (or have conducted) Community Health Needs Assessments, Western Missouri Medical Center is focusing this report on the residents of Johnson County. Nearly all community health data and research findings are analyzed and presented at a County level. Analysis of this data at a more granular level presents multiple statistical problems due to small sample sizes.

Of jurisdictional relevance is the fact that Western Missouri Medical Center is a hospital-district facility as defined by Missouri statute. The hospital district is Johnson County, Missouri. A portion of Johnson County residents' property tax is dedicated to the hospital.

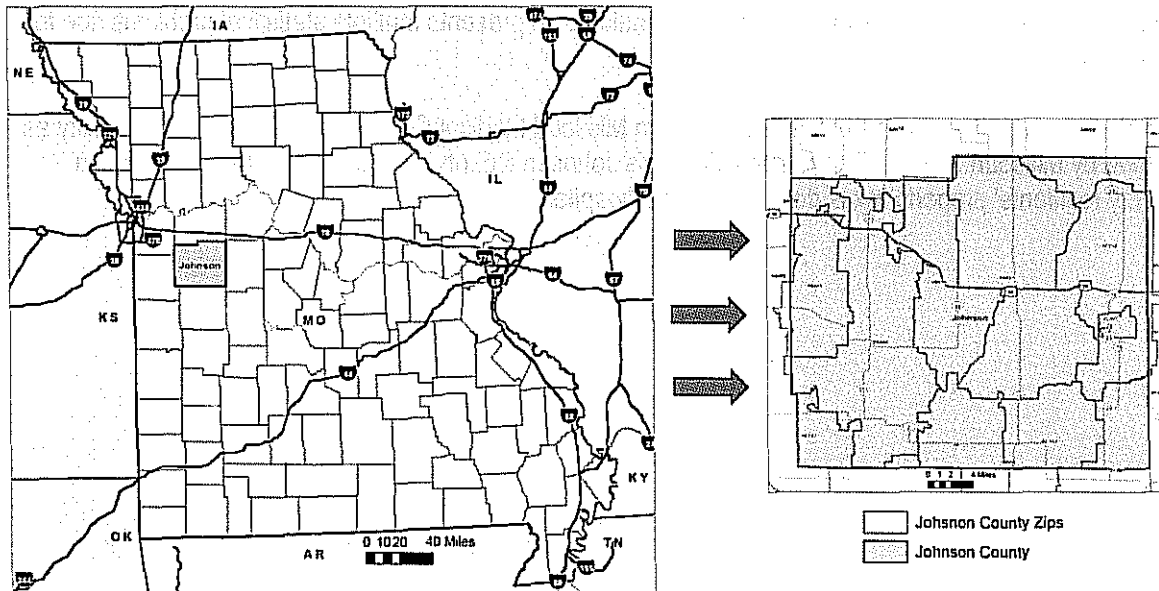
Demographic Analysis

This demographic analysis will present the region's key statistics and examine Johnson County's population growth, age demographics, ethnicity profile, socio-economic profile, and chronic disease profile. Additionally, this analysis will review the demographic profile of the Whiteman Air Force Base, located within Johnson County, as it represents a unique portion of the Johnson County population. The demographic analysis is conducted based on the following list of ZIP codes and corresponding cities which comprise the Johnson County service area.

Johnson County ZIP Code Summary

ZIP	City	County	State
64019	Centerview	Johnson County	Missouri
64040	Holden	Johnson County	Missouri
64061	Kingsville	Johnson County	Missouri
64093	Warrensburg	Johnson County	Missouri
64733	Chilhowee	Johnson County	Missouri
64761	Leebn	Johnson County	Missouri
65305	Whiteman Air Force Base	Johnson County	Missouri
65336	Knob Noster	Johnson County	Missouri

Source: Claritas.



POPULATION GROWTH**5-Year Projected Population Growth**

Region	2013 Population	2018 Population	% Change	CAGR (2013-2018)
Johnson County	52,630	55,027	4.6%	0.9%
Missouri	6,034,059	6,103,353	1.1%	0.2%
United States	314,861,807	325,322,193	3.3%	0.7%

Source: Claritas.

Johnson County's 2013 population is 52,630 and is projected to grow nearly 5% throughout the next five years to approximately 55,000 individuals in 2018. Johnson County's overall population growth is expected to outpace Missouri's population growth by four times. As illustrated above, the rate of Johnson County's population growth is more aligned with that of the nation.

Johnson County Population Distribution by ZIP Code

ZIP	City	2013 Population	% Total Johnson County
64019	Centerview	2,635	5.0%
64040	Holden	6,520	12.4%
64061	Kingsville	3,364	6.4%
64093	Warrensburg	28,909	54.9%
64733	Chilhowee	1,067	2.0%
64761	Leeton	1,451	2.8%
65305	Whiteman Air Force Base	2,277	4.3%
65336	Knob Noster	6,407	12.2%
Total:		52,630	100.0%

Source: Claritas.

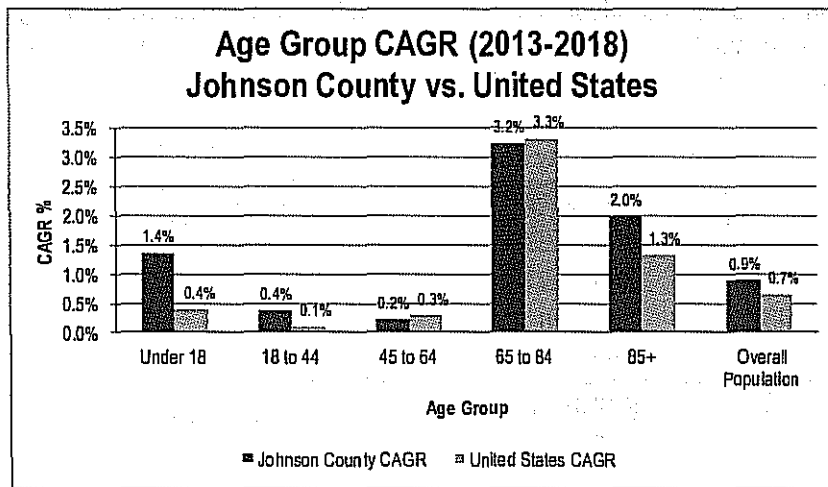
The ZIP code 64093 (Warrensburg, Missouri) represents more than half of the total Johnson County population.

AGE DEMOGRAPHICS

Age Distribution & Projected Growth

Age Group	2013 Population	2013 % Distrib.	2018 Population	2018 % Distrib.	% Change (2013-2018)	CAGR (2013-2018)	US CAGR (2013-2018)
Under 18	12,132	23.1%	12,985	23.6%	7.0%	1.4%	0.4%
18 to 44	22,997	43.7%	23,436	42.6%	1.9%	0.4%	0.1%
45 to 64	11,545	21.9%	11,677	21.2%	1.1%	0.2%	0.3%
65 to 84	5,181	9.8%	6,074	11.0%	17.2%	3.2%	3.3%
85+	775	1.5%	855	1.6%	10.3%	2.0%	1.3%
Total:	52,630	100.0%	55,027	100.0%	4.6%	0.9%	0.7%

Source: Claritas.



Source: Claritas.

Johnson County's age distribution will remain relatively stable throughout the next five years. Currently, individuals under 18 years of age represent nearly 25% of the overall population and individuals between the ages of 18 and 44 represent approximately 44% of the population. Both of these age cohorts' growth will substantially outpace their respective population's growth in the nation by a factor of four. As shown above, the age group under 18 years of age will grow by approximately 1.4% per year in Johnson County compared to 0.4% per year in the United States. Similarly, the 18 to 44 will grow by roughly 0.4% per year in Johnson County relative to a 0.1% per year growth rate in the United States.

While the Medicare population represents only 11.3% of the Johnson County population, it is also the county's fastest growing age group. More specifically, the age group between the ages of 65 and 84 will grow approximately 17.2% from 2013 to 2018, which is equivalent to a compound annual growth rate of 3.2%. The nation's 65 to 84 age cohort is expected to grow at a comparable pace of approximately 3.3% per year. Johnson County's population of individuals above 85 years of age currently represent only 1.5% of the county's population, but is expected to grow 10.3% throughout the next five years, which equates to a 2% annual growth rate. This particular population's growth in Johnson County is nearly twice that of the nation's population growth.

ETHNICITY PROFILE**Ethnicity Distribution (2013)**

Ethnicity	Johnson County	Missouri	United States
White	89.8%	82.2%	71.5%
Black	4.4%	11.8%	12.7%
Indian	0.5%	0.5%	1.0%
Asian	1.6%	1.8%	5.0%
Native Hawaiian/Pacific Islander	0.3%	0.1%	0.2%
Other	0.8%	1.5%	6.6%
Two or More Races	2.7%	2.2%	3.1%

Source: Claritas.

The strongest distinction between the ethnicity profiles in Johnson County, Missouri, and the nation is the portion of non-white residents in each geography. As shown above, each non-white ethnicity accounts for less than 5% of Johnson County's population, and the white population represents approximately 90% of Johnson County's population. Notable differences exist in the black population's representation in Johnson County and Missouri. For example, the population of black residents represents nearly 12% of Missouri's population, but only 4.4% of Johnson County's population. While the Asian ethnicity accounts for 5.0% of the nation's population, this ethnic group represents only 1.6% of Johnson County's population.

Ethnicity Distribution (2013)

Ethnicity	Johnson County	Missouri	United States
Hispanic	3.1%	3.9%	17.3%
Not Hispanic	96.9%	96.1%	82.7%

Source: Claritas.

Johnson County and Missouri's Hispanic populations represent similar portions of their overall populations, 3.1% and 3.9%, respectively. However, the percentages of Hispanic residents in Johnson County and Missouri are significantly lower than that of the United States (17.3%).

WHITEMAN AIR FORCE BASE PROFILE

The Whiteman Air Force Base is located in Johnson County, Missouri. It is located approximately two miles south of Knob Noster, 10 miles east of Warrensburg, 20 miles north of Sedalia, and 70 miles southeast of Kansas City. It was established on August 6, 1942 as Sedalia Glider Base.

Age Distribution

Age Group	2010 Population	2010 % Distrib.
Under 19	1,047	41.0%
19 to 44	1,453	56.8%
45 to 64	50	2.0%
65 to 84	6	0.2%
85+	0	0.0%
Total:	2,556	100.0%

Source: U.S. Census Bureau

Note: Based on census designated place Whiteman Air Force Base.

Ethnicity Distribution

Ethnicity	2010 Population	2010 Distribution
White	2,077	81.3%
Black or African American	237	9.3%
American Indian and Alaska Native	10	0.4%
Asian	45	1.8%
Native Hawaiian and Other Pacific Islander	13	0.5%
Other	48	1.9%
Two or More Races	126	4.9%
Total:	2,556	100.0%

Source: U.S. Census Bureau

Note: Based on census designated place Whiteman Air Force Base.

The population of the Whiteman Air Force Base's census designated area (defined as 5.2 square miles in which the air force base lies) is approximately 2,500 individuals as of 2010. Approximately 97.8% of the population is 44 years of age or younger. In fact, 27.9% of the population is between the age of 20 and 24. The ethnic distribution of the Whiteman Air Force Base is similar to that of Johnson County and the state of Missouri. As of 2010, the majority of the population, approximately 81.3%, was white and approximately 9.3% of the population was categorized as black or African.

SOCIO-ECONOMIC PROFILE: Poverty

Johnson County's poverty profile is currently very similar to that of Missouri and the United States. Families at or above the poverty line in Johnson County represent 62.3% of the region, and families at or above the poverty line in the United States represent 59.6% of the nation. Interestingly, Johnson County's average household income, approximately \$50,000, is substantially lower than that of Missouri's and the nation's, approximately \$60,000 and \$70,000, respectively.

Poverty Status Distribution (2013)

Poverty Status	Johnson County	Missouri	United States
Families At or Above Poverty	62.3%	60.8%	59.6%
Families At or Above Poverty, With Kids	26.9%	26.6%	27.4%
Families Below Poverty	5.9%	7.1%	7.3%
Families Below Poverty, With Kids	4.9%	5.5%	5.7%
Average Household Income	\$49,994	\$60,078	\$69,637

Source: Claritas.

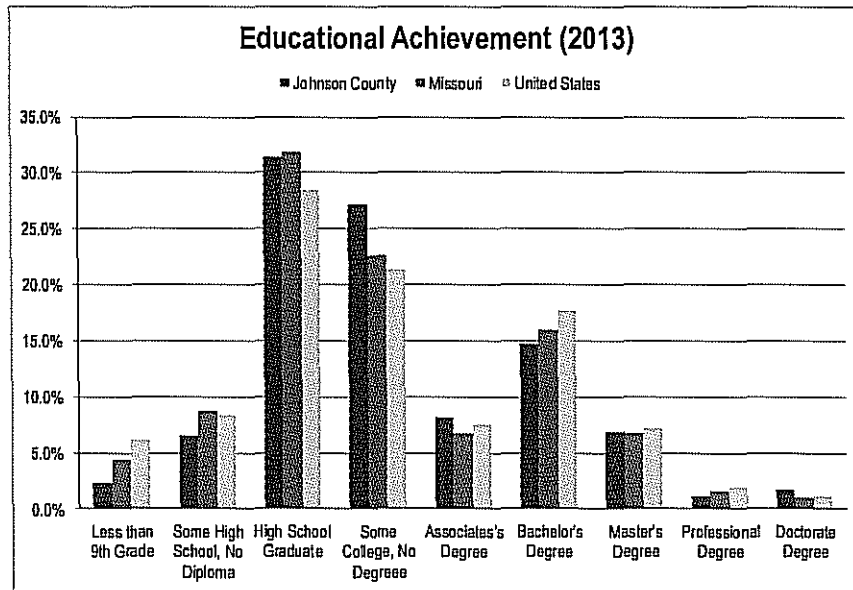
SOCIO-ECONOMIC PROFILE: Education

The portions of the Johnson County, Missouri, and United States populations that have achieved the varying levels of education shown above are comparable in most cases. A notable distinction is the percentage of Johnson County's population that has completed college relative to the nation, 27.2% and 21.3%, respectively.

Education Distribution (2013)

Education Achievement	Johnson County	Missouri	United States
Less than 9th Grade	2.4%	4.4%	6.2%
Some High School, No Diploma	6.5%	8.8%	8.4%
High School Graduate	31.3%	31.9%	28.4%
Some College, No Degree	27.2%	22.7%	21.3%
Associates's Degree	8.1%	6.8%	7.6%
Bachelor's Degree	14.7%	16.0%	17.7%
Master's Degree	6.9%	6.8%	7.3%
Professional Degree	1.1%	1.6%	1.9%
Doctorate Degree	1.8%	1.0%	1.2%

Source: Claritas.



Source: Claritas.

SOCIO-ECONOMIC PROFILE: Labor Force

Labor force and unemployment demographics in Johnson County, Missouri, and the nation are comparable on all metrics shown above except for the percentage of the population in the armed forces. The percentage of the Missouri and United States populations employed by the armed forces is 0.5%; whereas the percentage of Johnson County's population employed by the armed forces is 7.5%, 15 times that of the state and the nation. This statistic is not surprising given the Whiteman Air Force Base located within Johnson County. This subset of the population will, therefore, represent an important demographic in Johnson County's community health.

Labor Force Distribution (2013)

Type of Labor	Johnson County	Missouri	United States
Civilian Labor Force, Employed	52.6%	58.5%	57.9%
Civilian Labor Force, Unemployed	4.8%	5.9%	6.4%
Armed Forces	7.5%	0.5%	0.5%
Not in Labor Force	35.1%	35.2%	35.3%

Source: Claritas.

SOCIO-ECONOMIC PROFILE: Housing & Crime

Johnson County's housing market has a lower vacancy rate, 9.3%, than the state and nation, 12.9% and 12.4%, respectively.

There is a more notable difference in the value of owner-occupied houses in Johnson County versus the nation. For example, the percent of owner-occupied units in Johnson County that are valued at \$100,000 or less is 35.0%; whereas, the percent of owner-occupied units in the United States that are valued at \$100,000 or less is a mere 23.1%. Consequently, the proportion of more expensive houses (i.e., houses valued \$300,000 and above) in Johnson County, 8.1%, is much lower than the proportion in the United States, 28.4%.

Housing Occupancy & Vacancy

Housing	Actual			%		
	Johnson County	Missouri	United States	Johnson County	Missouri	United States
Occupied Housing Units	19,435	2,354,104	114,761,359	90.7%	87.1%	87.6%
Vacant Housing Units	1,989	348,786	16,273,587	9.3%	12.9%	12.4%
Total Housing Units	21,424	2,702,890	131,034,946	100.0%	100.0%	100.0%

Source: U.S. Census Bureau, 2012 Johnson County metrics.

Owner-Occupied Housing Values

House Value	Actual			%		
	Johnson County	Missouri	United States	Johnson County	Missouri	United States
Less than \$100,000	4,369	530,071	17,553,306	35.0%	32.4%	23.1%
\$100,000 to \$300,000	7,116	918,712	36,825,018	56.9%	56.1%	48.5%
Greater than \$300,000	1,015	187,922	21,518,435	8.1%	11.5%	28.4%
Total	12,500	1,636,705	75,896,759	100.0%	100.0%	100.0%

Source: U.S. Census Bureau, 2012 Johnson County metrics.

SOCIO-ECONOMIC PROFILE: Crime Rates

The violent crime rate in Johnson County is substantially lower than that of Missouri. Between 2010 and 2013, Johnson County's violent crime rate has consistently been 30% to 37% of Missouri's violent crime rate. Over the four years illustrated, Johnson County's violent crime rate as exhibited a marked decrease or remained relatively stable. Missouri's violent crime rate has remained stable, but has not experienced year-over-year decreases in the manner Johnson County has.

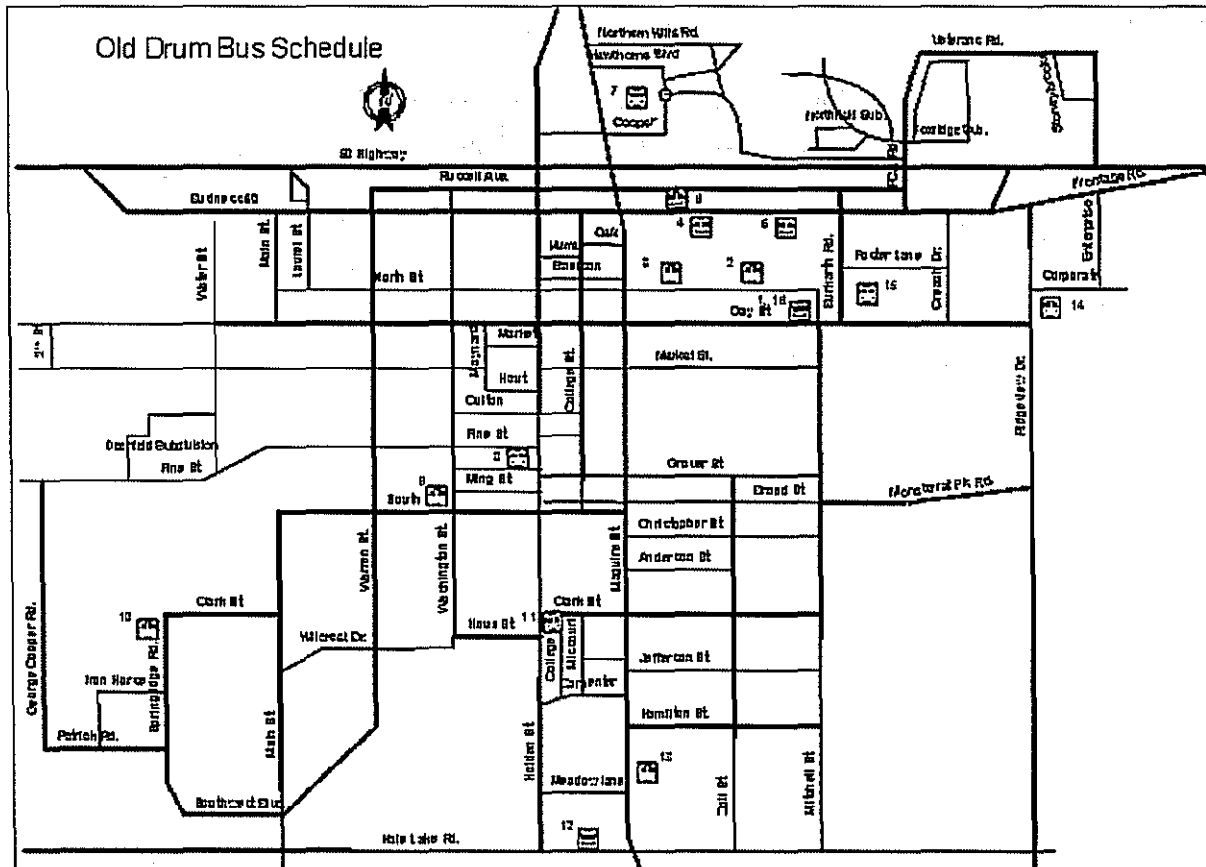
Violent Crime Rate (per 100,000 population)

Region	2010	2011	2012	2013
Johnson County	194	179	155	158
<i>% Change - Johnson County</i>		-7.7%	-13.4%	1.9%
Missouri	525	516	518	484
<i>% Change - Missouri</i>		-1.7%	0.4%	-6.6%

Source: Robert Wood Johnson Foundation, County Health Rankings

SOCIO-ECONOMIC PROFILE: Public Transportation

The City of Warrensburg operates the "Old Drum" during the week. A single bus makes a continuous circuit (see map) of 15 stops every hour during business hours. The bus makes a stop at the hospital and the Division of Family Services office. It can accommodate wheelchairs up to 30" in width.



Residents living outside the City of Warrensburg may utilize the non-profit OATS public transportation service. This service operates throughout most of the state and is primarily focused on medical transportation for the elderly and disabled. All of the vehicles are wheelchair accessible. Routes are limited and are generally less than once a week in Johnson County. Riders must contact OATS to arrange a pick-up and are provided door-to-door service.

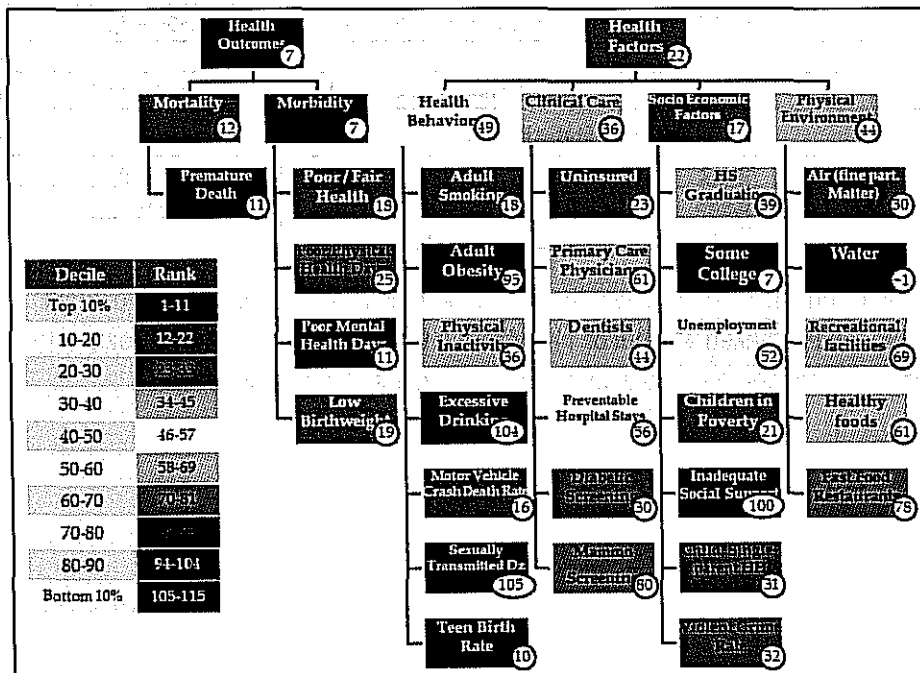
INVENTORY OF COMMUNITY HEALTH ISSUES

Robert Wood Johnson Foundation Ranking Methodology

The Robert Wood Johnson Foundation ("RWJF") produced the County Rankings & Roadmaps methodology to help communities assess and address population health by county. The ranking methodology emphasizes the components of population health that, if improved, can help create healthier communities. RWJF's framework builds upon previous work by America's Health Rankings and the University of Wisconsin Population Health Institute. RWJF aggregates information from national and state data sources to measure the health of almost all counties in the United States, and then reports county ranking by state. As such, the Johnson County rankings described herein reflect the county's standing within the state of Missouri.

There are two primary categories that RWJF evaluates: health outcomes and health factors. The health outcomes category represents how healthy a county is. The health factors category represents components that influence a county's health. Each primary category is composed of subcategories, and each subcategory is composed of its own set of measures.

The illustration below demonstrates the primary categories, subcategories, and measures used by RWJF to evaluate a county's health. For each of the primary measures, Johnson County is assigned a rank out of the 115 counties in Missouri. RWJF also assigns a weight to each measure, which corresponds to the measure's respective influence on its subcategory and primary category. Thus, the score for a subcategory is calculated as a weighted average of the subcategory's measures' scores. The illustration below details the Johnson County's rank within Missouri for each measure, subcategory, and primary category. Further detail on each measure's primary sources, reason for ranking, and historical performance is provided in the following section.



I. Health Outcomes: Mortality

a. Premature Death

- i. **Definition:** Premature death is represented by the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 50 years of life lost, whereas a person who dies at age 65 contributes 10 years of life lost to a county's YPLL. The YPLL measure is presented as a rate per 100,000 population and is age-adjusted to the 2000 US population.
- ii. **Reason for Ranking:** Measuring premature mortality, rather than overall mortality, reflects the County Health Rankings' intent to focus attention on deaths that could have been prevented. Measuring YPLL allows communities to target resources to high-risk areas and further investigate the causes of premature death.

Health Outcomes			
Category:	Mortality		
Statistic:	Premature Death		
Definition:	Years of Potential Life Lost before age 75, per 100,000 Population. Age adjusted.		
Data Source:	National Center for Health Statistics		
Data Years:	2008-2010		
2013 Statistics			
Johnson County:	6,375	95% Confidence Interval:	5,599 – 7,150
Johnson County Rank in MO:	12		
Missouri:	7,827	95% Confidence Interval:	7,747 – 7,906
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	6,438	6,194	6,063
Missouri:	7,981	8,043	8,112

- iii. Johnson County is currently lower than the state of Missouri in the premature death measure, and is ranked #12 out of 115 Missouri Counties. From the prior year, Johnson County decreased this measure by 63 years of potential life lost.

II. Health Outcomes: Morbidity

a. Poor/Fair Health

- i. Definition: Self-reported health status is a general measure of health-related quality of life (HRQoL) in a population. This measure is based on survey responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percent of adult respondents who rate their health "fair" or "poor." The measure is age-adjusted to the 2000 US population.
- ii. Reason for Ranking: Measuring HRQoL helps characterize the burden of disabilities and chronic diseases in a population. Self-reported health status is a widely used measure of people's health-related quality of life. In addition to measuring how long people live, it is important to also include measures that consider how healthy people are while alive.

Health Outcomes			
Category:	Morbidity		
Statistic:	Poor/Fair Health		
Definition:	Poor physical health days (average number in past 30 days), based on survey responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" Reported value is the percent of adult respondents who rate their health "fair" or "poor." Age adjusted.		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2011		
2013 Statistics			
Johnson County:	13.0%	95% Confidence Interval:	11.0% - 16.0%
Johnson County Rank in MO:	18		
Missouri:	16.0%	95% Confidence Interval:	16.0% - 17.0%
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	14.0%	15.0%	15.0%
Missouri:	16.0%	16.0%	16.0%

- iii. Johnson County is currently lower than the state of Missouri in the poor/fair health measure. From the prior year, Johnson County's average number of poor physical health days declined by 1.0%.

Health Outcomes: Morbidity

b. Poor Physical Health Days

- i. **Definition:** Poor physical health days are one of four measures of morbidity used in the County Health Rankings. This measure is based on survey responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" The value reported in the County Health Rankings is the average number of days a county's adult respondents report that their physical health was not good. The measure is age-adjusted to the 2000 US population.
- ii. **Reason for Ranking:** Measuring health-related quality of life (HRQoL) helps characterize the burden of disabilities and chronic diseases in a population. In addition to measuring how long people live, it is also important to include measures of how healthy people are while alive – people's reports of days when their physical health was not good are a reliable estimate of their recent health.

Health Outcomes			
Category:	Morbidity		
Statistic:	Poor Physical Health Days		
Definition:	Average number of days a county's adult respondents report that their physical health was not good. Based on survey responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" Age adjusted.		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2011		
2013 Statistics			
Johnson County:	3.3	95% Confidence Interval:	2.8 - 3.9
Johnson County Rank in MO:	25		
Missouri:	3.7	95% Confidence Interval:	3.6 - 3.8
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	3.3	3.3	3.5
Missouri:	3.6	3.7	3.7

- iii. Johnson County is currently lower than the state of Missouri in the poor physical health days measure. From the prior year, Johnson County's average number of poor physical health days did not change.

Health Outcomes: Morbidity

c. Poor Mental Health Days

- i. **Definition:** Poor mental health days is a companion measure to the poor physical health days reported in the County Health Rankings. This measure is based on survey responses to the question: "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" The value reported in the County Health Rankings is the average number of days a county's adult respondents report that their mental health was not good. The measure is age-adjusted to the 2000 US population.
- ii. **Reason for Ranking:** Overall health depends on both physical and mental well-being. Measuring the number of days when people report that their mental health was not good, i.e., poor mental health days, represents an important facet of health-related quality of life.

Health Outcomes			
Category:	Morbidity		
Statistic:	Poor Mental Health Days		
Definition:	Average number of days a county's adult respondents report that their physical health was not good in past 30 days. Based on survey responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" Age-adjusted.		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2011		
2013 Statistics			
Johnson County:	2.4	95% Confidence Interval:	1.9 - 2.8
Johnson County Rank in MO:	11		
Missouri:	3.8	95% Confidence Interval:	3.6 - 3.9
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	2.4	2.5	2.4
Missouri:	3.7	3.6	3.6

- iii. Johnson County is currently lower than the state of Missouri in the poor mental health days measure. From the prior year, Johnson County's average number of poor mental health days did not change.

Health Outcomes: Morbidity

d. Low Birth Weight

- i. Definition: Low birth weight is the percent of live births for which the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.).
- ii. Reason for Ranking: Low birth weight (LBW) represents two factors: maternal exposure to health risks and an infant's current and future morbidity, as well as premature mortality risk. From the perspective of maternal health outcomes, LBW indicates maternal exposure to health risks in all categories of health factors, including her health behaviors, access to health care, the social and economic environment she inhabits, and environmental risks to which she is exposed. In terms of the infant's health outcomes, LBW serves as a predictor of premature mortality and/or morbidity over the life course and potential for cognitive development problems.

Health Outcomes			
Category:	Morbidity		
Statistic:	Low Birthweight		
Definition:	Low birthweight is percent of live births for which the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.).		
Data Source:	National Center for Health Statistics		
Data Years:	2004-2010		
2013 Statistics			
Johnson County:	6.5%	95% Confidence Interval:	5.8% - 7.1%
Johnson County Rank in MO:	19		
Missouri:	8.1%	95% Confidence Interval:	8.0% - 8.2%
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	6.4%	6.2%	6.4%
Missouri:	8.1%	8.0%	8.0%

- iii. Johnson County is currently lower than the state of Missouri in the low birth weight measure. From the prior year, Johnson County's low birth weight percentage increased by 0.1%.

III. Health Factors: Behaviors

a. Adult Smoking

- i. Definition: Adult smoking prevalence is the estimated percent of the adult population that currently smokes every day or "most days" and has smoked at least 100 cigarettes in their lifetime.
- ii. Reason for Ranking: Each year approximately 443,000 premature deaths can be attributed to smoking. Cigarette smoking is identified as a cause of various cancers, cardiovascular disease, and respiratory conditions, as well as low birth weight and other adverse health outcomes. Measuring the prevalence of tobacco use in the population can alert communities to potential adverse health outcomes and can be valuable for assessing the need for cessation programs or the effectiveness of existing programs.

Health Factors			
Category:	Health Behaviors		
Statistic:	Adult smoking (percent of adults that smoke)		
Definition:	Adult smoking prevalence is the estimated percent of the adult population that currently smokes every day or "most days" and has smoked at least 100 cigarettes in their lifetime.		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2011		
2013 Statistics			
Johnson County:	20.0%	95% Confidence Interval:	16.1% - 24.5%
Johnson County Rank in MO:	18		
Missouri:	23.2%	95% Confidence Interval:	22.5% - 23.9%
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	21%	22%	23%
Missouri:	24%	24%	25%

- iii. Johnson County is currently lower than the state of Missouri in the adult smoking measure. From the prior year, Johnson County's adult smoking percentage declined by 1.0%.

b. Adult Obesity

- i. Definition: This measure represents the percent of the adult population (age 20 and older) that has a body mass index (BMI) greater than or equal to 30 kg/m2.
- ii. Reason for Ranking: Obesity is often the result of an overall energy imbalance due to poor diet and limited physical activity. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems, osteoarthritis, and poor health status.

Health Factors			
Category:	Health Behaviors		
Statistic:	Adult Obesity		
Definition:	Adult obesity percent of the adult population (age 20 and older) that has a body mass index (BMI) greater than or equal to 30 kg/m2.		
Data Source:	National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation		
Data Years:	2009		
2013 Statistics			
Johnson County:	33.6%	95% Confidence Interval:	29.0% - 38.6%
Johnson County Rank in MO:	95		
Missouri:	31.1%	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	34%	31%	30%
Missouri:	31%	30%	28%

- iii. Johnson County is currently higher than the state of Missouri in the adult obesity measure. From the prior year, Johnson County's adult obesity percentage declined by 0.4%.

The spectrum graph below graphically depicts the RWJF data on obesity. Johnson County, at an obesity rate of 34% is in the bottom 20% of all Counties in Missouri. The Missouri average obesity rate is 31% and ranges (by county) from a low of 27% to a high of 38%. Johnson County is higher than the state average, increasing, and increasing at a faster rate than the state. The consensus goal is an obesity rate of 25%.



Health Factors: Behaviors

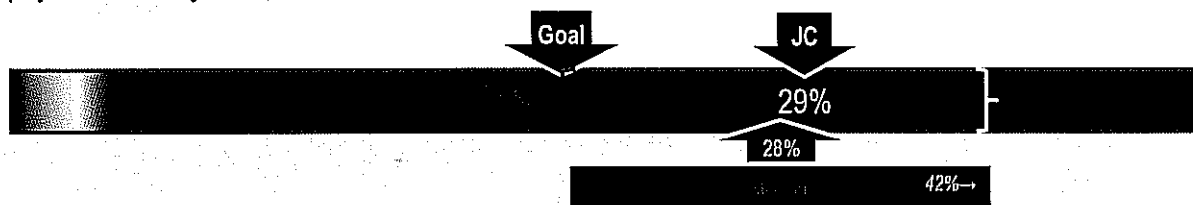
c. Physical Inactivity

- i. Definition: Physical inactivity is the estimated percent of adults aged 20 and over reporting no leisure time physical activity.
- ii. Reason for Ranking: Decreased physical activity has been related to several disease conditions such as type 2 diabetes, cancer, stroke, hypertension, cardiovascular disease, and premature mortality, independent of obesity. In addition, physical inactivity at the county level is related to health care expenditures for circulatory system diseases.

Health Factors			
Category:	Health Behaviors		
Statistic:	Physical Inactivity		
Definition:	Physical inactivity is the estimated percent of adults aged 20 and over reporting no leisure time physical activity.		
Data Source:	National Center for Chronic Disease Prevention and Health Promotion, Division of		
Data Years:	2009		
2013 Statistics			
Johnson County:	29.1%	95% Confidence Interval:	24.8% - 34.1%
Johnson County Rank in MO:	36		
Missouri:	27.7%	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	29%	27%	NA
Missouri:	28%	27%	NA

- iii. Johnson County is currently higher than the state of Missouri in the physical inactivity measure. From the prior year, Johnson County's percent of physically inactive adults increased by 0.1%.

The spectrum graph below graphically depicts the RWJF data on physical inactivity. Johnson County has a physical inactivity rate of 29% and is ranked 36th among the Counties of Missouri. The state average inactivity rate is 28% and ranges (by county) from a low of 21% to a high of 42%. Johnson County is higher than the state average, increasing, and increasing at a faster rate than the state. The consensus goal is a physical inactivity rate of 21%.



Health Factors: Behaviors

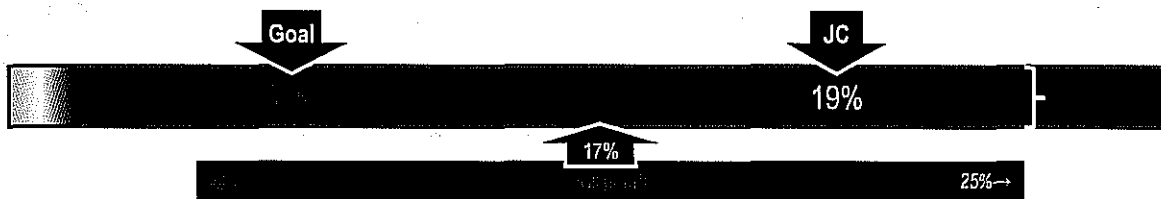
d. Excessive Drinking

- i. Definition: Excessive drinking reflects the percent of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average.
- ii. Reason for Ranking: Excessive drinking is a risk factor for a number of adverse health outcomes such as alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and motor vehicle crashes. Approximately 80,000 deaths are attributed annually to excessive drinking. Excessive drinking is the third leading lifestyle-related cause of death in the United States.

Health Factors			
Category:	Health Behaviors		
Statistic:	Excessive Drinking		
Definition:	Percent of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average.		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2011		
2013 Statistics			
Johnson County:	19.3%	95% Confidence Interval:	15.1% - 24.4%
Johnson County Rank in MO:	104		
Missouri:	17.2%	95% Confidence Interval:	16.5% - 17.9%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	19%	19%	NA
Missouri:	17%	17%	NA

- iii. Johnson County is currently higher than the state of Missouri in the excessive drinking measure. From the prior year, Johnson County's percentage of adults excessively drinking increased by 0.3%.

The spectrum graph below graphically depicts the rate of excessive drinking in Missouri. The state has a wide range of drinking habits, from a low of 2% to a high of 25%. The Johnson County rate is only 2% higher than the state average, yet the county rank is in the bottom 20%, likely reflecting a non-normal distribution of data.



Health Factors: Behaviors

e. Motor Vehicle Crash Death Rate

- i. Definition: Modified definition for 2013: Motor vehicle crash deaths are measured as the crude mortality rate per 100,000 population due to traffic accidents involving a motor vehicle. Motor vehicle deaths include traffic accidents involving motorcycles; 3-wheel motor vehicles; cars; vans; trucks; buses; street cars; ATVs; industrial, agricultural, and construction vehicles; or bicyclists and pedestrians when colliding with any of the previously listed motor vehicles. Deaths due to boating accidents and airline crashes are not included in this measure. In prior years, non-traffic motor vehicle accidents were included in this definition. Our definition has changed to better align with Healthy People 2020.
- ii. Reason for Ranking: Approximately 17,000 Americans are killed annually in alcohol-related motor vehicle crashes. Binge/heavy drinkers account for most episodes of alcohol-impaired driving.

Health Factors			
Category:	Health Behaviors		
Statistic:	Motor Vehicle Crash Death Rate		
Definition:	Crude mortality rate per 100,000 population due to traffic accidents involving a motor vehicle (modified for 2013).		
Data Source:	National Center for Health Statistics		
Data Years:	2004-2010		
2013 Statistics			
Johnson County:	14.9	95% Confidence Interval:	11.2 - 19.5
Johnson County Rank in MO:	16		
Missouri:	17.0	95% Confidence Interval:	16.7 - 17.5
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	21	21	21
Missouri:	19	20	20

- iii. Johnson County is currently lower than the state of Missouri in the motor vehicle crash death rate measure. Since 2010, this is the only year in which Johnson County's

motor vehicle death rate has been lower than the state of Missouri's. From the prior year, Johnson County's death rate from motor vehicle crashes declined by 6.1 deaths per 100,000 individuals.

Health Factors: Behaviors

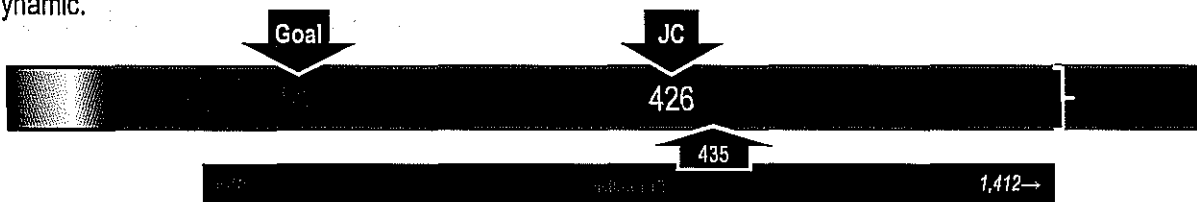
f. Sexually Transmitted Diseases

- iv. Definition: The sexually transmitted infection (STI) rate is measured as chlamydia incidence (number of new cases reported) per 100,000 population.
- v. Reason for Ranking: Chlamydia is the most common bacterial STI in North America and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain. STIs are associated with a significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, involuntary infertility, and premature death. STIs also have a high economic burden on society. The cost of managing chlamydia and its complications in the US, for example, was approximately two billion dollars in 1994.

Health Factors			
Category:	Health Behaviors		
Statistic:	Sexually Transmitted Diseases		
Definition:	Sexually transmitted infection (STI) rate is measured as chlamydia incidence (number of new cases reported) per 100,000 population.		
Data Source:	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention		
Data Years:	2010		
2013 Statistics			
Johnson County:	425.9	95% Confidence Interval:	NA
Johnson County Rank in MO:	105		
Missouri:	435.0	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	427	488	419
Missouri:	438	422	399

- vi. Johnson County is currently lower than the state of Missouri in the sexually transmitted diseases measure. From the prior year, Johnson County's incidence of sexually transmitted diseases declined by 1.1 cases per 100,000.

The spectrum graph below shows that Johnson County, with a STD rate of 426 per 100,000 is below the state average of 435 cases per 100,000 but also in the bottom 10% of all counties in the state. It appears the state rate is driven by high infection rates in a few counties, Johnson County included. The presence of two at-risk populations in the county, college students and service members, may contribute to this dynamic.



Health Factors: Behaviors

g. Teen Birth Rate

- vii. Definition: This measure is reported as the number of births per 1,000 female population, ages 15-19.
- viii. Reason for Ranking: Evidence suggests teen pregnancy significantly increases the risk of repeat pregnancy and of contracting a sexually transmitted infection (STI), both of which can result in adverse health outcomes for mothers, children, families, and communities. A systematic review of the sexual risk among pregnant and mothering teens concludes that pregnancy is a marker for current and future sexual risk behavior and adverse outcomes. Pregnant teens are more likely than older women to receive late or no prenatal care, have gestational hypertension and anemia, and achieve poor maternal weight gain. Teens are also more likely than older women to have a pre-term delivery and low birth weight baby, increasing the risk of child developmental delay, illness, and mortality.

Health Factors			
Category:	Health Behaviors		
Statistic:	Teen Birth Rate		
Definition:	Number of births per 1,000 female population between ages 15-19.		
Data Source:	National Center for Health Statistics		
Data Years:	2004-2010		
2013 Statistics			
Johnson County:	27.0	95% Confidence Interval:	24.5 - 29.4
Johnson County Rank in MO:	10		
Missouri:	42.0	95% Confidence Interval:	41.6 - 42.3
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	31	30	30
Missouri:	44	45	45

- ix. Johnson County's teen birth rate is currently lower than the state of Missouri's teen birth rate. From the prior year, Johnson County's teen births declined by 4 births per 1,000 females in the population.

IV. Health Factors: Clinical Care

a. Uninsured

- i. Definition: This measure represents the estimated percent of the population under age 65 that has no health insurance coverage.
- ii. Reason for Ranking: Lack of health insurance coverage is a significant barrier to accessing needed health care. The number of Americans who do not have health insurance continues to increase and there are disparities in access to care based on race/ethnicity, employment, gender, and income level. Ethnic minorities are more likely to be uninsured than non-Hispanic whites. Employer-based coverage is the largest source of health coverage in the US, and many unskilled, low paying, and part-time jobs do not offer benefits. Uninsured individuals experience more adverse outcomes (physically, mentally, and financially) than insured individuals. Individuals without insurance are less likely to receive preventive and diagnostic healthcare services, are more often diagnosed at a later disease stage, and, on average, receive less treatment for their condition than insured individuals. The Institute of Medicine reports that the uninsured population has a 25% higher mortality rate than the insured population.

Health Factors			
Category:	Clinical Care		
Statistic:	Uninsured		
Definition:	Estimated percent of the population under age 65 that has no health insurance coverage.		
Data Source:	Small Area Health Insurance Estimates		
Data Years:	2010		
2013 Statistics			
Johnson County:	15.0%	95% Confidence Interval:	13.1% - 16.9%
Johnson County Rank in MO:	23		
Missouri:	15.3%	95% Confidence Interval:	16.9% - 15.7%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	17%	NA	NA
Missouri:	15%	NA	NA

- iii. Johnson County's uninsured population is currently lower than the state of Missouri's rate of uninsured. From the prior year, Johnson County's uninsured population declined by 2.0%.

Health Factors: Clinical Care

b. Primary Care Physicians

- i. **Definition:** Measure Modified in 2013: Primary care physicians include practicing physicians (MDs and DOs) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. The measure represents the population per physician.
- ii. **Reason for Ranking:** Access to care requires not only financial coverage, but also, access to providers. While high rates of specialist physicians have been shown to be associated with higher, and perhaps unnecessary utilization, sufficient availability of primary care physicians is essential for preventive and primary care, and when needed, referrals to appropriate specialty care.

Health Factors			
Category:	Clinical Care		
Statistic:	Primary Care Physicians		
Definition:	Population per physician in the county. Primary care physicians include practicing physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics.		
Data Source:	HRSA Area Resource File		
Data Years:	2011-2012		
2013 Statistics			
Johnson County:	2396:1	95% Confidence Interval:	NA
Johnson County Rank in MO:	61		
Missouri:	1495:1	95% Confidence Interval:	NA
Historical Statistics*			
Year:	2012	2011	2010
Johnson County:	2608:1	2608:1	NA
Missouri:	1274:1	1274:1	NA

*Change to measure definition. As such, historical statistics not comparable to 2013 statistics.

- iii. Johnson County's population to primary care physician ratio is currently higher than the state of Missouri's ratio. From the prior year, Johnson County's population to primary care physician ratio declined (i.e., fewer individuals in the population per primary care physician).

Health Factors: Clinical Care

c. Dentists

- i. Definition: This measure represents the population per dentist in the county.
- ii. Reason for Ranking: Untreated dental disease can lead to serious health effects including pain, infection, and tooth loss. Although lack of sufficient providers is only one barrier to accessing oral healthcare, much of the country suffers from shortages. According to the Health Resources and Services Administration, as of December 2012, there were 4,585 Dental Health Professional Shortage Areas (HPSAs) with 45 million people living in them.

Health Factors			
Category:	Clinical Care		
Statistic:	Dentists		
Definition:	Population per dentist in the county.		
Data Source:	HRSA Area Resource File		
Data Years:	2011-2012		
2013 Statistics			
Johnson County:	3316:1	95% Confidence Interval:	NA
Johnson County Rank in MO:	44		
Missouri:	2167:1	95% Confidence Interval:	NA
Historical Statistics*			
Year:	2012	2011	2010
Johnson County:	3696:1	NA	NA
Missouri:	3198:1	NA	NA

*Change to measure definition. As such, historical statistics not comparable to 2013 statistics.

- iii. Johnson County's population to dentist ratio is currently higher than the state of Missouri's ratio. From the prior year, Johnson County's population to dentist ratio declined (i.e., fewer individuals in the population per dentist).

Health Factors: Clinical Care

d. Preventable Hospital Stays

- i. Definition: Preventable hospital stays is measured as the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees.
- ii. Reason for Ranking: Hospitalization for diagnoses treatable in outpatient services suggests that the quality of care provided in the outpatient setting was less than ideal. The measure may also represent a tendency to overuse hospitals as a main source of care.

Health Factors			
Category:	Clinical Care		
Statistic:	Preventable Hospital Stays		
Definition:	Preventable hospital discharge rate for ambulatory care-sensitive conditions per 1,000 Medicare enrollees.		
Data Source:	Dartmouth Atlas of Health Care		
Data Years:	2010		
2013 Statistics			
Johnson County:	76.5	95% Confidence Interval:	68.1 - 84.8
Johnson County Rank in MO:	56		
Missouri:	73.1	95% Confidence Interval:	72.4 - 73.7
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	75	76	88
Missouri:	75	79	85

- iii. Johnson County's preventable hospital stays rate is higher than the state of Missouri's rate of preventable hospital rate. From the prior year, Johnson County's rate increased by 1.5 preventable hospital stays per 1,000 Medicare enrollees.

Health Factors: Clinical Care

e. Diabetic Screening

- i. Definition: Diabetic screening is calculated as the percent of diabetic Medicare patients whose blood sugar control was screened in the past year using a test of their glycosylated hemoglobin (HbA1c) levels.
- ii. Reason for Ranking: Regular HbA1c screening among diabetic patients is considered the standard of care. It helps assess the management of diabetes over the long term by providing an estimate of how well a patient has managed his or her diabetes over the past two to three months. When hyperglycemia is addressed and controlled, complications from diabetes can be delayed or prevented.

Health Factors			
Category:	Clinical Care		
Statistic:	Diabetic Screening		
Definition:	Diabetic screening is calculated as the percent of diabetic Medicare patients whose blood sugar control was screened in the past year using a test of their glycosylated hemoglobin (HbA1c) levels.		
Data Source:	Dartmouth Atlas of Health Care		
Data Years:	2010		
2013 Statistics			
Johnson County:	86.7%	95% Confidence Interval:	79.1% - 94.3%
Johnson County Rank in MO:	30		
Missouri:	85.1%	95% Confidence Interval:	84.4% - 85.8%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	84%	85%	82%
Missouri:	84%	83%	81%

- iii. Johnson County's diabetic screening rate is higher than the state of Missouri's diabetic screening rate. From the prior year, Johnson County's rate increased by 2.7%.

Health Factors: Clinical Care

f. Mammography Screening

- i. Definition: This measure represents the percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period.
- ii. Reason for Ranking: Evidence suggests that mammography screening reduces breast cancer mortality, especially among older women. A physician's recommendation or referral—and satisfaction with physicians—are major factors facilitating breast cancer screening. The percent of women ages 40-69 receiving a mammogram is a widely endorsed quality of care measure.

Health Factors			
Category:	Clinical Care		
Statistic:	Mammography Screening		
Definition:	Percent of female Medicare enrollees age 67-69 that had at least one mammogram over a two-year period.		
Data Source:	Dartmouth Atlas of Health Care		
Data Years:	2010		
2013 Statistics			
Johnson County:	56.3%	95% Confidence Interval:	48.5% - 64.2%
Johnson County Rank in MO:	80		
Missouri:	64.3%	95% Confidence Interval:	63.6% - 65.0%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	58%	64%	NA
Missouri:	65%	62%	NA

- iii. Johnson County's mammography screening rate is lower than the state of Missouri's mammography screening rate. From the prior year, Johnson County's rate decreased by 1.7%.

V. Health Factors: Socioeconomic

a. High School Graduation

- i. Definition: High school graduation is reported as the percent of a county's ninth-grade cohort in public schools that graduates from high school in four years.
- ii. Reason for Ranking: Not only does one's education level affect his or her health; education can have multigenerational implications that make it an important measure for the health of future generations. Evidence links maternal education with the health of her offspring. Parents' level of education affects their children's health directly through resources available to the children, and also indirectly through the quality of schools that the children attend. Further, education levels also positively influence a variety of social and psychological factors. For example, increased education improves an individual's self-perception of either his or her sense of personal control and social standing, which also have been shown to predict higher self-reported health status.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	High School Graduation		
Definition:	Percent of a county's ninth-grade cohort in public schools that graduates from high school in four years.		
Data Source:	Missouri Dept. of Elementary & Secondary Education - Missouri Comprehensive Data System and the National Center for Education Statistics		
Data Years:	2010-2011		
2013 Statistics			
Johnson County:	89.0%	95% Confidence Interval:	NA
Johnson County Rank in MO:	39		
Missouri:	79.8%	95% Confidence Interval:	NA
Historical Statistics*			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	88%	85%	81%
Missouri:	86%	82%	81%

*Change to measure definition. As such, historical statistics not comparable to 2013 statistics.

- iii. Johnson County's high school graduation rate is higher than the state of Missouri's. From the prior year, Johnson County's high school graduation rate increased by 1.0%.

Health Factors: Socioeconomic

b. Some College

- i. Definition: This measure represents the percent of the population ages 25-44 with some post-secondary education, such as enrollment at vocational/technical schools, junior colleges, or four-year colleges. It includes individuals who pursued education following high school but did not receive a degree.
- ii. Reason for Ranking: The relationship between higher education and improved health outcomes is well known, with years of formal education correlating strongly with improved work and economic opportunities, reduced psychosocial stress, and healthier lifestyles.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Some College		
Definition:	Percent of the population ages 25-44 with some post-secondary education, such as enrollment at vocational/technical schools, junior colleges, or four-year colleges (includes individuals who pursued education following high school but did not receive a degree).		
Data Source:	American Community Survey, 5-year estimates		
Data Years:	2007-2011		
2013 Statistics			
Johnson County:	69.0%	95% Confidence Interval:	63.7% - 74.3%
Johnson County Rank in MO:	7		
Missouri:	62.3%	95% Confidence Interval:	61.8% - 62.8%
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	65%	63%	NA
Missouri:	61%	60%	NA

- iii. Johnson County's post-secondary education achievement rate is higher than the state of Missouri's. From the prior year, Johnson County's rate increased by 4.0%.

Health Factors: Socioeconomic

c. Unemployment

- i. Definition: Unemployment is measured as the percent of the civilian labor force, age 16 and older, that is unemployed but seeking work.
- ii. Reason for Ranking: The unemployed population experiences worse health and higher mortality rates than the employed population. Unemployment has been shown to lead to an increase in unhealthy behaviors related to alcohol and tobacco consumption, diet, exercise, and other health-related behaviors, which in turn can lead to increased risk for disease or mortality, especially suicide. Because employer-sponsored health insurance is the most common source of health insurance coverage, unemployment can also limit access to healthcare.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Unemployment		
Definition:	Percent of the civilian labor force, age 16 and older, that is unemployed but seeking work.		
Data Source:	Bureau of Labor Statistics		
Data Years:	2011		
2013 Statistics			
Johnson County:	8.4%	95% Confidence Interval:	NA
Johnson County Rank in MO:	52		
Missouri:	8.6%	95% Confidence Interval:	NA
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	9.1%	8.4%	5.0%
Missouri:	9.6%	9.3%	6.0%

- iii. Johnson County's unemployment rate is lower than the state of Missouri's. From the prior year, Johnson County's unemployment rate declined by 0.7%.

Health Factors: Socioeconomic

d. Children in Poverty

- i. Definition: Children in poverty are the percent of children under age 18 living below the Federal Poverty Line (FPL).
- ii. Reason for Ranking: Poverty can result in an increased risk of mortality, prevalence of medical conditions and disease incidence, depression, intimate partner violence, and poor health behaviors. A 1990 study found that if poverty were considered a cause of death in the US, it would rank among the top 10 causes. While negative health effects resulting from poverty are present at all ages, children in poverty experience greater morbidity and mortality than adults due to increased risk of accidental injury and lack of healthcare access. Children's risk of poor health and premature mortality may also be increased due to the poor educational achievement associated with poverty. The children in poverty measure is highly correlated with overall poverty rates.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Children in Poverty		
Definition:	Percent of children under age 18 living below the Federal Poverty Line (FPL).		
Data Source:	Small Area Income and Poverty Estimates		
Data Years:	2011		
2013 Statistics			
Johnson County:	18.9%	95% Confidence Interval:	14.1% - 23.7%
Johnson County Rank in MO:	21		
Missouri:	22.3%	95% Confidence Interval:	21.5% - 23.1%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	20%	17%	17%
Missouri:	21%	19%	18%

- iii. Johnson County's rate of children in poverty is lower than the state of Missouri's. From the prior year, Johnson County's rate of children in poverty declined by 1.1%.

Health Factors: Socioeconomic

e. Inadequate Social Support

- i. Definition: The social and emotional support measure is based on responses to the question: "How often do you get the social and emotional support you need?" The County Health Rankings reports the percent of the adult population that responds that they "never," "rarely," or "sometimes" get the support they need.
- ii. Reason for Ranking: Poor family support, minimal contact with others, and limited involvement in community life are associated with increased morbidity and early mortality. A 2001 study found that the magnitude of health risk associated with social isolation is similar to the risk of cigarette smoking. Furthermore, social support networks have been identified as powerful predictors of health behaviors, suggesting that individuals without a strong social network are less likely to make healthy lifestyle choices than individuals with a strong network. A study that compared Behavioral Risk Factor Surveillance System (BRFSS) data on health status to questions from the General Social Survey found that people living in areas with high levels of social trust are less likely to rate their health status as fair or poor than people living in areas with low levels of social trust.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Inadequate Social Support		
Definition:	Percent of the adult population that responds that they "never," "rarely," or "sometimes" get the support they need when asked: "How often do you get the social and emotional support you need?"		
Data Source:	Behavioral Risk Factor Surveillance System		
Data Years:	2005-2010		
2013 Statistics			
Johnson County:	21.5%	95% Confidence Interval:	16.4% - 27.6%
Johnson County Rank in MO:	100		
Missouri:	19.4%	95% Confidence Interval:	18.7% - 20.1%
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	22%	22%	23%
Missouri:	19%	20%	20%

- iii. Johnson County's rate of inadequate social support is higher than the state of Missouri's. From the prior year, Johnson County's inadequate support rate declined by 0.5%. Johnson County is ranked in the bottom 20% of all Missouri counties, 100 out of 115.



Health Factors: Socioeconomic

f. Children in Single-Parent Household

- i. Definition: This measure is the percent of all children in family households that live in a household headed by a single parent (male or female head of household with no spouse present).
- ii. Reason for Ranking: Adults and children in single-parent households are at risk for adverse health outcomes such as mental health problems (including substance abuse, depression, and suicide) and unhealthy behaviors such as smoking and excessive alcohol use. Self-reported health has been shown to be worse among lone parents (male and female) than for parents living as couples, even when socioeconomic characteristics are controlled. Mortality risk is also higher among lone parents. Children in single-parent households are at greater risk of severe morbidity and all-cause mortality than their peers in two-parent households.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Children in Single Parent Households		
Definition:	Percent of all children in family households that live in a household headed by a single parent (male or female head of household with no spouse present).		
Data Source:	American Community Survey, 5-year estimates		
Data Years:	2007-2011		
2013 Statistics			
Johnson County:	24.8%	95% Confidence Interval:	19.2% - 30.5%
Johnson County Rank in MO:	31		
Missouri:	32.9%	95% Confidence Interval:	32.3% - 33.5%
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	24%	23%	NA
Missouri:	32%	32%	NA

- iii. Johnson County's rate of children in single parent households is lower than the state of Missouri's. From the prior year, Johnson County's rate of children in single parent households increased by 0.8%.

Health Factors: Socioeconomic

g. Violent Crime Rate

- i. Definition: Violent crime is represented as an annual rate per 100,000 population. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault.
- ii. Reason for Ranking: High levels of violent crime compromise physical safety and psychological well-being. High crime rates can also deter residents from pursuing healthy behaviors such as exercising outdoors. Additionally, exposure to crime and violence has been shown to increase stress, which may exacerbate hypertension and other stress-related disorders and may contribute to obesity prevalence. Exposure to chronic stress also contributes to the increased prevalence of certain illnesses such as upper respiratory illness and asthma in neighborhoods with high levels of violence.

Health Factors			
Category:	Socioeconomics Factors		
Statistic:	Violent Crime Rate		
Definition:	Annual rate of violent crimes per 100,000 population. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault.		
Data Source:	Uniform Crime Reporting, Federal Bureau of Investigation		
Data Years:	2008-2010		
2013 Statistics			
Johnson County:	158	95% Confidence Interval:	NA
Johnson County Rank in MO:	32		
Missouri:	484	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	155	179	194
Missouri:	518	516	525

- iii. Johnson County's violent crime rate is lower than the state of Missouri's. From the prior year, Johnson County's violent crime rate increased by 3 violent crimes per 100,000 population.

VI. Health Factors: Physical Environment

a. Air (Fine Particulate Matter)

i. **Definition:** This measure represents the average daily amount of fine particulate matter in micrograms per cubic meter (PM2.5) in a county. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

ii. **Reason for Ranking:** The relationship between elevated air pollution, particularly fine particulate matter and ozone, and compromised health has been well documented. Negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.

Health Factors			
Category:	Physical Environment		
Statistic:	Air (Fine Particulate Matter)		
Definition:	Daily fine particulate matter is the average daily measure in micrograms per cubic meter (PM2.5). Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers.		
Data Source:	CDC WONDER Environmental data		
Data Years:	2008		
2013 Statistics			
Johnson County:	9.7	95% Confidence Interval:	NA
Johnson County Rank in MO:	30		
Missouri:	10.6	95% Confidence Interval:	NA
Historical Statistics			
Year:	2012	2011	2010
Johnson County:	NA	NA	NA
Missouri:	NA	NA	NA

iii. Johnson County's rate of fine particulate matter is lower than the state of Missouri's. Johnson County's performance in this measure is not reported for previous years.

Health Factors: Physical Environment

b. Water

- i. Definition: This measure represents the percentage of the population getting water from public water systems with at least one health-based violation during the reporting period. Health-based violations include Maximum Contaminant Level, Maximum Residual Disinfectant Level and Treatment Technique violations.
- ii. Reason for Ranking: Recent studies estimate that contaminants in drinking water sicken 1.1 million people each year. Ensuring the safety of drinking water is important to prevent illness, birth defects, and death for those with compromised immune systems. A number of other health problems have been associated with contaminated water, including nausea, lung and skin irritation, cancer, kidney, liver, and nervous system damage.

Health Factors			
Category:	Physical Environment		
Statistic:	Water		
Definition:	Percent of the population getting water from public water systems with at least one health-based violation during the reporting period. Health-based violations include Maximum Contaminant Level, Maximum Residual Disinfectant Level and Treatment Technique violations.		
Data Source:	Safe Drinking Water Information System		
Data Years:	FY 2012		
2013 Statistics			
Johnson County:	0.0%	95% Confidence Interval:	NA
Johnson County Rank in MO:	1		
Missouri:	4.7%	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	NA	NA	NA
Missouri:	NA	NA	NA

- iii. Johnson County is lower than the state of Missouri in the health-based violations in drinking water measure. Johnson County's performance in this measure is not reported for previous years.

Health Factors: Physical Environment

c. Recreational Facilities

- i. Definition: This measure represents the number of recreational facilities per 100,000 population in a given county. Recreational facilities are defined as establishments primarily engaged in operating fitness and recreational sports facilities, featuring exercise and other active physical fitness conditioning or recreational sports activities such as swimming, skating, or racquet sports.
- ii. Reason for Ranking: The availability of recreational facilities can influence individuals' and communities' choices to engage in physical activity. Proximity to places with recreational opportunities is associated with higher physical activity levels, which in turn is associated with lower rates of adverse health outcomes associated with poor diet, lack of physical activity, and obesity. The evidence for the effectiveness of improving access to recreational facilities is so strong that the Centers for Disease Control and Prevention (CDC) recommend it as one of the 24 environmental- and policy-level strategies to reduce obesity in its Common Community Measures for Obesity Prevention Project.

Health Factors			
Category:	Physical Environment		
Statistic:	Recreational Facilities		
Definition:	Number of recreational facilities per 100,000 population in a given county.		
Data Source:	County Business Patterns		
Data Years:	2010		
2013 Statistics			
Johnson County:	5.7	95% Confidence Interval:	NA
Johnson County Rank in MO:	69		
Missouri:	9.7	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	6	8	NA
Missouri:	10	10	NA

- iii. Johnson County's rate of recreational facilities is lower than the state of Missouri's. From the prior year, Johnson County's rate of recreational facilities decreased by 0.3 facilities per 100,000 population.

Health Factors: Physical Environment

d. Healthy Foods

- i. Definition: Limited access to healthy foods captures the proportion of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and non-rural areas; in rural areas, it means living less than 10 miles from a grocery store whereas in non-rural areas, it means less than one mile. Low income is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size.
- ii. Reason for Ranking: There is strong evidence that residing in a food desert is correlated with a high prevalence of overweight, obesity, and premature death. Supermarkets traditionally provide healthier options than convenience stores or smaller grocery stores. Additionally, lack of access to fresh fruits and vegetables is a substantial barrier to consumption and is related to premature mortality.

Health Factors			
Category:	Physical Environment		
Statistic:	Healthy Foods		
Definition:	Proportion of the population who are low income and do not live close to a grocery store. Close to grocery store defined as <10 miles from grocery store (rural areas) and <1 mile from grocery store (nonrural areas). Low income defined as family income <200% of FPL.		
Data Source:	USDA Food Environment Atlas		
Data Years:	2012		
2013 Statistics			
Johnson County:	6.5%	95% Confidence Interval:	NA
Johnson County Rank in MO:	61		
Missouri:	6.2%	95% Confidence Interval:	NA
Historical Statistics*			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	1%	NA	NA
Missouri:	8%	NA	NA

*Change to measure definition. As such, historical statistics not comparable to 2013 statistics.

- iii. Johnson County's low income population with healthy food inaccessibility is higher than the state of Missouri's. From the prior year, the proportion of Johnson County's low-income population that did not have access to healthy food increased by 5.5%.

Health Factors: Physical Environment

e. Fast Food Restaurants

- i. Definition: Fast food restaurants examine the proportion of restaurants in a county that are fast food establishments.
- ii. Reason for Ranking: Access to fast food restaurants is correlated with a high prevalence of overweight, obesity, and premature death. The average number of kilocalories consumed daily in the US has been on an increasing trend over the past several decades. Among most child age-groups, fast food restaurants are the second highest energy provider, second only to grocery stores.

Health Factors			
Category:	Physical Environment		
Statistic:	Fast Food Restaurants		
Definition:	Proportion of restaurants in a county that are fast food establishments.		
Data Source:	County Business Patterns		
Data Years:	2010		
2013 Statistics			
Johnson County:	46.8%	95% Confidence Interval:	NA
Johnson County Rank in MO:	78		
Missouri:	46.9%	95% Confidence Interval:	NA
Historical Statistics			
Year:	<u>2012</u>	<u>2011</u>	<u>2010</u>
Johnson County:	48%	NA	NA
Missouri:	47%	NA	NA

- iii. Johnson County's percentage of fast food restaurant is marginally lower than the state of Missouri's. From the prior year, Johnson County's percentage of fast food restaurants decreased by 1.2%

Chronic Disease Profile

Heart disease, cancer, and cerebrovascular disease are the chronic conditions that generate the highest chronic disease death rates in Johnson County. Overall, the death rates associated with various chronic diseases, such as cardiovascular disease, cancer, and diabetes, in Johnson County and Missouri are very similar. For all chronic diseases listed above, Johnson County's death rates are marginally lower than those for Missouri; however, the true differential in death rates has been determined to not be statistically significant.

Death Rates Associated with Chronic Diseases (per 100,000 population)

Chronic Disease	Johnson County	Missouri	Difference is Statistically Significant?
Heart Disease	244.40	245.60	No
All Cancers	187.40	197.70	No
Colorectal Cancer	16.90	19.39	No
Lung Cancer (SEER)	54.60	61.41	No
Breast Cancer	12.70	14.55	No
Cervical Cancer	1.30	1.41	No
Prostate Cancer	10.30	9.10	No
Stroke/Other Cerebrovascular Disease	53.40	54.94	No
Chronic Obstructive Pulmonary Disorder (excluding Asthma)	46.20	47.38	No
Diabetes Mellitus	21.00	23.78	No

Source: Missouri Department of Health & Senior Services

Note: Death rates reflect age-adjusted data. Data years vary based on disease type. All disease types include information updated through 2009.

Interestingly, some chronic disease hospitalization rates in Johnson County are significantly different from chronic disease hospitalization rates in Missouri. Johnson County's hospitalization rates for the general chronic disease categories (i.e., heart disease, cancer, stroke, chronic obstructive pulmonary disorder, and diabetes) are lower, at a statistically significant level, from Missouri's hospitalization rates.

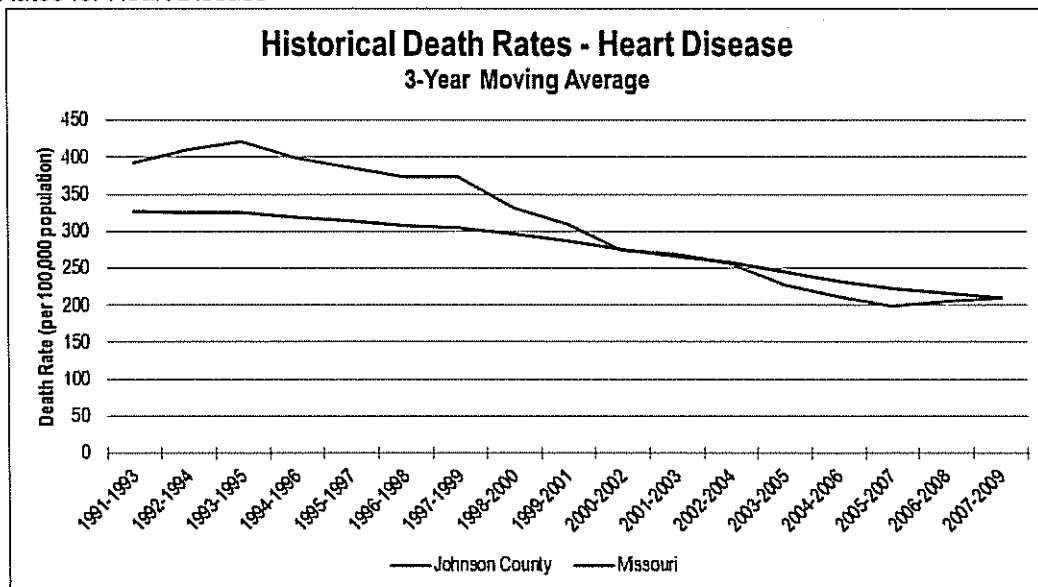
Hospitalization Rates Associated with Chronic Diseases (per 100,000 population)

Chronic Disease	Johnson County	Missouri	Difference is Statistically Significant?
Heart Disease	128.60	152.38	Yes - Lower
All Cancers	34.20	39.07	Yes - Lower
Colorectal Cancer	4.40	4.89	No
Lung Cancer (SEER)	3.20	5.18	Yes - Lower
Breast Cancer	1.50	2.20	Yes - Lower
Cervical Cancer	1.20	0.79	No
Prostate Cancer	2.80	2.78	No
Stroke/Other Cerebrovascular Disease	25.60	30.37	Yes - Lower
Chronic Obstructive Pulmonary Disorder (excluding Asthma)	20.40	23.22	Yes - Lower
Diabetes Mellitus	8.80	17.32	Yes - Lower

Source: Missouri Department of Health & Senior Services

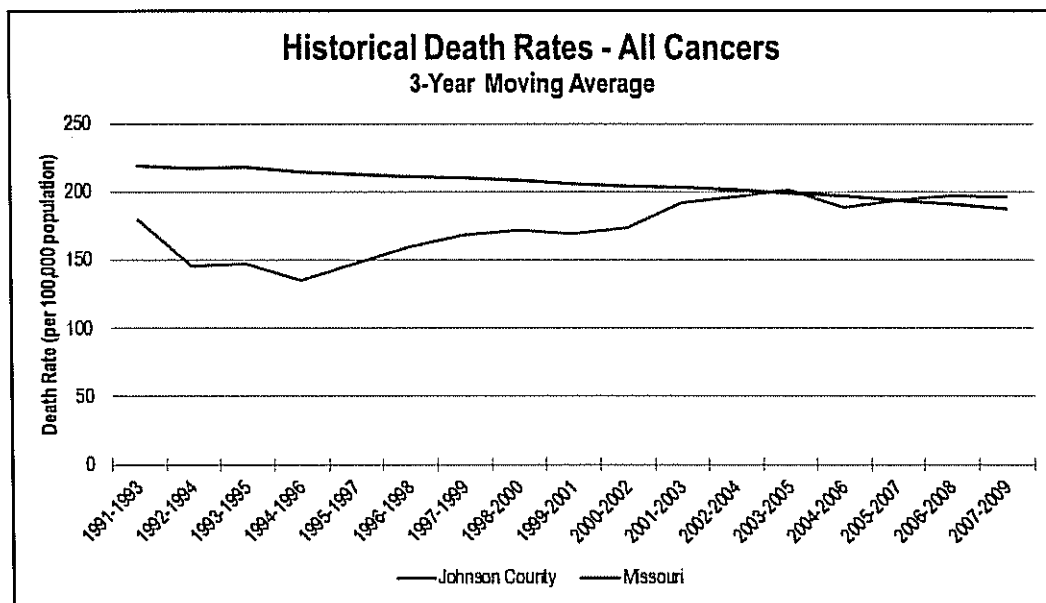
Note: Death rates reflect age-adjusted data. Data years vary based on disease type. All disease types include information updated through 2009.

Death Rates for Heart Disease



Johnson County's 3-year moving average heart disease death rate has slowly declined and converged to Missouri's heart disease death rate. Throughout this first 11 years depicted (1991-2002), Johnson County's heart disease death rate was, on average, 65.6 (per 100,000 population) higher than Missouri's. Throughout the following 7 years (2003-2009), Johnson County's heart disease death rate was, on average, 12.6 (per 100,000 population) lower than Missouri's.

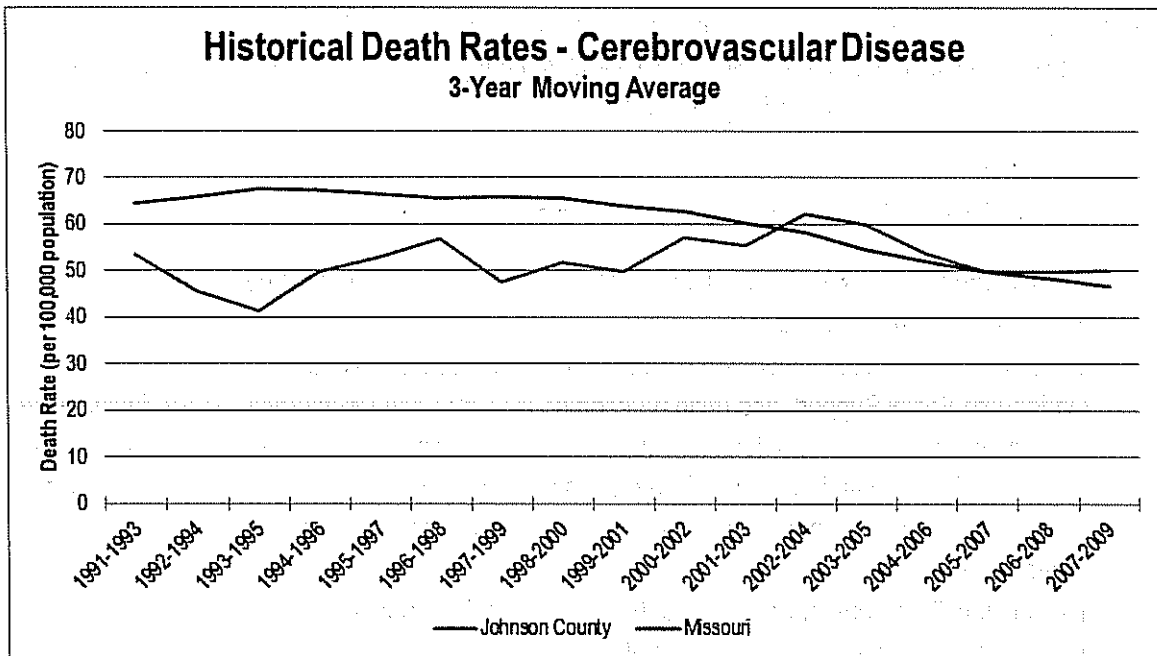
Death Rates for Cancer



Johnson County's 3-year moving average cancer death rate has slowly increased and converged to Missouri's cancer death rate. Throughout this first 13 years depicted (1991-2004), Johnson County's

cancer death rate was, on average, 45.3 (per 100,000 population) lower than Missouri's. Throughout the following 5 years (2005-2009), Johnson County's cancer death rate was, on average, 1.6 (per 100,000 population) higher than Missouri's.

Death Rates for Cerebrovascular Disease



Johnson County's 3-year moving average cerebrovascular death rate has slowly increased and converged to Missouri's cerebrovascular death rate. Throughout this first 10 years depicted (1991-2001), Johnson County's cerebrovascular death rate was, on average, 14.0 (per 100,000 population) lower than Missouri's. Throughout the following 8 years (2002-2009), Johnson County's cerebrovascular death rate was, on average, 2.7 (per 100,000 population) higher than Missouri's.

Summary of Death Rate for Chronic Disease

As depicted by the graphs above, chronic disease death rates are highly variable throughout time. Johnson County's historical death rates associated with heart disease have experienced a steady decrease since the early 1990's, whereas death rates associated with other chronic diseases (e.g., cancer and cerebrovascular disease) have fluctuated and even increased since the early 1990's.

Identification of High Priority Community Health Needs

The information from the Robert Wood Johnson Foundation was presented in summary form on June 27, 2013, to the community members participating in the Community Health Needs Assessment initiative. (Members are identified by name and organization in page 6, "Community Participants.") Hospital team members also participated.

In reviewing the findings, the discussion soon distilled to consensus on these items:

- As measured by the RWJF data, Johnson County is a relatively "healthy" community as compared with other Missouri counties.
- The four lowest-ranking factors are Excessive Drinking, Sexually Transmitted Diseases, Inadequate Social Support, and (high percentage of) Fast Food Restaurants. These factors were felt to be correlated with two dominant sub-groups in the community; Whiteman Air Force Base and the University of Central Missouri. Both groups were felt to have high concentrations of young adults potentially far from home and with periods of both intense pressure and intermittent supervision.
- The community is generally unaware of how to access the existing social support infrastructure. This likely creates a perception that social support avenues are unavailable.
- There is a shortage of primary care physicians and, in particular, pediatricians. This observation is supported by the RWJF data and has also been documented by Medical Staff planning activities of the hospital.
- There is a difference in environments between the city of Warrensburg and the more rural areas of the county. These differences will require either targeted solutions or adaptability to tailor programs between urban and non-urban populations.

Participants were then asked to identify and rank the top five health issues facing Johnson County from a listing of health issues. (The form used in the prioritization exercise is included as an appendix.) The list contained all RWJF topics, plus options to suggest other Chronic Disease and/or other Vulnerable Populations.

The results of the prioritization exercise are summarized in the table below:

Topic	Number of Top 5 Votes	Discussion Notes
Adult Obesity	8	
Childhood Obesity	8	
Heart Disease	4	
Seniors (Vulnerable Population)	4	
Adult Inactivity	1	
(Access to) Dental Providers	1	Particularly for uninsured or Medicaid

Uninsured/Underinsured	1	
(Availability and Access to) Mental Health Professionals	1	
(Availability and Access to) Primary Care Providers	1	Particularly Pediatricians and non-standard hours
Inadequate Social Support	1	Re-labeled "Access to Social Support"

Ten Community Health Needs were identified as High Priority based upon input from community participants. Six of these ten high-priority needs were grouped into two topics of perceived correlated causations and likely solutions:

The following health behaviors were felt to stem from a common root cause: **Adult Obesity, Childhood Obesity, Heart Disease, and Physical Inactivity**. There is a strong evidence-based relationship between obesity, lack of exercise, and heart disease. The Johnson County mortality rate from Heart Disease has historically been higher than the rest of the Missouri, but is now lower than the state average by a small but statistically significant amount. It should be noted that the 3-year-moving average (between 2005 and 2009) Mortality Rate for chronic heart disease in Johnson County is increasing. This is in contrast to the consistent downward trend in state and national statistics. A single action plan, a **"Get Fit"** initiative, was conceptualized to impact these four health behaviors or needs.

The access and availability of **Mental Health Professionals** and the inadequate **Access to Social Support** programs are believed to develop from a similar set of circumstances. Whether it is a bona fide shortage or mal-distribution of mental health professionals, or the inability to access the existing resources, the community perceives an inadequacy in social support programs. This perceived inadequacy is likely self-perpetuating in that people who need support programs but do not seek them are likely to become even more isolated and vulnerable. The community participants noted that because many physical ailments have a behavioral component (i.e., the behaviors of overeating and physical inactivity are associated with heart disease and diabetes), the county's perceived) relatively poor social support system may be contributing to or exacerbating many other community health issues. These two issues can be effectively addressed via a single **"Get Help"** action plan.

Two high priority Community Health Needs universally impacted all aspects of community health:

The availability and access to **Primary Care Providers** is recognized as a long-standing issue impacting the community. The RWJF report, based on US Health Resources and Services Administration data, shows a primary care deficit in the county: 2,396 population per primary care physician versus a Missouri average of 1,496 population per physician. To match the state average, Johnson County would need to have at least eight additional primary care providers

based on a population of 52,000. Western Missouri Medical Center separately commissioned an Advanced Medical Staff Planning Analysis to further define physician manpower issues. (Please see Appendix for a summary of this document.) This report is specific and actionable and is the basis for the hospital's **Physician Recruitment** Action Plan efforts.

Uninsured and Underinsured residents of Johnson County face significant access to care barriers which the community's health status. Federal legislation is supporting the expansion of healthcare insurance coverage via multiple provisions of the Patient Protection and Affordable Care Act. The principle mechanisms to expand insurance coverage to low-income individuals are the Health Insurance Exchanges and the expansion of Medicaid. Both initiatives are implemented at a state level. Missouri has declined to create its own insurance exchange and, by default, will rely on the federally-run insurance exchange. The implementation and operation of these plans in Missouri has not been established. Once details are available, Western Missouri Medical Center will be supporting the enrollment of individuals as part of a **"Get Covered"** action plan.

The remaining two high priority health issues facing the community will not be directly addressed by Western Missouri Center and will not have associated Action Plans:

The availability of **Dental Professionals** to low-income residents was felt to be a function of the level of insurance coverage. Missouri Medicaid (MO HealthNet) generally does not cover adult dental services except for emergency extractions or for individuals in special service categories (i.e., pregnancy). Because of the low or non-existent reimbursement stream, there is a scarcity of dentists willing to accept MO HealthNet patients. None of the 17 MO HealthNet dental providers that technically provide coverage in Johnson County are actually located in Johnson County. The RWJF documents a slight shortage of dentists in Johnson County in general (3,316 population per dentist in the county vs. 2,167 population per dentist in Missouri) which places Johnson County 44th out of 115 counties. An adult without dental insurance must either locate a charitable source or pay "out of pocket" for these services.

This issue will not be addressed in an Action Plan for these reasons:

- The provision of routine dental care is not a current or planned service offering of WMMC.
- Dental care is outside the core competency of WMMC. As such, it lacks the expertise and infrastructure to formulate a coherent response.
- The coming reforms in the insurance market are designed to indirectly increase the access to dental providers by low income residents.

The non-medical needs of **Senior Citizens** as a vulnerable population was identified as a high-priority health need. Community input proposed that housing and transportation were key considerations driving this selection as a high-priority issue. Community social support programs for the elderly were also felt to be marginal. This issue will not be formally addressed in an Action Plan due to its non-medical nature. In the course of addressing the other high-priority health needs via Action Plans, WMMC will be engaged and dialoging with community leaders that will be

supporting the non-medical issues facing the elderly. WMMC will, therefore, be supportive of the efforts by these groups, but will not be providing guidance or leadership to any specific initiative. The areas in which WMMC is provide direct support will likely tangentially impact the non-medical needs of seniors. This is particularly true of the "Get Help" action plan.

GET FIT ACTION PLAN

Description

The following four health issues were identified as high-priority in the 2014-2016 Community Health Needs Assessment:

- Childhood Obesity
- Adult Obesity
- Heart Disease
- Physical Inactivity

The "Get Fit" action plan is designed to address the confluence of interrelated and reinforcing behaviors associated with these issues.

Tentative Community Partners

- Western Missouri Medical Center
- Whiteman Air Force Base
- University of Central Missouri
- Warrensburg R-VI School District
- City of Warrensburg
- Johnson County Community Health Department
- Warrensburg Chamber of Commerce
- Community physicians (to be confirmed)

Goals

The "Get Fit" initiative has four goals:

- Increase the cardiovascular health of community residents
- Decrease the proportion of clinically overweight and obese individuals
- Promote heart healthy and nutritious dietary choices
- Decrease the prevalence of diagnosed cardiovascular disease

Preliminary Outcome Measures

- Decrease the proportion of Johnson County residents with a BMI in excess of 30 to the Missouri average or 31%
- Increase the weekly time devoted to cardiovascular exercise by 10%
- Increase the proportion of school age children achieving age-appropriate fitness guidelines (i.e., Presidential Challenge)
- Pounds lost in episodic weight loss challenges sponsored by community employers.

Strategies and Objectives

1. Sponsor periodic "weight-loss challenges" targeting employees large community employers. Promote a competitive atmosphere of team weight loss.
2. Partner with WAFB personnel to cultivate a fitness lifestyle for the City of Warrensburg, UCM, WMMC, and Warrensburg Schools.
3. Promotion of health-choice and nutritious dining selections by students.
4. Create a wellness measurement program that will increase the awareness of heart disease and the adverse effects of poor weight management.
5. Establish and/or obtain a rudimentary cost-benefit analysis that employers can utilize to assess the health insurance burden of heart disease and obesity.
6. Promote children's sports in inclusive, non-competitive recreational leagues.
7. Promote adult recreational fitness activities.

Timeframe

2014 through 2016

Scope/Target Populations

The "Get Fit" initiative will focus on residents of Johnson County, with an emphasis on the employers participating in the initiative. It is hoped that "leading by example" with these large employers will have an impact on other employers and will therefore reach a larger population.

Financial Requirement and Funding Source

The financial needs of the "Get Fit" initiative have yet to be developed.

GET HELP ACTION PLAN

Description

The following two health issues were identified as high-priority in the 2014-2016 Community Health Needs Assessment:

- Inadequate Social Support
- Mental Health Providers

The "Get Help" action plan is designed to address the availability of Mental Health providers and the access to community programs providing social support.

Tentative Community Partners

- Western Missouri Medical Center
- City of Warrensburg
- Johnson County Community Health Department
- Pathways Community Health
- (WAFB and UCM are also potential partners)

Goals

The "Get Help" initiative has three goals:

- Increase the availability of trained counselors and therapists to support individuals in need
- Improve the accessibility and prominence (via promotion) of mental health and behavioral counselors and therapists
- Increase the number of volunteer-led support groups and other resources available to assist those needing socialization and assistance

Outcome Measures

Tentative goal of improving Johnson County's score on the Behavioral Risk Factor Surveillance Report from a 2005-2010 baseline of 22% to the Missouri average of 19%.

Strategies and Objectives

- Inpatient admissions for mental health and substance abuse increased in most years. Help with integrating patients back into the outpatient community after an inpatient admission.
- Telemedicine offers four fundamental benefits: improved access, cost efficiencies, improved quality and patient health.
- Proactively engaging consumers in taking better care of their health.

Timeframe

Initialization in 2015 for implementation starting in 2016

Scope/Target Populations

The "Get Help" initiative will impact and benefit the residents of Johnson County.

Financial Requirement and Funding Source

The financial needs of the "Get Help" initiative have yet to be developed.

GET COVERED ACTION PLAN

Description

An estimated 6,500 residents (~15% of adults) of Johnson County are uninsured based on 2010 Federal estimates. The "Get Covered" action plan supports obtaining health insurance coverage for this vulnerable population. The principal mechanism of action will be directing individuals to the insurance products offered via the Federal Health Insurance Exchange. Western Missouri Medical Center will not be creating an insurance product. The details, including carriers, products, and rates of the Insurance Exchange have not been developed as of August 2013.

Tentative Community Partners

- The State of Missouri Health Insurance Exchange and associated financial counselors and insurance agents
- The insurance companies offering products (Platinum, Gold, Silver, or Bronze) via the Missouri Health Insurance Exchange
- Western Missouri Medical Center
- Johnson County Community Health Department
- Care Connections

Goal

The "Get Covered" initiative has the goal of reducing the number of uninsured residents of Johnson County.

Outcome Measures

To be determined

Strategies and Objectives

- Population Health Management, which is patient-centered, proactive, coordinated, continuous, and comprehensive.
- Better communication between patient and provider.
- Health coalition of resources.

Timeframe

Dependent on the Federal implementation schedule.

Scope/Target Populations

To be determined

Financial Requirement and Funding Source

The financial needs of the "Get Covered" initiative have yet to be developed.

PRIMARY CARE PROVIDER ACTION PLAN

Description

The Robert Wood Johnson Foundation assembled data from the Health Resources and Services Administration (HRSA) 2011-2012 Health Workforce area resource file to establish a population to primary care provider ratio of 2,396 residents per physician. This is considerably lower than the Missouri average of 1,495 residents per primary care provider. Johnson County is designated as a Primary Care Health Professional Shortage Area for Low Income populations (HPSA ID 129999291U).

Western Missouri Medical Center has separately documented physician manpower deficits as part of an *Advanced Medical Staff Planning* project performed by Navigant Consulting. Portions of this report are attached as an Exhibit. The Navigant report describes specific specialties and recruitment targets.

Tentative Community Partners

Western Missouri Medical Center will have primary accountability for this initiative. The hospital will involve existing community physician groups in the recruitment process at their invitation and with their support.

Goal

Increase the availability of primary care physicians to Johnson County residents by the recruitment of physicians.

Outcome Measures

- Recruitment of 1 or more pediatricians.
- Increase the available primary care physician manpower in Johnson County.

Strategies and Objectives

- WMMC will engage third-party physician recruiting firm to locate and source candidate physicians.
- The WMMC physician liaison/recruiter will also work on recruiting

Timeframe

Recruitment of qualified physicians is an ongoing activity for Western Missouri Medical Center.

Scope/Target Populations

Physicians recruited by WMMC will primarily serve the residents of Johnson County. Citizens of other areas will have access to their services as well.

Financial Requirement and Funding Source

The financial needs of the Primary Care Provider Action Plan are dependent on how recruited physicians wish to be aligned with the community. Employment of physicians by Western Missouri Medical Center is a likely outcome. All employment contracts would be reviewed by a third-party evaluator for fair-market-value. Other alignment structures involving WMMC are also possible. It is also possible that recruited physicians may join existing physician groups, in which case the group will be responsible for all financial details.