MU SCHOOL OF PUBLIC HEALTH

# Regional Health Needs Assessment

## For Benton, Henry, and St. Clair Counties

**Jan Neumann**

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The following is a regional health needs assessment designed to identify priority regional health problems in Benton, Henry, and St. Clair Counties in Missouri. This assessment can be used as a tool when planning public health programs.

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## Part I. Author's Introduction

### Purpose

The following report is a community health needs assessment. For the purposes of this report, the community covered by the assessment includes Henry County, which is served by the Henry County Health Center and Golden Valley Memorial Hospital, both located in Clinton, Missouri. Benton County and St. Clair County, Missouri are also included in the assessment because they lie within the greater service area of Golden Valley Memorial Hospital. The purpose of the assessment is to identify the priority health problems of the tri-county area in order to help the Henry County Health Center and Golden Valley Memorial Hospital improve their services and guide their accreditation processes.

### Methods

To complete this regional health needs assessment, I utilized several different techniques and sources. For example, Parts III through XIII of the assessment, (the backbone of the report), cover priority regional health problems, from heart disease to alcohol and substance abuse problems. In this section of the project, I used Priorities MICA (a service of the Missouri Department of Health and Senior Services) to capture tabulated and ordered lists of health problems according to certain criteria. The focus in Parts III through XIII is on health problems that fit the criteria of strong associations with deaths, hospitalizations, long hospital stays, or disability burden in the tri-county area. A description of each health problem highlights risk and preventive factors. Each health problem is also accompanied by graphs showing tri-county and state rates, plus trends over time.

Other components of the assessment cover additional health needs in the region. For example, Part I of the assessment, Demographic Information, provides a useful characterization of the community. The Health Issue Profiles cover topic areas such as maternal and child health. The results of the 2011 Missouri County Health Rankings highlight the wide range of factors in the tri-county area that influence public health. Finally, the results of my dentist interviews and the 2011 Tri-County Healthy Lifestyle Survey provide primary qualitative and quantitative data about dental health, as well as attitudes and behaviors related to diet and exercise (important lifestyle-related health factors), in the tri-county area.

**Intent for Use**

This regional health needs assessment has been designed to provide the data necessary to substantiate the need for attention to clinical and population-level interventions for certain diseases and conditions in the tri-county area. My intent is that these sets of data will be used to prompt discussion of regional health issues and serve as tools to inspire public health program ideas. The assessment was not designed to provide detailed research hypotheses about each health problem. Indeed, the data sets in the assessment may be used to construct research hypotheses about the best localized intervention practices for certain health problems in the future, as the needs for certain studies arise. However, these endeavors will constitute projects in themselves, and will be determined by the stakeholders using this assessment as a tool.

**Limitations**

The data described in parts III through XIII focus mainly on tri-county numbers (rates ans moving average rate trends over time) that have been labeled by the Missouri

Department of Health and Senior Services as *statistically significantly* higher than the state statistics.[18] Please note, then, that the magnitude of the *clinical or practical* differences between the tri-county and state statistics is open to subjective interpretation.

Also, please note that the 2011 Tri-County Healthy Lifestyle Survey, which serves as a primary data instrument in this assessment, reached a mostly female, caucasian, moderate-to-high income audience. These resuls may not be fully representative of Henry County demographics.

**Hospitalization and Mortality Rates**

Parts III through XIII of the assessment make use of hospitalization and mortality rates, which have been age adjusted by the Missouri Department of Health and Senior Services to the 2000 United States Census per 10,000 population.[18]

**Survey Responses and Confidentiality**

To ensure the confidentiality of 2011 Tri-County Healthy Lifestyle Survey respondent information, a small number of responses have been labeled as *Restricted*. For more information, please contact the author using the email address below.

**Acknowledgements**

The needs assessment project was made possible by a partnership between the Missouri Hospital Association, the University of Missouri School of Public Health, Golden Valley Memorial Hospital, and the Henry County Health Center. For any additional information on this report, please contact me at jen539@mail.missouri.edu.

Sincerely,

Jan Neumann, MPH Candidate 2011

**Part II. Regional Demographics**

The tri county area is situated in a largely rural area of Missouri. Demographically, all three counties share many characteristics. For example, greater than or equal to 98 percent of residents report as White in Benton, Henry, and St. Clair Counties. The average family size in the tri county area is fewer than three people. Finally, over the past decade (2000 to 2009), the tri county area has experienced a number of economic setbacks. For example, in this time period, all three counties have seen a greater than 100 percent increase in the number of unemployed persons, increases in the number of residents living in poverty, and decreases in median household income.[25]

An additional demographic characteristic worth examining for this tri county area is age distribution. The majority of tri-county residents are between the ages of 19 and 64. However, relative to most other counties in the state of Missouri, Benton, Henry, and St. Clair Counties have a greater percentage of people over age 65. In fact, in terms of percentage of people over age 65 in the population, the tri county area is in the two upper quintiles of the interactive map in Figure II-A. The Office of Social and Economic Data Analysis (2011) created the interactive map using 2010 United States Census Data.[24]

These two demographic discussion themes of economics and age present particular public health implications. First, it is important to note the downturn of certain economic indicators in the tri county area. It seems likely that more people in the region have lost their health insurance (and thereby losing their access to primary care) since the onset of recent periods of economic recession, mirroring the national trend of the growing ranks of the uninsured.[13] Also, a number of public health problems, including chronic disease and incidences such as falls, are related to age (see Priority Regional Health Problem

Profiles) – for this reason, it is important to note the relatively high percentage of elderly persons living in the tri county area.

**Figure II-A. Trends in Demographics: Age Distribution and Aging (OSEDA, 2011)**

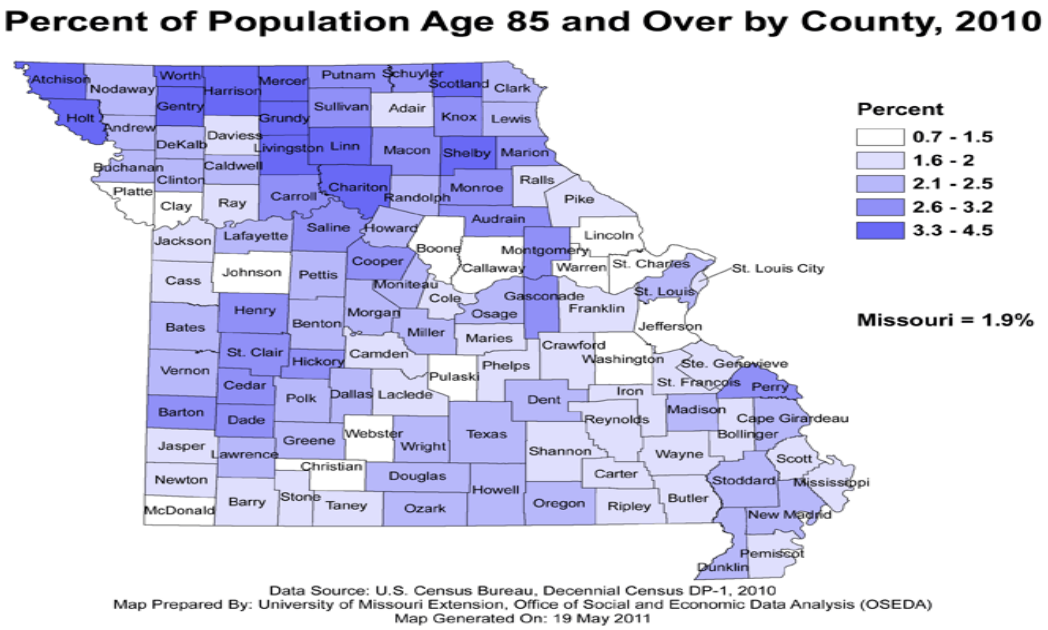
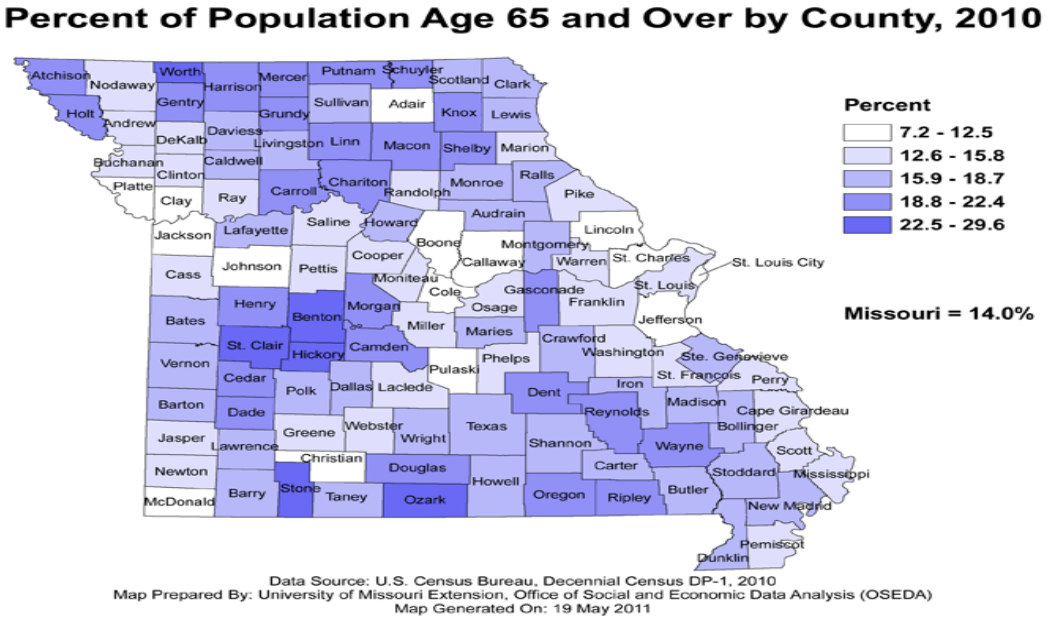


**Figure II-B. Topics in Demographics: Age Distribution and Aging (OSEDA, 2011)**



## Part III. Heart Disease

## Priority Regional Health Problems – Leading Causes of Death

## Priority Regional Health Problems – Leading Causes of Hospitalization

## Priority Regional Health Problems – Number of Days of Hospital Care

### General Information

According to Priorities MICA, a service of the Missouri Department of Health and Senior Services, heart disease is the leading cause of death, as well as the leading cause of hospitalizations and the cause of the greatest number of hospital care days, in the entire tri-county area.[19] And according to the Centers for Disease Control and Prevention (CDC, 2010), heart disease is also the leading cause of death for both men and women in the entire Unites States.[6]

### Risk Factors and Prevention

As with many other conditions, the risk factors for heart disease and heart attacks – obesity and tobacco use are two examples – can be mitigated by a healthy diet, regular physical activity, smoking cessation, and/or a medication regimen. The CDC (2010) also recommends preventive screening for heart problems, as well as swift emergency care at the first signs of a heart attack, to prevent disability and death associated with heart disease.[6] When discussing heart disease or any other health problem, it is important to remember these different dimensions of prevention: primary (lifestyle changes), secondary (screening), and tertiary (mitigating the effects of a heart attack) prevention.

### Data

The regional statistics related to heart disease deaths show some promising trends, but the statistics related to heart disease hospitalizations are less optimistic. For example,

all three counties in the tri county area have been following the state's overall downward trend of deaths due to heart disease from 1991 to 2008, and all three counties have a 1999-2009 age adjusted rate of heart disease mortality that is not significantly different from the state rate. The 2004-2008 age adjusted rates of hospitalizations due to heart disease in all three counties are significantly higher than the state rate. The 1994-2008 three-year moving average rate trend of hospitalizations due to heart disease in Benton and St. Clair Counties are not statistically significant; for this indicator, Henry County displays a statistically significant upward trend.[18]

Figure III-A. Heart Disease Death Trends (MO DHSS Community Data Profiles)

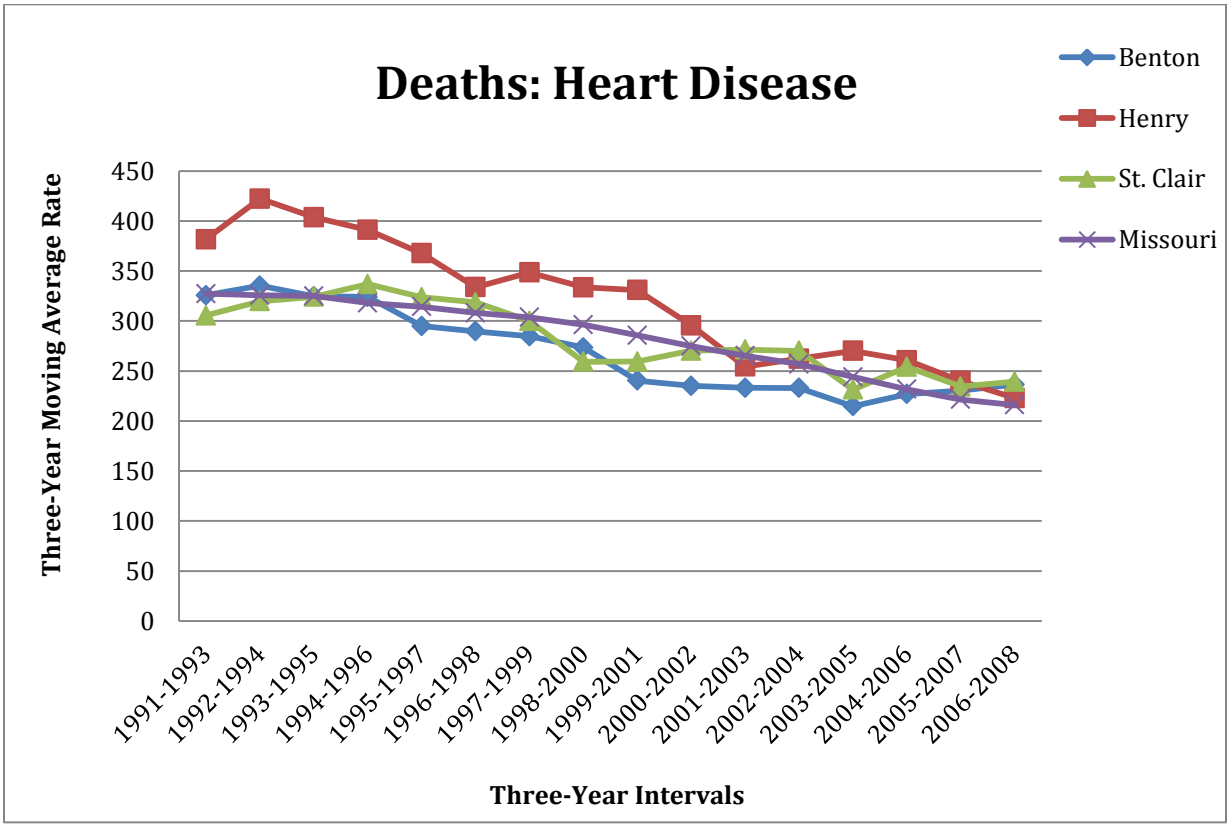


Figure III-B. Heart Disease Mortality Rates, State/Tri-County Comparison (MO DHSS Community Data Profiles)

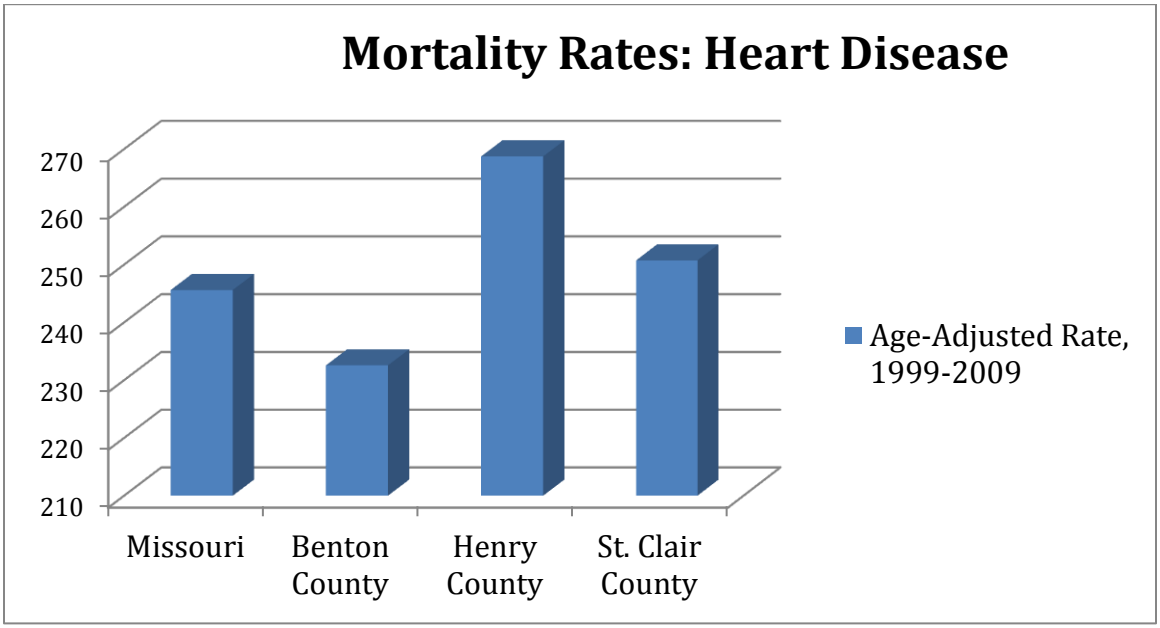



Figure III-C. Heart Disease Hospitalization Trends (MO DHSS Community Data Profiles)

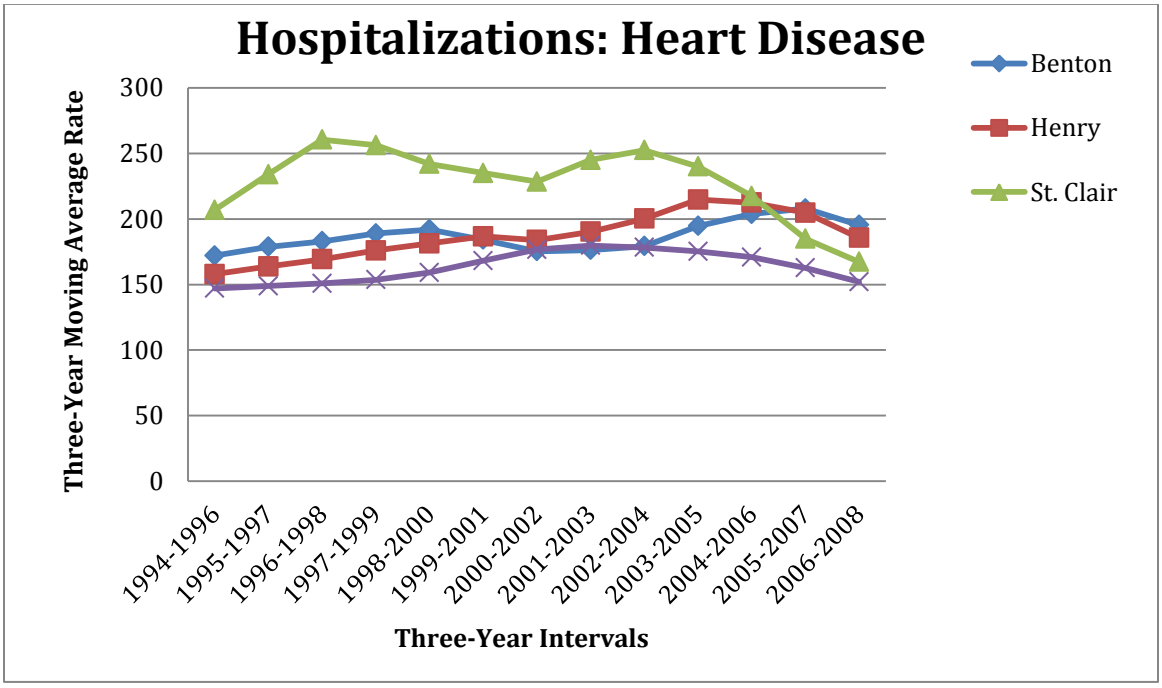
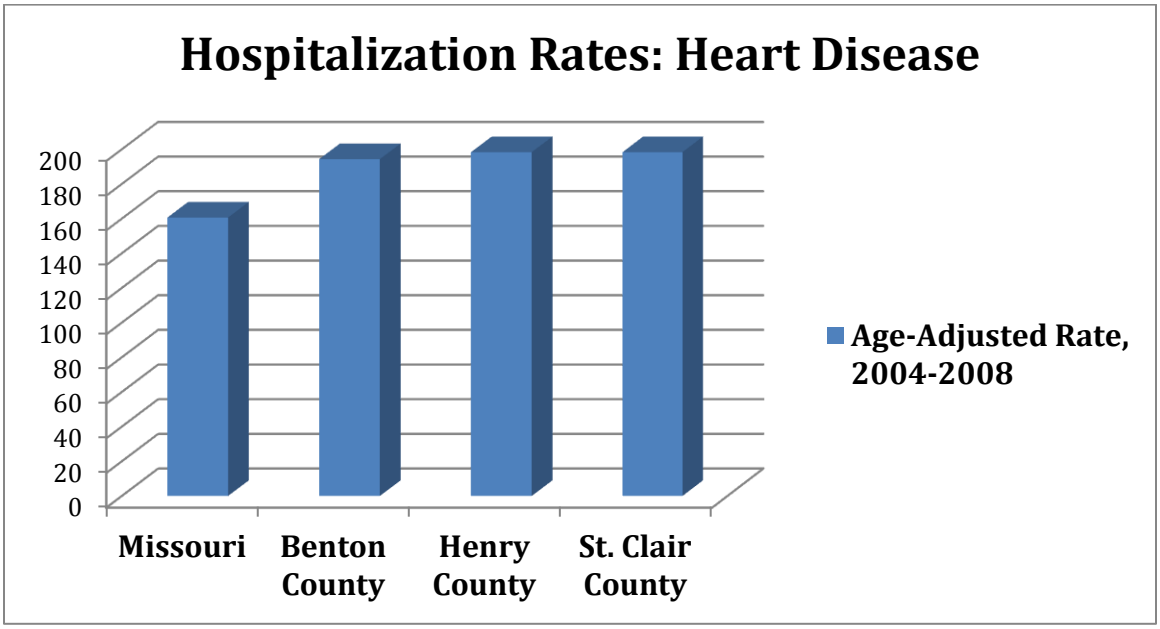


Figure III-D. Heart Disease Hospitalization Rates (MO DHSS Community Data Profiles)



## Part IV. Stroke

### Priority Regional Health Problems – Leading Causes of Death

#### General Information, Risk Factors, and Prevention

According to Priorities MICA, stroke (and other cerebrovascular disease) is the second leading cause of death in Henry County and the third leading cause of death in St. Clair County.[19] According to the Centers for Disease Control and Prevention, stroke is the third leading cause of death in the United States. A number of underlying conditions and behaviors can contribute to strokes, such as heart disease, diabetes, high blood pressure and cholesterol, overweight and obesity, and alcohol and tobacco use. Lifestyle changes, such as substance use cessation, healthy diet and exercise, and medication regimens can act as primary prevention tools to prevent blood clots from forming and affecting the brain. In terms of later-stage prevention, the CDC (2010) also recommends swift emergency medical attention at the first signs of a stroke to prevent death and disability.[7]

#### Data

While the 1999-2009 age adjusted mortality rates due to stroke and other cerebrovascular disease in Benton County and St. Clair County are not significantly higher than the state rate, Henry County does have a significantly higher rate than the state rate. In terms of trends, the 1991-2008 three-year moving average rate trends in Benton and Henry Counties are not statistically significant (comparable data from the same source is not available for St. Clair County).[18]

Figure IV-A. Tri-County/State Stroke Mortality Trends (MO DHSS Community Data Profiles)

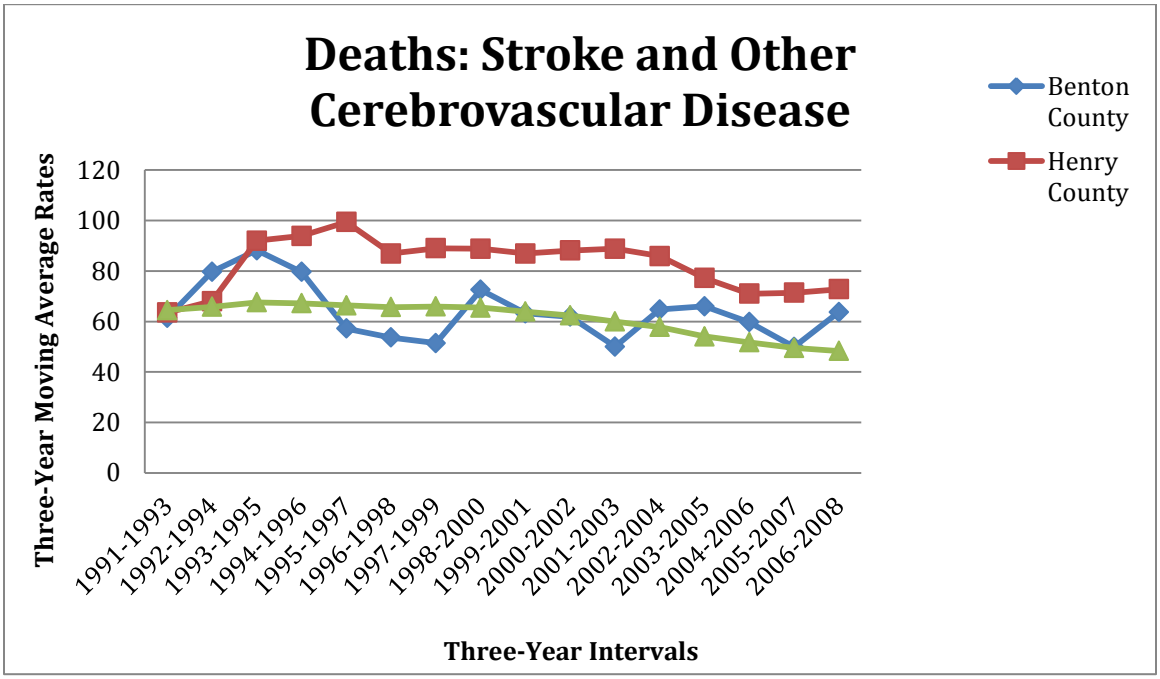
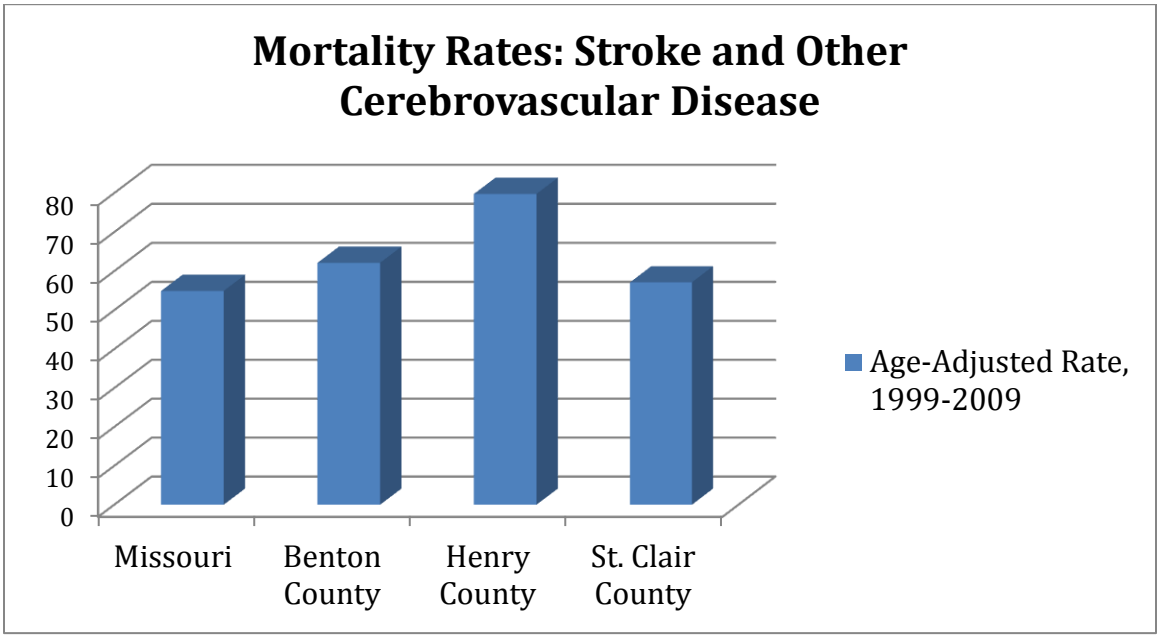


Figure IV-B. Tri-County/State Stroke Mortality Rates (MO DHSS Community Data Profiles)



## Part V. Lung Cancer and COPD

**Lung Cancer: Priority Regional Health Problems – Leading Causes of Death**

**COPD: Priority Regional Health Problems – Number of Days of Hospital Care**

**COPD: Priority Regional Health Problems – Leading Causes of Death**

### General Information

In Part D of this needs assessment, I have decided to group lung cancer and chronic obstructive pulmonary disease together because these two conditions share an important risk factor: tobacco use. According to Priorities MICA, lung cancer is the second leading cause of death in Benton and St. Clair Counties and the third leading cause of death in Henry County.[19] Meanwhile, COPD is the third leading cause of death in Benton County and the cause of the third highest number of days of hospital care in St. Clair County. According to the Centers for Disease Control and Prevention (2011), more deaths are attributable to lung cancer than any other type of cancer in the United States. The CDC also cites COPD as a disease encompassing a variety of conditions, including emphysema, chronic bronchitis, and asthma. However, the data I used for this assessment did not include asthma in the definition of COPD.[9, 11]

### Risk Factors and Prevention

Lung cancer and COPD share a few key risk factors, according to the CDC. Tobacco use, genetic history of either of these conditions, and occupational and environmental pollutants all contribute to the development of these diseases in the lungs. While smoking cessation counts as a key preventive tool for lung health, other strategies, such as awareness of family history and policies that support environmental health, also serve as useful prevention tools.[9, 11]

**Data**

According to the Missouri Department of Health and Senior Services Community Data Profiles, each county in the tri-county area has a 1999-2009 age adjusted lung cancer mortality rate that is significantly higher than the state rate. From 1991-2008, Benton and Henry Counties do not display a statistically significant trend of three-year moving average rates of deaths due to lung cancer (comparable data from the same source is not available for St. Clair County). Moving from lung cancer data to COPD data, Benton County's 1998-2008 age adjusted rate of deaths due to COPD is significantly higher than the state rate; however, these rates for Henry and St. Clair Counties are not significantly different from the state rate.[18]

Figure V-A. Tri-County/State COPD Mortality Rates (MO DHSS Community Data Profiles)

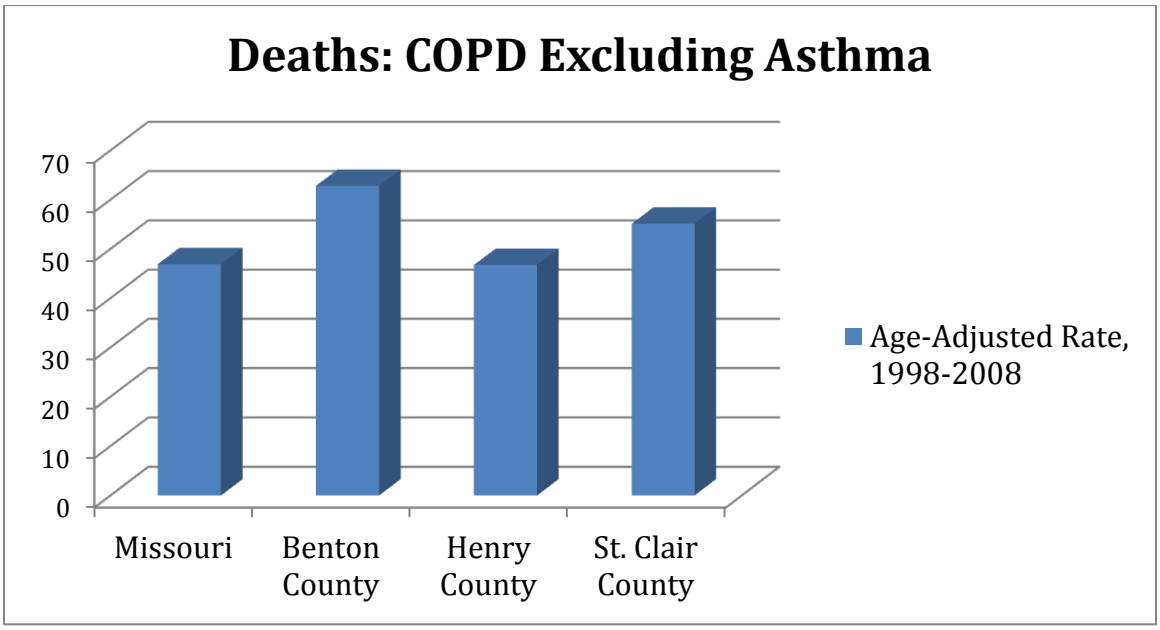


Figure V-B. Tri-County /State COPD Hospitalization Trends (MO DHSS Community Data Profiles)

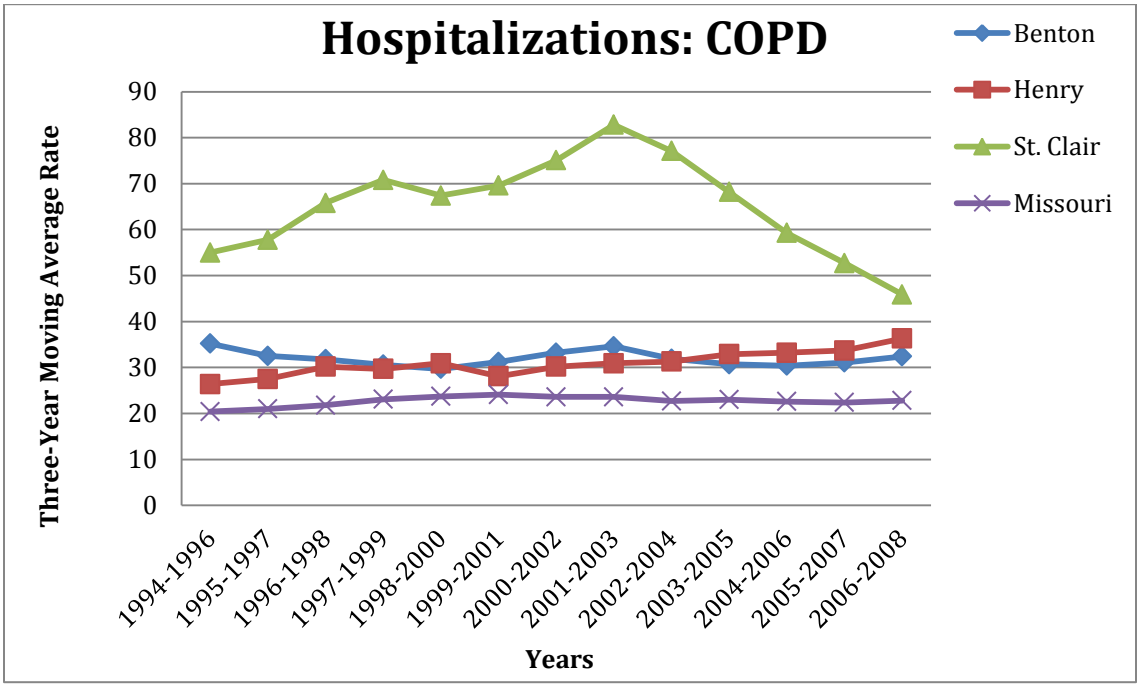



Figure V-C. Tri-County/State COPD Hospitalization Rates (MO DHSS Community Data Profiles)

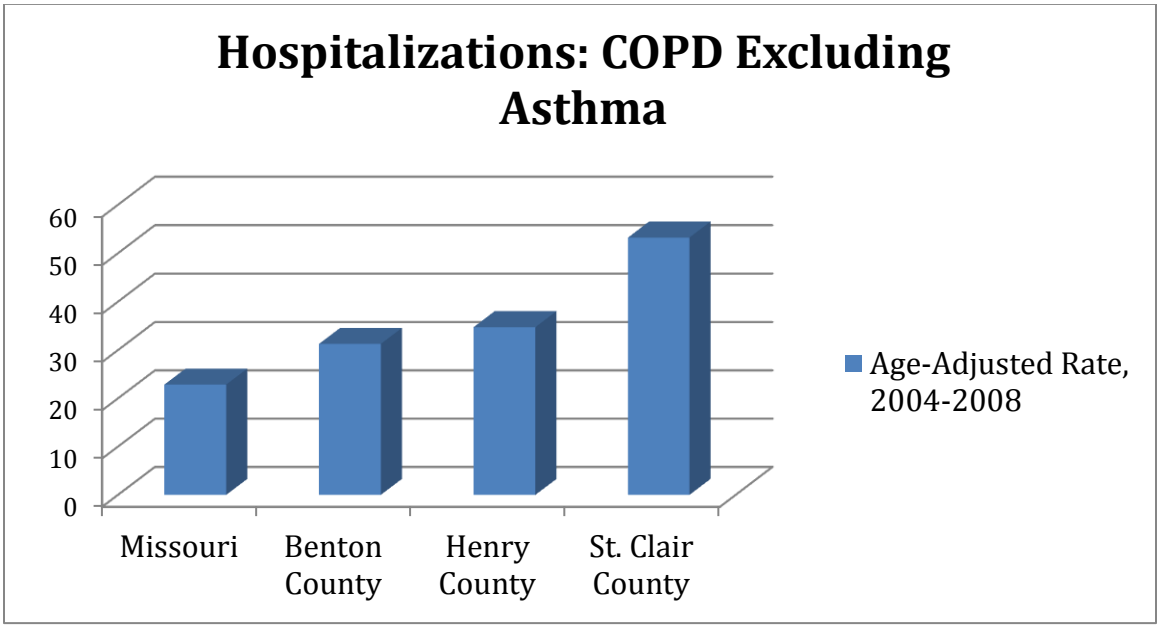


Figure V-D. Bi-County/State Lung Cancer Mortality Trends (MO DHSS Community Data Profiles)

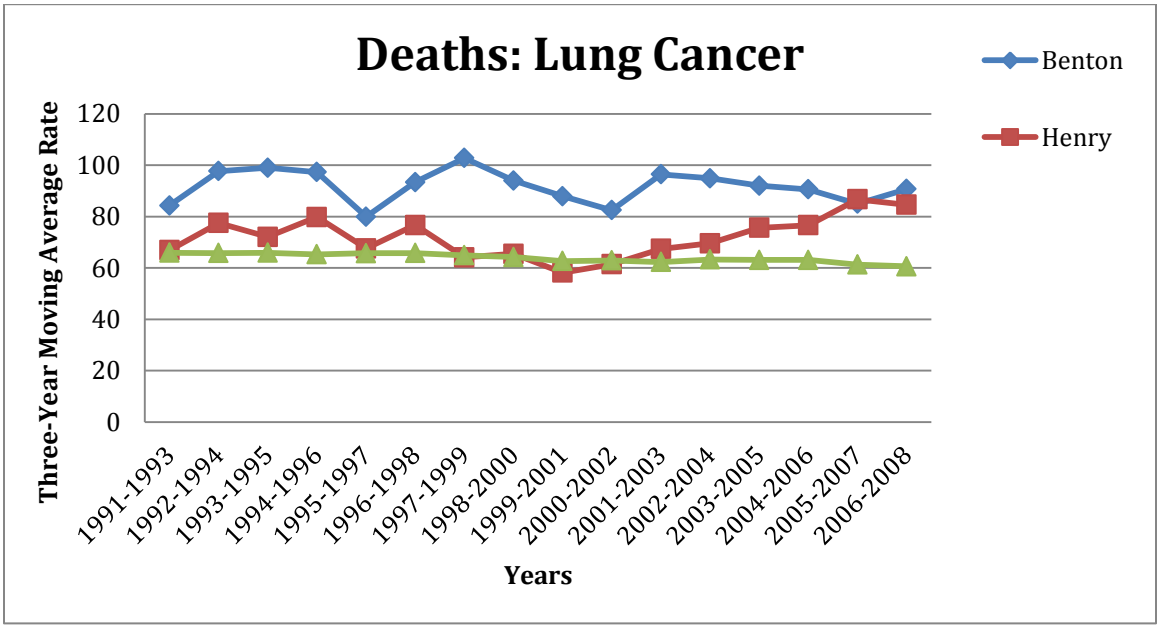
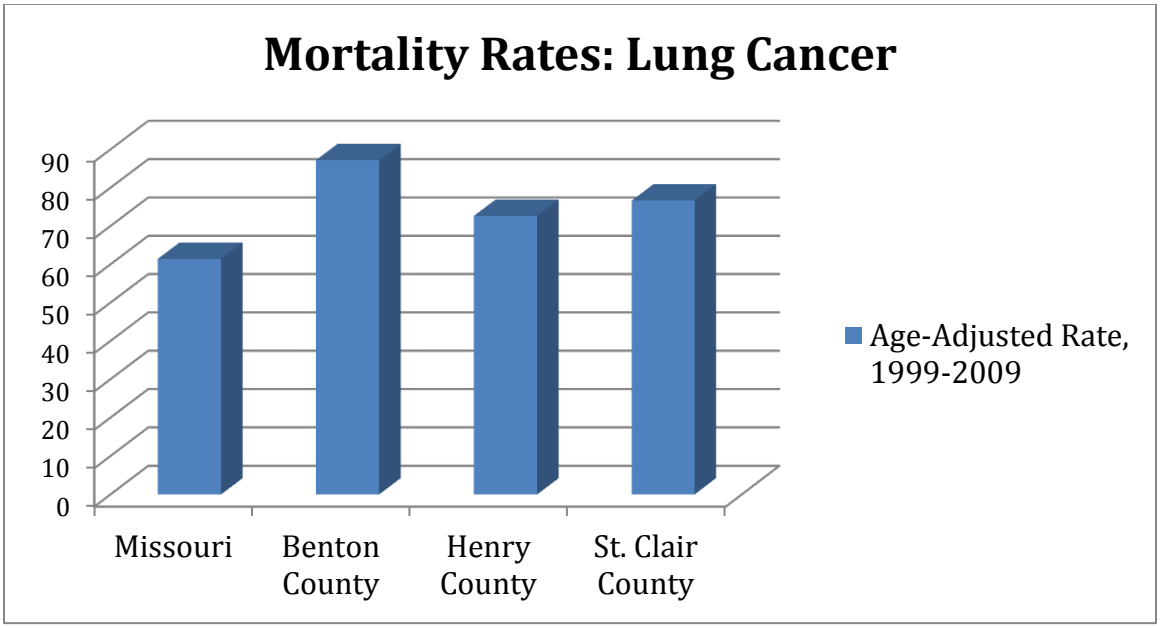



Figure V-E. Tri-County/State Lung Cancer Mortality Rates (MO DHSS Community Data Profiles)



## Part VI. Falls

### Priority Regional Health Problems – Number of Hospitalizations

#### General Information

This synopsis of falls in the tri-county area refers to falls experienced by the elderly (adults age 65 and older), although the definition of falls used in the state data may include falls experienced by people under age 65. According to Priorities MICA, falls are the second leading cause of hospitalizations in the tri county area.[19] According to the Centers for Disease Control and Prevention (2010),

"Among those age 65 and older, falls are the leading cause of injury death. They are also the most common cause of nonfatal injuries and hospital admissions for trauma (Falls among older adults, p.1)."[5]

#### Risk Factors and Prevention

Two examples of the debilitating effects of falls in the elderly include traumatic brain injuries (TBI) and hip fractures. Fortunately, a variety of preventive strategies can be employed to mitigate risk factors and prevent falls, thereby preventing disability and death from falls in the elderly population. For example, senior citizens who maintain optimal vision, bone health, and overall physical fitness lower their risk of falling. These goals can be achieved with the help of regular vision checks, dietary supplements when necessary, regular exercise, and any needed accommodations to home infrastructure to make daily movement easier.[5]

#### Data

According to the Missouri Department of Health and Senior Services Community Data Profiles, Benton, Henry, and St. Clair Counties all have 1998-2008 age adjusted

rates of falls that are significantly higher than the state rate. Meanwhile, Benton and St. Clair Counties do not have a statistically significant three-year moving average rate trend of falls from 1994-2008, but Henry County is displaying a significant decreasing trend in this time period.[18]

Figure VI-A. Tri-County/State "Falls" Hospitalization Trend (MO DHSS Community Data Profiles)

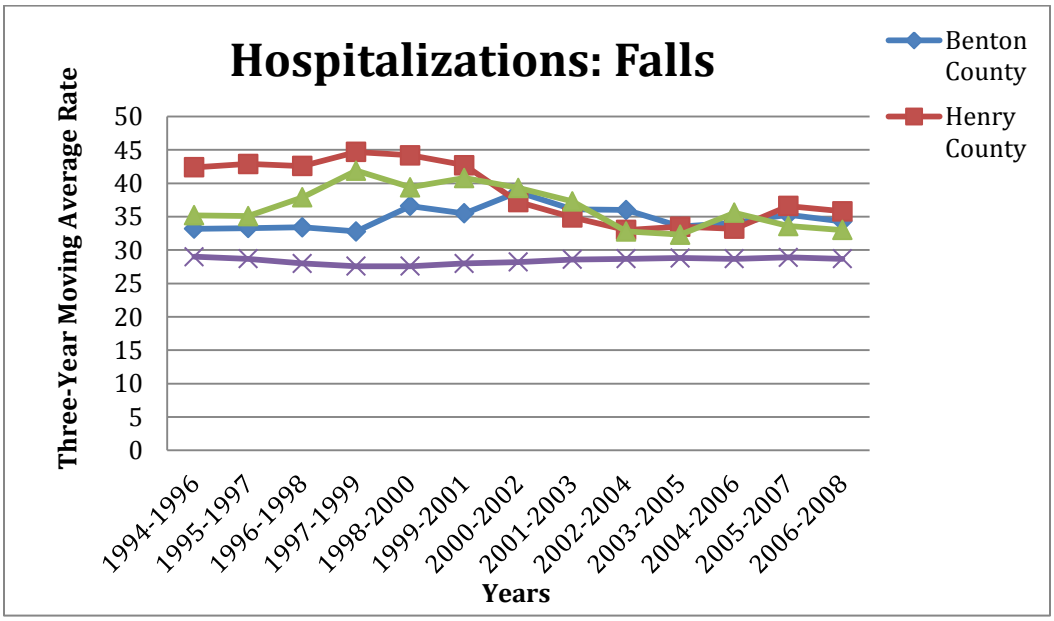
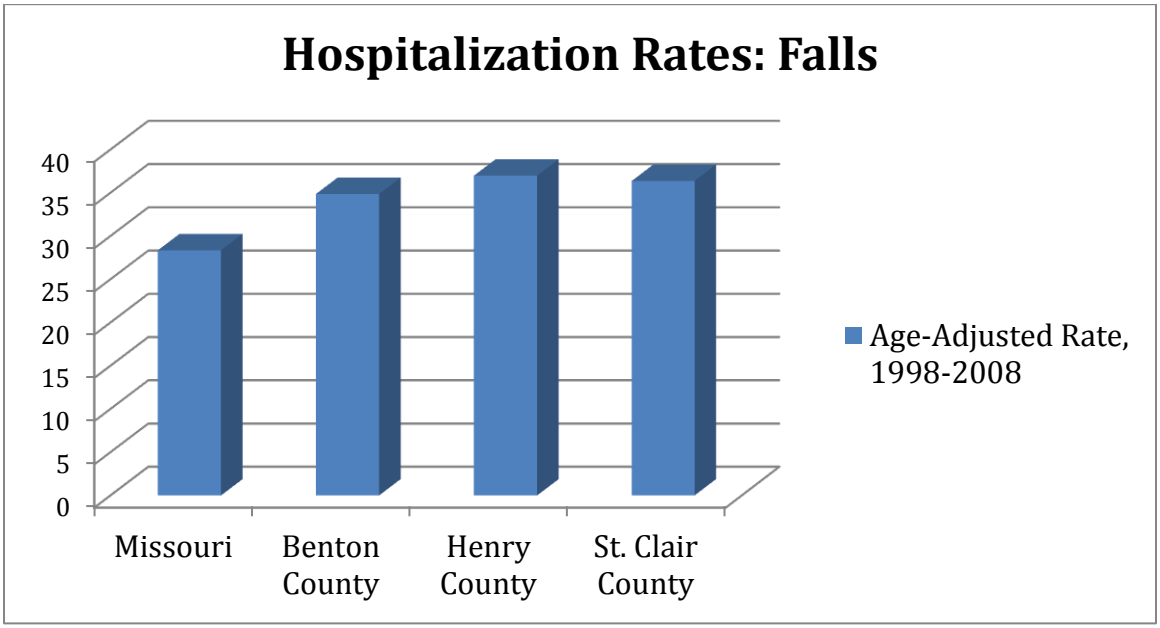


Figure VI-B. Tri-County/State “Falls” Hospitalization Rates (MO DHSS Community Data Profiles)



## Part VII. Pneumonia and Influenza

### Priority Regional Health Problems – Number of Hospitalizations

### Priority Regional Health Problems – Number of Days of Hospital Care

#### General Information and Risk Factors

Pneumonia and influenza are grouped together in the data provided by the Missouri Department of Health and Senior Services. (For this reason, it may not be possible to determine the proportion of impact on the data results shared by the two conditions. These two infectious diseases share many important characteristics, though they are different conditions.). The influenza virus can sometimes cause pneumonia, a respiratory illness, but pneumonia is often associated with a bacterial infection (CDC, 2011; Mayo Foundation for Medical Evaluation and Research, 2011).[10,15]

Similar symptoms can be observed in patients with either disease, such as fever, coughing, and fatigue. However, many flu patients also experience aches and sore throat, while pneumonia patients may experience shortness of breath or rapid breathing. Other similarities between the two diseases can be found upon examination of high-risk populations and risk factors. Children under the age of 5 and adults over age 64 are at high risk for illness, complications, and death due to the flu and pneumonia. A variety of conditions, such as obesity, COPD, a compromised immune system, and heart disease, make individuals especially vulnerable to complications related to the flu and pneumonia (CDC, 2011; Mayo Clinic, 2011).[10,15]

#### Prevention

Vaccines are the key preventive tool against the flu and pneumonia; immunizations are available for both diseases and are especially recommended for

individuals in high-risk populations or persons frequently in contact with those in high-risk populations. Vigilant hand washing behaviors and sanitization of surfaces at home and in the workplace can also greatly reduce individual risk for contracting the flu and pneumonia.[10,15]

**Data**

While the 2008 age-adjusted rate of hospitalization related to pneumonia and influenza was not significantly different from the state rate, Henry and St. Clair Counties experienced hospitalization rates that were significantly higher than the state rate in 2008. (It should be noted that "2008" only captures one flu season. Strains and incidence of the flu virus can vary from season to season). And from 1994-2008, Benton and St. Clair Counties have been experiencing a significant decrease in the three-year moving average rate trend of hospitalizations due to pneumonia and influenza, but Henry County's rate trend was not statistically significant.[18]

Figure VII-A. Tri-County/State Influenza/Pneumonia Hospitalization Trends (MO DHSS Community Data Profiles)

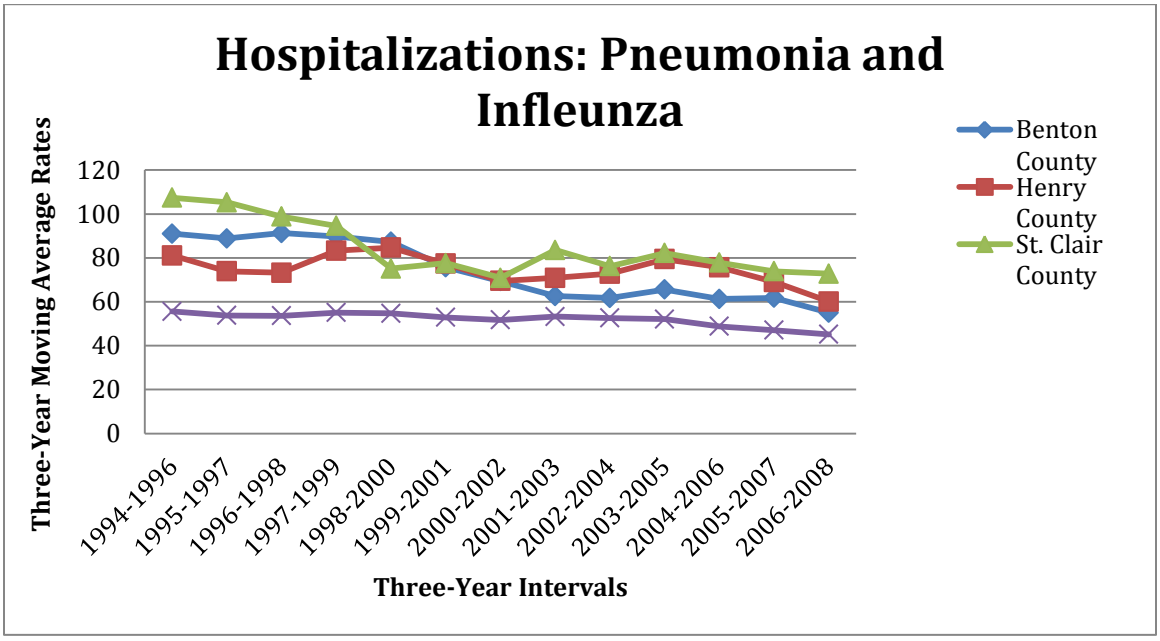
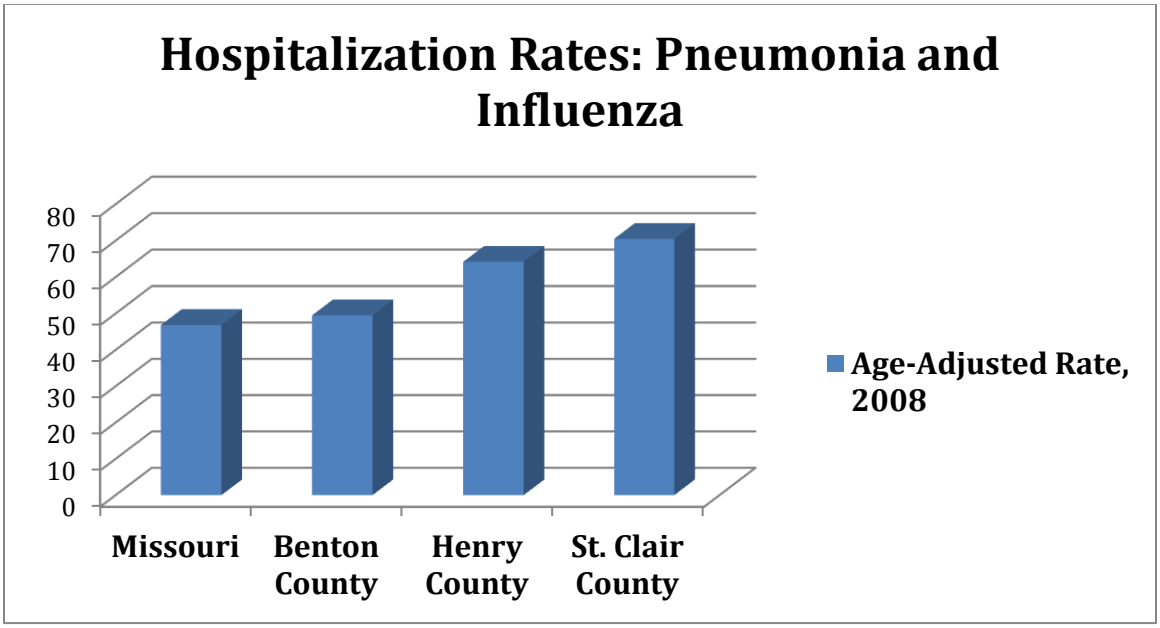



Figure VII-B. Tri-County/State Influenza/Pneumonia Hospitalization Rates (MO DHSS Community Data Profiles)



## Part VIII. Arthritis and Lupus

### Priority Regional Health Problems – Number of Hospitalizations

### Priority Regional Health Problems – Disability Burden

#### General Information

The Missouri Department of Health and Senior Services have grouped arthritis and lupus together in the statewide hospitalization data used in this assessment, perhaps because the Centers for Disease Control and Prevention (2009-2010) categorize lupus as a type of arthritis. (For this reason, it may not be possible to discern which proportions of the data results are attributable to arthritis in general, and which are attributable to lupus.)

According Priorities MICA, arthritis and lupus are associated with the third highest disability burden in the tri-county area and are the third largest cause of hospitalizations in Henry County.[19] According to the CDC (2009-2010), arthritis also encompasses many other rheumatic diseases in addition to lupus, which cause symptoms in the joints and other organs. Arthritis in general, and lupus in particular, can cause disability and death; lupus, also known as systemic lupus erythematosus (SLE), contributes to a significant percentage of arthritis-related deaths. While general arthritis is associated with joint pain and limited capacity for physical activity, lupus is associated with a group of additional manifestations, including pericarditis, seizures, and decreased kidney function.[1,3]

#### Risk Factors and Prevention

Adults age 50 and older, as well as obese adults, are at particular risk for developing arthritis. Meanwhile, young women and African-Americans are at a heightened risk for developing lupus. Maintaining a healthy weight with regular exercise

and a healthy diet appear to help prevent or mitigate the negative effects of arthritis, but more specific preventive practices against arthritis and lupus have not yet been identified (CDC, 2009-2010).[1,3]

**Data**

Benton and Henry County's 2004-2008 age adjusted rates of hospitalizations due to arthritis and lupus are significantly higher than the state rate, while St. Clair's rate is not significantly different from the state rate, according to the Missouri Department of Health and Senior Services Community Data Profiles. Not one of the counties in the tri-county area shows a statistically significant three-year moving average rate trend of hospitalizations due to arthritis and lupus from 1994 to 2008.[18]

Figure VIII-A. Tri-County/State Arthritis/Lupus Hospitalization Trends (MO DHSS Community Data Profiles)

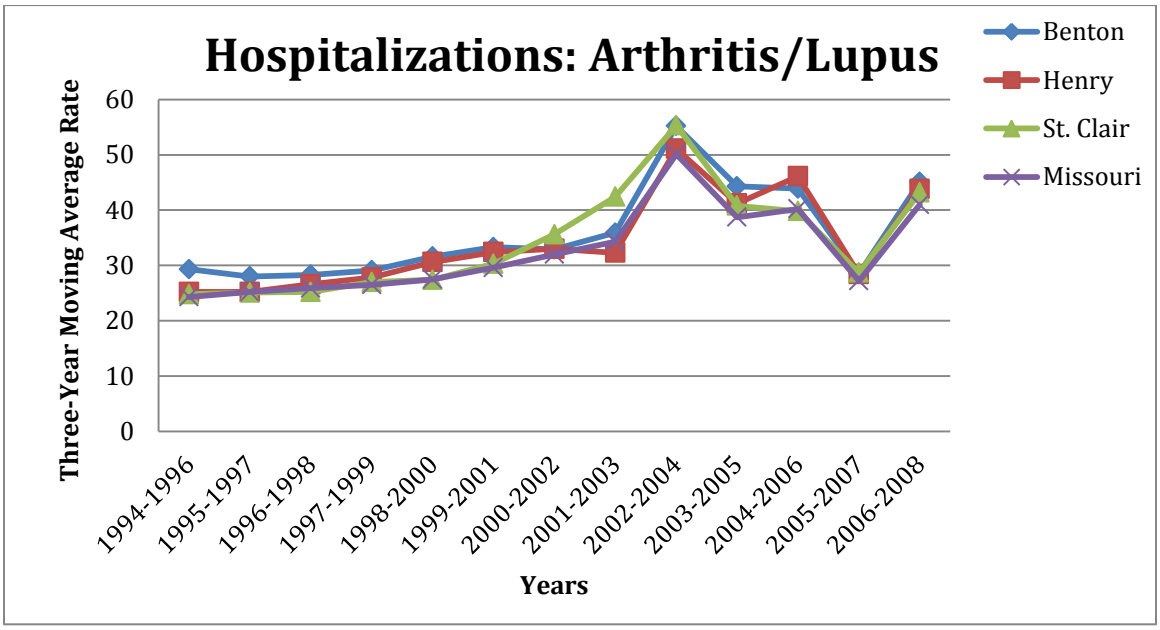
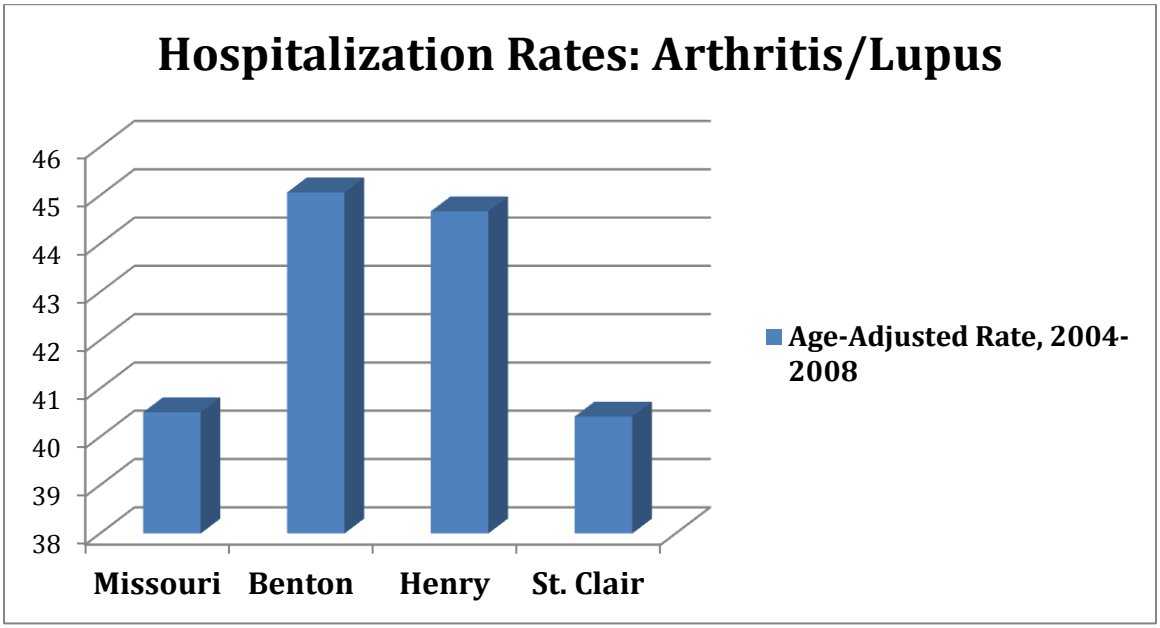


Figure VIII-B. Tri-County/State Arthritis/Lupus Hospitalization Rates (MO DHSS Community Data Profiles)



## Part IX. Affective Disorders (Mental Illness)

## Priority Regional Health Problems – Number of Days of Hospital Care

## Priority Regional Health Problems – Disability Burden

### General Information

Mental illness impairs an individual's ability to cope with life's stressors and function normally, and many Americans do struggle with the type of mental illness known as mood or affective disorders. According to Priorities MICA, affective disorders are the cause of the third greatest number of days of hospital care in Benton and Henry Counties, as well as the leading condition associated with the disability burden of the entire tri-county area.[19]

Common affective disorders include depression and bipolar disorder; according to results from the National Comorbidity Survey Replication cited by the Centers for Disease Control and Prevention (2011), more than 1 in 5 Americans struggle with depression in particular. Further, the CDC and the Mayo Clinic (2011) identify depression as a leading cause of disability. Other serious outcomes and conditions related to mental illness range from chronic diseases to substance abuse to suicide.[12, 14]

### Risk Factors and Prevention

Traumatic or stressful experiences in childhood or adulthood, genetics, chronic disease, and substance use represent some of the key risk factors that can trigger mental health problems, according to the Mayo Clinic (2011). To prevent mental distress from getting worse, individuals are encouraged to seek help from trained sources; clinicians can help individuals identify the best treatment for mental disorders.[14]

### Data: MO DHSS Community Data Profiles

Benton and Henry Counties' 2008 age-adjusted rates of hospitalization due to affective disorders are not significantly different from the state rate, and St. Clair County's rate is significantly lower than the state rate. However, Henry and St. Clair Counties' three-year moving average rates of hospitalization due to affective disorders have increased significantly from 1994 to 2008; during this time period, Benton County's have not displayed a statistically significant trend.[18]

Figure IX-A. Tri-County/State Affective Disorder Hospitalization Trend (MO DHSS Community Data Profiles)

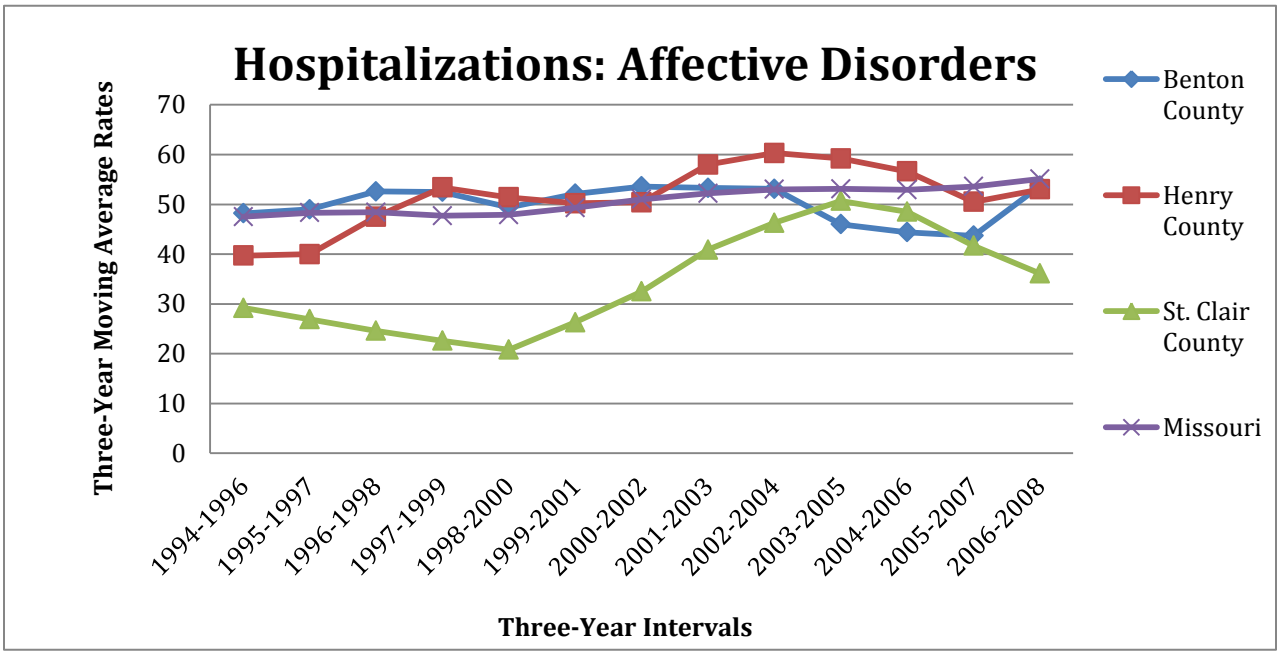
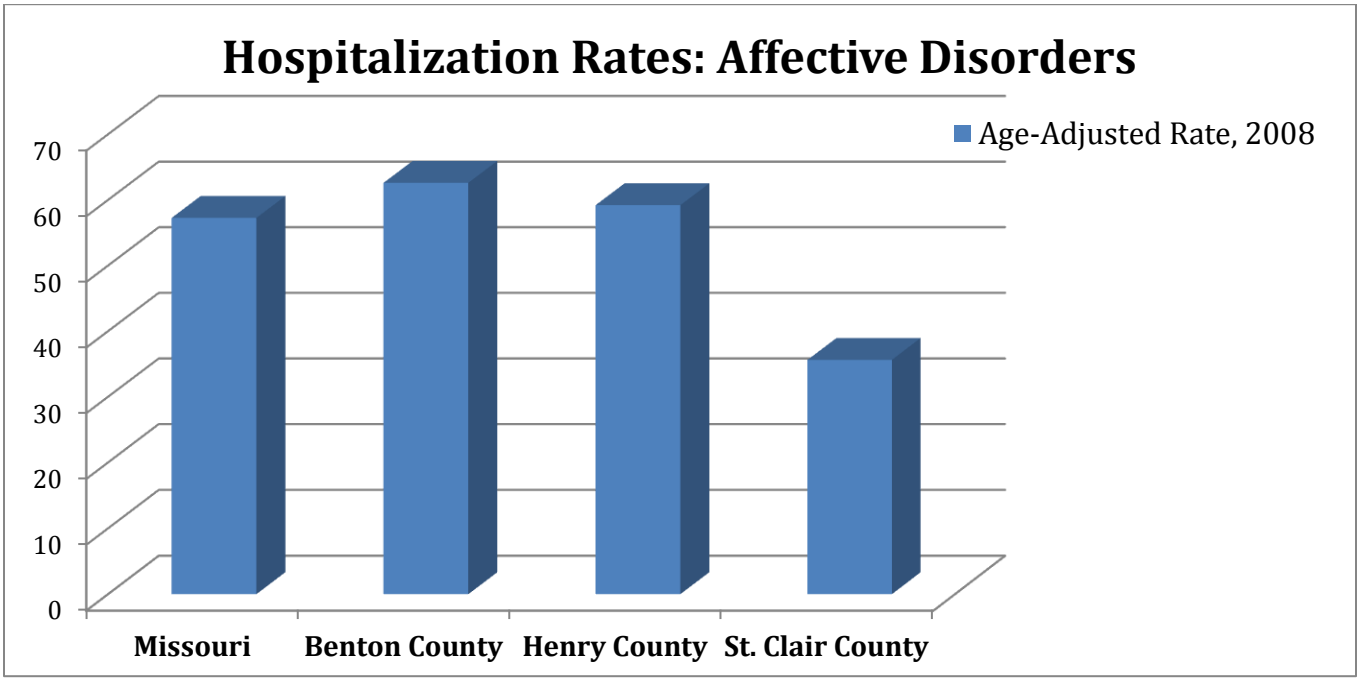


Figure IX-B. Tri-County/State Affective Disorder Hospitalization Rates (MO DHSS Community Data Profiles)



**Data: Adolescent Self-Reported Disordered Mental Health Indicators**

The following tri-county lists summarize data prepared by the Missouri Division of Alcohol and Drug Abuse and Mental Health Services Administration (2011).[20]

When surveyed, Benton County adolescents reported experiencing the following indicators of disordered mental health during the previous month at higher percentages than the state statistics:

- Feeling very sad
- Feeling grouchy/irritable/in a bad mood
- Feeling hopeless about the future
- Not eating or eating more than usual
- Sleeping a lot more or a lot less than usual
- Difficulty concentrating on schoolwork
- Seriously considered attempting suicide
- Been bullied on school property

When surveyed, Henry County adolescents reported experiencing the following indicators of disordered mental health during the previous month at higher percentages than the state statistics:

- Feeling very sad
- Feeling hopeless about the future
- Not eating or eating more than usual
- Sleeping a lot more or less than usual
- Difficulty concentrating on schoolwork
- Been bullied on school property

When surveyed, St. Clair County adolescents reported experiencing the following indicators of disordered mental health during the previous month at higher percentages than the state statistics:

- Feeling very sad
- Feeling grouchy/irritable/in a bad mood
- Feeling hopeless about the future
- Not eating or eating more than usual

## Part X. Alcohol and Other Substance Use/Abuse/Problems

### Priority Regional Health Problems – Disability Burden

#### General Information

According to Priorities MICA, alcohol and substance related problems are associated with the second largest disability burden in the tri-county area[19]. And according to the National Center on Addiction and Substance Abuse at Columbia University (CASA, 2011), alcohol and drug problems are also a concern at the national level: "One in four Americans will have a an alcohol or drug problem at some point in their lives".[22]

#### Risk Factors and Prevention

Various factors have been linked to the development of alcohol or other drug problems during childhood and adolescence (when most addictions begin), such as poverty, academic problems, parental neglect, and the use of drugs in peer groups. According to the National Institute on Drug Abuse (n.d.), family attachments, development of self-discipline, and support from policies that decrease the availability of drugs are some examples of strategies that can mitigate these risk factors.[23]

#### Data: Regional Adolescent Substance Use

Figures X-A through X-C summarize tri-county self-reported adolescent substance use (within the thirty days prior to being surveyed) data (Missouri Division of Alcohol and Drug Abuse, and the Substance Abuse and Mental Health Services Administration, 2011). The graphs list the substances that adolescents in each county reported using in higher percentages than the state statistics. Figure X-D breaks down the

primary substance abuse problems faced by Southwest Missouri residents entering treatment.[20]

Figure X-A. Current Substance Use for Benton County 6th-12th Grade Students (Missouri Division of Alcohol and Drug Use, and the Substance Abuse and Mental Health Services Administration, 2011)

| **Substance** | **Is use higher than the state statistic?** |
|---|---|
| Cigarettes | Yes |
| Chewing tobacco | Yes |
| Alcohol | Yes |
| Binge drinking | Yes |
| Marijuana | No |
| Inhalants | Yes |
| Prescription drugs not perscribed for student | Yes |
| Over-the-counter medications for non-medical use | No |

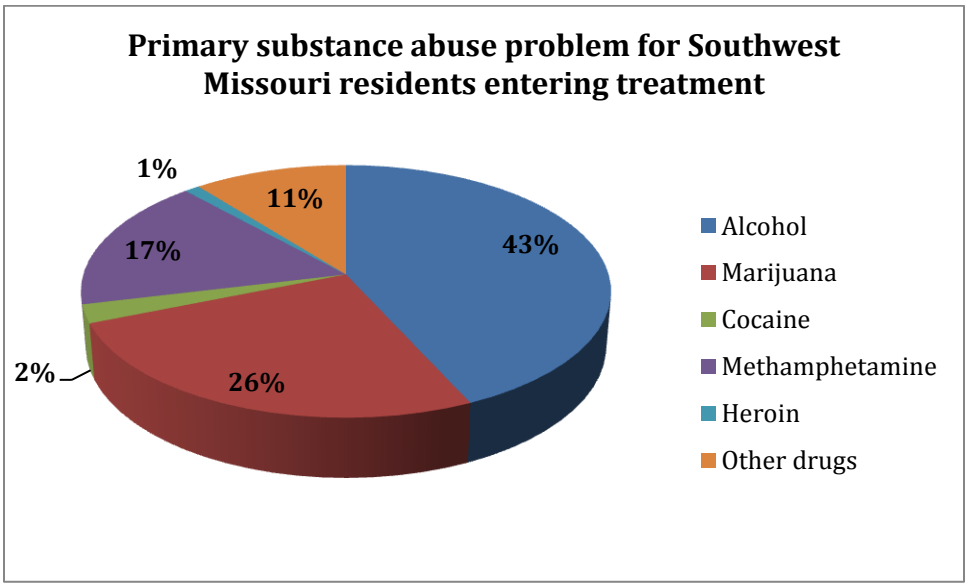
Figure X-B. Current Substance Use for Henry County 6th-12th Grade Students (Missouri Division of Alcohol and Drug Abuse, and the Substance Abuse and Mental Health Services Administration, 2011)

| **Substance** | **Is use higher than the state statistic?** |
|---|---|
| Cigarettes | Yes |
| Chewing tobacco | No |
| Alcohol | Yes |
| Binge drinking | Yes |
| Marijuana | Yes |
| Inhalants | No |
| Prescription drugs not perscribed for student | Yes |
| Over-the-counter medications for non-medical use | No |

Figure X-C. Current Substance Use for St. Clair County 6th-12th Grade Students (Missouri Division of Alcohol and Drug Abuse, and the Substance Abuse and Mental Health Services Administration, 2011)

| **Substance** | **Is use higher than the state statistic?** |
|---|---|
| Cigarettes | Yes |
| Chewing tobacco | Yes |
| Alcohol | Yes |
| Binge drinking | Yes |
| Marijuana | Yes |
| Inhalants | Yes |
| Prescription drugs not perscribed for student | No |
| Over-the-counter medications for non-medical use | No |

Figure X-D. Primary Substance Abuse Problems for Southwest Missouri Residents Entering Treatment (Missouri Division of Alcohol and Drug Abuse, and the Substance Abuse and Mental Health Services Administration, 2011)



## Part XI. Breast Cancer

### Priority Regional Health Problems – Amenability to Change

#### General Information

According to Priorities MICA, breast cancer is the second leading health problem in terms of amenability to change in the tri-county area.[19] This means that public health interventions could make a significant difference in breast-cancer related outcomes in the region. Breast cancer is also one of the most common types of cancer among women in the United States, according to the Centers for Disease Control and Prevention (2010).[4]

#### Risk Factors and Prevention

A number of factors have been identified with the development of breast cancer, including but not limited to: age, family history (genetics), oral contraceptives, tobacco and alcohol use, physical inactivity and overweight, and hormone replacement therapy. Preventive techniques include modifying risk factors with lifestyle changes and receiving regular mammograms to screen for early-stage cancer (CDC, 2011).[8]

#### Data: Breast Cancer Incidence and Mortality

According to a collaborative state profile project prepared by the National Cancer Institute and the Centers for Disease Control and Prevention State Cancer Profiles, Henry County's 2003-2007 breast cancer incidence rate lies in the 5$^{th}$ quantile (1$^{st}$ quantile=highest rates, 6$^{th}$=lowest disclosed rates) in the state of Missouri, while St. Clair County's rate lies in the 3$^{rd}$ quantile, and Benton County's rate lies in the 1$^{st}$ quantile. Meanwhile, Henry County lies in the 4$^{th}$ quantile in terms of mortality rates for the same time period; Benton County lies in the 3$^{rd}$ quantile, and St. Clair County's numbers were not disclosed.[21]

Figure XI-A. Breast Cancer Incidence: Interactive Map (CDC State Cancer Profiles and NCI)

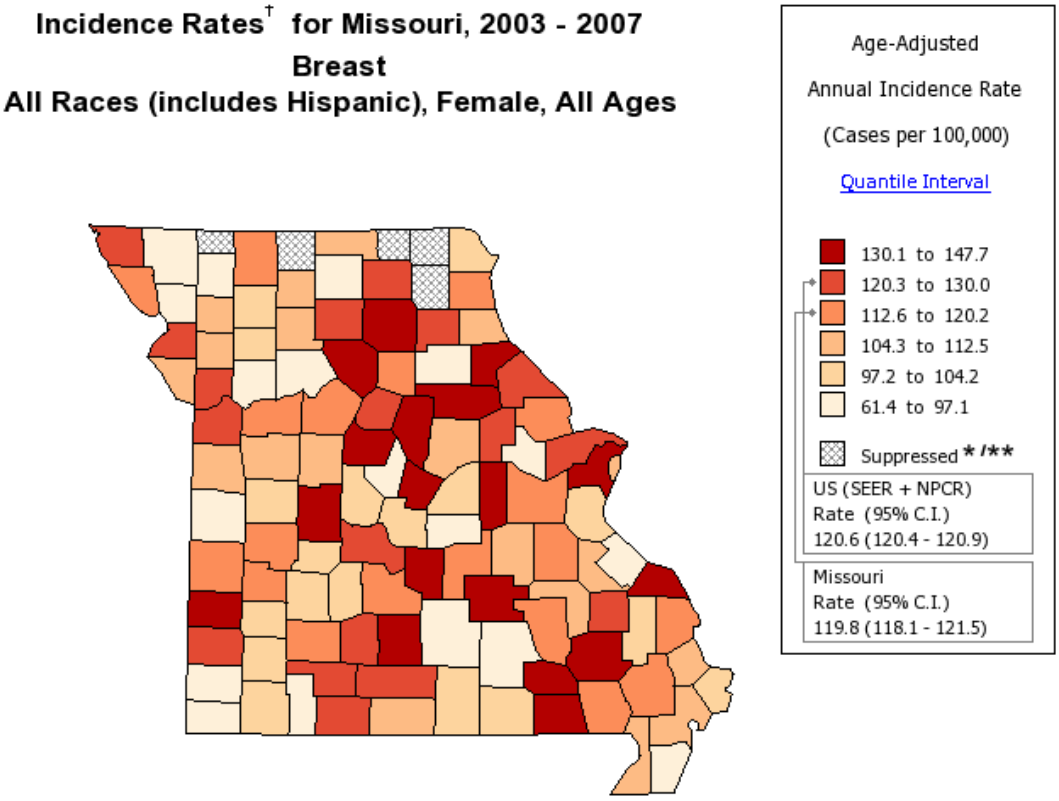
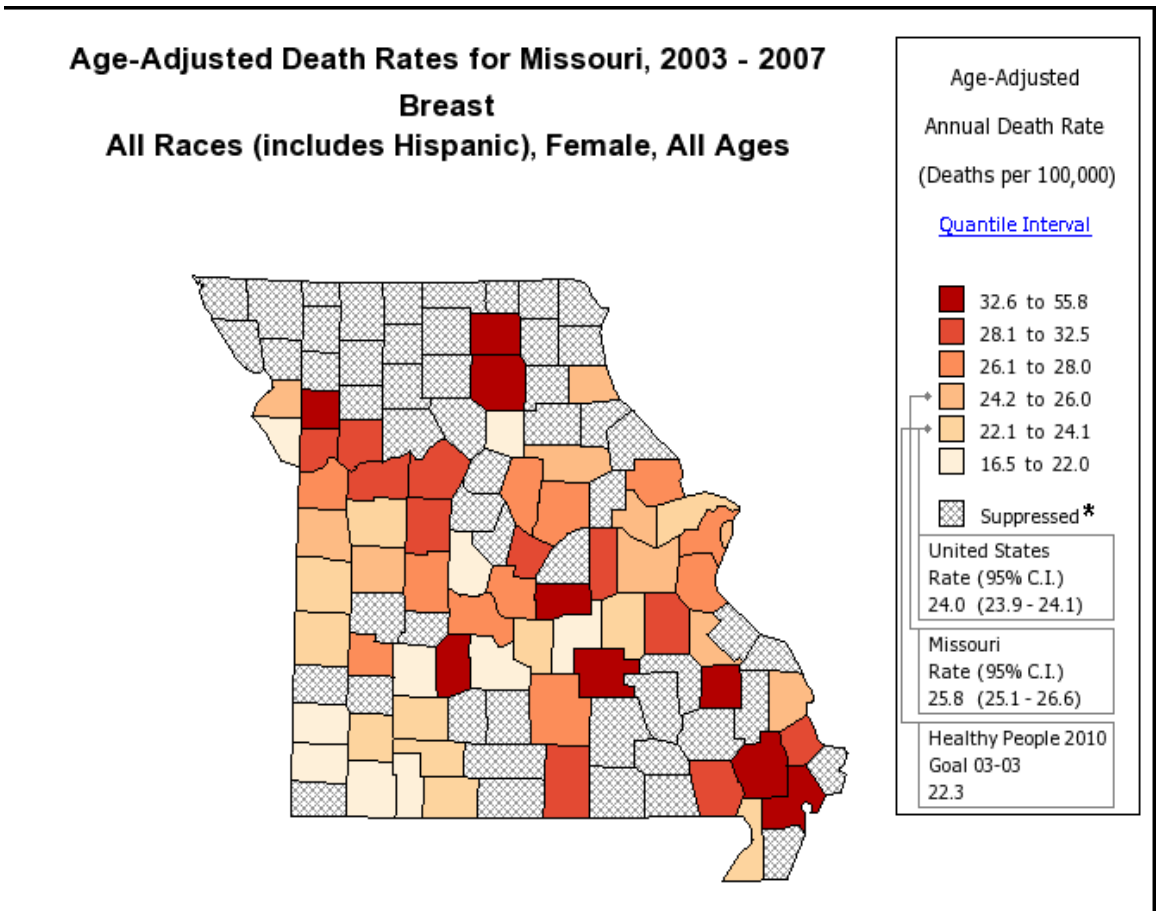


Figure XI-B. Breast Cancer Mortality: Interactive Map (CDC State Cancer Profiles and NCI)



## Part XII. Colorectal Cancer

### Priority Regional Health Problems – Amenability to Change

#### General Information

According to Priorities MICA, colorectal cancer (cancer of the colon and/or rectum) is the third most significant regional health problem, in terms of amenability to change, in the tri-county area[19]. This means that public health interventions could make a significant impact on colorectal cancer-related outcomes in the region. In addition to being a regional health problem, colorectal cancer is also a high-priority national health problem. According to the Centers for Disease Control and Prevention (CDC, 2009), colorectal cancer is a common cancer among men and women, as well as a common killer of both men and women in the United States.[2]

#### Risk Factors and Prevention

Certain genetic disorders, as well as family history of the disease (genetics), age, and inflammatory bowel syndrome, have all been linked to the development of colorectal cancer. Fortunately, timely screening for the disease, which detects pre-cancerous polyps in the colon, can greatly improve an individual's chances of survival. Men and women over age 50 are the target population for screening interventions (CDC, 2009).[2]

#### Data: Colorectal Cancer Incidence and Mortality

According to a joint project prepared by the National Cancer Institute and the Centers for Disease Control and Prevention State Cancer Profiles (n.d.), Henry County lies in the 4$^{th}$ quantile of all the counties in the state of Missouri (1$^{st}$ quantile=highest rates, and 6$^{th}$ quantile=lowest disclosed rates) in terms of its 2003-2007 incidence rates for cancer of the colon and rectum. Benton County lies in the 1$^{st}$ quantile, while St. Clair

County lies in the 2nd quantile. Meanwhile, Henry County lies in the 5th quantile of mortality rates for cancer of the colon and rectum from 2003 to 2007; St. Clair County lies in the 2nd quantile, and Benton County lies in the 4th quantile.[21]

Figure XII-A. Colorectal Cancer Incidence: Interactive Map (CDC State Cancer Profiles and NCI)

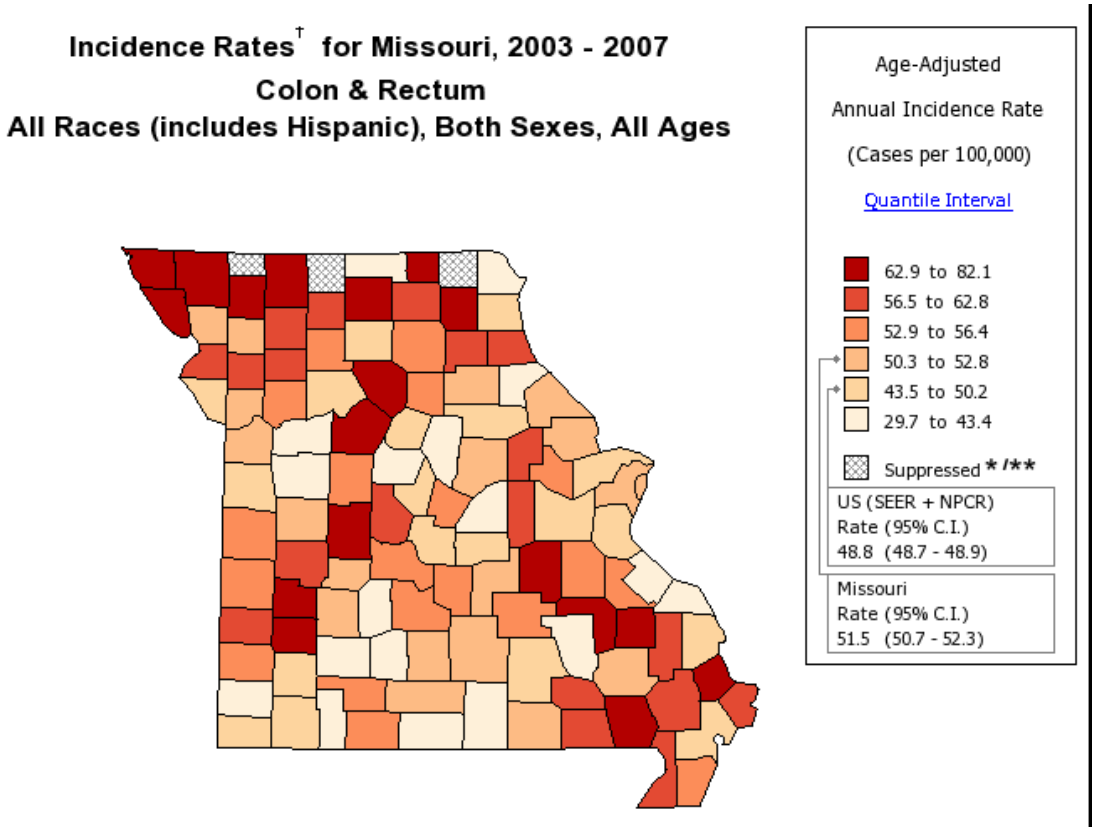
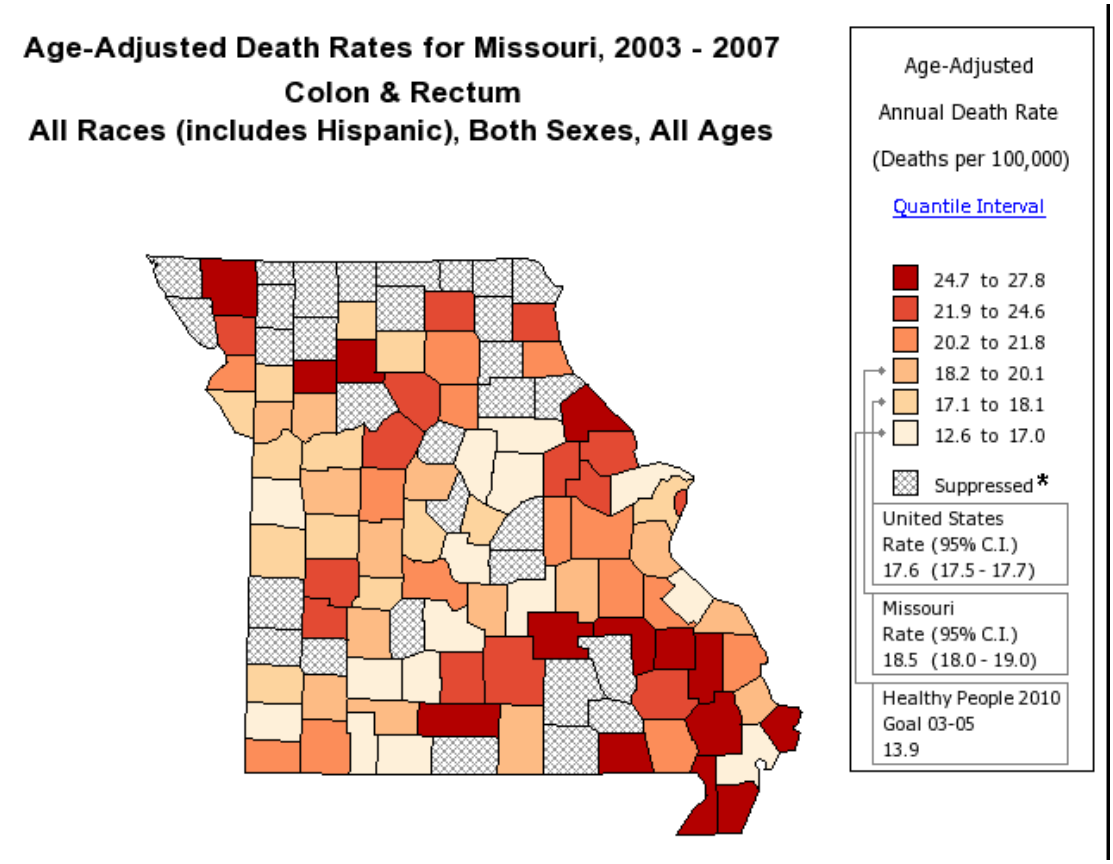


Figure XII-B. Colorectal Cancer Mortality: Interactive Map (CDC State Cancer Profiles and NCI)



## Part XIII. Dental Health

### Priority Regional Health Problems – Amenability to Change

#### General Information

The maintenance of optimal dental health is essential to ensure overall well-being. Individuals who go without regular primary dental care are at risk for poor dental health and a variety of other health problems, including chronic disease. According to Priorities MICA (n.d.), dental health problems represent the leading priority regional health problems in terms of amenability to change.[19] This means that public health interventions could make a significant impact on dental health outcomes in the tri county area.

#### Risk Factors and Prevention

To prevent poor dental and oral health outcomes, such as cavities, gum disease, and potentially serious tooth infections, adults and children alike are encouraged to brush, floss, and rinse their teeth regularly, as well as maintain healthy nutrition. Regular teeth cleaning and checkups at a dentist's office are also advised (United States Department of Health & Senior Services, 2000).[26]

#### Data

According to the 2010 Missouri Behavioral Risk Factor Surveillance System (BRFSS) Key Findings Report, 63 percent of the Missourians surveyed reported having been to the dentist within the past year, and 63 percent also reported having had their teeth cleaned at the dentist during the previous year.[17] These statistics are an example of statewide data; to capture a more localized summary of dental health, I interviewed three dentists from Henry County. A description of the results of those interviews follows below.

**Dentist Interviews – A Brief Qualitative Assessment of Dental Health in Henry County.**

To capture the care providers' perspectives on dental health in the region, I interviewed three dentists from Clinton in July/August 2011 and asked them general questions about their experiences practicing in Henry County. A sample of questions I asked during these face-to-face, semi-structured interviews included:

- Tell me about your background. How long have you been practicing here?
- What is it like to practice in Henry County?
- Have you had any experience with population-based dental health (Medicaid/emergency/volunteer work)? Can you tell me more about those experiences?
- Tell me about your perception of dental health in Henry County.
- Are there any particular or significant dental health behavioral patterns or trends that you see and would like to comment on? What behavioral patterns, if any, would you like to see change in your clientele and other patient populations?

The following represent the main discussion themes of the interviews.

- One dentist is able to serve Medicaid patients, another is able to take 24-hour emergency calls, and the third dentist I interviewed is able to travel to do volunteer work (institutionalized populations and rural clinic visits were two examples). Due to constraints on time and resources, all three dentists cannot engage in all three activities; rather, each care provider plays a unique role in the community.

- Low reimbursement rates from the state, as well as an observed phenomenon of Medicaid appointment no-shows, create significant barriers to serving the Medicaid population and other low-income populations.
- The majority of patients of these practices are from Clinton.
- Observed trends:
    - Dental health appears to be worse in the outlying, isolated rural areas of the county (outside of Clinton and other towns), especially among children.
    - Poor nutrition and tobacco use, and a lack of regular home care behaviors, contribute to poor dental health.
- The dentists remarked that they would like to see
    - Less soda-drinking and tobacco use across populations.
    - More frequent home care (brushing, flossing, etc.).
    - An increase in the quality and quantity of dental education (from parents to children, as well as in community settings).

## Part XIV. Health Issue Profiles (MO DHSS Community Data Profiles)[18]

Part XIV-A. Tri-County ER Visit Profiles

The following ER visit profiles highlight the indicators related to ER visits that are higher than the state statistics.

Benton County does not see higher rates than the state average of ER visits for any condition, excluding mental health indicators.

Henry County sees higher rates than the state average of ER visits for the following conditions:

- Migraines
- Strokes and other cerebrovascular disease
- Fractures
- Sprains
- Burns

St. Clair County sees higher rates than the state average of ER visits for the following conditions:

- Headaches and migraines
- Heart and circulation problems
- Heart disease
- Fractures
- Open wounds

Part XIV-B. Tri-County Women's Health Profiles

The following women's health profiles highlight the indicators related to women's health that are higher than the state statistics.

Benton County sees higher rates than the state average of the following indicators (among women):

- Lung cancer cases
- Self-inflicted injuries
- Hysterectomies
- Hospitalizations for heart disease, strokes and other cerebrovascular disease, chronic lower respiratory disease, and pneumonia/influenza
- Deaths due to lung cancer, chronic lower respiratory disease, and diabetes mellitus

Henry County sees higher rates than the state average of the following indicators (among women):

- Deaths due to lung cancer and strokes
- Hospitalizations due to heart disease, strokes, chronic lower respiratory disease, hip fractures, and pneumonia/influenza

St. Clair County sees higher rates than the state average of the following indicators (among women):

- Hospitalizations due to heart disease, stroke and other cerebrovascular disease, chronic lower respiratory disease, and pneumonia/influenza

## Part XIV-C. Tri-County Family Planning Profiles

The following family planning profiles highlight the indicators related to family planning that are higher than the state statistics.

Benton County sees higher rates than the state average of the following indicators:

- Mother's education less than 12 years
- 5-year change in live births (the direction of the change is not clear)
- Births to mothers aged 15-17, 18-19, and 20-24.

Henry County sees higher rates than the state average of the following indicators:

- Births to mothers aged 18-19 and 20-24
- Mother greater than or equal to 20% overweight for height

St. Clair County sees higher rates than the state average for the following:

- Mother's education less than 12 years
- 5-year change in live births (the direction of the change is not clear)
- 5-year change in the fertility rate (the direction of the change is not clear)
- Births to mothers aged 18-19 and 20-24

Part XIV-D. Tri-County Prenatal Health Profiles

The following prenatal health profiles highlight the indicators related to prenatal health that are higher than the state statistics.

Benton County sees higher rates than the state average of the following indicators:

- Smoking during pregnancy
- Participation in Prenatal Medicaid and Prenatal WIC

Henry County sees higher rates than the state average of the following indicators:

- Smoking during pregnancy
- Instances of less than 15 lbs. of weight gain during pregnancy
- Participation in Prenatal Medicaid, Prenatal WIC, and Prenatal Food Stamps

St. Clair County sees higher rates than the state average of the following indicators:

- Late prenatal care ($2^{nd}$/$3^{rd}$ trimester)
- Smoking during pregnancy
- Instances of less than 15 lbs. of weight gain during pregnancy
- Participation in Prenatal WIC and Prenatal Food Stamps

Part XIV-E. Tri-County Child Health Profiles

The following child health profiles highlight the indicators related to child health that are higher than the state statistics.

Benton County sees higher rates than the state average of the following indicators:

- WIC participation, ages 12-59 months inclusive
- Probable child abuse or neglect
- Unintentional injuries, ages 15-19
- Motor vehicle deaths, ages 15-19

Henry County sees higher rates than the state average for the following indicators:

- WIC participation, ages 12-59 months inclusive
- Injury ER visits, ages 1-14 and 15-19

St. Clair County sees higher rates than the state average for the following indicators:

- WIC participation, 12-59 months inclusive
- Lead testing for children under age 6
- Injury ER visits, ages 1-14 and 15-19
- Motor vehicle deaths, ages 15-19

Part XIV-F. Tri-County Mental Health – Self-Inflicted Injury Profile

The following self-inflicted injury profiles highlight the indicators related to self-inflicted injuries that are higher than the state statistics.

Benton County sees higher rates than the state average for the following indicators:

- Total hospitalizations
- Hospitalizations for the 35-64 age group

Henry County sees higher rates than the state average for the following indicators:

- Hospitalizations within the 15-19, 20-34, and 35-64 age groups
- ER visits

St. Clair County does not see higher than average rates for any indicators related to self-inflicted injury.

**Part XV. Summary of Henry County Immunization Statistics**

Figures XV-A and XV-B display immunization statistics from Henry County K-12 schools (for a copy of these results, please consult the Henry County Health Center). In summary, 1-dose immunizations appear to have better uptake rates than 2-dose immunizations in both private and public schools. Also, the immunization rate among private school Kindergarten students was the lowest of all grade levels, even when compared to public school rates, which lowered the private school grades K-6 average immunization rate (this may indicate that the pre-Kindergarten age group is a prime demographic for targeted vaccine interventions). This brief data summary should be a useful foundation for investigating the state of preventive practices in Henry County and other parts of the tri-county area.

Figure XV-A. Henry County Childhood Immunization Rates in Private Schools by Type (State of Missouri Immunization Assessment Survey Results, 2009-2010 Academic Year)

| **Immunization Type** | **Rate** |
|---|---|
| Diphtheria/Tetanus/ Pertussis | 99.16% |
| Polio | 99.16% |
| Measles | 95.83% |
| Mumps 2-dose | 94.70% |
| Mumps 1-dose | 100% |
| Rubella 2-dose | 94.70% |
| Rubella 1-dose | 100% |
| Hepatitis B | 98.75% |
| Varicella | 96.46% |

Figure XV-B. Henry County Childhood Immunization Rates in Public Schools by Type

(State of Missouri Immunization Assessment Survey Results, 2009-2010 Academic Year)

| **Immunization Type** | **Rate** |
|---|---|
| Diphtheria/Tetanus/ Pertussis | 98.62% |
| Polio | 98.73% |
| Measles | 98.69% |
| Mumps 2-dose | 98.19% |
| Mumps 1-dose | 99.24% |
| Rubella 2-dose | 98.19% |
| Rubella 1-dose | 99.24% |
| Hepatitis B | 98.90% |
| Varicella | 95.91% |

**Part XVI**. **Regional Health Summary: 2011 Missouri County Health Rankings**

The Missouri County Health Rankings (2011) were prepared by the Robert Wood Johnson Foundation and the Institute of Population Health at the University of Wisconsin; a review of the ranking results can be found in Figures XV1-A through XVI-F. The charts in these figures include data on the following topics: health outcomes; health behaviors; clinical care; social and economic factors; physical environment (environmental health); and a summary of the overall health rankings into which each county in the tri-county area falls. Data for each county are juxtaposed with state statistics and national benchmarks.

When reading the county health ranking charts, please note the following. First, there are pockets of missing data for certain indicators, which poses a limitation to complete generalization of the results. However, the data is sufficiently complete to make the generalization that many of the county statistics compare unfavorably to the state statistics and national benchmarks, in terms of both risk (negative) factors and protective (positive) factors.[16]

Figure XVI-A. Health Summary: Outcomes (2011 Missouri County Health Rankings)

| Health Outcomes | Benton County | Henry County | St. Clair County | National Benchmark | Missouri |
|---|---|---|---|---|---|
| **Premature Death** | 9,472 | 9,772 | 9,858 | 5,564 | 8,043 |
| **Poor or Fair Health** | 19% | 27% | Missing | 10% | 16% |
| **Poor Physical Health Days** | 3.7 | 5.1 | 5.6 | 2.6 | 3.7 |
| **Poor Mental Health Days** | 2.2 | 5.4 | 5.5 | 2.3 | 3.6 |
| **Low Birth Weight** | 6.7% | 6.3% | 9.0% | 6.0% | 8.0% |

Figure XVI-B. Health Summary: Behaviors (2011 Missouri County Health Rankings)

| Behaviors | Benton County | Henry County | St. Clair County | National Benchmark | Missouri |
|---|---|---|---|---|---|
| **Adult Smoking** | 21% | Missing | Missing | 15% | 24% |
| **Adult Obesity** | 29% | 30% | 29% | 25% | 30% |
| **Excessive Drinking** | 18% | 10% | Missing | 8% | 17% |
| **Motor Vehicle Crash Death Rate** | 33 | 28 | 35 | 12 | 20 |
| **Sexually Transmitted Infections** | 136 | 162 | 151 | 83 | 422 |
| **Teen Birth Rate** | 48 | 53 | 50 | 22 | 45 |

Figure XVI-C. Health Summary: Clinical Care (2011 Missouri County Health Rankings)

| Clinical Care Factors | Benton County | Henry County | St. Clair County | National Benchmark | Missouri |
|---|---|---|---|---|---|
| **Uninsured Adults** | 22% | 17% | 20% | 13% | 17% |
| **Primary Care Providers** | 3,089:1 | 1,056:1 | 936:1 | 631:1 | 1,015:1 |
| **Preventable Hospital Stays** | 96 | 104 | 136 | 52 | 79 |
| **Diabetic Screening** | 79% | 83% | 93% | 89% | 83% |
| **Mammography Screening** | 58% | 47% | 49% | 74% | 62% |

Figure XVI-D. Health Summary: Social and Economic Factors (2011 Missouri County Health Rankings)

| S&E Factors | Benton County | Henry County | St. Clair County | National Benchmark | Missouri |
|---|---|---|---|---|---|
| **High School Graduation** | 90% | 80% | 80% | 92% | 82% |
| **Some College** | 38% | 46% | 43% | 68% | 60% |
| **Unemployment** | 10.0% | 9.6% | 9.9% | 5.3% | 9.3% |
| **Children in Poverty** | 31% | 24% | 35% | 11% | 19% |
| **Inadequate Social Support** | 20% | Missing | Missing | 20% | 32% |
| **Single Parent Households** | 20% | 26% | 28% | 20% | 32% |
| **Violent Crime Rate** | 349 | 233 | 227 | 100 | 516 |

Figure XVI-E. Health Summary: Physical Environment (2011 Missouri County Health Rankings)

| Physical Environment Factors | Benton County | Henry County | St. Clair County | National Benchmark | Missouri |
|---|---|---|---|---|---|
| **Air Pollution-Particulate Matter Days** | 0 | 0 | 0 | 0 | 0 |
| **Air Pollution-Ozone Days** | 0 | 2 | 1 | 0 | 7 |
| **Access to Healthy Foods** | 60% | 25% | 100% | 92% | 47% |
| **Access to Recreational Facilities** | 5 | 5 | 0 | 17 | 10 |

Figure XVI-F. Health Summary: County Rankings (Overall) (2011 Missouri County Health Rankings)

| Rankings | Benton County | Henry County | St. Clair County |
|---|---|---|---|
| **Health Outcomes Ranking** | 51<br>Mortality: 80<br>Morbidity: 22 | 89<br>Mortality: 83<br>Morbidity: 90 | 98<br>Mortality: 86<br>Morbidity: 101 |
| **Health Factors Ranking** | 65 | 55 | 63 |

## Part XVII. Top Regional Health Risk Factors

Figure XVII-A displays the top health risk factors in the tri-county area, according to lists generated in Priorities MICA (n.d.). These risk factors highlight the importance of addressing overweight and obesity, as well as smoking and a lack of mammography, in the region.[19]

Figure XVII-A. Top Regional Behavioral Risk Factors, Listed in Descending Order (Priorities MICA)

| **Benton County** | **Henry County** | **St. Clair County** |
|---|---|---|
| Obesity | Obesity | Obesity |
| No Exercise | Mother Overweight | No Exercise |
| Mother Overweight | No Exercise | No Exercise |
| Smoking | Smoking | Smoking |
| No Mammography | No Mammography | No Mammography |

## Part XVIII. 2011 Tri-County Healthy Lifestyle Survey Results

### Introduction

This community health needs assessment includes two primary data components: the dentist interviews (see **Dental Health**) and the 2011 Tri-County Healthy Lifestyle Survey. With permission, the survey was adapted almost entirely from the 2009 Boone County Healthy Lifestyle Survey, prepared by the Columbia/Boone County Department of Public Health and Human Services and the University of Missouri Extension Healthy Lifestyle Initiative. The survey was administered through an online survey program, and participants were made aware of the survey through radio and print advertisements, as well as communal and workplace email listservs. Questions covered the topic areas of self-reported attitudes and behaviors related to diet and exercise. The results of this survey provide valuable information about attitudes and behaviors related to some of the top health risk factors in the region.

### Summary of Results

The following statistics summarize the survey responses.

- n= 340 (attempted the survey); n=294 (completed all questions)
- The majority of respondents were female, from Henry County, between the ages of 26 and 64, and did not have school aged children living in the home.
- The majority of respondents would support school and local government policies designed to promote healthy lifestyles.
- The top reason for respondents eating the foods that they eat was that “it tastes good”.

## Appendix A: 2011 Tri-County Healthy Lifestyle Survey Addendum

**All survey questions and responses are listed here.**

Q1: "I feel my health is…"

Responses

| **Options** | **Response Percent** | **Response Count (n)** |
|---|---|---|
| Excellent | 21.50% | 73 |
| Good | 71.70% | 243 |
| Poor | 6.80% | 23 |
| | | |
| Total Answered Question | | 339 |
| Skipped Question | | 1 |

Q2: “Are you satisfied with your current health?”

Responses

| **Options** | **Reponse Percent** | **Response Count** |
|---|---|---|
| Yes | 65.20% | 221 |
| No | 34.80% | 118 |
| | | |
| Total answered question | | 339 |
| Skipped Question | | 1 |

Q3: “Are you currently trying to improve your health by changing your food choices?”

Responses

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Currently | 67.60% | 229 |
| In the next 30 days | 9.70% | 33 |
| In the Next 6 months | 4.40% | 15 |
| No changes planned | 18.30% | 62 |
| | | |
| Total answered question | | 339 |
| Skipped question | | 1 |

Q4: “Are you attempting to improve your health by changing your physical activity level?”

Responses

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Currently | 63.50% | 207 |
| In the next 30 days | 13.20% | 43 |
| In the next 6 months | 4.90% | 16 |
| No changes planned | 18.40% | 60 |
| | | |
| Total answered question | | 326 |
| Skipped question | | 14 |

Q5: “On most days, how many minutes per day do walk, bike, run, lift weights, garden, etc.?”

Responses

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| 0-15 minutes | 23.60% | 77 |
| 16-30 minutes | 38% | 124 |
| 31-45 minutes | 16% | 52 |
| 46-60 minutes | 10.40% | 34 |
| 60+ minutes | 12% | 39 |
| | | |
| Total answered question | | 326 |
| Skipped question | | 1 |

Q6: “Why are you physically active?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| To look and feel better | 71.20% | 232 |
| To lose weight | 61% | 199 |
| To maintain health | 52.10% | 170 |
| To improve health | 47.20% | 154 |
| For relaxation and enjoyment | 29.10% | 95 |
| To get from one place to another | 22.40% | 73 |
| My job requires me to be physically active | 19.90% | 65 |
| Part of a personal fitness plan | 14.10% | 46 |
| To walk pets | 12% | 39 |
| To meet people and spend time with friends | 7.10% | 23 |
| | | |
| Total answered question | | 326 |
| Skipped question | | 14 |

Q7: “Why do you eat the food that you eat?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Tastes good | 64.90% | 207 |
| It is easy to prepare | 56.70% | 181 |
| It is healthy | 35.70% | 114 |
| Reasonably priced | 28.50% | 91 |
| I know how to cook it | 28.20% | 90 |
| It is easily available | 27.90% | 89 |
| Helps me control my weight | 25.40% | 81 |
| It is familiar | 24.50% | 78 |
| It is ready to eat and convenient | 24.10% | 77 |
| Looks good | 8.20% | 26 |
| It is locally produced | 7.20% | 23 |
| Organically or naturally grown | 5.30% | 17 |
| | | |
| Total answered question | | 319 |
| Skipped question | | 21 |

Q8: “Which of the following items would help you be more active?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| A friend or family member to exercise with | 58.30% | 186 |
| Safe and clean parks and trails with lights for use after dark | 44.20% | 141 |
| Adequate neighborhood sidewalks | 37% | 118 |
| Personal fitness services (e.g., personal trainers) | 33.90% | 108 |
| Group exercise programs | 26.60% | 85 |
| Community recreation center/fitness center | 23.80% | 76 |
| Indoor swimming pools | 17.90% | 57 |
| Public access to school track or gym | 17.90% | 57 |
| Classes that teach you safe and proper methods of exercising | 16.60% | 53 |
| Ability to walk to stores | 14.40% | 46 |
| Sports leagues for all ages | 12.20% | 39 |
| Sport facilities | 11.90% | 38 |
| Outdoor swimming pools | 7.20% | 23 |
| Exercise facilities at your church | 6.90% | 22 |
| Exercise facilities at the senior center | 3.40% | 11 |
| | | |
| Total answered question | | 319 |
| Skipped question | | 21 |

Q9: “Which of the following items would help you eat more fruits and vegetables?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Reasonably priced fruits and vegetables | 76.20% | 243 |
| Grocery stores that provide a larger variety and/or quantity of fruits and vegetables | 50.20% | 160 |
| Availability of fruits and vegetables at farmers' markets | 33.20% | 106 |
| A local farmers' market | 27% | 86 |
| Locally grown fruits and vegetables | 26% | 83 |
| Cooking classes (e.g., classes that teach you how to select, prepare, and cook fruits and vegetables) | 20.40% | 65 |
| Classes on how to grow and store your own fruits and vegetables | 16.30% | 52 |
| A community garden (e.g., a place to grow your own fruits and vegetables | 12.50% | 40 |
| | | |
| Total answered question | | 319 |
| Skipped question | | 21 |

Q10: “Has your doctor or health care provider done any of the following?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Not applicable | 54.50% | 170 |
| Advised you to become more active or eat healthier | 39.10% | 122 |
| Given you materials regarding being physically active or eating healthy | 11.20% | 35 |
| Helped you develop a plan to become more active or eat healthier | 8.00% | 25 |
| Followed up with you to see if you have increased your physical activity or consumption of healthy foods | 7.40% | 23 |
| | | |
| Total answered question | | 312 |
| Skipped question | | 28 |

Q11: “Has your child’s health care provider done any of the following?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Not applicable | 92% | 287 |
| Advised your child to become more active or eat healthier | 6.10% | 19 |
| Helped you develop a plan for your child to become more active or eat healthier | *Restricted* | *Restricted* |
| Followed up with you to see if your child has increased their physical activity or consumption of healthier foods | *Restricted* | *Restricted* |
| Given you materials regarding your child becoming more active or eating healthier | *Restricted* | *Restricted* |
| | | |
| Total answered question | | 312 |
| Skipped question | | 28 |

Q12: “Has your doctor or health care provider ever told you that you have one of the following chronic conditions?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Not applicable | 54.70% | 156 |
| High blood pressure | 28.40% | 81 |
| Arthritis | 18.60% | 53 |
| Diabetes | 7.40% | 21 |
| Heart disease | 7.40% | 21 |
| Cancer | 5.30% | 15 |
| Osteoporosis | 2.10% | 6 |
| | | |
| Other conditions | | 38 |
| Total answered question | | 285 |
| Skipped question | | 55 |

Q13: “Which of the following reasons contribute to an unhealthy lifestyle among adults in your community?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Cost of healthy foods | 62.20% | 184 |
| Limited income | 56.10% | 166 |
| Lack of time | 48.60% | 144 |
| Too much screen time (e.g., TV, video games, computer) | 47% | 139 |
| Fast food restaurants and vending machines | 42.90% | 127 |
| Not a priority | 40.20% | 119 |
| Lack of family mealtimes | 24.70% | 73 |
| Lack of awareness about food choices for good health | 19.90% | 59 |
| Cost of joining facilities and/or sport participation | 18.90% | 56 |
| Limited healthy food options | 13.50% | 40 |
| Lack of sidewalks, parks, trails | 13.50% | 40 |
| Unsure of physical activity needed for good health | 9.10% | 27 |
| Safety concerns: physical environment, crime, traffic, etc. | 6.80% | 20 |
| | | |
| Total answered question | | 296 |
| Skipped question | | 44 |

Q14: “Which of the following reasons contribute to an unhealthy lifestyle among children in your community?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Too much screen time (i.e., TV, computer, video games) | 72.60% | 215 |
| Parents don't model healthy behaviors | 68.20% | 202 |
| Fast food restaurants and vending machines | 57.10% | 169 |
| Lack of adult supervision | 44.60% | 132 |
| Lack of family mealtimes | 36.50% | 108 |
| Reduced PE and recess time | 25.30% | 75 |
| School's food choices | 23.30% | 69 |
| Cost of sports programs | 21.30% | 63 |
| Lack of awareness about healthy food choices | 20.90% | 62 |
| Safety concerns: physical environment, crime, and traffic | 10.50% | 31 |
| Coaches/teachers don't model healthy behaviors | 9.50% | 28 |
| | | |
| Total answered question | | 296 |
| Skipped question | | 44 |

Q15: “Which of the following prevent you from getting regular physical activity?”

Responses listed in descending order

| **Options** | **Response Percent** | **Response Count** |
|---|---|---|
| Lack of time | 65.50% | 194 |
| Lack of self-discipline or motivation | 60.80% | 180 |
| Lack of energy | 41.90% | 124 |
| Lack of an exercise partner | 29.70% | 88 |
| Lack of equipment | 24.30% | 72 |
| Lack of good weather | 23.60% | 70 |
| Self-conscious about my looks when exercising | 20.90% | 62 |
| Lack of interest in exercise or physical activity | 18.60% | 55 |
| Lack of enjoyment from exercise or physical activity | 16.90% | 50 |
| Lack of sidewalks, parks, and trails | 16.20% | 48 |
| Poor health | 9.50% | 28 |
| Lack of safe places to exercise (i.e., crime, traffic, etc.) | 9.10% | 27 |
| Lack of knowledge on how to exercise | 4.40% | 13 |
| Lack of transportation | 1.70% | 5 |
| | | |
| Total answered question | | 296 |
| Skipped question | | 44 |

Q16: “What county do you live in?”

Responses listed in descending order

| County | Response Percent | Percent Count |
|---|---|---|
| Henry | 82.30% | 242 |
| Benton | 11.60% | 34 |
| St. Clair | 6.10% | 18 |
| | | |
| Total answered question | | 294 |
| Skipped question | | 46 |

Q17: [If Benton County was chosen for Q16] “Which town do you live in or live closest to?”

Responses listed in descending order

| Town/City | Response Percent | Response Count |
|---|---|---|
| Warsaw | 50% | 17 |
| Lincoln | 23.50% | 8 |
| Cole Camp | Restricted | Restricted |
| Ionia | Restricted | Restricted |
| | | |
| Other | Restricted | Restricted |
| Total answered question | | 34 |

Q18: [If Henry County was chosen for Q16] “Which town do you live in or live closest to?”

Responses listed in descending order

| **Town/City** | **Response Percent** | **Response Count** |
|---|---|---|
| Clinton | 64.90% | 157 |
| Windsor | 11.20% | 27 |
| Deepwater | 4.50% | 11 |
| Tightwad | 4.10% | 10 |
| Calhoun | 3.70% | 9 |
| Montrose | 3.30% | 8 |
| Urich | 2.50% | 6 |
| Blairstown | Restricted | Restricted |
| Brownington | Restricted | Restricted |
| | | |
| Other | 2.50% | 6 |
| Total answered question | | 242 |

Q19: [If St. Clair County was chosen for Q16] "What town do you live in or live closest to?"

Responses listed in descending order

| Town/City | Response Percent | Response Count |
|---|---|---|
| Lowry City | 33.30% | 6 |
| Osceola | 27.80% | 5 |
| Appleton City | Restricted | Restricted |
| Gerster | Restricted | Restricted |
| | | |
| | | |
| Total answered question | | 18 |

Q20: "Would you support schools and local governments in developing policies and environments to support healthy lifestyles?"

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| Yes | 77.90% | 229 |
| No | 22.10% | 65 |
| | | |
| | | |
| Total answered question | | 294 |
| Skipped question | | 46 |

Q21: “What is your gender?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| Female | 86.60% | 252 |
| Male | 13.40% | 39 |
| Total answered question | | 291 |
| Skipped question | | 49 |

Q22: “What is your age?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| 18-25 years | 6.50% | 19 |
| 26-39 years | 29.40% | 86 |
| 40-54 years | 34.50% | 101 |
| 55-64 years | 25.30% | 74 |
| 65-80 years | 4.40% | 13 |
| | | |
| Total answered question | | 293 |
| Skipped question | | 47 |

Q23: “What is your annual household income?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| Less than $20,000 | 12.10% | 33 |
| $20,000 to $29,000 | 19.50% | 53 |
| $30,000 to $49,000 | 20.20% | 55 |
| Over $50,000 | 48.20% | 131 |
| | | |
| Total answered question | | 272 |
| Skipped question | | 68 |

Q24: “What race or ethnic group do you identify with?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| White alone | 93.40% | 271 |
| Two or more races | 4.50% | 13 |
| African American or Black alone | Restricted | Restricted |
| Hispanic or Latino alone | Restricted | Restricted |
| American Indian or Alaska Native alone | Restricted | Restricted |
| | | |
| Total answered question | | 290 |
| Skipped question | | 50 |

Q25: “What is your highest educational level?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| Less than high school graduate | 1% | 3 |
| High school diploma or GED | 18.50% | 54 |
| Some college | 26% | 76 |
| College degree or higher | 54.50% | 159 |
| | | |
| Total answered question | | 292 |
| Skipped question | | 48 |

Q26: “Do you have school-aged children living in your home?”

Responses

| Options | Response Percent | Response Count |
|---|---|---|
| Yes | 38.80% | 114 |
| No | 61.20% | 180 |
| | | |
| Total answered question | | 294 |
| Skipped question | | 46 |

## Appendix B: Summary of Priority Regional Health Problem Rankings (Priorities MICA)

Priority Regional Health Problems: In Terms of Number of Deaths
In descending order

| Benton County | Henry County | St. Clair County |
|---|---|---|
| Heart Disease | Heart Disease | Heart Disease |
| Lung Cancer | Stroke and Other Cerebrovascular Disease | Lung Cancer |
| COPD | Lung Cancer | Stroke and Other Cerebrovascular Disease |

Priority Regional Health Problems: In Terms of Number of Hospitalizations
In descending order

| Benton County | Henry County | St. Clair County |
|---|---|---|
| Heart Disease | Heart Disease | Heart Disease |
| Falls | Falls | Falls |
| Pneumonia and Influenza | Arthritis/Lupus | Pneumonia and Influenza |

Priority Regional Health Problems: In Terms of Number of Days of Hospital Care
In descending order

| Benton County | Henry County | St. Clair County |
|---|---|---|
| Heart Disease | Heart Disease | Heart Disease |
| Pneumonia and Influenza | Pneumonia and Influenza | Pneumonia and Influenza |
| Affective Disorders | Affective Disorders | COPD |

Priority Regional Health Problems: In Terms of Amenability to Change
In descending order

| **Benton County** | **Henry County** | **St. Clair County** |
|---|---|---|
| Dental Health Problems | Dental Health Problems | Dental Health Problems |
| Breast Cancer | Breast Cancer | Breast Cancer |
| Colorectal Cancer | Colorectal Cancer | Colorectal Cancer |

Priority Regional Health Problems: In Terms of Disability Burden
In descending order

| **Benton County** | **Henry County** | **St. Clair County** |
|---|---|---|
| Affective Disorders | Affective Disorders | Affective Disorders |
| Alcohol and Substance Related | Alcohol and Substance Related | Alcohol and Substance Related |
| Arthritis/Lupus | Arthritis/Lupus | Arthritis/Lupus |

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