Stone County Community Health Coalition™

March 2015

Community Health Assessment

Stone County, MO

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

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Stone County Community Health Coalition

Community Health Assessment

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Acknowledgement

Sincere appreciation is given to the following community partners for their instrumental participation in providing research, data, editing, assistance, and funding. Thank you!

Resources/ Partners:

- National Association of County and City Health Officials, www.NACCHO.org
- Mobilizing for Action through Planning and Partnership, MAPP, Handbook
- Epi Info 7 database
- Blue Eye Schools
- Children's Smile Center
- Christian Associates
- City of Branson West
- City of Reeds Spring
- Community Members
- Cox Medical Center Branson
- Crane Schools
- Galena Schools
- Galena Vision of Hope
- Hurley Schools
- Jordan Valley Community Health Center
- Kimberling Area Library
- Lakes Area Medical Clinic
- Life Song UMC
- Mercy EMS
- OACAC Neighborhood Center
- One Body Pilates and More
- Parents as Teachers Reeds Spring
- Pregnancy Life Line
- Reeds Spring Schools
- Skaggs Foundation
- SCHD Board of Trustees
- Silver Dollar City Attractions
- Southern Stone County Fire
- Southwest Center for Independent Living
- Stone County Assessor's Office
- Stone County Board of Probation/ Parole (Drug Court)
- Stone County Children's Division
- Stone County Commission
- Stone County Emergency Services/ 911
- Stone County Emergency Management
- Stone County Health Department
- Stone County Health Department Board of Trustees
- Stone County Public Health Volunteers/ MRC
- Stone County Prosecuting Attorney's Office
- Stone County Public Health Volunteers
- Taney County Health Department
- Tri-Lakes Clean Air Alliance
- Tri-Lakes Community Health Center
- University of Missouri Extension

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SKAGGS FOUNDATION Legacy

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Introduction: What is a Community Health Assessment?

The Stone County Health Department worked hard to implement the Stone County Community Health Coalition in order to gain community feedback and participation in the development of the Community Health Assessment and Community Health Improvement Plan. As a coalition of over 30 participating agencies and more than 45 members, the Community Health Coalition has completed the Four Assessments included in the Mobilizing for Action through Planning and Partnership (MAPP) Process.

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

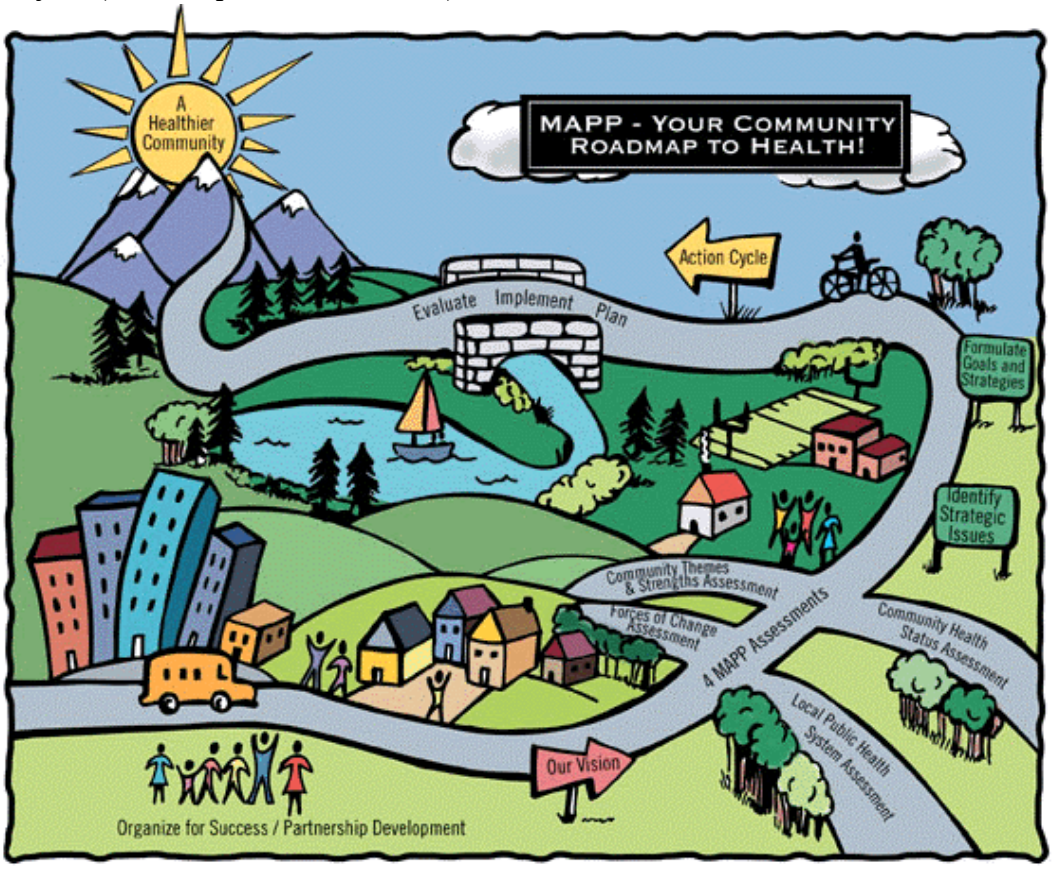
The Stone County Community Health Coalition will utilize this community assessment to assess and generate awareness of the issues being studied, and to implement a Community Health Improvement Plan. A successful community assessment provides comprehensive, usable and accurate information for decision-making.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

Methodology

The Mobilizing for Action through Planning and Partnership (MAPP) is a process taught by the National Association of County and City Health Officials (NACCHO). NACCHO is the guiding organization for the 2800 local public health departments across the United States. After a community-driven process, MAPP has been recognized as an evidence-based program for best developing the Community Health Assessment and Community Health Improvement Plan. With community input in the process, each participating organization/ member achieves a sense of ownership over the process and the success of the CHIP. MAPP has six (6) phases which are designed to best facilitate this process and develop a community coalition. The Stone County Health Department facilitated this process to create the Community Health Coalition with the help of many public health partners.

The Six MAPP Phases are:

1. Organizing for Success
2. Visioning
3. Four MAPP Assessments
4. Identify Strategic Issues
5. Formulate Goals and Strategies
6. Action Cycle (Plan, Implement, Evaluate)



From the illustration above, it is clear to see that this process is not one that is done quickly or carelessly. Each process is a journey that each participating member goes through together- a journey that results in a Healthier Community. Developing a Healthy Community is a long-term endeavor, well-planned, integrated into the big picture, initiated and supported by community members, benefits the community, and grounded in experience that leads to best-practice programs. MAPP provides the framework, guidance, structure, and best practices for developing healthy communities. Benefits of MAPP include increasing the visibility of public health, creating advocates for public health, creating a healthy community and better quality of life, anticipating and managing change, creating a stronger public health infrastructure, building stronger partnerships, and building public health leadership.

Throughout the process, key partners were solicited to join the coalition and a kick-off event was held. After educating the members about the process and its importance, a survey was used in order to create the Mission, Vision, and Value statements. These statements are a reflection of what the coalition does and why, the future of Stone County, and the values of the group. The longest portion of the process was completing each of the four MAPP Assessments: Community Health Assessment, Community Themes and Strengths, Forces of Change, and Local Public Health System Assessment. A combination of surveys, sub-groups, data collection, and several meetings were used in order to gather the information necessary for each of these assessments. Each assessment is attached at the end of this document.

Finally, after collecting and analyzing local data compared to state and national data, the coalition identified six (6) Health Priorities. These priorities are the focus of the Community Health Coalition's efforts to improve health in Stone County. Goals, strategies, and objectives were created to address each health priority- found in the Community Health Improvement Plan.

For future health improvement, the Community Health Coalition will enter into the Sixth Phase: The Action Cycle. This phase consists of Planning, Implementing, and Evaluating programs designed to address each Health Priority. To keep the coalition accountable and ensure ongoing success of the wellness improvement efforts, meetings of the coalition will continue along with subcommittees focusing on each Health Priority. Data from the Community Health Assessment will be available for each partner organization participating in the Community Health Coalition for program development and grant proposals. Continued updating of the local county data will continue as statistics become available or on a three-year cycle.

The Trademarked look and logo of the coalition will be used to promote the coalition at events and give a designated look to the group.

Stone County Community Health Coalition™

Mission, Vision, Values Statements

Mission:

The Community Health Coalition works collaboratively with partners in the assessment of Stone County to identify priorities associated with health and safety. As a coalition, we will address our priorities in our Community Health Improvement Plan to promote accessible health opportunities within a safe environment for all those who live, work, and play in Stone County.

Vision:

The Community Health Coalition will promote a healthier, happier, and safer Stone County, MO.

Values:

Accessible health and safety through Innovation, Collaboration, and Excellence.

Health Priorities

After analyzing the data presented from the Community Health Assessment, the Community Health Coalition identified six (6) Health Priorities. These priorities were deemed to be High Priority/ Low Status, meaning that they are major concerns in the community and there is currently minimal progress toward improvement of those issues.

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

Six Health Priorities:

1. Drug Abuse
2. Smoking (Pregnancy)
3. Unhealthy Body Weight (obesity, exercise, diet)
4. Chronic Disease (diabetes, heart disease, cancer)
5. Equal Access to Care (transportation, clinics, affordable)
6. Economic Equity (jobs, insurance, poverty)

Other strategic issues were identified to be in other categories including:

A: High Priority/ Low Status Drug Abuse Smoking (Pregnancy) Unhealthy Body Weight (obesity, exercise, diet) Chronic Disease (diabetes, heart disease, cancer) Equal Access to Care (transportation, clinics, affordable) Economic Equity (jobs, insurance, poverty)	**B: High Priority/ High Status** Smoking- Awareness/ Cessation Family Safety/ Dynamics Dental/ Mental Health School Health Programs Emergency Management
C: Low Priority/ Low Status Violent Crime Rate Healthcare Options Housing Medical/ Public Transportation	**D: Low Priority/ High Status** Food Safety Emergency Services Community Collaboration Education

Each of these Health Priorities are addressed in detail in the Community Health Improvement Plan. Goals, Strategies, and Objectives have been developed to address each issue and include the community participation.

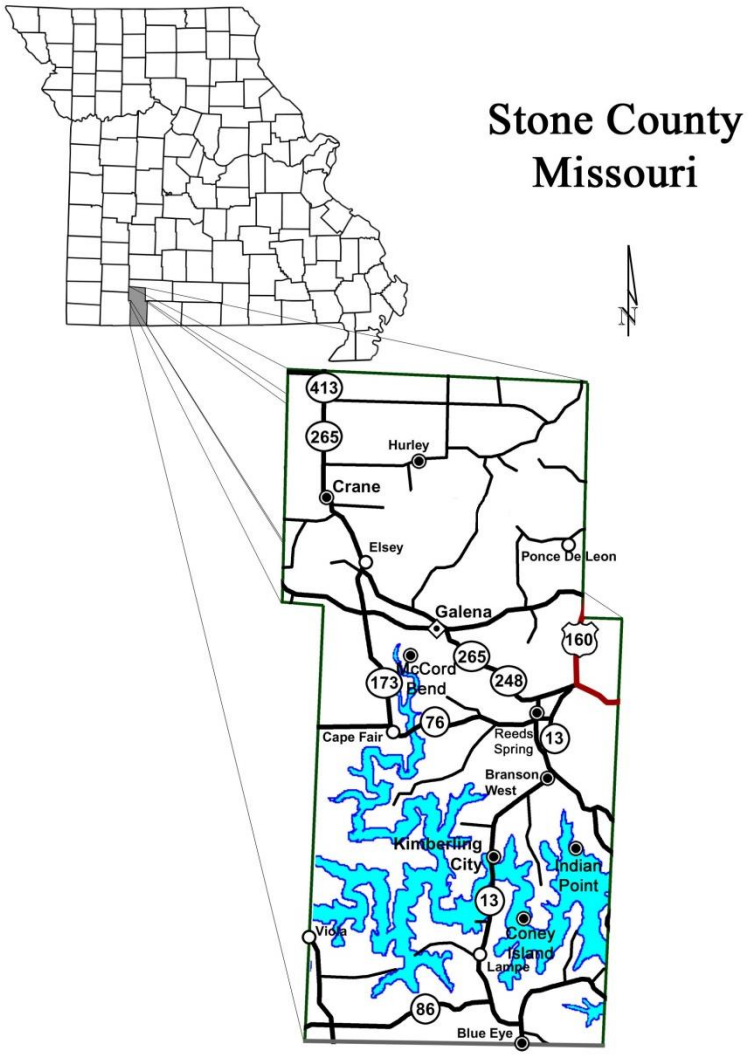
Community Health Assessment

Chapter 1: Demographics of Stone County Residents

Location

Stone County lies in Southwest Missouri and is bordered by Barry and Lawrence counties to the west, Christian County to the north and east, Taney County to the southeast, and Carroll County, Arkansas to the south. The county covers 510.9 square miles, including 463.2 square miles of land and 47.7 square miles of surface water; the county is 34.5 miles long and 15 miles wide. Table Rock Lake, a reservoir maintained by the U.S. Army Corps of Engineers, is located in the southern portion of the county.

Incorporated communities include the villages of Coney Island, Indian Point, and McCord Bend, the town of Blue Eye, and the cities of Branson West, Crane, Galena, Hurley, Kimberling City, and Reeds Spring. There are also several unincorporated settlement areas in the county, including Ponce DeLeon and Elsey in the northern section of the county and Lampe, Cape Fair, and Viola the southern portion. The City of Galena is the county seat.



Form of Government

Missouri is divided into 114 counties and the City of St. Louis by the Revised Statutes of Missouri (RSMo) §46.040. Counties are political subdivisions of the State "for governmental, political, and public purposes," (Freyermuth, n.d.) and have a wide range of governmental responsibilities. The Missouri legislature has established four classes of counties, based on the assessed valuation of real and personal property (Freyermuth, n.d; RSMo §48.820). Stone County is classified as a third class county and is governed by a three-member Commission. Under the provisions of RSMo §49.010, counties are divided into two districts of nearly equal population (in Stone County, the

northern district and the southern district). Each district elects one commissioner, and the presiding commissioner is elected by the county as a whole. Commissioners serve four-year terms.

Stone County's population grew from 25,658 in 2000 to 32,154 in 2010, an increase of over 12 percent. This continual increase in growth is attributable to immigration of workers attracted by employment opportunities in the Branson/Lakes area tourism industry and retirees attracted by the area's quality of life and natural environment. The substantial majority of population growth has occurred in unincorporated areas, particularly along the Highway 13 and Highway 76 corridors and around Table Rock Lake. Unincorporated population represented 78 percent of total population in 2000, increasing slightly to 78.4 percent in 2010.

The youth (under 20) represent slightly over 20 percent of the total population in Stone County; while working-aged citizens represent roughly over 50 percent, see Table 1.1. The retirement age population (65 and over) constitutes nearly 25 percent of the population. The three largest cohorts though, are the 45-54, 55-64 and the 65-74 age groups. The median age of the population is 49.9 years, an older median age than the state or other nearby counties in Southwest Missouri. Stone County's older median age and larger percentage of population 65 years and older reflects the in-migration of retirement-aged persons.

Table 1.1: Stone County Age Specific Population, 2010

Age Cohort	Population	Percent of Total
Under 5	1,436	4.5
5 to 9	1,600	5.0
10 to 14	1,865	5.8
15 to 19	1,883	5.9
20 to 24	1,194	3.7
25 to 34	2,634	8.2
35 to 44	3,481	10.8
45 to 54	4,828	15.0
55 to 64	5,670	17.7
65 to 74	4,823	15.0
75 to 84	2,108	6.6
85+	632	2.0
Total	32,154	100

Source: Missouri Census Data Center 2007-2011

West City experienced the third fastest growth rate, doubling population in the same time period. Table 1.2 provides population change information for incorporated and unincorporated areas of the county.

Table 1.2: Population Growth, 2000-2010

Jurisdiction	2000 Population	2010 Population	Change 2000-2010	Approx. % Change 2000-2010
Stone County Total	28,658	32,154	3,496	12%

Blue Eye Town	129	138	9	7%
Branson West City	*408*	*820*	*412*	***100%***
Coney Island Village	94	57	-37	-39%
Crane City	1,390	2,206	816	58%
Galena City	451	639	188	42%
Hurley City	*157*	*361*	*204*	***130%***
Indian Point Village	*588*	*1,023*	*435*	***73%***
Kimberling City	2,253	2,811	558	25%
McCord Bend Village	292	289	-3	-1%
Reeds Spring	*465*	*1,172*	*707*	***152%***
Incorporated Population Total	6,277	6,938	661	11%
Unincorporated Population Total	22,381	25,264	2,883	13%

Source: U.S. Bureau of the Census. 2010 Census, 2010 Demographic Profile Data; 2007-2011 American Community Survey

Population shifts among Missouri regions have followed similar patterns for many years. Shifts have been from rural Agricultural areas to urban areas to rural areas rich in recreational amenities. Projections show that these patterns will continue, and that there will be more movement from older urban centers to their less densely settled fringes and to newer urban areas (OSEDA, 2010).

Table 1.3: Population Estimates and Projections for Stone County, 1990-2025

Population Estimates and Projections for Stone County, 1990-2025						
Year	1990	2000	2004	2005	2015	2025
Stone Co.	19,078	28,658	30,720	30,931	35,328	39,113
Missouri	5,117,073	5,595,211	5,754,618	5,800,310	6,184,390	6,580,868

Source: U.S. Census Bureau, 2010, and MU Extension Service, 2010

Table 1.4 is a review of the reported populations in Stone County for each gender from 2001 to 2011 and revealed no significant change in population distribution for any given gender.

Table 1.4 Population Estimate Trends for Stone County by Gender, 2001-2011

Population Estimate for Stone County by Gender, 1999-2009											
Year	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
Male	14,082	14,376	14,666	14,959	15,106	15,451	15,661	15,767	15,826	15,868	15,852
Female	14,759	14,971	15,378	15,583	15,694	16,095	16,305	16,352	16,388	16,334	16,411
All	28,841	29,347	30,044	30,542	30,800	31,546	31,966	32,119	32,214	32,202	32,263

Source: Missouri Department of Health and Senior Services, MICA, 2011

According to the Office of Social and Economic Data Analysis (OSEDA 2010), Stone County (along with the bordering counties of Christian and Taney) is one of the top ten fastest-growing counties in Missouri and is considered a "metropolitan county" in that it does have strong socioeconomic ties to the central city of the region, which is Springfield.

Age Characteristics

The youth (under 20) represent slightly over 20 percent of the total population in Stone County; while roughly over 50 percent is represented by working-aged citizens, see Table 1.5. The retirement age population (65 and over) constitutes nearly 25 percent of the population. The three largest cohorts though, are the 45-54, 55-64 and the 65-74 age groups. The median age of the population is 49.9 years, an older median age than the State or other nearby counties in Southwest Missouri. Stone County's older median age and larger percentage of population 65 years and older reflects the in-migration of retirement aged persons.

This can be attributed to several factors, including the popularity of the "Lakes Area" as a retirement destination as well as the affordability of residing in Stone County compared to other areas. As this group continues to age, and with the increased rate of individuals retiring to Stone County, it will likely add an increasing burden to the healthcare system in Stone and surrounding counties. It is important at this time to begin preparing for a surge in the healthcare needs and the environmental impact of this growing population.

Table 1.5: Stone County Age Specific Population, 2010

Age Cohort	Population	Percent of Total
Under 5	1,436	4.5
5 to 9	1,600	5.0
10 to 14	1,865	5.8
15 to 19	1,883	5.9
20 to 24	1,194	3.7
25 to 34	2,634	8.2
35 to 44	3,481	10.8
45 to 54	4,828	15.0
55 to 64	5,670	17.7
65 to 74	4,823	15.0
75 to 84	2,108	6.6
85+	632	2.0
Total	32,154	100

Source: Missouri Census Data Center 2007-2011

Of the municipalities in Stone County, Branson West has the largest percentage of population under the age of 18 followed by Hurley, Reeds Spring and Crane, respectively. The Village of Coney Island has the greatest percentage of population aged 65 and older followed by Kimberling City and Indian Point, respectively.

Table 1.6 contains information for dependent age groups and median age for the entire county as well as incorporated communities.

Table 1.6: Stone County and Municipalities, Population by Age, 2010

Jurisdiction	Total Population	Percent Under 18	Percent 18 - 64	Percent 65 and over	Median Age
Stone County	32,202	18.7	56.9	24.4	49.9

Blue Eye	167	19.8	58.5	21.6	44.3
Branson West	478	28	55.9	16.1	36.4
Coney Island	75	4	54.7	41.3	63.4
Crane	1,462	25.1	53.4	21.5	39.9
Galena	440	22.5	60.7	16.8	41.5
Hurley	178	27.5	62.9	9.6	36.5
Indian Point	528	12.9	57.5	29.5	56
Kimberling City	2,400	14.4	50.3	35.4	57.1
McCord Bend	297	24.2	59.3	16.5	41.3
Reeds Spring	913	26.1	59.1	14.8	35.5

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

Race

Stone County's population is primarily White, with minority populations representing 4.6 percent of the total population in 2010 as depicted in Table 1.7. The Hispanic population has continued to grow rapidly in Southwest Missouri since 2000, particularly in counties located west and south of Stone County. Although Hispanics represented only 1.7 percent of Stone County's total population in 2010, the number of individuals identified as Hispanic increased from in 298 in 2000 to 553 in 2010, an increase of 85.5 percent.

Table 1.7: Race and Hispanic Population Percentages, 2010

Jurisdiction	White	Black or African American	American Indian and Alaska Native	Asian	Hawaiian and Pacific Islander	Some Other Race	Two or More Races	Hispanic or Latino (any race)
Stone County	97.2	0.2	0.6	0.3	0.0	0.4	1.4	1.7
Blue Eye	97	0.0	0.6	0.0	0.0	0.0	2.4	1.8
Branson West	91.4	0.6	0.0	0.4	0.0	3.6	4.0	11.9
Coney Island	97.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
Crane	97.2	0.1	0.7	0.2	0.0	0.4	1.4	1.2
Galena	97.7	0.0	0.9	0.0	0.0	0.7	0.7	3.6
Hurley	98.9	0.0	0.6	0.0	0.0	0.0	0.6	0.0
Indian Point	96.4	0.0	1.3	0.2	0.0	0.6	1.5	2.1
Kimberling City	98.1	0.2	0.4	0.5	0.0	0.1	0.7	1.3
McCord Bend	96.0	0.3	0.7	0.3	0.0	0.0	2.7	2.7
Reeds Spring	95.3	0.1	1.6	0.8	0.0	0.3	1.9	2.3

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

The groups that could potentially experience disparity in health status or barriers to accessing health care or preventive services would be those who cannot speak or read English and those without means of transportation to a health service facility. Even with the lack of cultural/ethnic diversity, Stone County Health Department is staffed with bi-lingual English/Spanish staff in an

effort to prepare for the anticipated continued growth of the Hispanic population in Stone County.

Household Characteristics

The total number of households only increased from 11,822 in 2000 to 13,297 households in 2011. In 2011, nearly 75 percent of Stone County households were family households; however, the traditional family household of married couples with children under the age of 18 represented only 21.4 percent of the total households in the county. Single person households accounted for 21.8 percent of all households and single parent households with children under the age of 18 accounted for 6.7 percent.

Over 73 percent of single person households reside in the rural areas of the county, with the largest numbers of single person households that reside in municipalities living in the cities of Crane and Kimberling City. Of the county's 898 single parent households with children under the age of 18, 534 (59.4 percent) reside in the rural areas, see Table 1.8.

Table 1.8: Household Characteristics, 2011

Jurisdiction	Total Households	Total Families	Married Couple w/ children under 18	Single Parent w/ children under 18	Non-Family Household	Single Person Household	Average Household Size
Stone County	13,297	9,742	1,954	898	3,555	2,898	2.4
Blue Eye	93	26	6	0	67	67	1.48
Branson West	267	182	50	29	85	22	2.98
Coney Island	31	24	0	0	7	3	1.96
Crane	828	538	132	67	290	248	2.53
Galena	237	180	91	14	57	45	2.58
Hurley	133	114	44	23	19	19	2.71
Indian Point	354	285	53	70	69	52	2.89
Kimberling City	1321	813	136	65	362	362	2.13
McCord Bend	127	65	14	16	62	48	2.28
Reeds Spring	438	322	111	80	116	96	2.68

Source: U.S. Bureau of the Census, 2011 Census, 2011 Demographic Profile Data

Special Housing Characteristics

Stone County's housing stock increased from 16,241 to 20,453 units between 2000 and 2010, an increase of 25 percent. The downfall of the housing market in 2008 has not curbed growth in the county. The immigration of persons attracted by employment opportunities in the growing Branson/Tri-Lakes area tourism economy and retirees attracted by the area's moderate climate, natural environment and lower cost of living serves as the primary catalyst for the housing construction boom in Stone County during the 1990s and continuing into the early 2000's.

Table 1.9: Stone County Housing Characteristics, 2009-2011	
Total Housing Units	20,453
Total Owner-Occupied Units	10,805
Total Renter-Occupied Units	2,877
Vacant Units	6,771
Vacancy Rate - Home Owner	3.3%
Vacancy Rate - Rental	3.0%
Median Value Owner-Occupied Units	$135,300
Median Monthly Mortgage Cost	$1,012
Median Gross Rent	$686

Source: U.S. Bureau of the Census.2009-2011American Community Survey

The number of vacant units in the county (6,771 units), is of significance. In 2010, nearly 70 percent of all vacant units were for seasonal use. Many are second homes occupied by owners during the summer season and units rented out to individuals and families vacationing in the area. A natural disaster occurring during the peak tourist season could affect significantly greater numbers of occupied housing units around the Table Rock Lake area. Over 70 percent of the housing units in the county are single family detached units (Table 1.10). The second largest type of housing unit in Stone County is mobile homes, accounting for 17.8 percent of all housing units. The median year structure built for housing units in the county is 1981.

Table 1.10: Housing Structure Characteristics, Stone County 2011

Housing Units	Number
Total Housing Units	20,453
1, detached	14,486
1, attached	269
2	408
3 or 4	252
5-9	763
10 to 19	574
20+	56
Manufactured Home	3,645
Boat, RV, Van	0

Source: US Census Bureau, 2009-2011 American Community Survey

Mobile homes are located in a few mobile home parks, but the majority of mobile homes are primarily scattered on individual lots throughout the rural areas of the county. Mobile home parks in Stone County are listed in Table 1.11.

Table 1.11: Manufactured Home Parks in Stone County

Mobile Home Park	Address	City	Telephone	Number of Lots
Coachlight Village Mobile Home Park	--	Kimberling City	417-779-4336	69
Akers Mobile Home Park	Rout 6	Branson West	417-272-3619	26
Henderson Park	1502 Keystone Rd.	Reeds Spring	417-272-8120	21
Maloney's Oak Land Park	HWY 86	Blue Eye	417-779-3744	--
Lakewood Park	374 Trellis Dr.	Lampe	417-779-2049	--
Cape Fair Mobile Home Park	76 W	Cape Fair	417-538-4271	--
Show Me Shores	12 Yellow Rose Ln	Reeds Spring	417-338-2881	--
Country Lake Mobile Home Park	County Road H20b	Blue Eye	417-779-2200	--
Warrens Mobile Home Park	1560 Railey Creek Rd.	Reeds Spring	417-272-8802	15
Warren's Oakland Mobile Home	5704 E. State HWY 86	Blue Eye	417-779-5095	--
Rocky Top Mobile Home Court	16 Livingstone Ln	Reeds Spring	417-272-3863	--
Roxborough on the Lake	19 Violet Ln	Branson West	417-338-2874	--
Sunset Ridge Mobile Home Village	Hc 6 Box 1045	Reeds Spring	417-538-2633	9
White Eagle Woods	198 Eagle Dr	Reeds Spring	417-739-1419	--
Woodrow Akers	17804 Hwy 13	Reeds Spring	417-272-3619	--

Source: MobileHomeParkStore.com 2013

Chapter 2: Socioeconomic Characteristics of Stone County

Educational Attainment

The educational attainment of Stone County's population has slightly increased since 2000. 2011 Census data presented in Table 2.1 indicates that 83.8 percent of the population aged 25 and older are high school graduates or higher (includes equivalency) compared to 80.4 percent in 2000. Also, 16.2 percent of the county's population aged 25 and older have a bachelor's degree or higher, compared to 14.2 percent in 2000.

Within the incorporated communities, Kimberling City's population aged 25 and older has the highest educational attainment level, with 92.2 percent high school graduates or higher and 26.6 percent with bachelor's degree or higher education. Blue Eye's population aged 25 and older also had a tremendous increase with 78.9 percent attaining a high school degree in 2000 to 88.1 in 2011.

Table 2.1: Educational Attainment, Population 25 Years and Older 2011

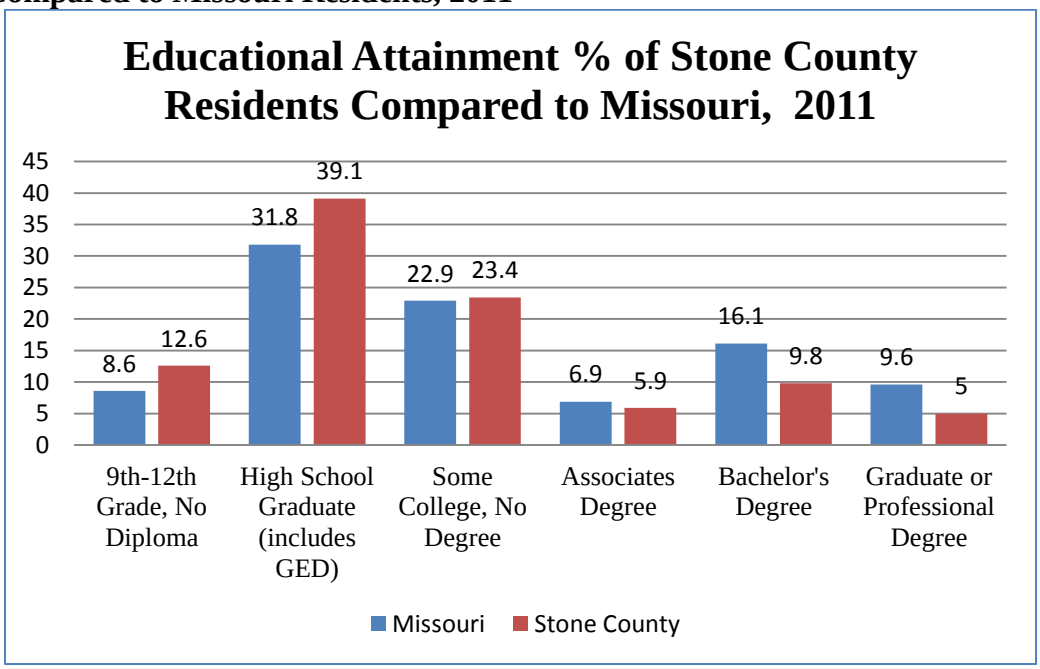
Jurisdiction	Less than 9th grade	9th-12th grade, no diploma	High school graduate	Some college, no degree	Assoc. degree	Bach. Degree	Graduate or Prof. Degree	% high school graduate or higher	% BA/BS degree or higher
Stone County	870	3,046	9,380	5,391	1,571	2,417	1,499	83.8%	16.2%
Blue Eye	0	13	21	60	12	13	0	89.1%	10.9%
Branson West	20	130	284	87	26	20	21	74.5%	7%
Coney Island	3	6	26	14	0	5	3	84.2%	14%
Crane	107	223	668	268	79	60	86	77.9%	9.8%
Galena	33	99	118	123	5	38	5	68.6%	10.2%
Hurley	6	65	73	43	10	42	0	70.3%	17.6%
Indian Point	3	77	322	177	20	90	32	88.9%	16.9%
Kimberling City	20	157	670	711	106	447	159	92.2%	26.6%
McCord Bend	20	60	81	19	15	6	5	61.2%	5.3%
Reeds Spring	102	36	309	177	24	76	10	81.2%	11.7%

Source: U.S. Bureau of the Census, American Community Survey 2007-2011

The level of educational attainment and poverty rates both correlate with health status. The educational attainment for Stone County is displayed in Figures 1.2 and 1.3. Education attainment for persons 25 years of age and older is higher in Stone County than in Missouri, except at the college level, from Associates Degree to Graduate or Professional Degree. Figure

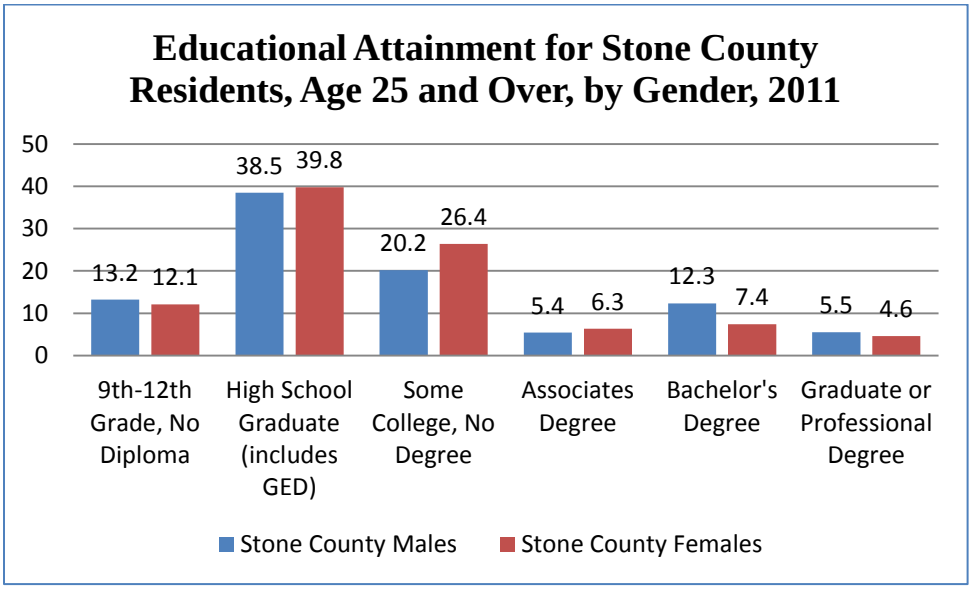
1.2 shows each level of education and the corresponding percentages of the population for both Missouri (in blue) and Stone County (in blue) for the year 2011.

Figure 2.2: Educational Attainment Percentages of Stone County Residents, Age 25 and Over, Compared to Missouri Residents, 2011



Source: U.S. Bureau of the Census, 2009-2011 American Community Survey

Figure 2.3: Educational Attainment for Stone County Residents, Age 25 and Over, by Gender, 2011.



Source: U.S. Bureau of the Census, 2009-2011 American Community Survey

Stone county females have higher levels of educational attainment from the levels of High School Graduate through Associates Degree. Males, however, represent higher levels of Bachelors and Graduate or Professional Degrees than the females. Figure 1.3 shows each level of education and the corresponding percentages of the population separated by Stone County Males (in blue) and Stone County Females (in red) for the year 2011.

Income Characteristics

Stone County's 2010 median household income estimate was $41,351, slightly lower than that of the State of Missouri ($46,262) and the nation ($41,433). The 2010 per capita income for Stone County, $21,748, is lower than state and national figures. The majority of Stone County residents (52.3 percent) accumulated $25,000 to $75,000 in 2010. 28.9 Percent of the population make less than $24,999 while 18.9 percent make over $75,000, see Table 2.4.

Table 2.4: Stone County Income, 2007-2011

Income	Number of Households	Percent of Total
Less than $10,000	1,048	7.9
$10,000 to $14,999	976	7.3
$15,000 to $24,999	1,789	13.5
$25,000 to $34,999	1,952	14.7
$35,000 to $49,999	2,299	17.3
$50,000 to $74,999	2,757	20.7
$75,000 to $99,999	1,386	10.4
$100,000 to $149,999	706	5.3
$150,000 to $199,999	178	1.3
$200,000 or more	206	1.5
Total	13,297	100.0
Median Household Income	$41,069	--
Per Capita Income	$21,748	--

Source: Missouri Census Data Center, ACS Profile Report 2007-2011

Table 2.5: Median Household Income by Age

Age	Stone County	MO	U.S.
Less than 25	$19,497	$22,599	$23,788
25 to 44	$36,597	$50,413	$54,769
45 to 64	$44,262	$54,714	$61,148
65 or over	$37,177	$32,977	$35,107

Source: Missouri Census Data Center, ACS Profile Report 2007-2011; U.S. Census Bureau, 2009-2011 American Community Survey

Table 2.5 shows that all the median household income is less than the state or nation in all ages except for the age of 65 or over. This correlates with the percentage of poverty in Stone County that is shown below. The federal poverty guidelines are used to define poverty states for families based on family size. These guidelines (Table 2.6) are used to determine the poverty status for families by government agencies. The figures below are also used to determine distribution for WIC (Women, Infants, and Children).

Table 2.6 Federal Poverty Guidelines, WIC Income Eligibility Guidelines

Size of Family Unit	Year 2000	Year 2008	Year 2012
1	$8,350	$18,889	$20,665
2	$11,250	$25,327	$27,991
3	$14,150	$31,765	$35,317
4	$17,050	$38,203	$42,643
5	$19,950	$44,641	$49,969
6	$22,850	$51,079	$57,295
7	$25,750	$57,517	$64,621
8	$28,650	$63,955	$71,947
Ea. Add'l person add:	$2,900	$6,436	$7,326

Source: United States Department of Agriculture, Food and Nutrition Service, 2012

The table below compares Stone County population poverty to the state and national percentages. The table reflects that the poverty percentage of the general population, as well as families, is well above the state and national percentages.

Table 2.7: Poverty Comparison Percentages

Unit Size	Stone County	MO	U.S.
Population in Poverty	16.05% (5,075)	13.97%	13.82%
Families in Poverty	10.53% (1,041)	9.98%	10.08%

Source: USA.Com – Based on 2006-2010 data

Table 2.8 presents the percentage of individuals under the age of 18 and those over the age of 65 below poverty levels according to their reported 2009 income. The number of individuals in both age groups living below poverty decreased during the 2000s in both Stone County and Missouri.

Table 2.8 Percent of Persons Below Poverty Level by Age -Stone County, 1999

	≤18 Years	18-64 Years	>65 Years
Stone	32.1%	19.7%	6.4%
Missouri	21.3%	14.3%	8.6%

Source: U.S. Bureau of the Census, 2009-2011 American Community Survey

Labor Force Characteristics

According to the Missouri Economic Research and Information Center's civilian labor force data for 2012, Stone County averaged a labor force of 14,409 persons. Employed persons accounted for 12,912 while unemployed persons totaled 1,497 equaling an unemployment rate of 10.4 percent. This is compared to a 6.1 percent unemployment rate for the Springfield MSA and 6.9 percent for the State of Missouri during the same period. **Table 2.9** shows the unemployment rates for Stone County per month, including the total labor force numbers, employment numbers, and unemployment numbers. Characteristically, unemployment rates are highest from January to March due to the tourist economy.

Table 2.9: Unemployment Rates in Stone County, 2012-2013

Month 2012	Labor Force	Employment	Unemployment	Rate
January	13,776	11,334	2,442	17.70%
February	13,485	10,975	2,510	18.60%
March	13,839	12,051	1,788	12.90%
April	13,971	12,643	1,328	9.50%
May	14,149	12,928	1,221	8.60%
June	14,993	13,734	1,259	8.40%
July	15,316	13,961	1,355	8.80%
August	15,031	13,776	1,255	8.30%
September	14,473	13,373	1,100	7.60%
October	14,734	13,573	1,161	7.90%
November	14,672	13,474	1,198	8.20%
December	14,469	13,127	1,342	9.30%
Annual Averages	14,409	12,912	1,497	10.40%

Source: Missouri Economic Research and Information Center, 2013

Disabilities

Disabled employed workers represented 15.7% of the population 21 to 64 years of age in Stone County, or 2,858 residents in 2011. Table 2.10 also identifies 27.4% of the population without a disability (or 4,989 residents) as not employed.

Table 2.10: Disability and Employment Status - Stone County, 2011

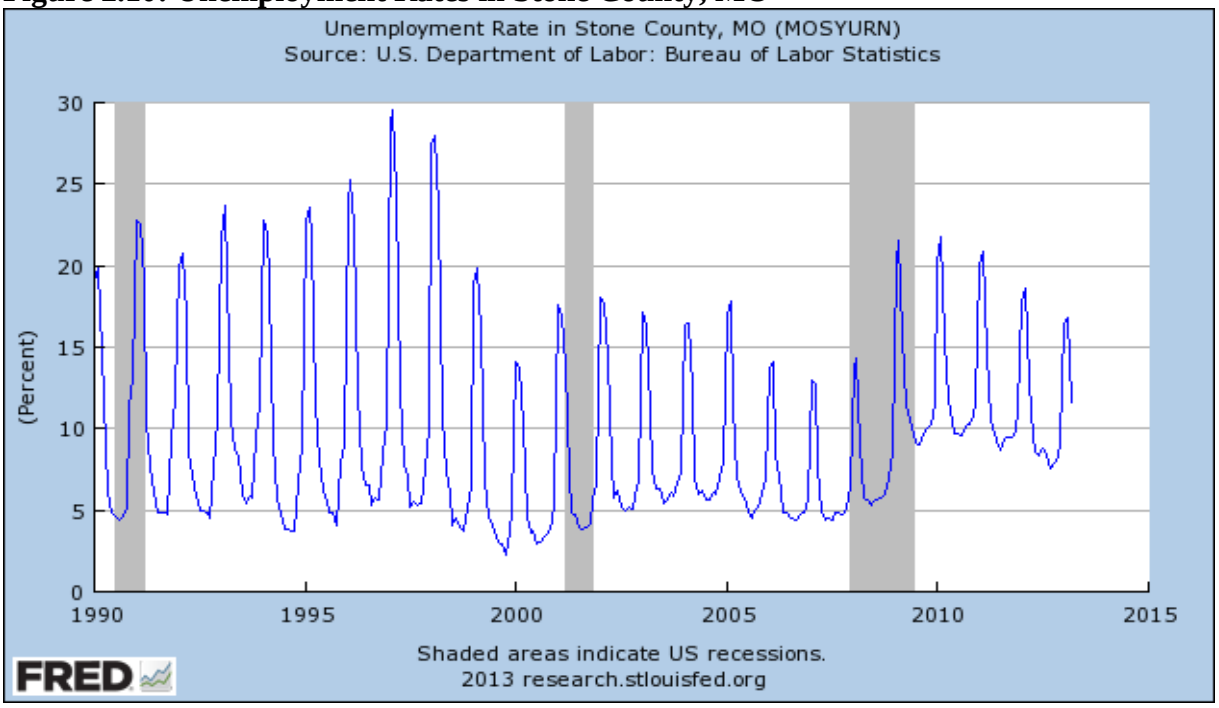
Individuals with a Disability	Total	Percentage of Total Workforce
Total Workforce Population, 21-64 years	**18,207**	**100%**
With a Disability	**2,858**	**15.7%**
Disabled and Employed	498	2.7%
Disabled and Not Employed	2,360	13%
Without Disability	**15,349**	**84.3%**
Employed	10,306	56.6%
Not Employed	4,989	27.4%

Source: US Census Bureau, 2009-2011 American Community Survey

Unemployment

Stone County's unemployment rate reflects the impact of seasonal employment in the tourism industry. For example, the county's May 2012 unemployment rate was 8.6 percent, whereas the unemployment rate during February 2012 was 18.6 percent. However, much of the unemployment rate during the off-season months comes from employees who are semi-retired or those who intentionally only work part of the year. The unemployment rate for Stone County has traditionally been higher than the state's rate. Figure 2.10 shows trends in unemployment rate from 1990- 2013. This graph depicts the fluctuations in the rates caused by the tourism industry and seasonal employment. The highest unemployment rate for Stone County was 8.5% in 2002. Historically, the unemployment rate for Stone County has been higher than that of the state.

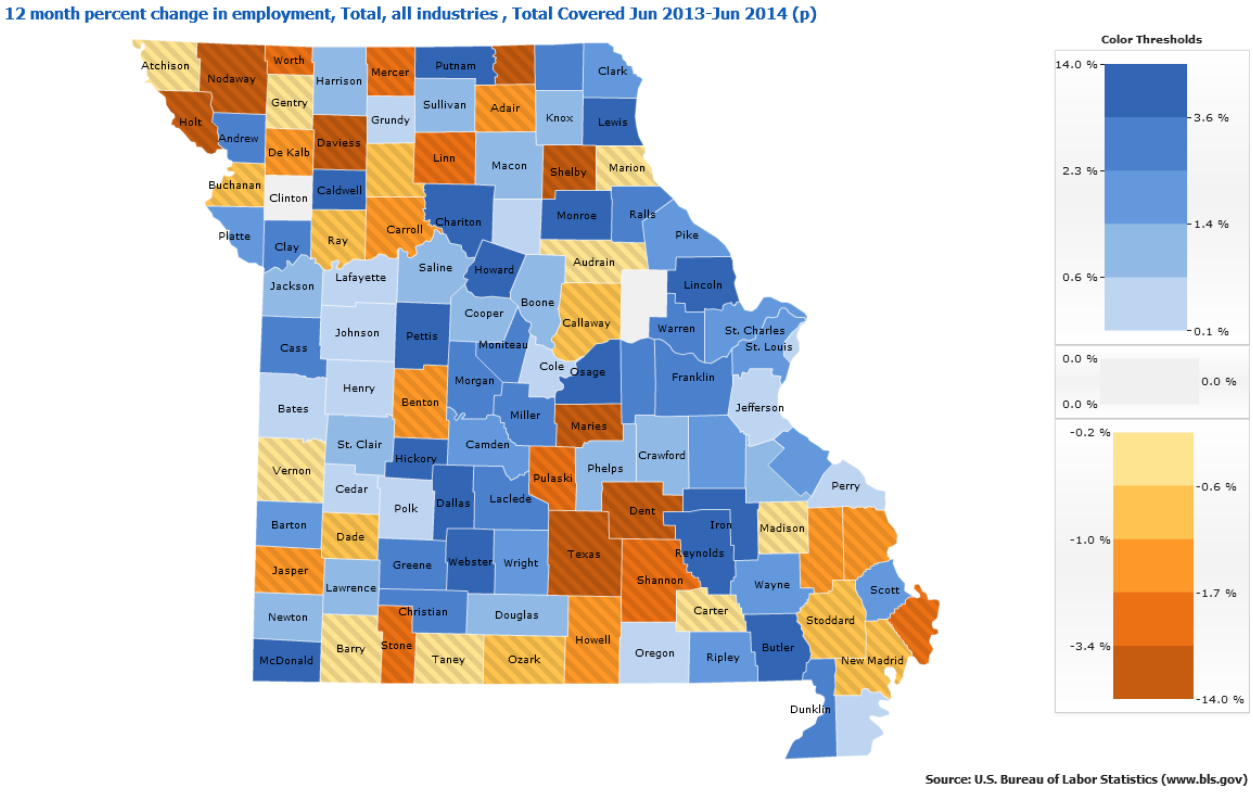
Figure 2.10: Unemployment Rates in Stone County, MO



Source: US Department of Labor: Bureau of Labor Statistics 2013

The following **Figure 2.11** depicts the 12-month change in employment for all industries per county between June 2014 and June 2014. Stone County has seen a change of -2.9%. Neighboring counties are doing much better. Barry and Taney Counties on either side experienced a change -0.6% each, while Christian County to the North experienced an increase in employment of 3.1%.

Figure 2.11: 12 Month Percent Change in Employment June 2013-June 2014



Economy, Employment, and Industry

Data concerning the connection between economics and health have shown that people in the lower economic strata usually experience more negative health consequences. Traditionally, families in poverty have less access to routine health care, less nutritious diets, and engage in other lifestyle practices that negatively affect health. Besides poverty, other economic factors are useful in identifying trends in the community that impact health. For instance, increased employment rates for the population may indicate more access to health insurance coverage leading to increased overall community health. Conversely, an increase in unemployment could indicate that some families would lose access to their source of routine preventive health care.

As shown in Table 2.12, the greatest numbers of Stone County's labor force are employed in the *Arts, Entertainment, Recreation, Accommodation, & Food Services* industries, with 2,722

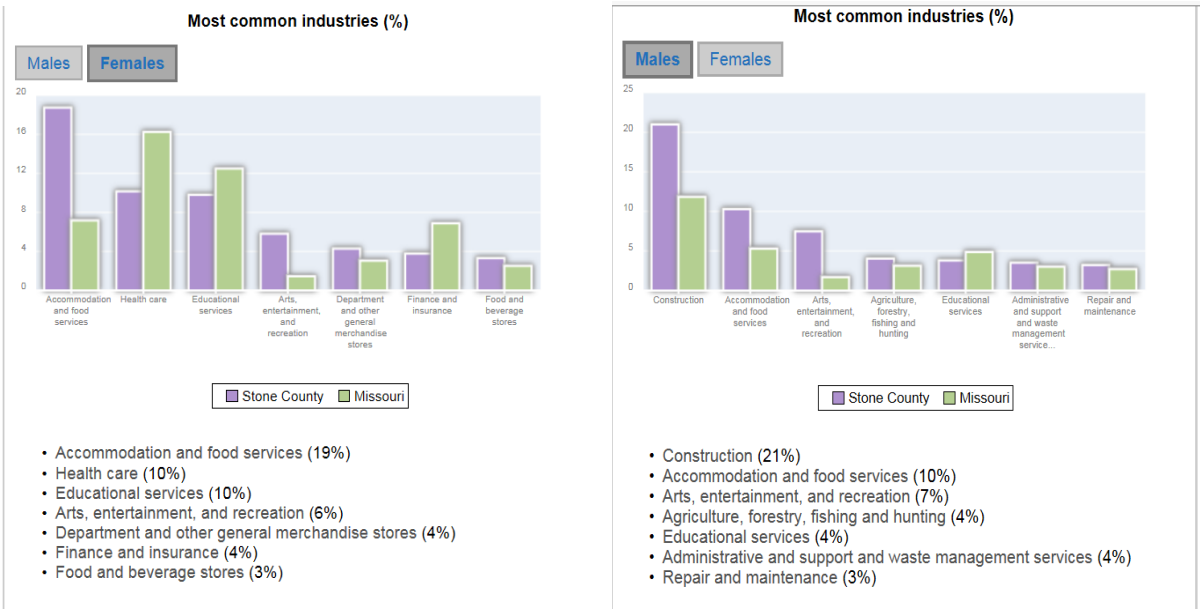
persons employed in these industries accounting for 17 percent of the total employed. The retail industry has seen steady growth boost in employment changing from 13.8 percent in 2000 to 14.8 in 2011. The data in Table 2.12 reflect employment of Stone County residents by industry and not by actual place of employment.

Table 2.12: Stone County Employment by Industry, 2011

Industry	Number Employed	Percent of Total
Agriculture, Forestry, Fishing and Hunting, and Mining	110	0.8%
Construction	1,493	11.5%
Manufacturing	700	5.4%
Wholesale Trade	230	1.8%
Retail Trade	1,921	14.8%
Transportation and Warehousing, and Utilities	546	4.2%
Information	117	0.9%
Finance, Insurance, Real Estate, and Rental and Leasing	732	5.7%
Professional, Scientific, Management, Administrative, and Waste Management Services	1,049	8.1%
Education, Health, and Social Services	2,207	17%
Arts, Entertainment, Recreation, Accommodation, and Food Services	2,722	21%
Other Services (except Public Administration)	657	5.1%
Public Administration	490	3.7%
Total	12,974	100%

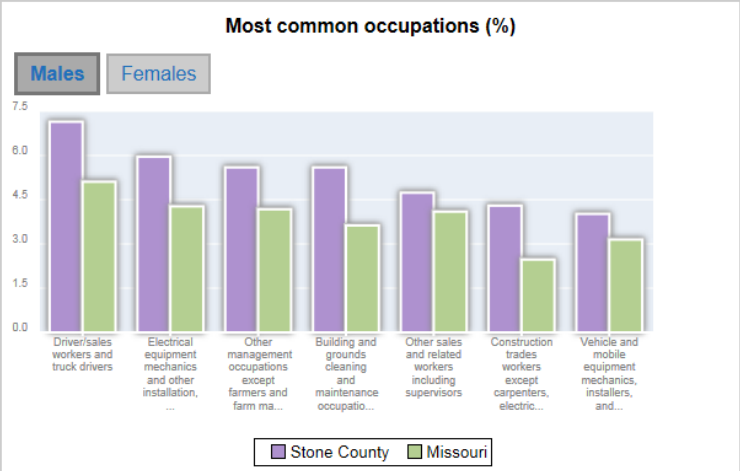
Source: U.S. Bureau of the Census, 2011

Figure 2.13: Most Common Employment Industries by Gender.

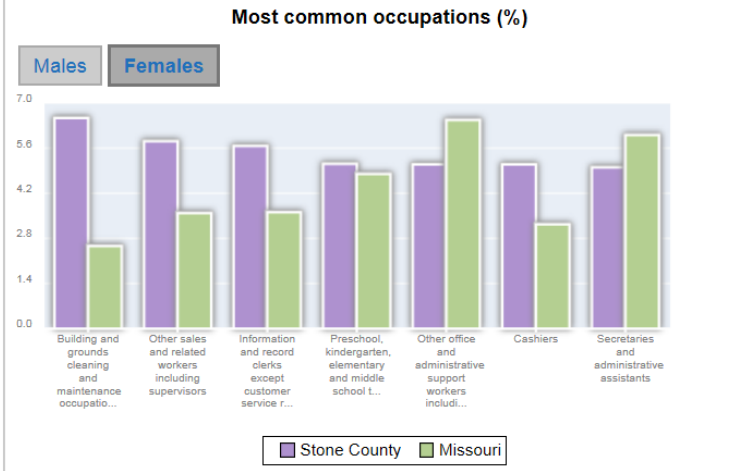


Source: City-Data.com,2012

Figure 2.14: Most Common Occupations by Gender



- Driver/sales workers and truck drivers (7%)
- Electrical equipment mechanics and other installation, maintenance, and repair occupations including supervisors (6%)
- Other management occupations except farmers and farm managers (6%)
- Building and grounds cleaning and maintenance occupations (6%)
- Other sales and related workers including supervisors (5%)
- Construction trades workers except carpenters, electricians, painters,



- Building and grounds cleaning and maintenance occupations (7%)
- Other sales and related workers including supervisors (6%)
- Information and record clerks except customer service representatives (6%)
- Preschool, kindergarten, elementary and middle school teachers (5%)
- Other office and administrative support workers including supervisors (5%)
- Cashiers (5%)
- Secretaries and administrative assistants (5%)

Source: City-Data.com; 2012

The most common industries and occupations for employees working in Stone County are depicted in Figures 2.13 and 2.14 above. Males are shown on the left and females are listed on the right. Approximately 45.1 percent of the counties work force worked in Stone County in 2011, as shown in Table 2.15. The remaining 51.6 percent worked outside the county. According to the Census Transportation Planning Package, the majority of workers commute to places of employment outside of the county. The major counties of employment for Stone County workers are Taney County (23.3%), Greene County (16.8%), and Christian County (6.3%).

Table 2.15: Place of Employment, 2011

Employed Residents	Number	% of Total
Work in Stone County	5,528	45.1%
Work Outside Stone County	6,324	51.6%
Work Outside of State	404	3.3%
Total	12,257	100%

Source: American Community Survey 2007-2011

Primary Industries

Table 2.16: Number of Businesses and Employees in Stone County, 2010

Business Sector	Number Businesses	Percent of Total	Number Employees*
Utilities	6	0.9	50
Construction	112	16.3	467
Manufacturing	19	2.8	119
Wholesale Trade	19	2.8	20-99
Retail Trade	93	13.5	954
Transportation & Warehousing	16	2.3	34
Information	7	1.0	30
Finance, Insurance, Real Estate	89	12.9	451
Professional, Scientific, & Technical Serv.	31	4.5	83
Administration, Support, Waste Management, Remediation Services	48	7.0	166
Educational Services	1	0.1	0-19
Health Care and Social Assistance	54	7.85	519
Arts, Entertainment & Recreation	23	3.35	1,000-2,499
Accommodation & Food Services	92	13.4	531
Other Services (except Public Admin.)	73	10.6	531
Unclassified Establishments	5	0.7	0-19
Total	**688**	**100.0**	**4,973**

Source: U.S. Bureau of the Census, 2010 County Business Patterns

Table 2.16 lists businesses by industrial sector located in Stone County and number of employees. The largest numbers of businesses in the county are in the *Construction, Retail Trade, and Accommodation and Food Service* industries. However, the greatest numbers of persons are employed in the *Retail Trade* and *Arts, Entertainment and Recreation* businesses located in Stone County.

Tourism and Commuting Workers

The construction of Table Rock Dam on the White River in 1958, and the creation of Table Rock Lake, brought a new era of development and changing economy to Stone County. Today, tourism is one of the most important industries bringing an estimated 60,000 guests traveling into

Stone County on any given day of March through December. Besides Table Rock Lake, Silver Dollar City theme park is a major attraction for tourists from all over the world. The park employs over 2,500 individuals, an average of 12,500 tourists visit the park on a daily basis with 20,000 attending daily during the seasonal festivals. Seasonal park attractions include a World Fest that brings in performers and guests from all over the world. The park is located in Branson West on the boarder of Stone and Taney County and is considered part of the Branson City tourist attractions.

Table 2.17 shows the number of trips out of Stone County, MO for work purposes. This information is based on the 2000 census. Table 2.18 shows the number of trips into Stone County, MO from outside counties.

Table 2.17 Work Flows From Stone County Residents to County of Work, 2000 Census

Missouri Work Flow Data
Work Flows from Stone MO

County of Work	Number of Trips	Pct of Trips
Stone Co. MO	5,353	82.7
Taney Co. MO	2,905	44.9
Greene Co. MO	1,564	24.2
Christian Co. MO	548	8.5
Barry Co. MO	300	4.6
Carroll Co. AR	212	3.3
Lawrence Co. MO	169	2.6
Jackson Co. MO	56	0.9
St. Louis Co. MO	47	0.7
Boone Co. AR	39	0.6
Jasper Co. MO	34	0.5
Clark Co. IN	19	0.3
Benton Co. AR	18	0.3
Richland Co. SC	18	0.3
Cole Co. MO	17	0.3
Newton Co. MO	17	0.3
Franklin Co. AR	15	0.2
Shelby Co. TN	14	0.2
Howell Co. MO	13	0.2
Wyandotte Co. KS	12	0.2

County of Work	Number of Trips	Pct of Trips
Douglas Co. MO	11	0.2
Lee Co. FL	10	0.2
Fulton Co. GA	10	0.2
Pettis Co. MO	10	0.2

Report created by workflow.sas on 12MAR15

Table 1.X: Work Flow Into Stone County for Work, 2000 Census

Missouri Work Flow Data
Work Flows into Stone MO

County of Residence	Number of Trips	Pct of Trips
Stone Co. MO	5,353	82.7
Taney Co. MO	275	4.2
Christian Co. MO	241	3.7
Greene Co. MO	213	3.3
Barry Co. MO	151	2.3
Carroll Co. AR	57	0.9
Lawrence Co. MO	55	0.8
Boone Co. AR	24	0.4
St. Louis Co. MO	15	0.2
Woods Co. OK	13	0.2
Warren Co. IL	12	0.2
Webster Co. MO	12	0.2

Report created by workflow.sas on 12MAR15

Work Flow Into Stone County

Census Data Details estimates for 2011 that 12,410 Stone County Residents travel out of Stone County for work on a daily basis, but only 2,797 outside residents travel to Stone County for work. Estimating that each employee would spend approximately $5.00/day on meals, Stone County is losing approximately $5,000.00 per day to commuters to other counties. This equates to $1,000,000 per month, or $12,000,000 per year that is spent outside of Stone County by Stone County residents.

As the development and population continues to grow, the significance of the daily influx of commuters and guests into Stone County is becoming increasingly important. As these individuals enter and leave the county, the population increases and decreases substantially on a daily bases. This poses many potential public health challenges for the Health Department. Potential challenges include but are not limited to disease surveillance, emergency response, environmental impact/pollution, and traffic/transportation issues. Consequently, as the population in the region continues to increase more cooperation between the contiguous county health departments will be necessary to avoid public health problems that easily move across jurisdictional boundaries.

Chapter 3: Health Resource Availability

Health Care Providers and Facilities: Stone County does not have a hospital or acute care facility. Residents and guests that require emergency treatment must travel to Cox Medical Center Branson, or to the Mercy Regional Centers or CoxHealth Medical Centers, located in Springfield. Small community hospitals are also located in Cassville (Barry County) and Aurora (Lawrence County). . The closest walk-in care facilities are located over 30-miles away in Branson, Cassville, or Nixa.

There are nine physicians that practice primary health care medicine in Stone County. According to the Missouri Department of Health and Senior Services, the ratio of physicians per population in Stone County is 1:1,959, while Taney County's ratio is 1:588, Lawrence County's ratio is 1:1,289, and Barry County's ratio is 1:1,046. Uninsured residents (23% age 18 and over) have limited resources to receive routine and preventative health care services.

Although physicians practicing in Stone County will accept individuals without health insurance, if the individual does not qualify for a discounted fee they are responsible to pay the full fee at the time of the service. This frequently places a financial burden on the individual and therefore they do not seek medical care. Additional problems that stand between Stone County residents and adequate health care involve lack of transportation, lack of understanding of a health situation, and a lack of understanding of the importance of preventive health maintenance.

Medicaid Providers: Although there are health care providers in Stone County who accept Medicaid, there are not enough to meet the demand. The following health care providers are available to the residents of Stone County that are enrolled in Medicaid:

Acute Care	CoxHealth Family Medicine- Branson West CoxHealth Center- Crane CoxHealth Family Medicine- Kimberling City CoxHealth Center- Shell Knob Mercy Clinic Family Medicine- Branson West Mercy Clinic Family Medicine- Shell Knob White Oak Medical Center – Crane Lakes Area Medical Center- Branson West

In-Patient Acute Care Facilities And Emergency Services	Cox Medical Center Branson – Branson Cox Medical Center South – Springfield Mercy Hospital – Springfield, Aurora, Cassville Cox Monett Hospital, Inc., - Monett
Skilled Long-Term Care	Crane Residential Care Home Ozark Mountain Regional Healthcare Center Table Rock Retirement Village Wedgewood Gardens
Emergency Services	First Responders 911 Service Ambulance (Cox, Mercy)
Dental	Crane Family Dentistry Tri-Lakes Community Health Center Kimberling City Dental Center Children's Smile Clinic, Christian County
Vision	Table Rock Family Vision Care Kimberling Vision Center Walmart Vision Center

For those who have no other transportation, the OATS Way-to-Go bus runs a regular route for a minimal cost ($1.00 per trip) and will take anyone needing transportation to medical appointments. The only drawback is that the routes are not always convenient to access for all who need them. Figure 3.1 shows the current Way-to-Go bus schedule.

Figure 3.1: Way-to-Go Bus Schedule:

Stone County **Driver Tim Huff**

OATS transportation is available to anyone regardless of age, income, disability, race, gender, religion, or national origin.

To Branson West from:

Crane, Galena, Cape Fair, Reeds Spring	Wednesdays each month
Reeds Spring, Kimberling City, Blue Eye, Lampe	Thursdays each month

To Branson from:

Shell Knob, Viola, Carr Lane	1st Monday each month

To Springfield from:

Stone County	2nd Monday each month

To Shell Knob from:

Shell Knob, Viola, Carr Lane	Tuesdays each month

To schedule a ride on any of the above routes, call the contact number in your town:

Shell Knob/Viola/Carr Lane	Janell Hammer	417-249-0140
Kimberling City/Blue Eye	Charles Lopez	417-309-1603

South Reeds Spring/Lampe
Cape Fair/Galena/Crane
North Reeds Spring

Stone County Way-2-Go
Sunday-Saturday 7:00a.m.-8:10pm.

Passengers can request to be picked up and dropped off up to 3/4 mile off the bus route. The pickup and drop off locations will be at the curb. Reservations must be made in advance, at least a day before, by calling the Springfield OATS office at 1-800-770-6287.

Source: OATS Transit, 2015

Poverty and unemployment rates also lead to high rates of un- and underinsured individuals and families in Stone County, and the surrounding areas. The following map shows the distribution of the uninsured in Missouri by combining Census "Public-Use Microdata Areas" (PUMAs) and data from the Centers for Medicare and Medicaid Services (CMS). Each PUMA is an area within a state that contains at least 100,000 residents. In densely populated areas, PUMAs are limited to smaller areas within a county. In sparsely populated areas, PUMAs typically comprise one or more neighboring counties within a given state.

Figure 3.2: Uninsured Rates in Southwest Missouri.

Place(s) within this PUMA: Taney County, Lawrence County, Barry County, Stone County, McDonald County, Dade County

34,685

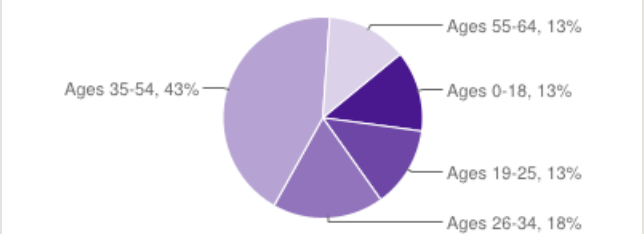
Number of the Nonelderly (0-64) Uninsured

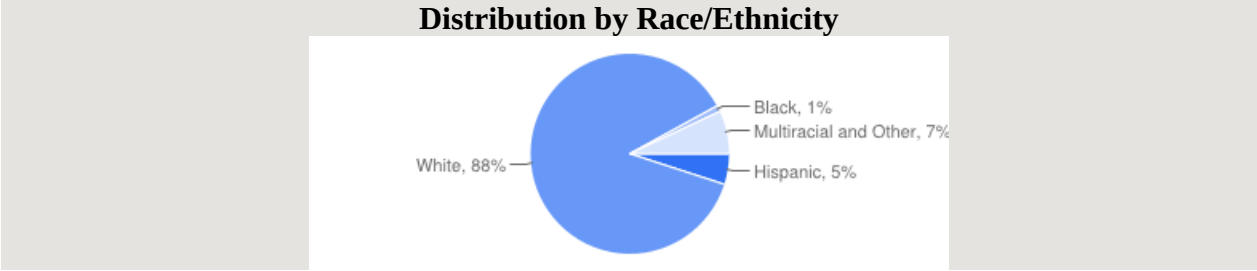
Approximately **22.40%** of residents under the age of 65 are uninsured.

Distribution by Income
(as a percentage of the federal poverty level (FPL))

41% ≤ 138%
44% 139% > 400%
16% ≥ 400%

Distribution by Age

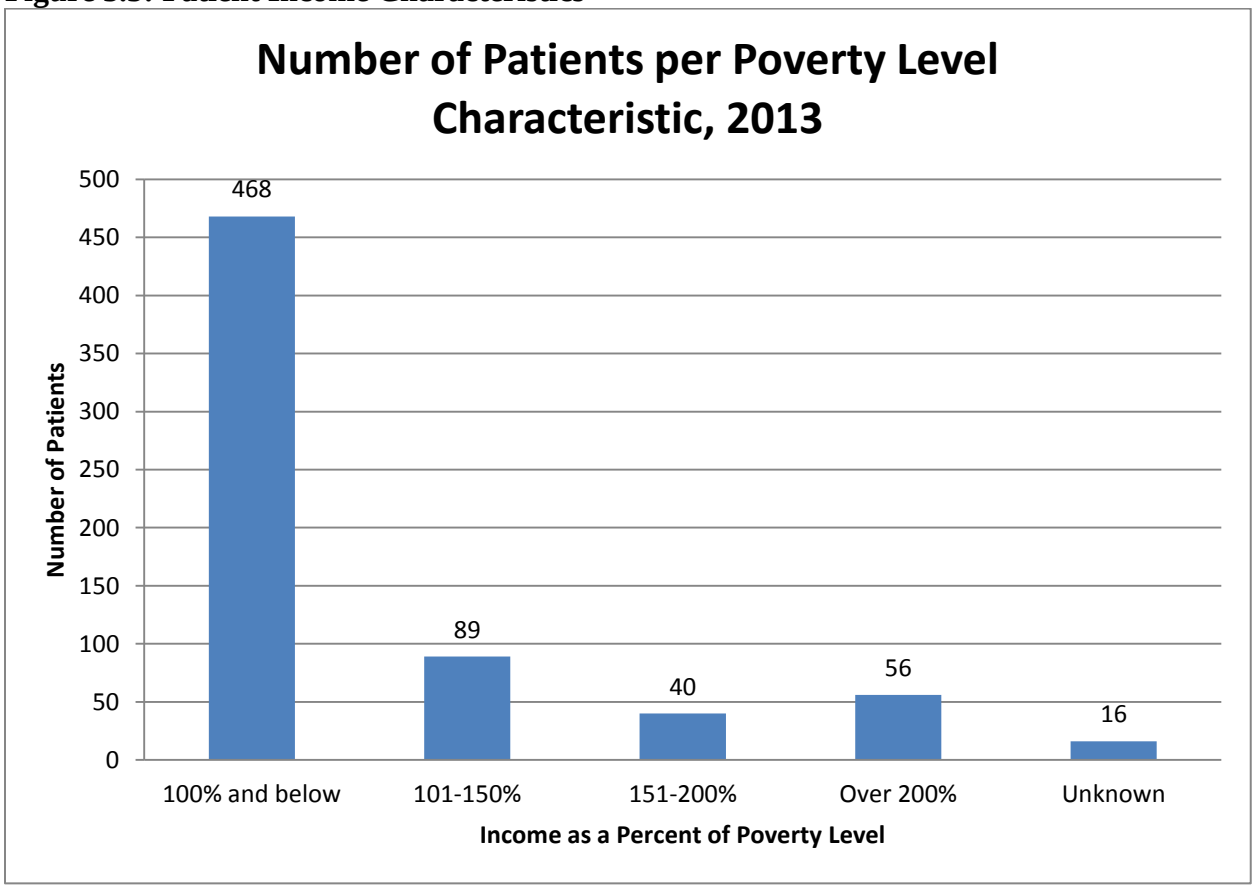




Source: Enroll America, 7/30/2014

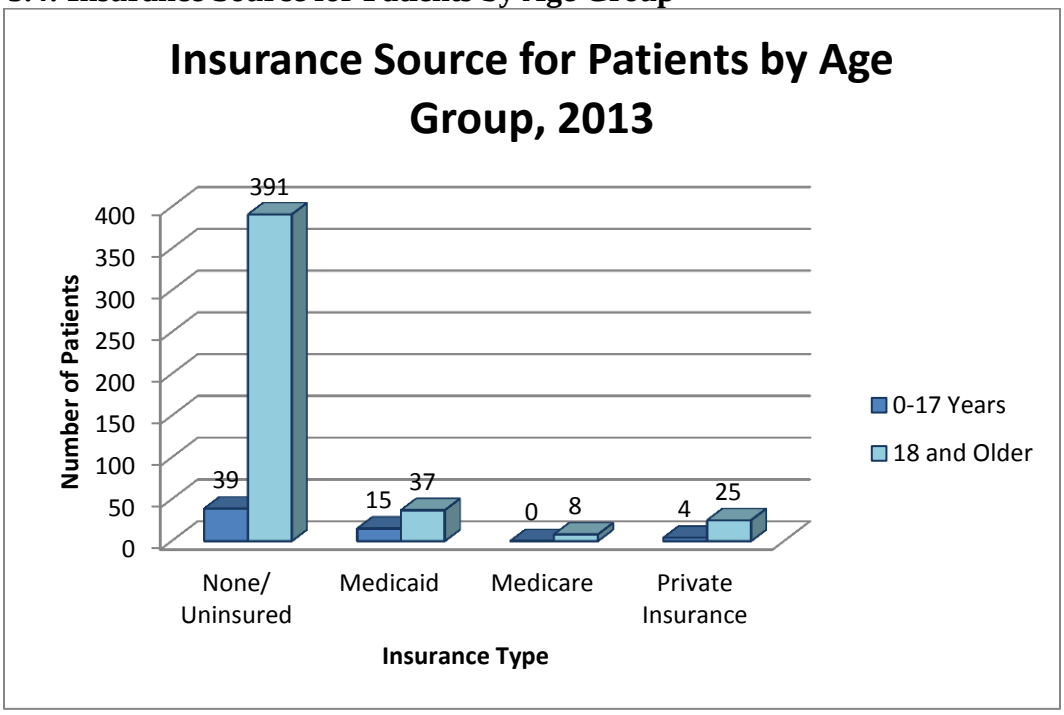
Figure 3.3 and 3.4 shows the Patient Income Characteristics and Insurance Source for Patients at Cox Medical Center Branson for the year 2014. A high majority of reported patients fall below the 100% Federal Poverty Limit numbers. This has a direct correlation to the number of patients falling in the "Medicaid Gap" due to the lack of Medicaid Expansion in Missouri. Figure 3.4 shows that a high number of patients older than 18 fall in the Uninsured category.

Figure 3.3: Patient Income Characteristics



Source: Cox Medical Center Branson, 2014

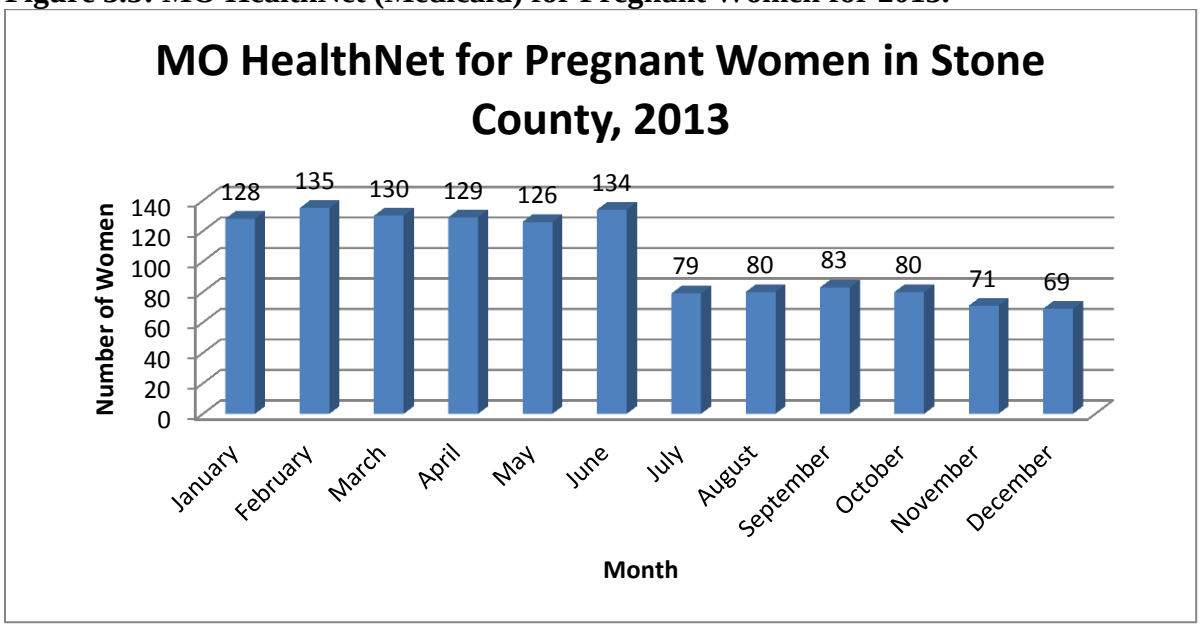
Figure 3.4: Insurance Source for Patients by Age Group



Source: Cox Medical Center Branson, 2014

The following figure represents the number of women receiving MO HealthNet (Medicaid) insurance coverage for pregnancy. This picture also represents the decrease in services that occurred in August.

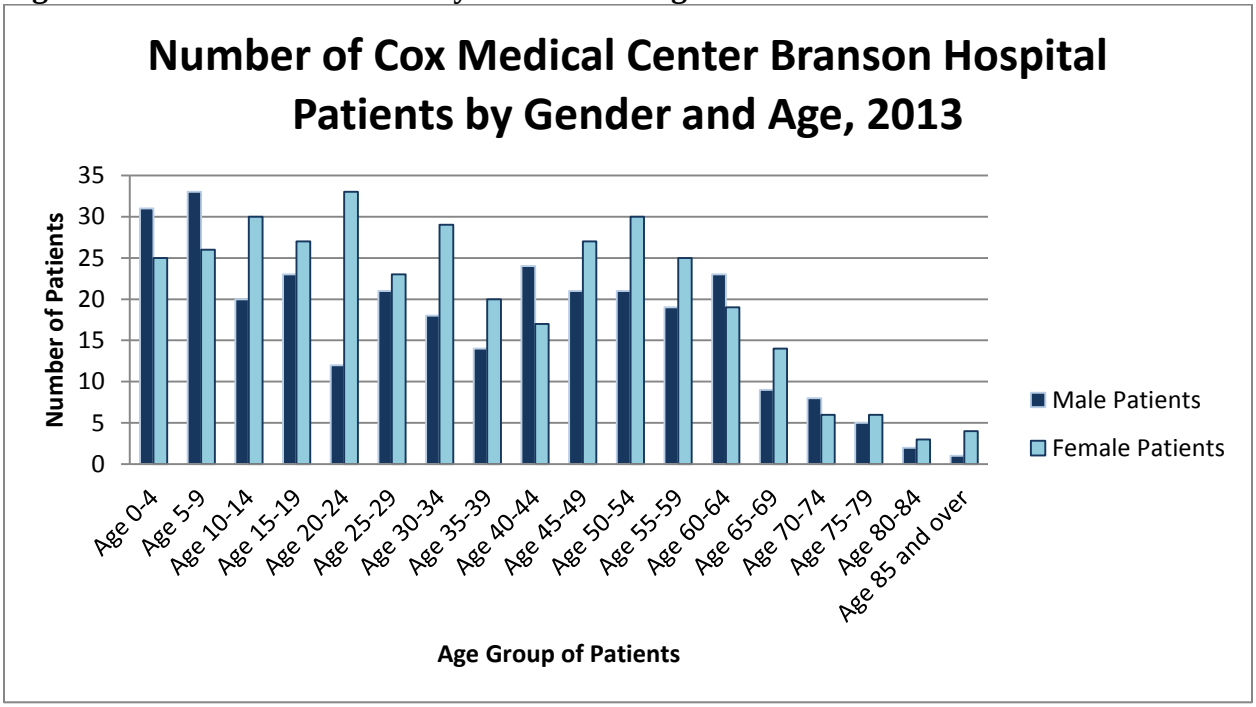
Figure 3.5: MO HealthNet (Medicaid) for Pregnant Women for 2013.



Source: DFAS, 2014

Figure 3.6 is a descriptive breakdown of Cox Medical Center Branson patient case load for 2013 broken down into both age and gender. For ages 0-9. Patients are primarily male; for ages 10-39, patients are primarily female, Ages 40-44 are primarily male; Ages 45-59 are primarily female; ages 60-64 are mainly males; 65-69 are mostly females; 70-74 are primarily males; and 75 and older patients are primarily female.

Figure 3.6: Number of Patients by Gender and Age

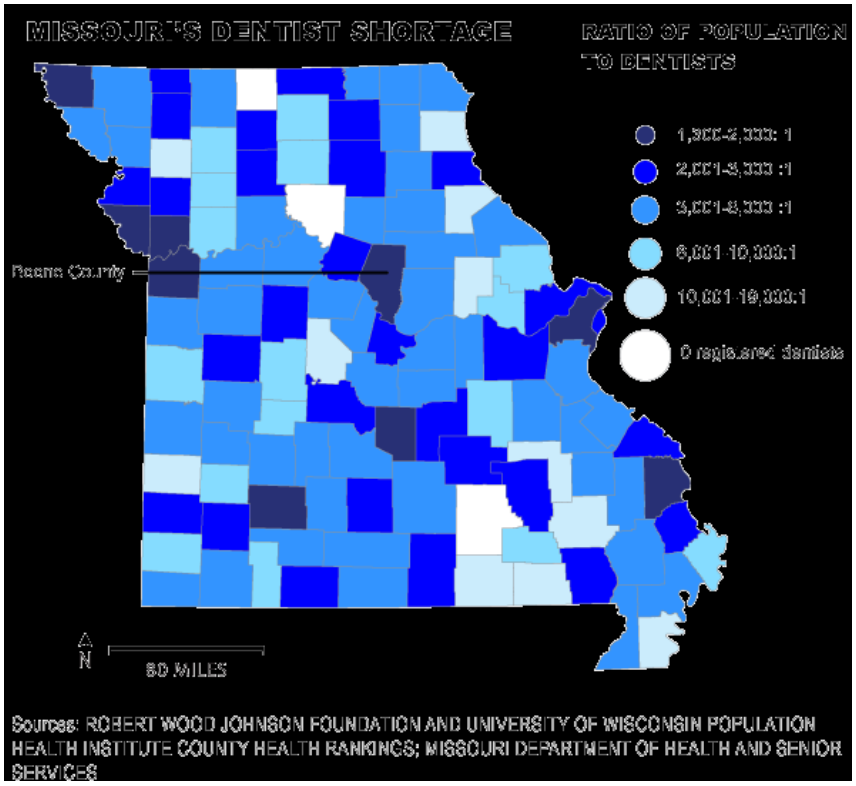


Source: Cox Medical Center Branson, 2014

Dental Health

Dental health is an important aspect of overall health. Strides are being made to provide better dental health care access to all income levels in Stone County. At this time, the Smile Clinic, located in Branson West, Ozark, and Aurora is a program available for children living in the counties of Stone, Christian, and Lawrence who are on Medicaid. Do to the location; transportation is a major barrier to children in Stone County, and parts of Christian, from receiving the full benefit of this clinic. The Elks Lodge also works with the Stone County Health Department to help subsidize dental care for those in dire need. Additionally, one dentist in Crane will treat children who are enrolled in Medicaid and have severe dental issues. The Fordland Clinic has recently opened a clinic in Kimberling City called Tri-Lakes Community Health Center. This facility offers dental services to all ages, starting with the very important 12 month check-up. Most insurance plans are accepted there and services are provided free to children with Medicaid and at a discounted rate for those without insurance who meet income eligibility guidelines. Figure 3.7 shows the current dentist shortage for all of Missouri. Stone County is in the third best category for number of population per dentist.

Figure 3.7: Missouri's Dentist Shortage

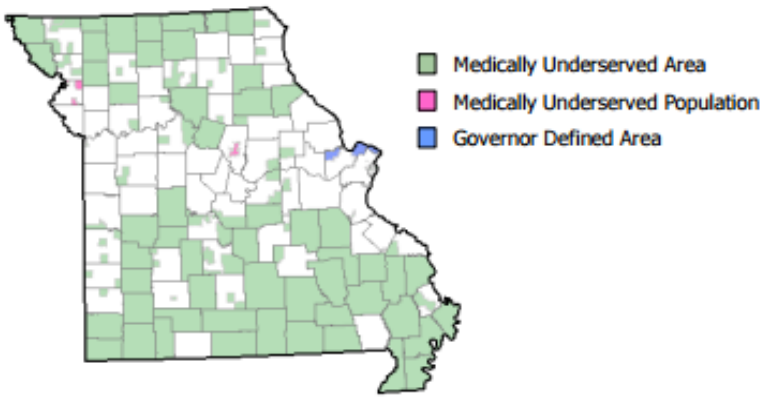


Source: Robert Wood Johnson Foundation/ Missouri Department of Health and Senior Services, 2013

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

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

Medically Underserved Areas in Missouri



Data Source: Health Resources and Services Administration, HHS
Map created by RUPRI Community Information Resource Center
Interactive Map Room: http://circ.rupri.org

Medically Underserved Areas in Missouri is based off the population per medical provider. To be considered a MUA, the variance must be larger than 3500:1. Health Professional Shortage Areas are based on three categories: Total Population, Low Income Population, and Medicaid Eligible Population. Stone County is considered in the shortage area based on our level of Low Income Population.

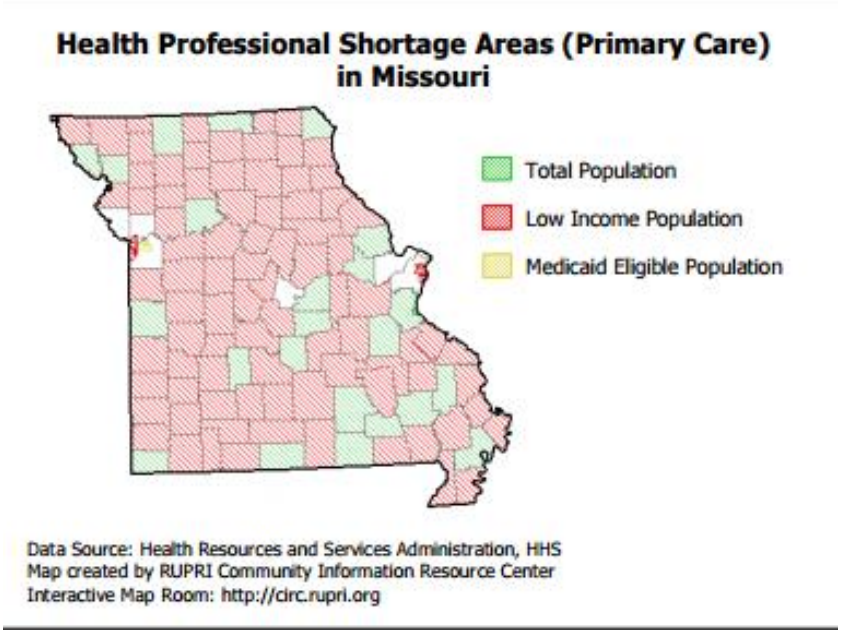


Figure 3.8 below shows the grading scale used by the Health Resources and Services Administration (HRSA). HRSA is the official organization providing this designation. Stone County is in a Primary Care Health Professional Shortage Area (score 16) and a Mental Health Professional Shortage Area (score 15). Stone County is not in a Dental Care Health Professional Shortage Area, but overall, it is considered a Medically Underserved Area.

Figure 5.3: Health Care Shortage Designations

In a Primary Care Health Professional Shortage Area: Yes	
Primary Care HPSA Name:	Stone County
Primary Care HPSA ID:	129209
Primary Care HPSA Status:	Designated
Primary Care HPSA Score:	16
Primary Care HPSA Designation Date:	2003/04/18
Primary Care HPSA Designation Last Update Date:	2013/03/29
In a Mental Health Professional Shortage Area: Yes	
Mental Health HPSA Name:	Low Income - Springfield Mental Health Service are
Mental Health HPSA ID:	7299992917
Mental Health HPSA Status:	Designated
Mental Health HPSA Score:	15
Mental Health HPSA Designation Date:	2000/03/25
Mental Health HPSA Designation Last Update Date:	2013/05/09
In a Dental Care Health Professional Shortage Area: No	
In a Medically Underserved Area/Population: Yes	
MUA/P Service Area Name:	STONE SERVICE AREA
MUA/P ID:	01888

Source: US Department of Health and Human Services; Health Resources and Services Administration; 2014

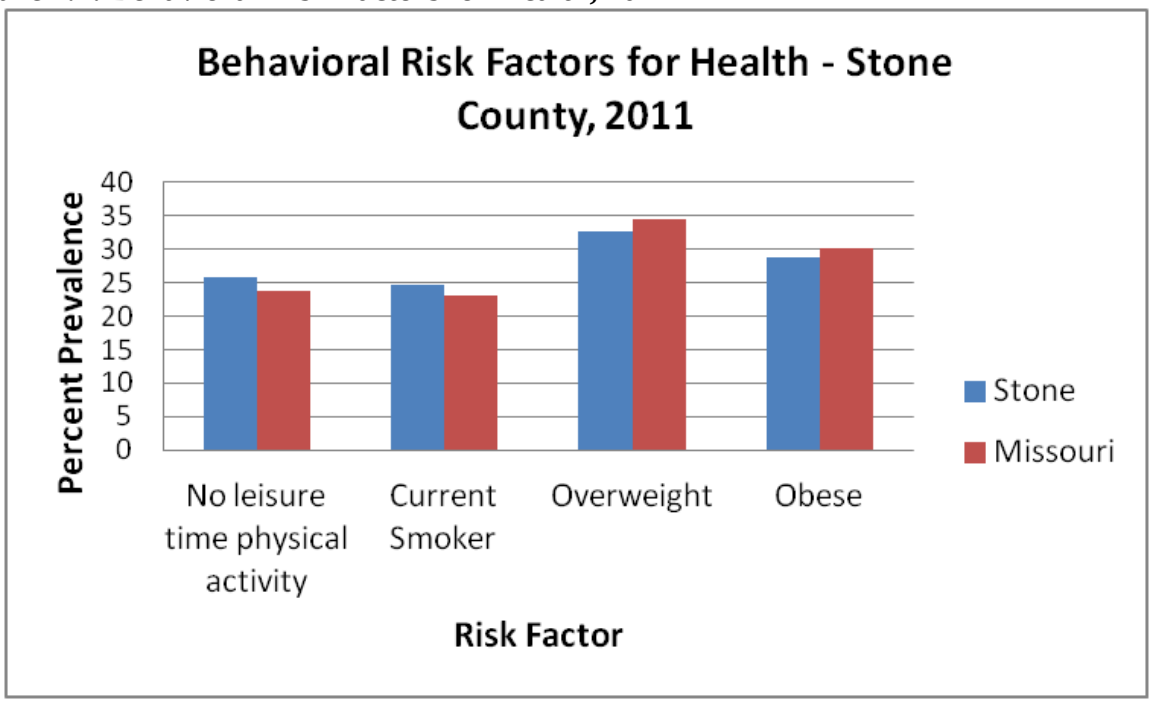
Chapter 4: Behavioral Risk Factors

Risk Factors

High-risk lifestyle behaviors can result in the development of many chronic diseases. In the following tables, several behavioral risk factors are presented. The data was collected from the Behavioral Risk Factor Surveillance System through more than 500,000 interviews conducted in the states in 2011. The data is forwarded to the CDC that is aggregated for each state and published by the end of the year by each state.

Figure 4.1 indicates that Stone County residents were not significantly different from other state and region residents. However, each of these prevalence percentages indicates an area of concern. For example, the self-reported obesity rate of 28.7% and overweight rate of 32.6% signifies the increasing risk that many county residents are developing for chronic diseases associated with being overweight and obese. These numbers are lower than that of the state; however Stone County residents have a higher prevalence of smokers and those with no leisure time physical activity which are outlined in Figure 4.1.

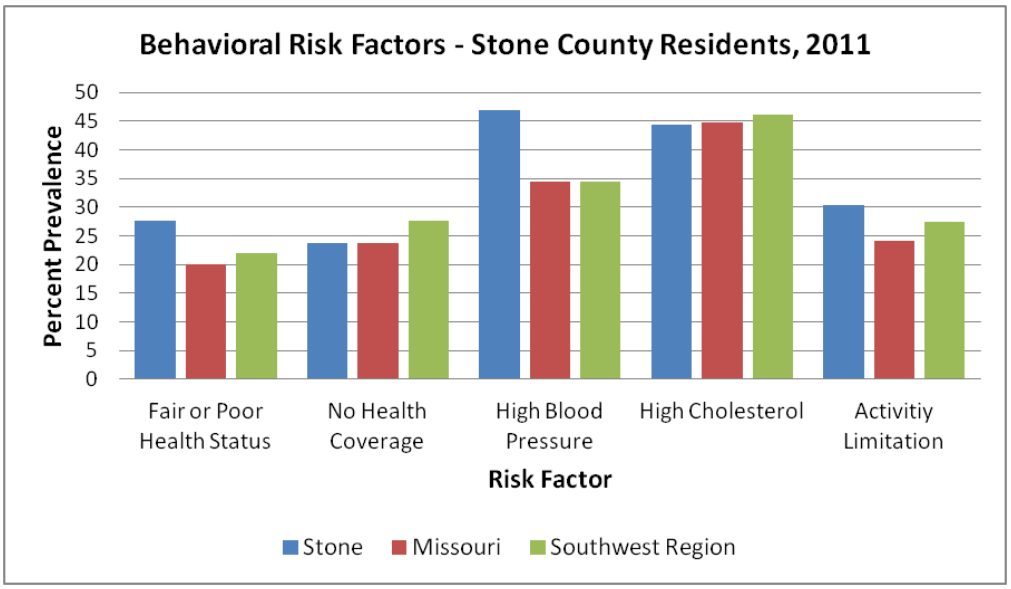
Figure 4.1: Behavioral Risk Factors for Health, 2011



Source: Missouri Department of Health and Senior Services, 2011

Figure 4.2 shows a comparison of Stone County residents with Missouri and the Southwest Region for Behavioral Risk Factors including Fair or Poor Health Status, No Health Coverage, High Blood Pressure, High Cholesterol, and Activity Limitation. Stone County highly exceeds both the state and region in High Blood Pressure.

Figure 4.2: Behavioral Risk Factors, Compared to Region



Source: Missouri Department of Health and Senior Services, 2011

Table 4.3 shows the utilization of screening tests among men and women in Stone County measured in prevalence. In Stone County 9.3% of women reported never having had a mammogram. This rate was lower than both the southwest Missouri region and the state average. The number of women who did not have a pap test last three years is 31.8%, much higher than the state average.

Table 4.3: Screening Test and Utilization

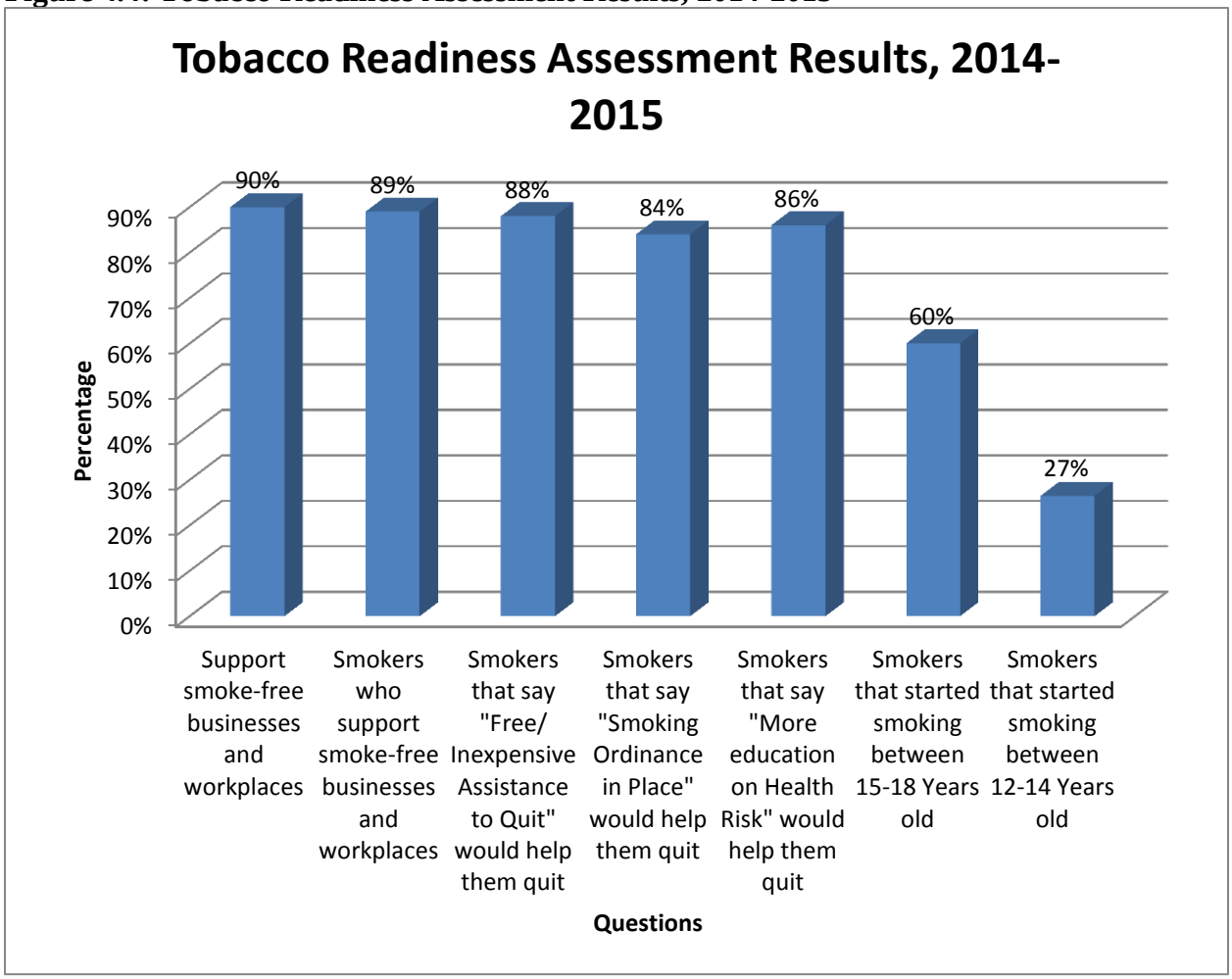
Screening Test and Utilization - Stone County, 2011			
	Prevalence Percentage		
	Stone	Southwest Region	State
Women			
Never had a Mammogram	9.3	12.3	9.9
No Mammogram or Clinical Breast Exam In the Last Year:			
40 and older	32.1	33.3	30.5
Never Had a Pap Smear			
18 and older	4.0	8.4	7.5
No Pap Smear Last 3 Years	31.8	32.5	26.4
Men and Women			

Never Had a Blood Stool Test	64.0	58.8	66.1
No Blood Stool Test Last Year	91.9	87.4	90.4
Sigmoidoscopy/Colonoscopy			
Never had	24.6	39.3	33.8
None in last ten years	30.9	43.9	38.0

Source: Missouri Department of Health and Senior Services, 2011

The Stone County Health Department conducted an anonymous survey funded by the Missouri Department of Health and Human Services, Comprehensive Tobacco Control Program, which yielded 249 responses. Some very interesting numbers were collected to gauge the community's attitudes toward smoking, ordinances, and how to quit. Figure 4.4 shows the results of the survey, including those responses from current smokers.

Figure 4.4: Tobacco Readiness Assessment Results, 2014-2015



Source: Stone County Health Department 2015

Chapter 5: Mental and Social Health

Mental health problems are also on the rise in Stone County. This could be from a variety of causes- increased retired and veteran population, increased screening, increased awareness, or increased law enforcement involvement. The Division of Behavioral Health Southwest Region reports that mental health was the primary diagnosis in 18,119 hospital visits, including hospitalization and emergency room visits in 2011 for the Southwest Region of Missouri.

Figure 5.1: Mental Health Diagnoses in Southwest Region of Missouri

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

DIAGNOSIS CATEGORY	FY2012	FY2011	FY2010
Adjustment Disorder	687	822	641
Anxiety Disorder	3,841	3,852	3,122
Dementia	34	33	79
Developmental Disorder	194	209	171
Impulse Control Disorder	1,855	1,983	1,545
Mood Disorder	6,081	6,475	5,460
Personality Disorder	1,747	1,867	1,700
Psychotic Disorder	1,623	1,699	1,526
Sexual Disorder	32	30	29
Other Diagnosis	1,063	979	808
Diagnosis Unknown	1,409	1,249	3,161

Source: Division of Behavioral Health Southwest Region, 2012

Figure 5.1 shows the number of individuals who received psychiatric services and the disorder that was identified in Southwest Missouri. Some individuals do present with multiple disorders, so the numbers listed are not necessarily the number of patients, but the number of psychiatric disorders.

The Figure 5.2 below is from the Missouri Student Survey. This visual represents the students in Missouri and their thoughts potentially resulting from depression. Such thoughts include being unhappy up through suicide contemplation. This figure also shows the percentage of students who believe that harm could result from alcohol, cigarette, marijuana, and other illicit drugs. Only 73-74% of students believe that alcohol and marijuana are dangerous.

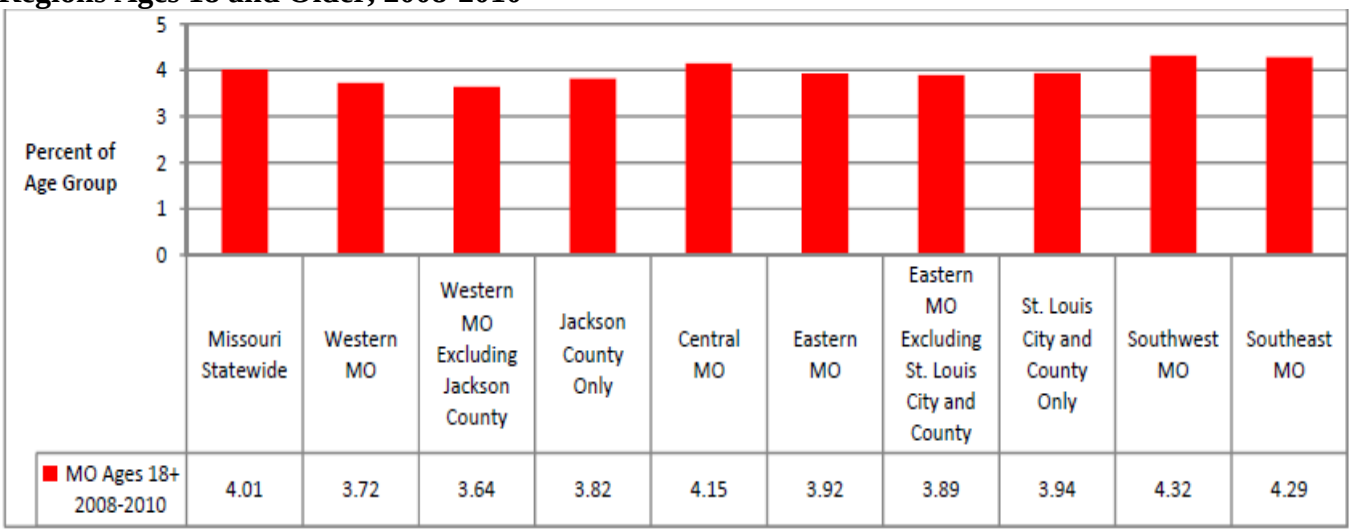
Figure 5.2: Missouri Student Survey, 2010 and 2012

	2012	2010
Percent who believe they risk harm if they use:		
Alcohol	73.3	75.9
Cigarettes	82.1	80.0
Marijuana	74.5	74.9
Other Illicit (Cocaine, LSD, Meth, Club Drug, etc)	93.7	93.0
Percent of students who, in past 30 days:		
Were very sad	19.2	19.5
Were grouchy, irritable, or in a bad mood	23.1	24.0
Felt hopeless about the future	10.7	11.7
Felt like not eating or eating more than usual	17.5	18.1
Slept a lot more or a lot less than usual	19.7	25.6
Had difficulty concentrating on school work	22.0	24.9
Percent of students who, in past 12 months:		
Seriously considered attempting suicide	11.9	11.7
Made plan about how they would attempt suicide	8.6	8.7
Attempted suicide	5.4	5.5
Attempted suicide and resulting injury, poisonng, or overdose had to be treated by doctor or nurse	1.8	2.3

Source: Division of Behavioral Health Southwest Region, 2012

When looking at adults, those in Southwest Missouri had the highest rate of Thoughts of Suicide in Missouri, which was higher than the state's rate. Figure 1.5 shows each of the regions of Missouri and the Thoughts of Suicide rate. Clearly Missouri, especially the Southwest Region needs to focus on Mental Health.

Figure 1.5: Estimated Past-Year Serious Thoughts of Suicide (%): Missouri and DBH Regions Ages 18 and Older, 2008-2010



Source: U.S. Dept of Health and Human Services, SAMHSA. National Survey on Drug Use and Health. Estimates are 3-year averages.

Chapter 6: Maternal and Child Health

Maternal and Child Health Indicators

Maternal and child health issues are of great importance as healthier mothers, infants, and children contribute to the continued overall health of the community. Infants and children who are exposed to alcohol, tobacco, child abuse, and poor nutrition may develop detrimental health conditions such as asthma, diabetes, and obesity early in life. Because of this, severe chronic diseases such as heart disease can develop at younger ages leading to a decreased life expectancy.

A variety of maternal and child health issues such as teen pregnancy, infant deaths, child abuse, and maternal tobacco use are examined in this chapter. These issues are very important and can have severe consequences for the overall health of our community. Healthier children and mothers can ultimately result in a healthier, happier, and more productive community.

Characteristics of Live Births: Birth Trends

From the year 2000 to the year 2010, 3,285 births have occurred. This averages to 298.6 new births each year. Table 6.1 displays the trend in the number of live births in Stone County from 2000-2010. Over the span shown below, 51.4% of the newborn population in Stone County is male, and 48.6% is female. The figure shown below, Figure 5.1, shows the trends in percentages of males and females for each year.

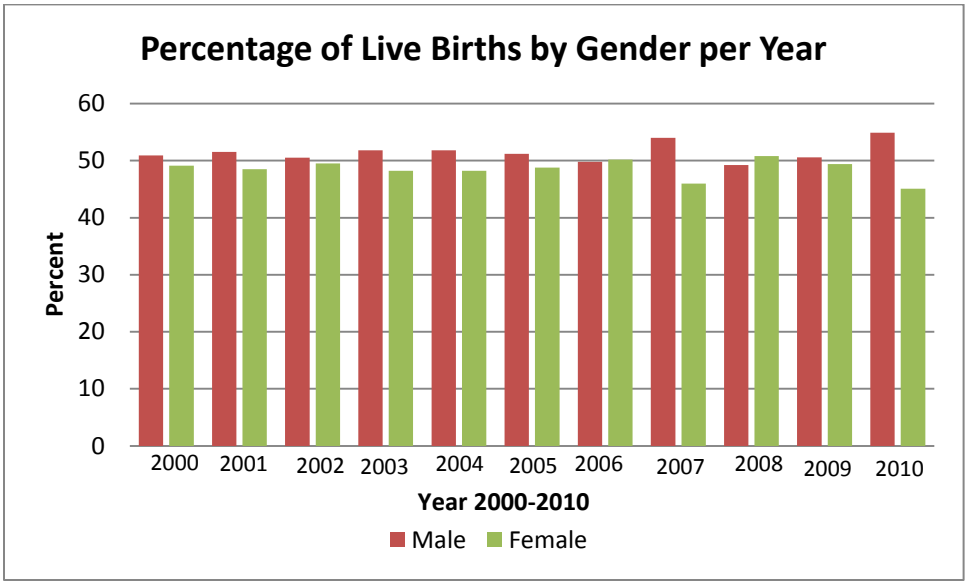
Table 6.1: Live Births by Gender, Stone County, 2000-2010

	Sex				
	Male		Female		Total
Year	Number	Percent	Number	Percent	Number
2000	173	50.9%	167	49.1%	340
2001	140	51.5%	132	48.5%	272
2002	146	50.5%	143	49.5%	289
2003	161	51.8%	150	48.2%	311
2004	147	51.8%	137	48.2%	284
2005	152	51.2%	145	48.8%	297
2006	163	49.8%	164	50.2%	327
2007	156	54.0%	133	46.0%	289
2008	159	49.2%	164	50.8%	323
2009	134	50.6%	131	49.4%	265
2010	158	54.9%	130	45.1%	288
Total	1689	51.4%	1596	48.6%	3285

Source: Missouri Department of Health and Senior Services, 2013

The following figure (Figure 6.2) shows a graphical representation of each sex born in Stone County, MO from 2000-2010. As indicated in the legend, Red shows males born and Green shows females born.

Figure 6.2: Percentage of Live Births by Gender, per Year, 2000-2010



Source: Missouri Department of Health and Senior Services, 2013

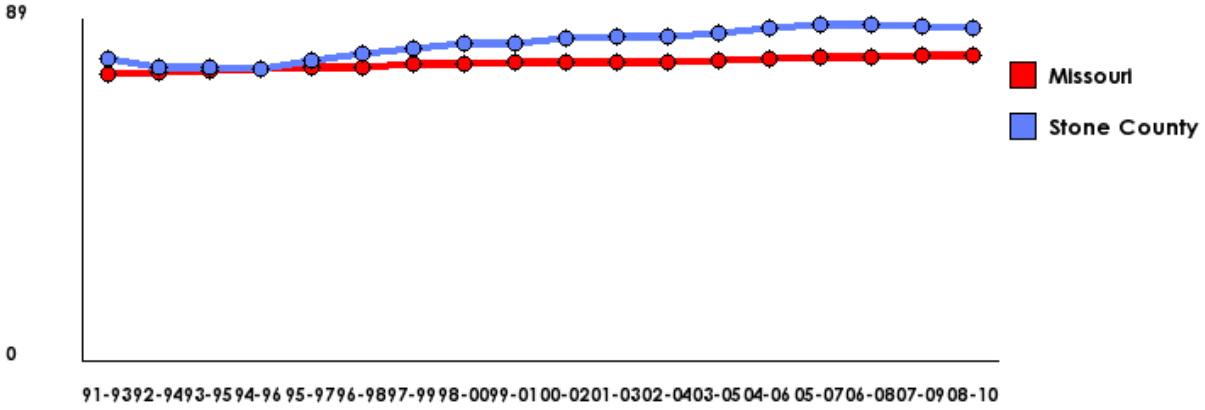
The **General Fertility Rate** refers to the total number of live births per 1,000 women aged 15 to 44 for a given year. The General Fertility Rate for Stone County (Figure 6.3) indicated a increasing trend overall from 2000 to 2010, while infant death rates for Stone County have been low and varied little from year to year from 2000-2010 (Figure 6.4).

Table 6.3: General Fertility Rate, 2000-2010

	Healthy Live Births Fertility Rate	
Year	**Number**	**Rate per 100**
2000	340	82.7
2001	272	83.7
2002	289	84.3
2003	311	84.2
2004	284	85.2
2005	297	86.7
2006	327	87.6
2007	289	87.5
2008	323	86.9
2009	265	86.6
2010	288	86.6
Total	3285	85.6

Source: Missouri Department of Health and Senior Services, 2013

Figure 6.4: Live Births and Fertility Rate of Stone County Compared to Missouri

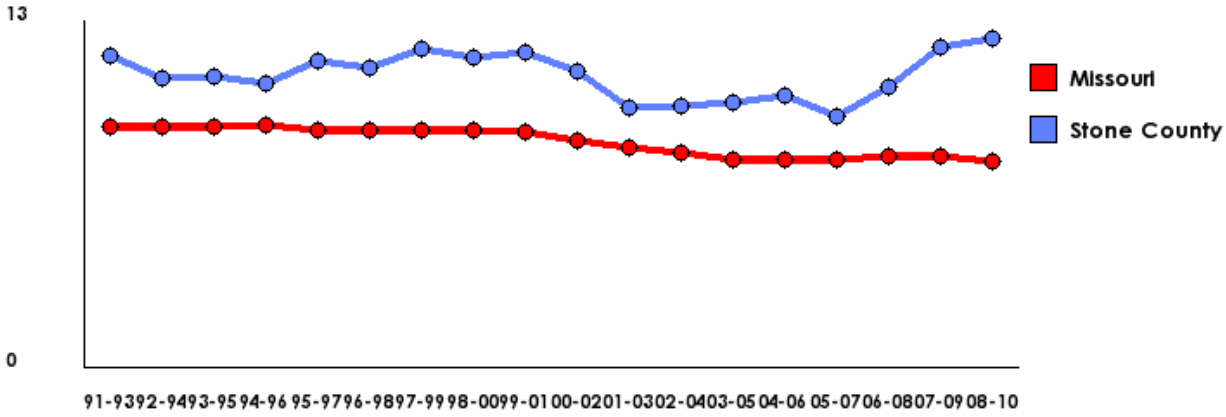


Source: Missouri Department of Health and Senior Services, 2013

Teen Pregnancy

Figure 6.5 displays the total rates of pregnancies for females 18-19 years of age. The figure for teen pregnancy in Stone County remains relatively unstable, with 2008-2010 reflecting the highest number of teen pregnancies (12.3 per 100 live births) over the twenty-year period.

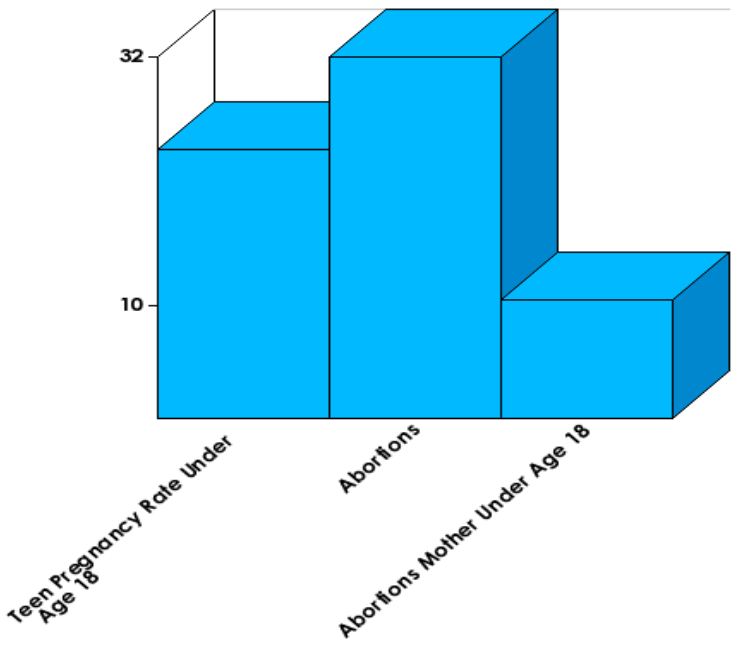
Figure 6.5: Births by Age of Mother, 18-19, in Stone County Compared to Missouri



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.6 shows the Indicator Rates per 1,000 live births for Teen Pregnancy Rate Under Age 18, Total Abortions, and Abortions for Mother Under Age 18.

Figure 6.6: Rates per 1,000 of Teen Pregnancies Under Age 18, Total Abortions, and Abortions Under Age 18, 2006-2010.



Source: Missouri Department of Health and Senior Services, 2013

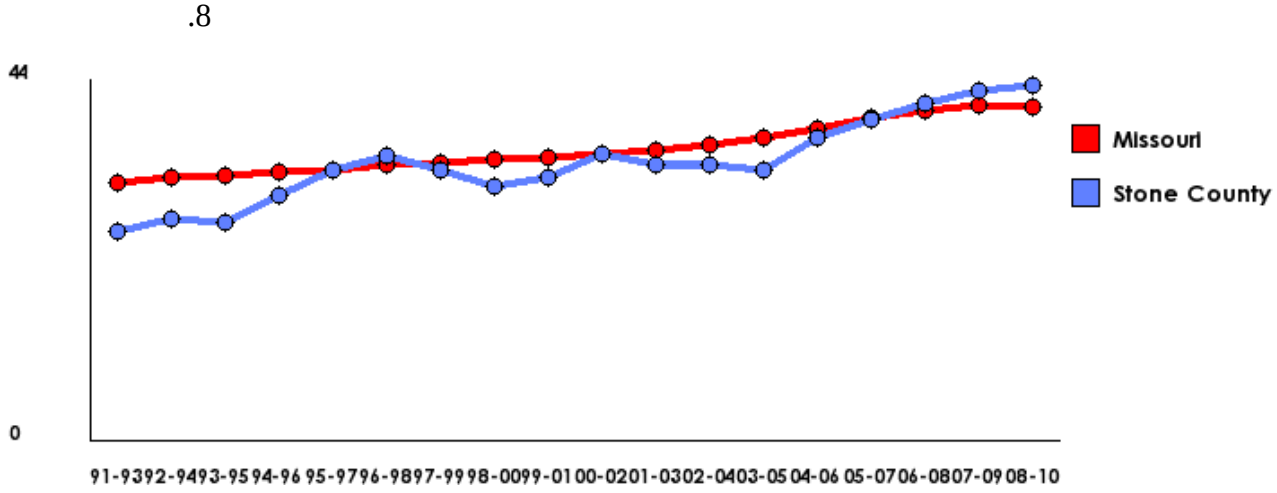
Figure 6.7: Indicators Describing Figure 5.4

Indicators	Data Years	Number of Events	Stone County Rate	Missouri Rate
Teen Pregnancy Rate Under Age 18	2006-2010	67	23.8	26.2
Abortions	2006-2010	48	32.2	138.6
Abortions Mother Under Age 18	2006-2010	7	10.5	19.3

Source: Missouri Department of Health and Senior Services, 2013

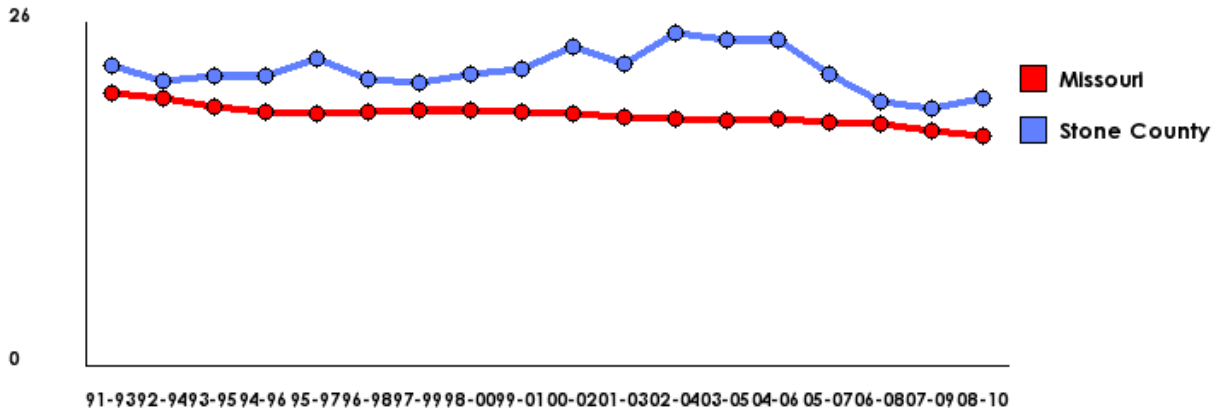
Figures 6.8 and 6.9 represent the numbers of total births for women in Missouri and in Stone County born out-of-wedlock and those born to mothers with less than 12 years of education. Missouri and Stone County are comparable in births born out-of-wedlock. However, for those births to mothers with less than 12 years of education, rates are higher for Stone County than for Missouri as a whole.

Figure 6.8: Births Out-of-Wedlock for Stone County Compared to Missouri, 1991-2010



Source: Missouri Department of Health and Senior Services, 2013

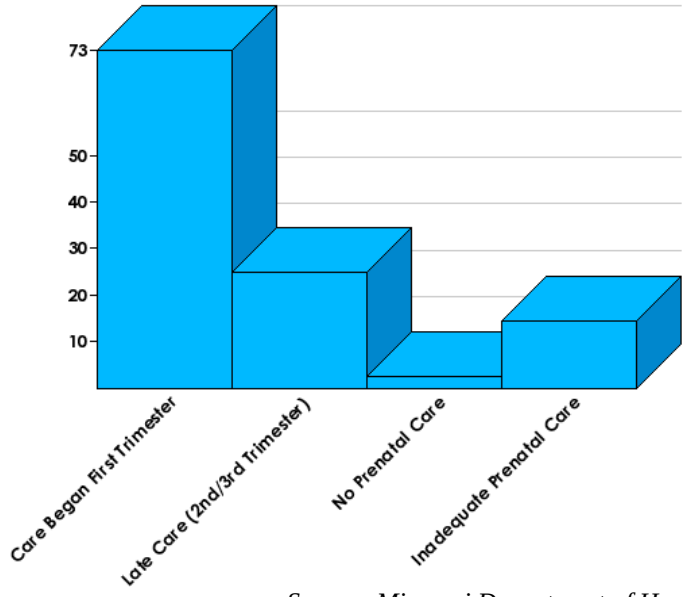
Figure 6.9: Births to Mothers with Less than 12 years of Education, 1991-2010



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.10 reflects that the majority of Stone County residents who had infants received prenatal care beginning in the first trimester (this is considered adequate care). A lesser percentage overall received inadequate prenatal care (care beginning after the first trimester of pregnancy). Inadequate prenatal care is defined as fewer than five prenatal visits for pregnancies less than 37 weeks, fewer than eight visits for pregnancies 37 weeks or longer or care beginning after the first four months of pregnancy. If adequacy of prenatal care could be determined even if month care began or visits were unknown, then these records were included. A very small percentage received no prenatal care for pregnancies occurring in 2010.

Figure 6.10: Rates in Which Pre-Natal Care for Pregnancies Was Sought, 2010



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.11: Indicators Describing Figure 5.8

Indicators	Data Years	Number of Events	Stone County Rate	Missouri Rate
Care Began First Trimester	2010	200	72.7	76.6
Late Care (2nd/3rd Trimester)	2010	68	24.7	22.4
No Prenatal Care	2010	7	2.6	1.0
Inadequate Prenatal Care	2010	39	14.5	13.9

Source: Missouri Department of Health and Senior Services, 2013

Birth Spacing

Figure 6.12 shows that from 2006-2010, Stone County has birth spacing less than 18 months at a rate of 11.3 per 100 births. The state of Missouri has remained averaged a rate of 12.4% from 2006-2010.Child spacing is important, as research has shown that increasing child spacing beyond 2 years increases the likelihood of healthier infants and mothers. In particular, mothers are more likely to avoid anemia and other nutritional deficiencies, death during childbirth, and third trimester bleeding.

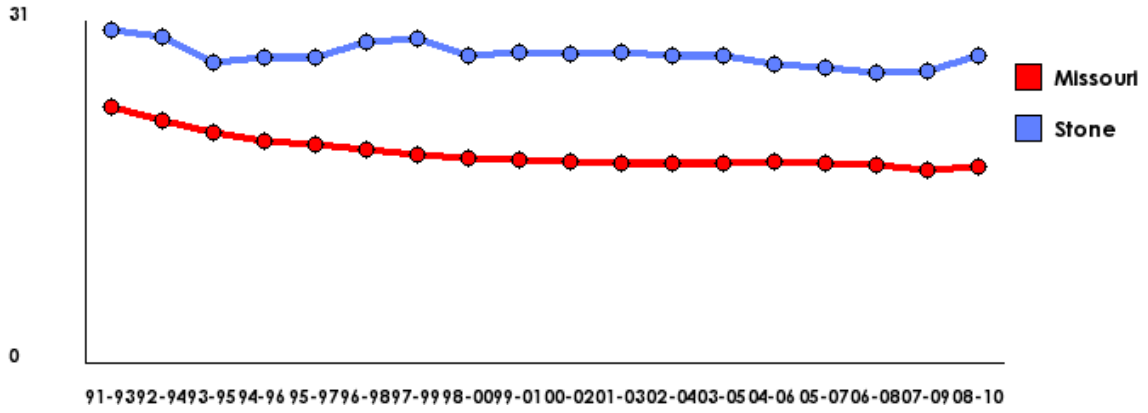
Figure 6.12: Rates of Birth Spacing Less than 18 Months, Stone County and Missouri, 2013

	Data Years	Number of Events	Rate	State Rate
Spacing Less Than 18 Months	2006-2010	96	11.3	12.4

Source: Missouri Department of Health and Senior Services, 2013

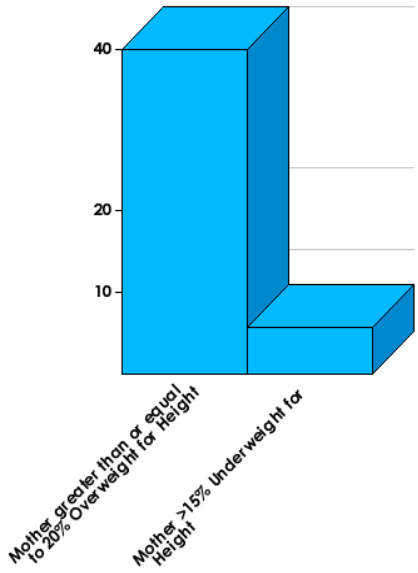
The percentage of expectant mothers who smoked declined slightly from 30.2% in 1991 (Figure 6.13). Overall, across the state, there is a trend of decline in the number of mothers who smoke. In 2010, Stone County mothers smoked at a rate of 31.6% during pregnancy, while only 18.7% of mothers smoked during pregnancy for Missouri.

Figure 6.13: Rates of Mothers Smoked During Pregnancy, 1991-2010



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.14: Mothers 20% or More Overweight and Mothers less than 15% Underweight by Rate, Stone County, 2006-2010



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.14 shows the percentage of mothers in Stone County in the category of 20% or more overweight and less than 15% underweight. Nearly 40% of mothers are 20% or more overweight, an issue that should be considered a concern for the health of infants at birth.

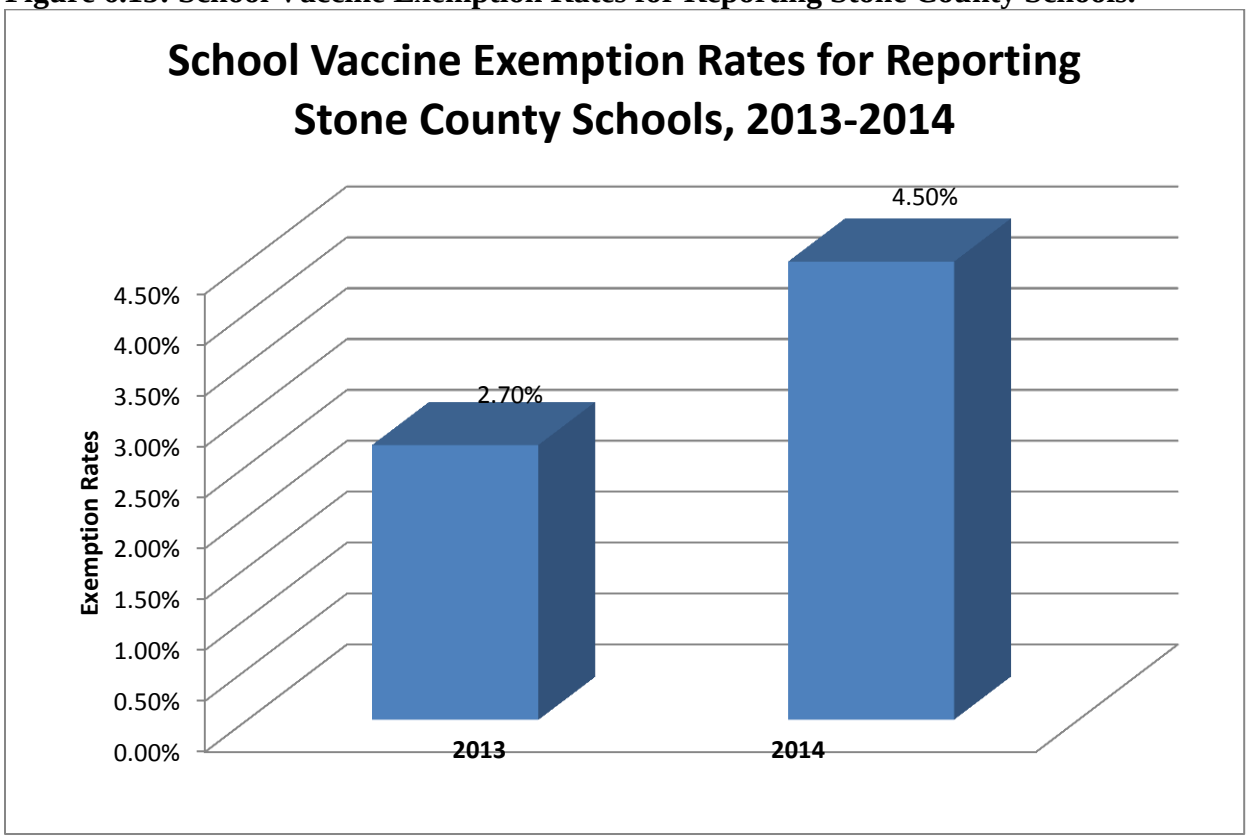
Characteristics of Childhood Health and Safety

Assessing children's health and safety is key to understanding the priority health areas for the county. Once these priorities are identified by Community Health statistics, these areas can be focused on to ensure that the children of Stone County are as safe and healthy as possible.

Children Immunizations

Figure 6.15 illustrates the percent of children who were exempt from immunizations in the public schools of Stone County reporting such rates. The rate nearly doubled from 2013 to 2014. Exemptions include medical and religious.

Figure 6.15: School Vaccine Exemption Rates for Reporting Stone County Schools.

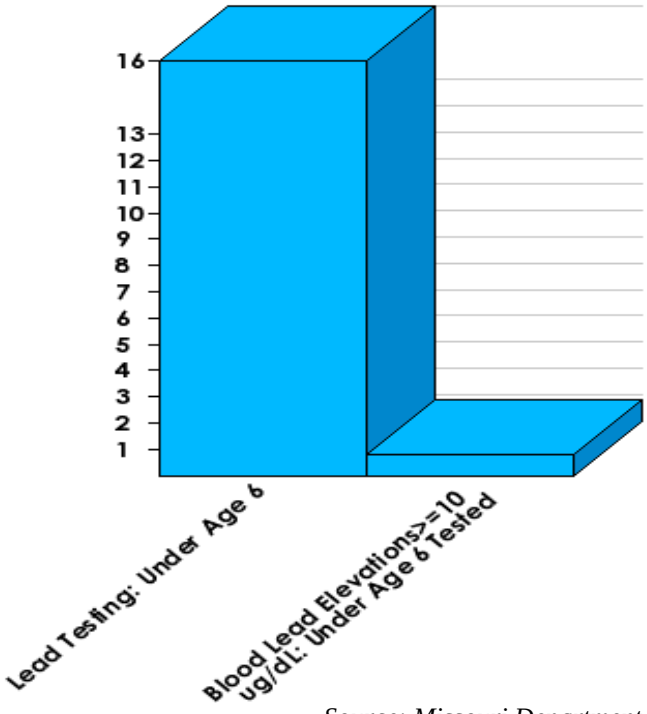


Source: Stone County Health Department, 2014

Lead Testing

The rates of children under age 6 that have been tested for lead in 2011 totaled 259, or 15.8% of the total population under age 6. Of those tested, only 2 had Blood Lead Elevations > 9mg/dl, which is 0.8% of the population under 6 (Figure 5.14). Approximately 20.3% of Missouri's children are tested for lead, and 0.8% on average have blood lead levels over 9mg/dl.

Figure 6.16: Blood Lead Testing for Children Under Age 6, Stone County, 2011



Source: Missouri Department of Health and Senior Services, 2013

Childhood Obesity

Obesity, diabetes and asthma are debilitating diseases that will impact the quality of life of those who live with these conditions. Children who are obese have a greater chance of developing these and other chronic diseases and complications because of these underlying conditions. Table 6.18 presents the data concerning Women, Infant, and Children (WIC) participants who were identified as 2008.

Table 6.18: Percentage of Overweight and Obesity Data of WIC Children, Stone County, 2008

WIC Children:	Stone County	Missouri
Overweight, <5 Years	11.9%	15.9%

Source: Missouri Department of Health and Senior Services, 2010

Because the WIC program is standardized, BMI data is easily collected from these individuals. The group of children that does not have readily available BMI data is the school-aged children, from 5-18 years. Stone County Health Department conducted research in the form of public health practice to weigh and measure most of the children within the Stone County school districts in 2011-2012. The resulting data from that research are in the following figures.

The following figure lists the total summary of the research in table form. The categories that were identified were based on percentiles of growth charts based on height and weight, or BMI. Underweight was identified as anything below the 5th percentile, Normal was listed as anything within the 5-85th percentiles, Overweight was determined to be anything above the 85th percentile, while Obese was identified as above the 95th percentile. Results show that approximately 2% of the assessed children were classified as underweight, 55% were normal weight for height, and 43% were determined to be overweight. Of the overweight children, 24% of those were measured to be obese (Figure 6.19)

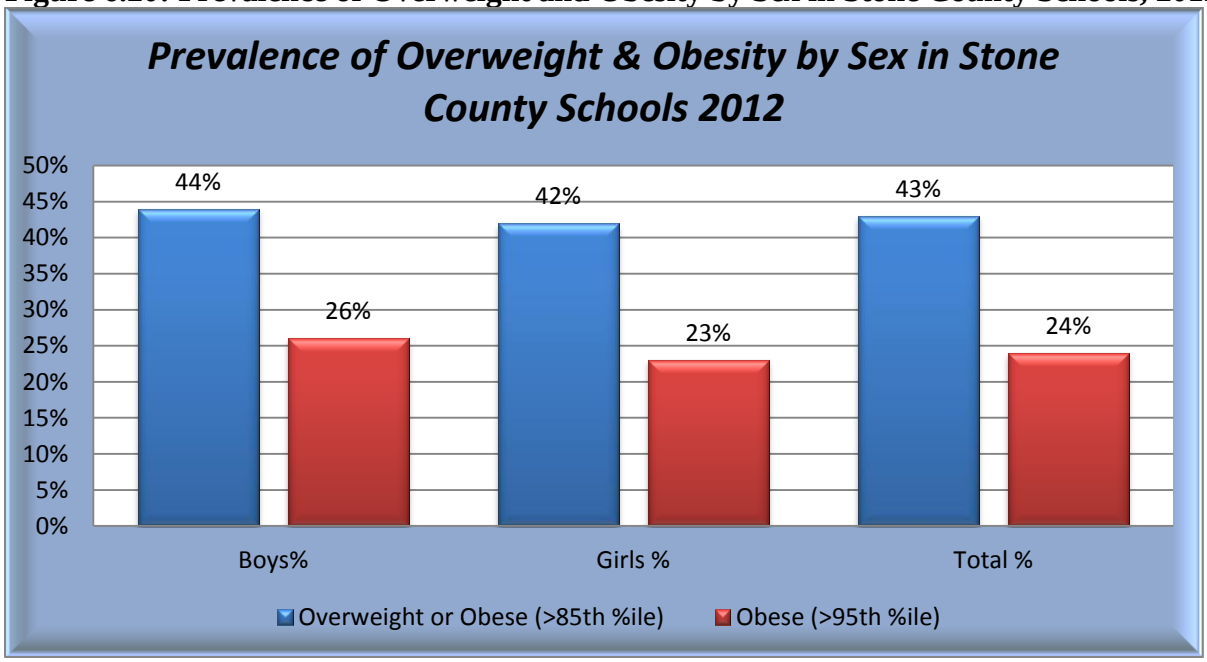
Figure 6.19: Children's BMI for Age for Stone County Students, 2012

Summary of Children's BMI-for-Age for Stone County 2012						
Category	**Boys**	**Boys%**	**Girls**	**Girls %**	**Total**	**Total %**
Number Assessed	1334	100%	1354	100%	2688	100%
Underweight (<5th %ile)	27	2%	19	1%	49	2%
Normal (5-85th %ile)	724	54%	769	57%	1493	55%
Overweight or Obese (>85th %ile)	583	44%	566	42%	1149	43%
Obese (>95th %ile)	150	26%	130	23%	280	24%

Source: Stone County Health Department, 2013

Figure 6.20 shows the prevalence of overweight and obese children by sex in Stone County schools. From the graph, both sexes are fairly equal in representation with 44% for boys and 42% overweight for girls, and 26% obese for boys and 23% obese for girls.

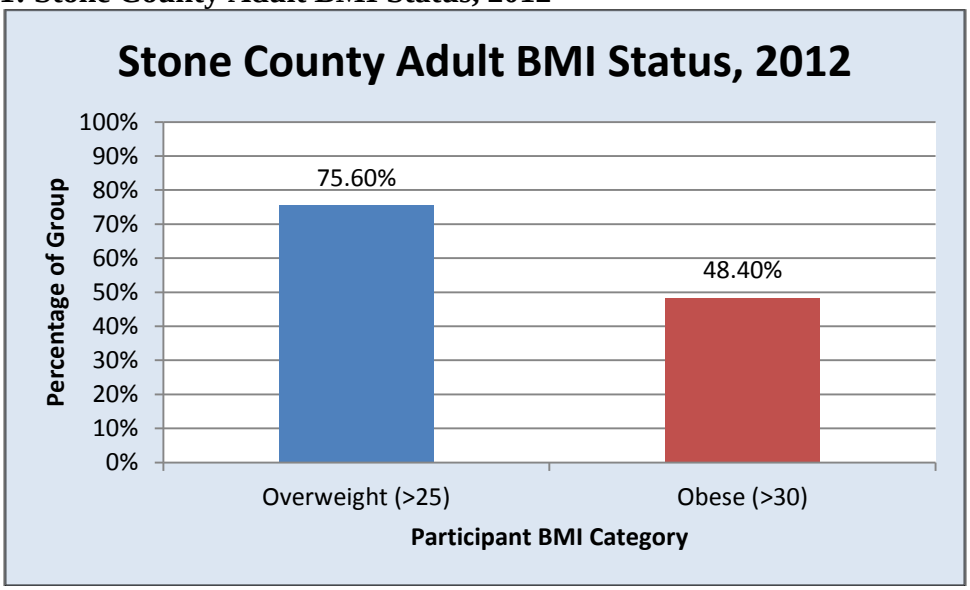
Figure 6.20: Prevalence of Overweight and Obesity by Sex in Stone County Schools, 2012



Source: Stone County Health Department, 2013

Body Mass Index data for Stone County adults are not readily available. To compensate for that, the Stone County Health Department, along with a local non-profit group, Galena Vision of Hope, sponsored a program to get residents involved in a wellness program. This program consisted of weighing and measuring the participants, and encouraging them to record walking distances, eat healthily and maintain overall healthy lifestyles. The information obtained from that program is below in Figure 6.21. Approximately 75.6% of the 61 total participants for that program, which included both residents and employees working in Stone County, were classified as overweight, which is a BMI over 25. Of those 75.6%, 48.4% of them were obese (BMI over 30).

Figure 6.21: Stone County Adult BMI Status, 2012



Source: Stone County Health Department, 2013

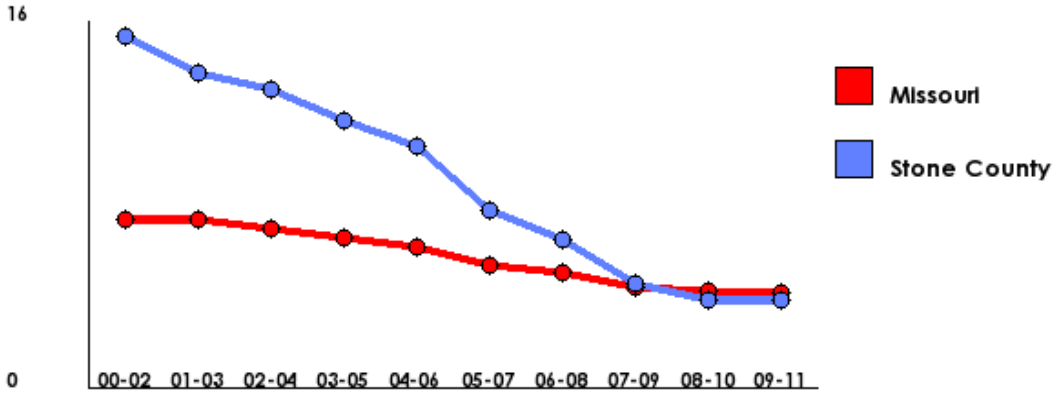
Dental Health

Dental health is an important aspect of overall health. Strides are being made to provide better dental health care access to all income levels in Stone County. At this time, the Smile Clinic, located in Ozark, Missouri (Christian County) and Aurora, Missouri (Lawrence County) is a program available for children living in the counties of Stone and Christian who are on Medicaid. Due to the location, transportation is a major barrier to children in Stone County (and parts of Christian) from receiving the full benefit of this clinic. The Elks Lodge also works with Stone County Health Department to help subsidize dental care for those in dire need. Additionally, one dentist in Crane will treat children who are enrolled in Medicaid and have severe dental issues. The Fordland Clinic has recently opened a clinic in Kimberling City called Tri-Lakes Community Health Center. This facility offers dental services to all ages, starting with the very important 12 months old check-up. Most insurance plans are accepted there and services are provided free to children with Medicaid and at a discounted rate for those without insurance who meet income eligibility guidelines.

Child Abuse and Neglect

From 2001 to 2010, the rates of Probably Child Abuse/ Neglect reported to the Missouri Department of Health and Senior Services has decreased from 15.3 per 1,000 to 3.8 per 1,000 in Stone County. Missouri rates started significantly lower than Stone County in 2001 at 7.3 per 1,000 but it has also decreased to 4.1 per 1,000 in 2010 (Figure 6.22).

Figure 6.22: Probable Cause Child Abuse/ Neglect Rates per 1,000, 2001-2010



Source: Missouri Department of Health and Senior Services, 2013

Figure 6.23 shows the reported and substantiated number of children involved in abuse/ neglect cases in Stone County and Missouri. The table also shows each category of abuse/ neglect, and the percentage of children who were affected by each category.

Figure 6.23: Substantiated Children of Abuse/ Neglect

	Stone County		Missouri	
Category of Abuse/ Neglect	**Number of Children**	**Percent of Children**	**Number of Children**	**Percent of Children**
Physical Abuse	13	38.2%	1675	27.5%
Neglect	18	52.9%	3541	58.1%
Emotional Maltreatment	0	0.0%	232	3.8%
Medical Neglect	2	5.9%	169	2.8%
Educational Neglect	0	0.0%	75	1.2%
Sexual Maltreatment	0	0.0%	1335	21.9%

Source: Missouri Department of Social Services, Child Abuse/Neglect, 2011

Figure 6.24 shows the number of Child Abuse and Neglect Fatalities by year. Fortunately no children have died in Stone County due to abuse. Unfortunately, 29-46 children have died throughout the state from 2007-2011. Still a concern that cannot be abandoned.

Figure 6.24: Substantiated Child Abuse/ Neglect Fatalities by Year of Death

Region	2007	2008	2009	2010	2011
Stone County	0	0	0	0	0
Missouri	46	30	33	29	29

Source: Missouri Department of Social Services, Child Abuse/Neglect, 2011

According to the Missouri Department of Health and Senior Services, the number of children and infants who died from unintentional injuries in Stone County is so low that the rates are not stable and are potentially inaccurate in making comparisons to Missouri. The following figure does give the number of each event that was recorded for each category and a rate per 100,000.

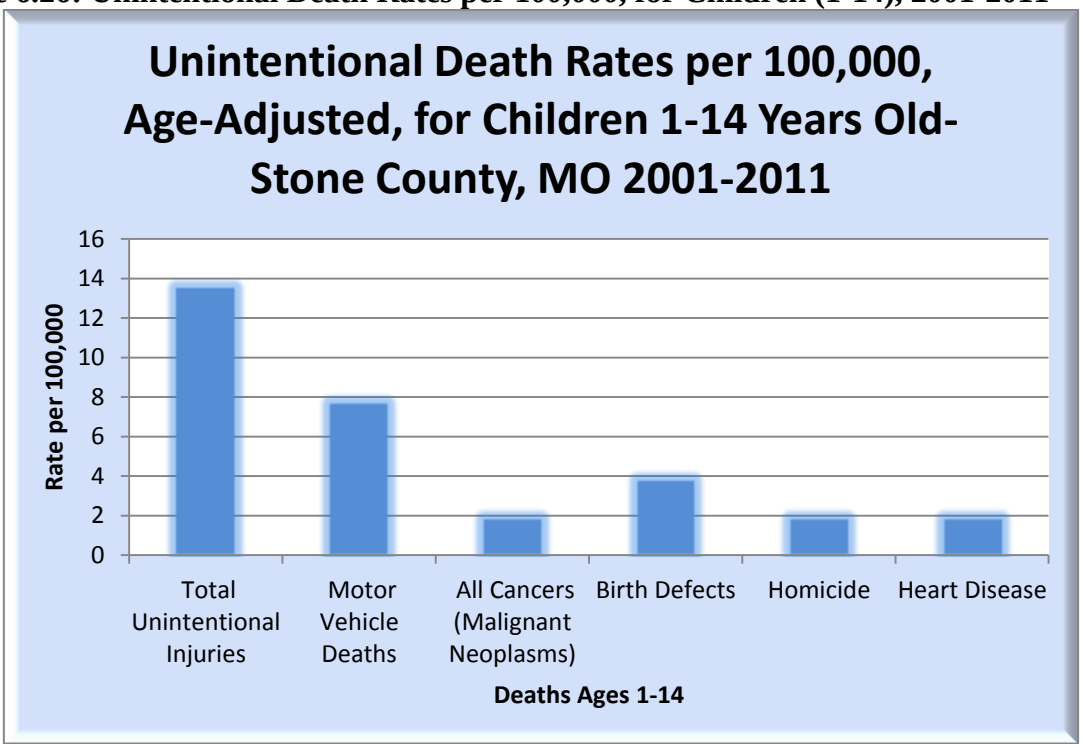
Figure 6.25: Unintentional Death Rates per 100,000 for Children 1-14 in Stone County and Missouri, 2001-2011

Deaths Ages 1-14	Number of Events	Stone County Rate	Missouri Rate
Total Unintentional Injuries	7	13.6*	8.0
Motor Vehicle Deaths	4	7.8*	3.8
All Cancers (Malignant Neoplasms)	1	1.9*	2.3
Birth Defects	2	3.9*	1.7
Homicide	1	1.9*	1.9
Heart Disease	1	1.9*	0.9

Source: Missouri Department of Health and Senior Services, 2013

Figure 6.26 is a graphical representation of each category of unintentional deaths for children ages 1-14 in Stone County for the time period of 2001-2011. Rates are per 100,000. Motor vehicle accidents are far above the rest of the unintentional deaths of children. Birth defects are the second cause, concluding that vehicle safety and adverse birth outcomes need to remain a high priority for the community.

Figure 6.26: Unintentional Death Rates per 100,000, for Children (1-14), 2001-2011



Source: Missouri Department of Health and Senior Services, 2013

The following table shows the number of students enrolled in free and reduced lunch, born with a low birth weight, suffered child abuse and neglect, born to teen mothers, recipients of food stamps, enrolled in Medicaid. All of these factors contribute to the livelihood of the child and increase the at-risk potential for both child abuse and neglect.

Table 6.27: Economic Profile

Children and Families			
Students enrolled in free & reduced lunch program, 2012	2,428	61.9	49.4
Low birthweight infants (count/**per 1000**), 2008-2012	107	7.9	8.0
Child abuse and neglect (count/**per 1000**), 2012	225	39.7	35.9
Births to Teens Aged 15-19 (count/**per 1000**), 2012	31	37.1	32.2
Food stamp recipients (kids), 2012	2,723	48.0	39.1
Children enrolled in MC+/Medicaid, 2012	2,729	48.1	37.4
Overall Kids Count composite rank (out of 115), 2012	63		

Source: Missouri Census Data Center, 2012

Chapter 7: Injury, Chronic Illness, and Death

Injuries and Chronic Disease

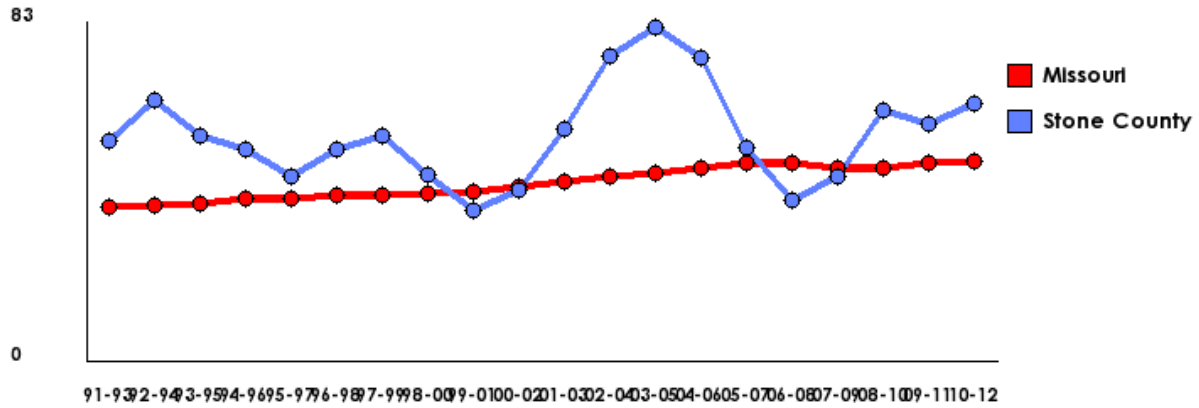
Injuries have an enormous impact on residents of Stone County. Injuries result in economic losses, as well as disabilities that affect quality and length of life. Some of these negative consequences can be avoided by following proper safety precautions.

Numerous deaths due to cancer, heart disease, stroke, and other chronic diseases occur every year. Longitudinal studies have shown that both genetic and lifestyle components affect these diseases. In order to decrease the prevalence of chronic diseases, prevention through lifestyle changes and early detection need to occur.

Unfortunately, it is difficult to monitor the incidence of active and developing chronic diseases in the community. This can be accomplished through health surveys that inquire about lifestyle risk factors and diagnosed disease conditions. Using existing data, local public health agencies must monitor mortality trends closely to measure the impact that chronic diseases have on the community.

Unintentional Deaths and Hospitalizations

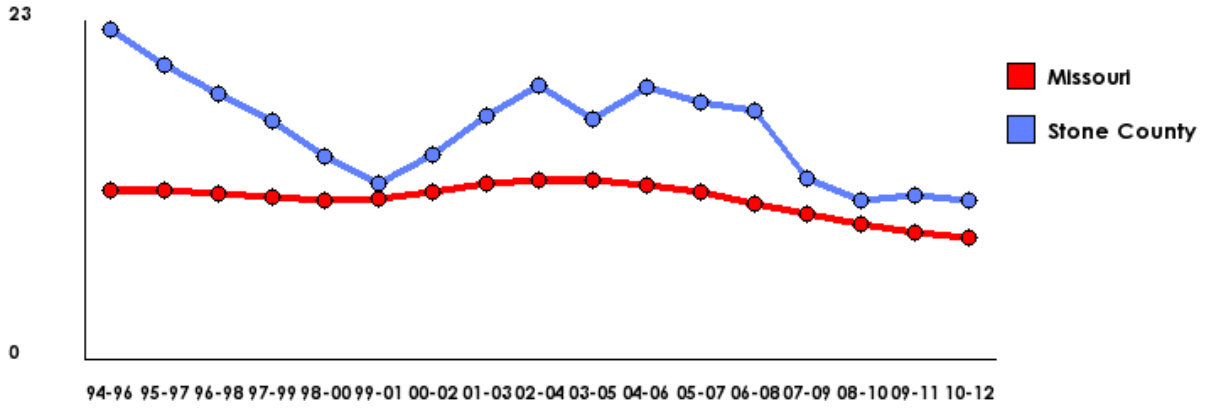
Figure 7.1: Unintentional Injury Profile for Stone County Deaths: Total Unintentional Injury 1991-2012



Source: MO Department of Health and Senior Services, 2015

Missouri has 115 counties. Quintiles are used to rank counties in order by rate. There are 23 counties in each quintile (1/5). Highest rates are ranked with a 1 and the lowest rates are ranked with a 5. Stone County is ranked as a 2 in both Total Unintentional Deaths and Motor Vehicle Deaths, and 1 in Poisoning Hospitalizations for Drugs/ Alcohol.

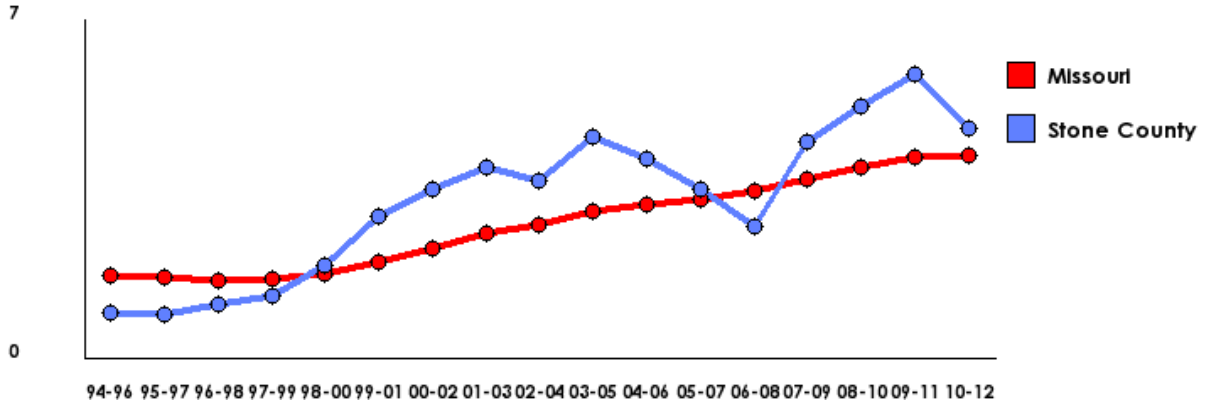
Figure 7.2: Unintentional Injury Profile for Stone County Hospitalizations: Motor Vehicle Traffic 1994-2012



Source: MO Department of Health and Senior Services, 2015

Figures 7.2 and 7.3 show the number of hospitalizations due to Motor Vehicle Accidents and Poisoning due to Drugs/ Alcohol for the years 1994-2012. The trend lines show that Missouri has steadily decreased in motor vehicles deaths and steadily increased in drug/ alcohol deaths. Stone County is following the same general trends, however the trend lines do jump up and down over the years. Overall, however, Stone County is higher than Missouri for both categories.

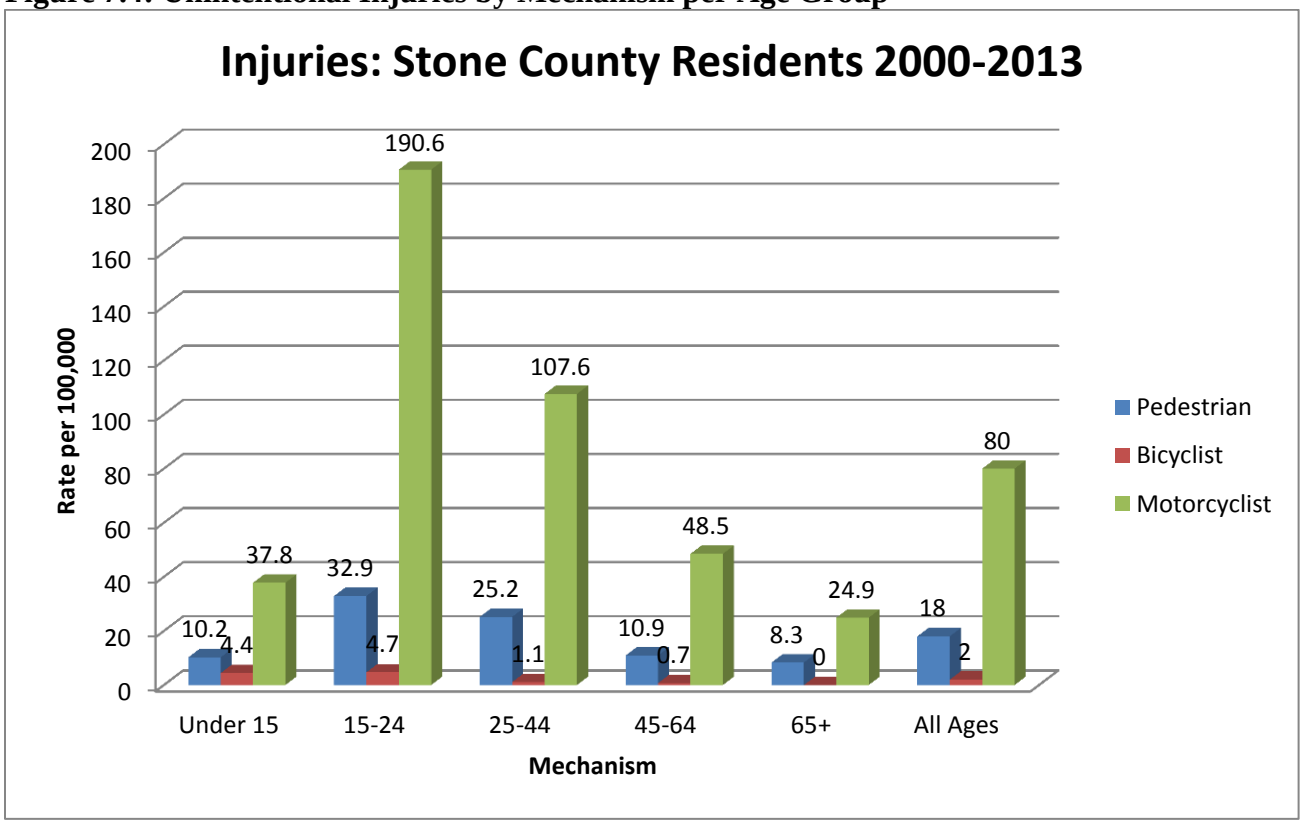
Figure 7.3: Unintentional Injury Profile for Stone County Hospitalizations: Poisoning (Drugs/ Alcohol) 1994-2012



Source: MO Department of Health and Senior Services, 2015

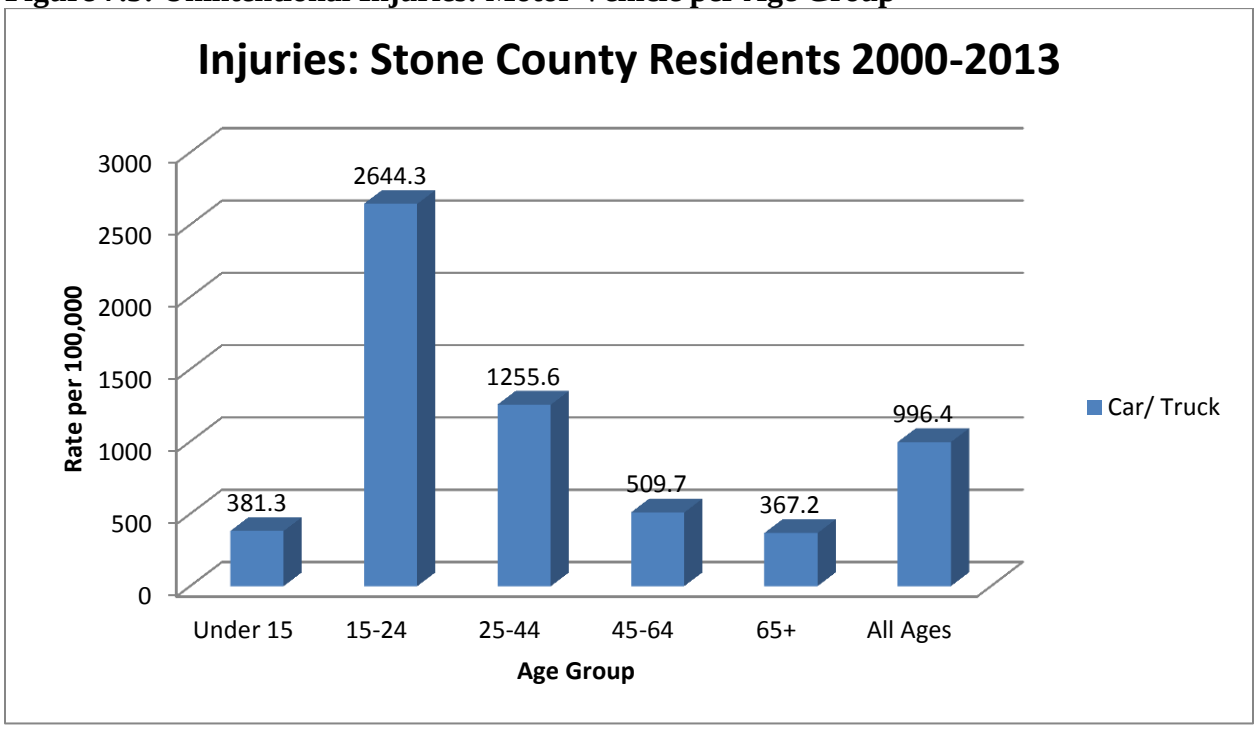
Figure 7.4 shows the mechanism of injuries by age group. Motorcyclists lead each age category, with a significant lead in the 15-24 age group. Ages 25-44 follow closely behind. Bicycle injuries are minimal, most likely due to the low availability of sidewalks in the county. Figure 7.5 shows the number of car/truck injuries in the county by age group. Again, the 15-24 age group leads with the highest number of injuries.

Figure 7.4: Unintentional Injuries by Mechanism per Age Group



Source: MO Department of Health and Senior Services, 2015

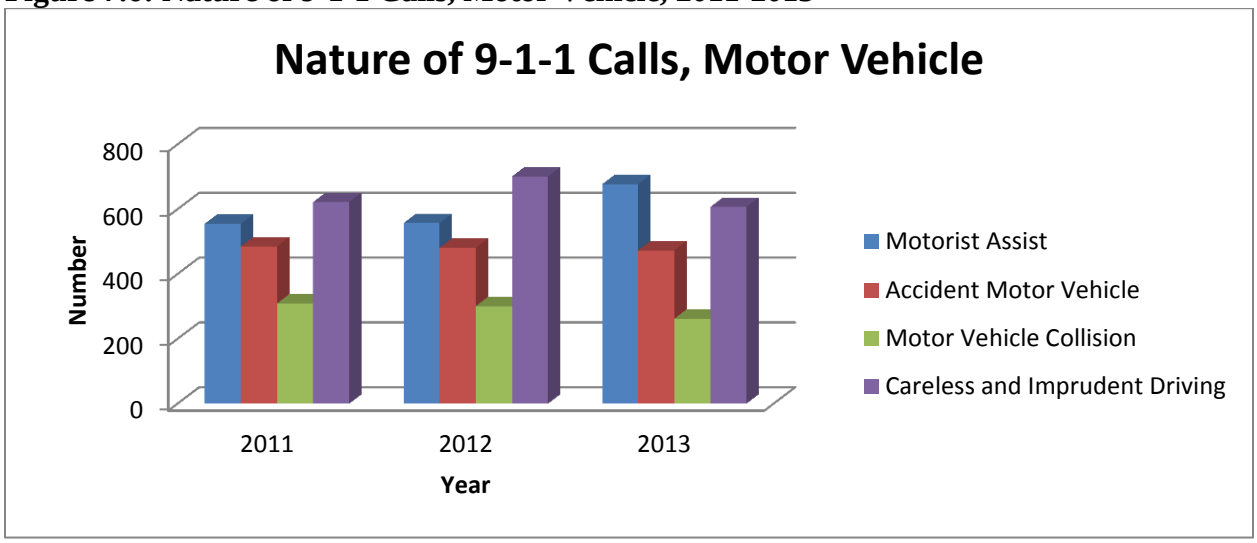
Figure 7.5: Unintentional Injuries: Motor Vehicle per Age Group



Source: MO Department of Health and Senior Services, 2015

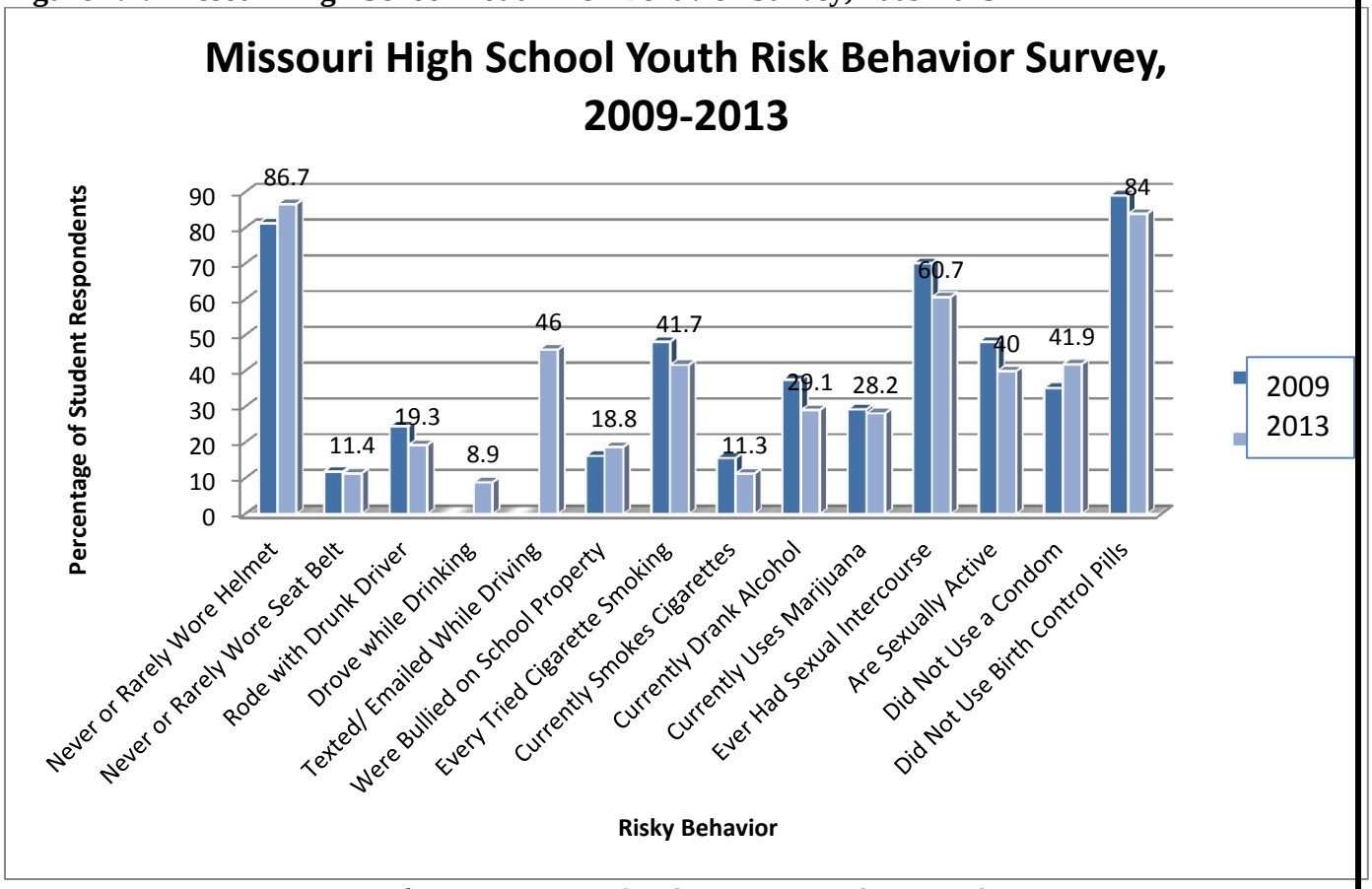
Figure 7.6 is a representation of the nature of 9-1-1 calls relating to motor vehicle instances. Motorist Assists and Careless and Imprudent Driving lead for each year.

Figure 7.6: Nature of 9-1-1 Calls, Motor Vehicle, 2011-2013



Source: Stone County Emergency Services, 2015

Figure 7.7: Missouri High School Youth Risk Behavior Survey, 2009-2013



Source: Centers for Disease Control and Prevention, Behavior Risk Factor Survey, 2013

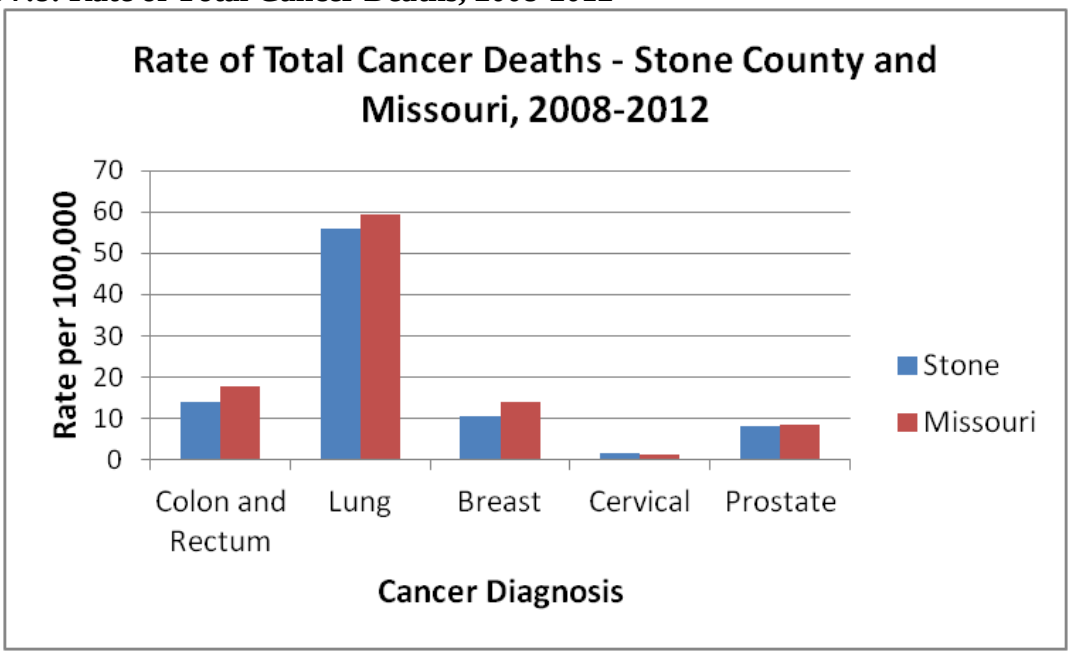
Figure 7.7 is a highly descriptive representation from the Behavior Risk Factor Survey for Missouri Youth for both 2009 and 2013. Popular risky behaviors for Stone County youth include Never or Rarely Wore a Helmet, Texted/ Emailed While Driving, Ever Had Sexual Intercourse, Are Sexually Active, And Did Not Use Birth Control Pills. The only two categories that showed an increase are Never or Rarely Wore a Helmet, and Did Not Use a Condom. Drove While Drinking and Texted/ Emailed While Driving are new categories to 2013.

Chronic Diseases

Cancer

Figure 7.8 illustrates the proportion of deaths in Stone County by the most common cancer sites. Stone County has a slightly higher cervical rate than the state. In addition, Stone has a nearly identical rate of prostate cancer.

Figure 7.8: Rate of Total Cancer Deaths, 2008-2012

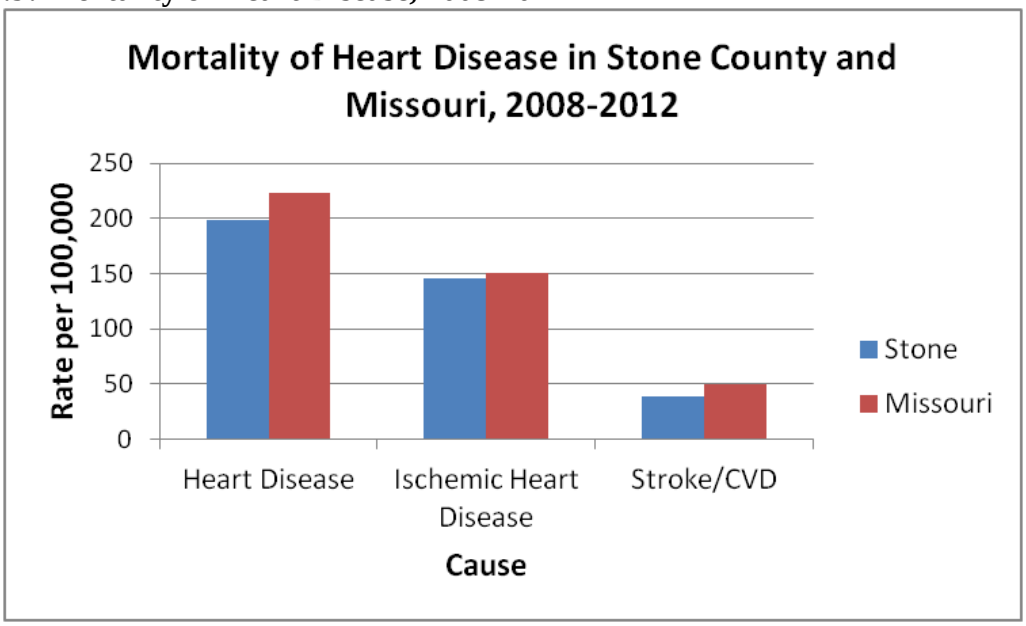


Source: Missouri Department of Health and Senior Services, 2012

Cardiovascular and Cerebrovascular Disease

Figure 7.9 illustrates the heart disease mortality rate comparison between Stone County and Missouri. Overall, the rate for Stone County has been slightly lower than the state's. However, it is evident that the rates are nearly identical with regard to ischemic heart disease. These should be monitored closely due to heart disease being the leading cause of death in Stone County.

Figure 7.9: Mortality of Heart Disease, 2008-2012

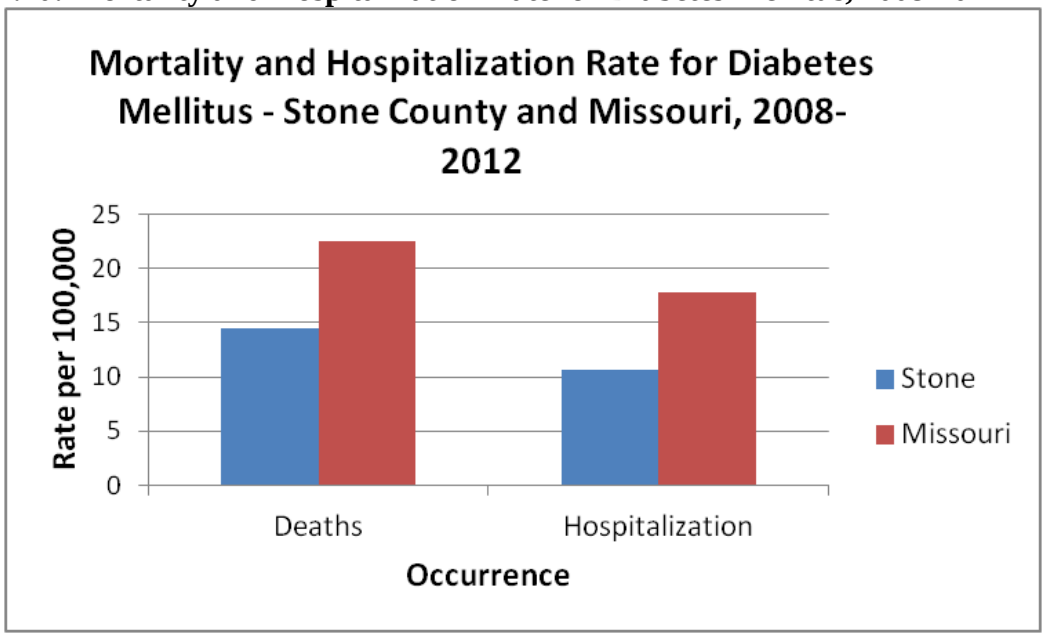


Source: Missouri Department of Health and Senior Services, 2012

Diabetes Mellitus

Diabetes is one of the most common diseases today and can be attributed to many factors – genetics, diet, inactivity, and failure of other organ systems in the body. Figure 7.10 compares mortality and hospitalization rates for diabetes mellitus for Stone County and Missouri.

Figure 7.10: Mortality and Hospitalization Rate for Diabetes Mellitus, 2008-2012

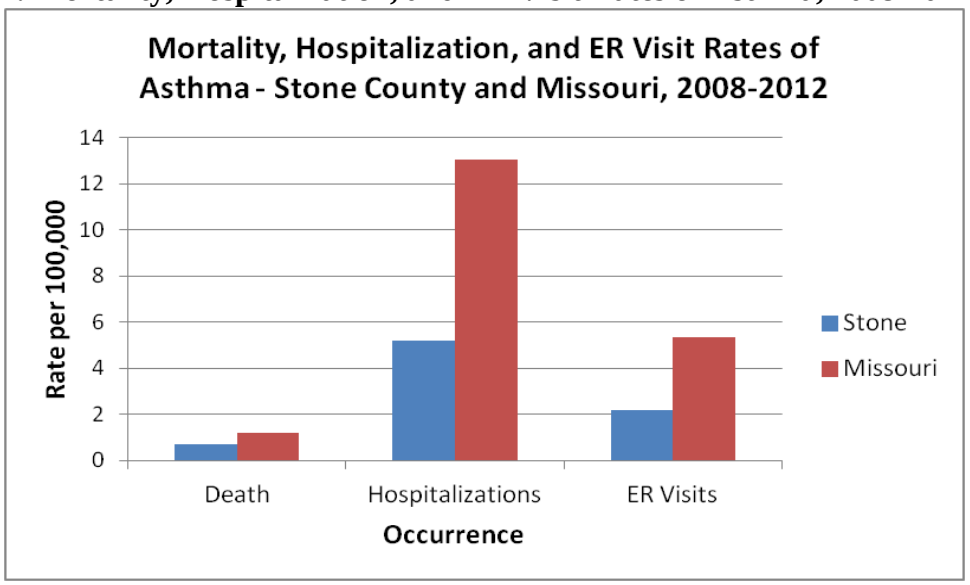


Source: Missouri Department of Health and Senior Services, 2012

Asthma

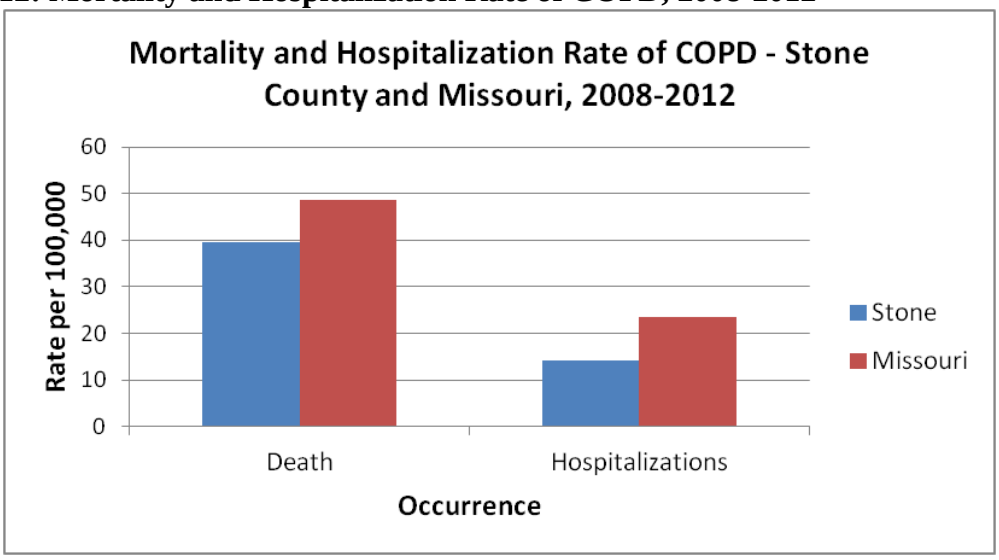
The mortality rate for asthma is significantly higher in the state that it is in Stone County (see Figure 7.11). Figure 7.12 shows the rate of difference for Chronic Obstructive Pulmonary Disorder (COPD), reflecting that both the mortality and hospitalization rate for COPD in Stone County is also lower than that of the state.

Figure 7.11: Mortality, Hospitalization, and ER Visit Rates of Asthma, 2008-2012



Source: Missouri Department of Health and Senior Services, 2012

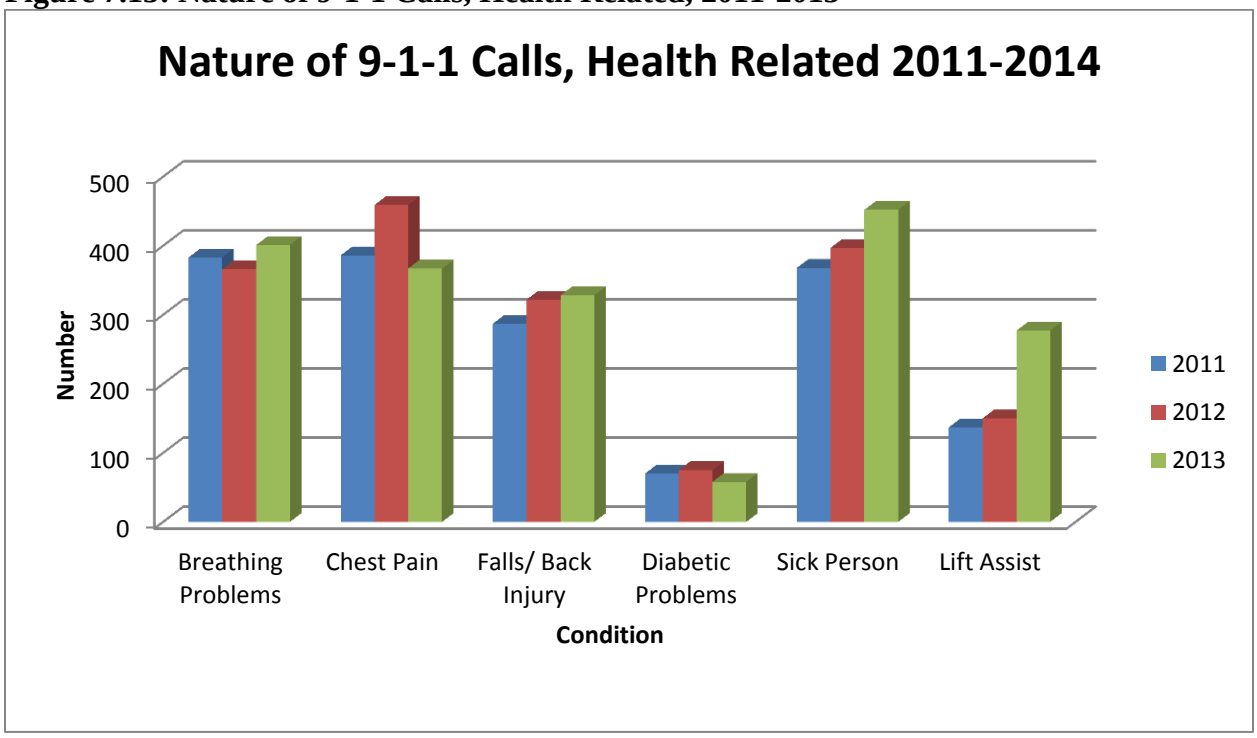
Figure 7.12: Mortality and Hospitalization Rate of COPD, 2008-2012



Source: Missouri Department of Health and Senior Services, 2012

Figure 7.13 shows a representation of the nature of 9-1-1 Emergency Calls related to health conditions. Chest Pain holds the highest number for 2011 and 2012 and Sick Person holds the highest number for 2013.

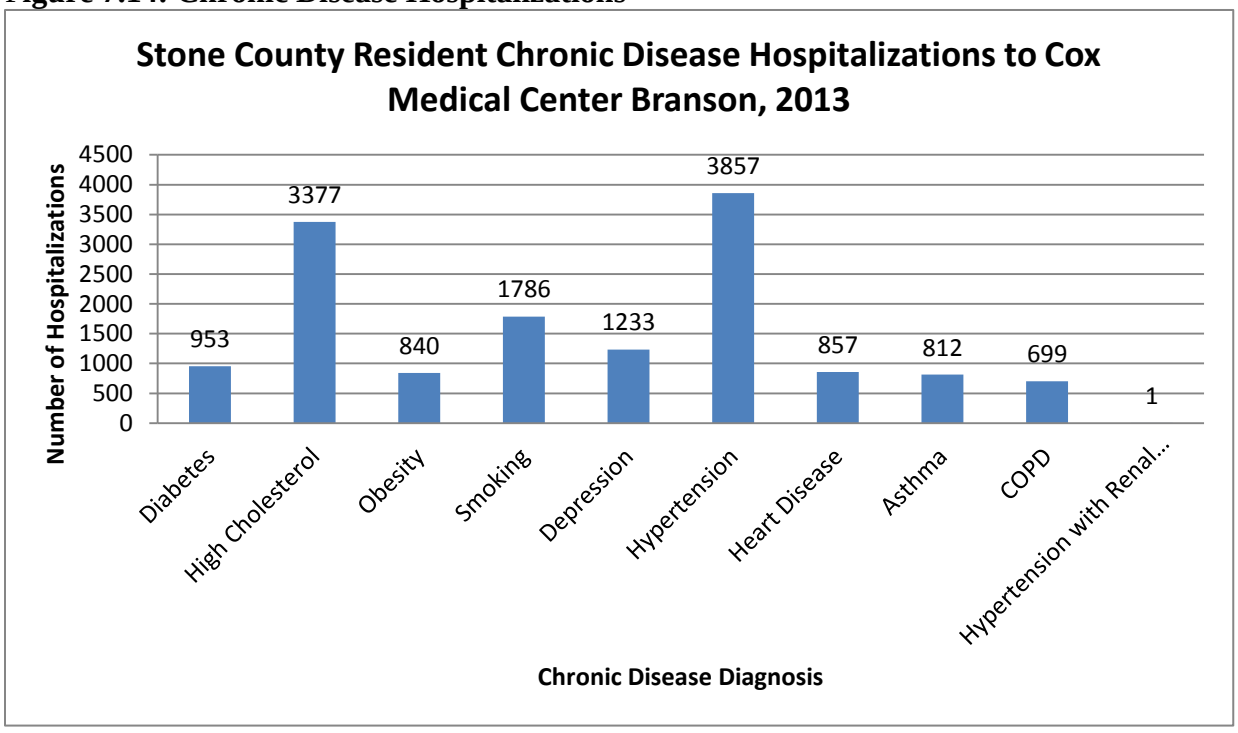
Figure 7.13: Nature of 9-1-1 Calls, Health Related, 2011-2013



Source: Stone County Emergency Services, 2015

Figure 7.14 is a display of each of the Chronic Disease Hospitalizations to Cox Medical Center Branson in 2013.

Figure 7.14: Chronic Disease Hospitalizations



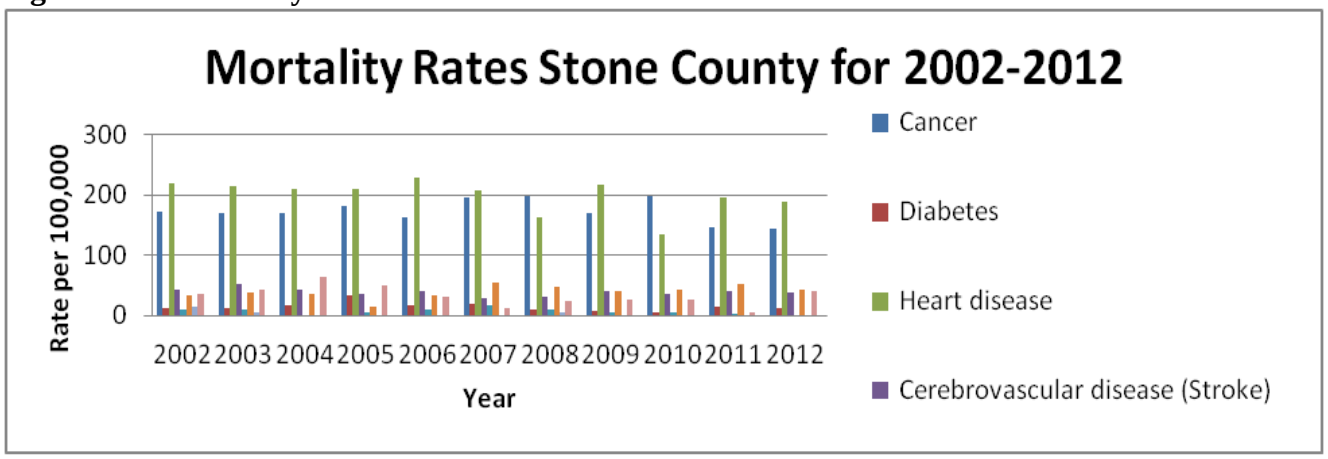
Source: Cox Medical Center Branson, 2014

Leading Causes of Mortality

The leading causes of mortality in Stone County are heart disease and cancer (Figure 7.15). In neither case are the rates in Stone County higher than the state. However, the rates for both of these diseases are justified when the number of deaths from lung cancer and the rate of obesity in Stone County are taken into account.

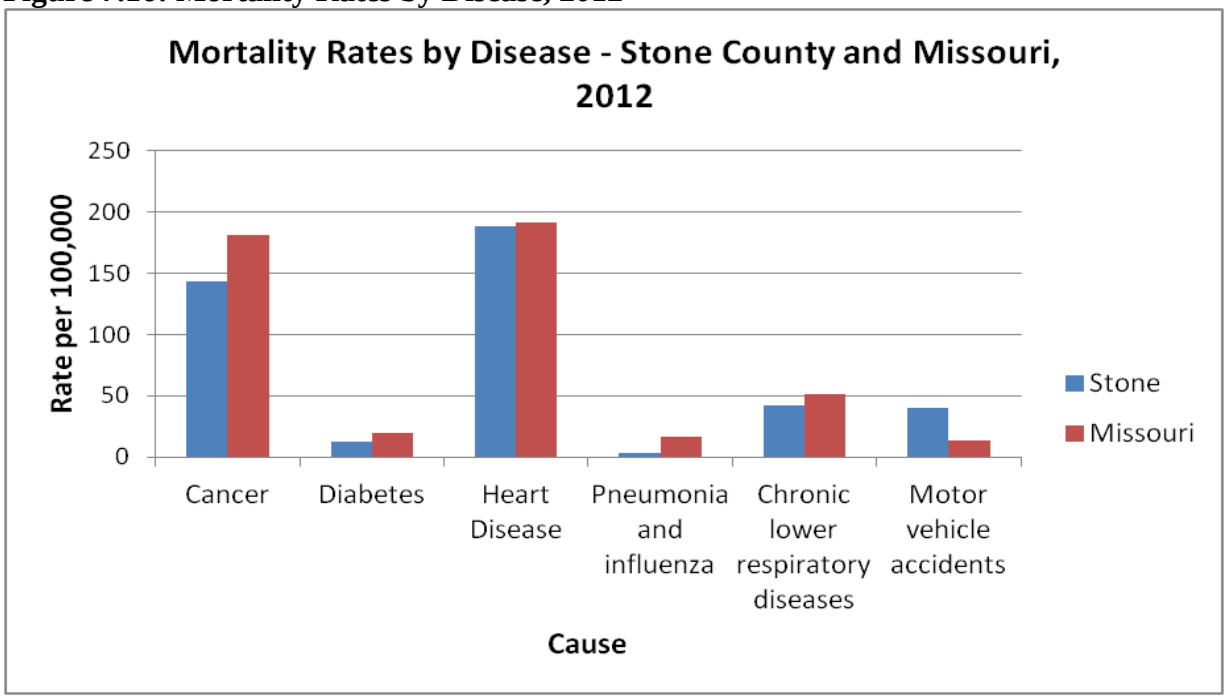
When looking at mortality rates by disease (Figure 7.16), we see that Stone County largely exceeds the state in motor vehicle accidents. In 2012, Stone County had a rate of 40.3 motor vehicle accidents compared to 14.0 in Missouri.

Figure 7.15: Mortality Rates 2002-2012



Source: Missouri Department of Health and Senior Services, 2012

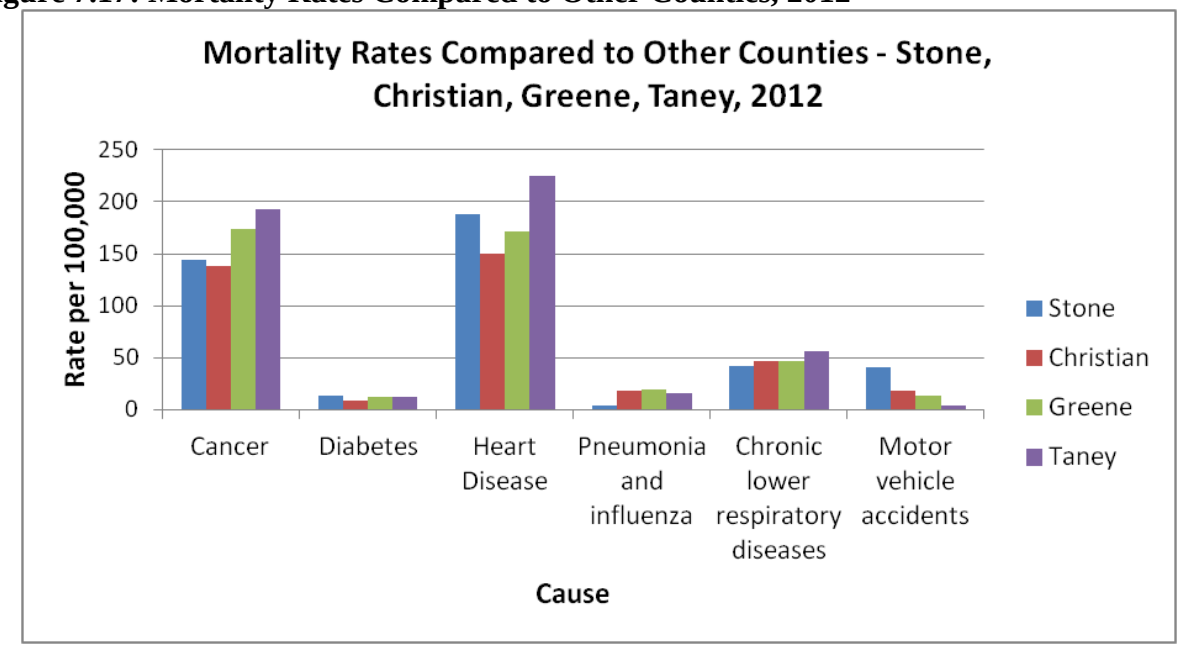
Figure 7.16: Mortality Rates by Disease, 2012



Source: Missouri Department of Health and Senior Services, 2012

Figure 7.17 show that Stone County exceeds closely surrounding counties only in the number of fatalities from motor vehicle accidents. The difference is relatively small in the other areas.

Figure 7.17: Mortality Rates Compared to Other Counties, 2012



Source: Missouri Department of Health and Senior Services, 2012

Chapter 8: Infectious / Communicable Disease

Infectious/ Communicable Disease

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

Vaccine-Preventable Disease

There were reported cases of pertussis, also known as “whooping cough”, in Stone County, as outlined in the figure below. Pertussis is a highly contagious bacterial infection that may start with cold symptoms or a dry cough, followed by episodes of severe coughing. It is spread through droplet transmission and, if untreated, can be spread by an infected person for several weeks.

Meningococcal Infections

Meningitis (aseptic and bacterial) became a reportable disease in 1994, with the earliest record available for Stone County being 1997. Stone County had no cases reported from 1997 through 2004, with the exception of 2001 when the rate per 100,000 was 3.49, more than three times the state rate of that year (1.04). These data can be verified through the Missouri Department of Health and Senior Services website.

Campylobacter

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

Giardiasis (Giardia enteritis)

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

Hepatitis A

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

The trend alternately increases and decreases in Stone County, perhaps due to the fact that there are many activities that involve the use of lake water, which could harbor the Hepatitis A virus via human and animal waste. Higher incidents of hepatitis A could be attributed to the increased use of methamphetamine because users who are infected often share a common drinking vessel. Another factor influencing the incidence of hepatitis A in the summer could also be related to poor sanitation and training of seasonal workers in food establishments.

Hepatitis B

Approximately 30% of those infected with the Hepatitis B virus (HBV) do not have signs or symptoms of infection. Symptoms of HBV infection include fatigue, abdominal pain, loss of appetite, nausea, vomiting, joint pain and jaundice. Death occurs in 15-25% of those who are chronically infected with the virus. Children who are infected rarely exhibit signs or symptoms.

Hepatitis B virus is transmitted through the blood and body fluids of an infected person. Methods of transmission include unprotected sex, sharing of intravenous needles and from mother to child during pregnancy.

Hepatitis C

Approximately 80% of those infected with the Hepatitis C virus (HCV) do not have signs or symptoms of infection. Symptoms of HCV infection include fatigue, abdominal pain, decreased appetite, nausea, dark urine and jaundice. Death occurs in <3% of those who are chronically infected with the virus. However, 70-85% of those initially infected will develop a chronic infection with 70% of those individuals eventually developing chronic liver disease. Chronic Hepatitis C infection is the leading cause of liver transplants. The virus is transmitted through blood and body fluids of an infected person. Common methods of transmission include sharing of intravenous needles, tattoos, body piercing, or sharing of items such as razors or toothbrushes that might have had blood on them. Hepatitis C is a hearty virus and can survive up to 4 weeks outside the body in certain conditions. Unlike Hepatitis B, the risk of transmission of Hepatitis C through sex is considered low.

Salmonella

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

Tuberculosis

Tuberculosis is a respiratory disease caused by the bacteria *Mycobacterium tuberculosis.* This disease is a major public health threat causing many deaths and disabilities worldwide. Initial infection usually goes unnoticed and results in lifelong risk of reactivation of disease. If untreated, approximately 50% of those infected will die within 5 years and usually within 18 months. This disease is treatable with antibiotics, but failure to complete the treatment may result in the development of antibiotic-resistant strains of the bacteria, which are more difficult to treat. Table 8.1 displays the number of active cases of tuberculosis in Stone County.

Table 8.1: Reported Cases of Tuberculosis, 2013

Reported Cases of Tuberculosis - Stone County, 2013		
	Active	**Latent**
2013	0	4

Source: Missouri Department of Health and Senior Services, 2013

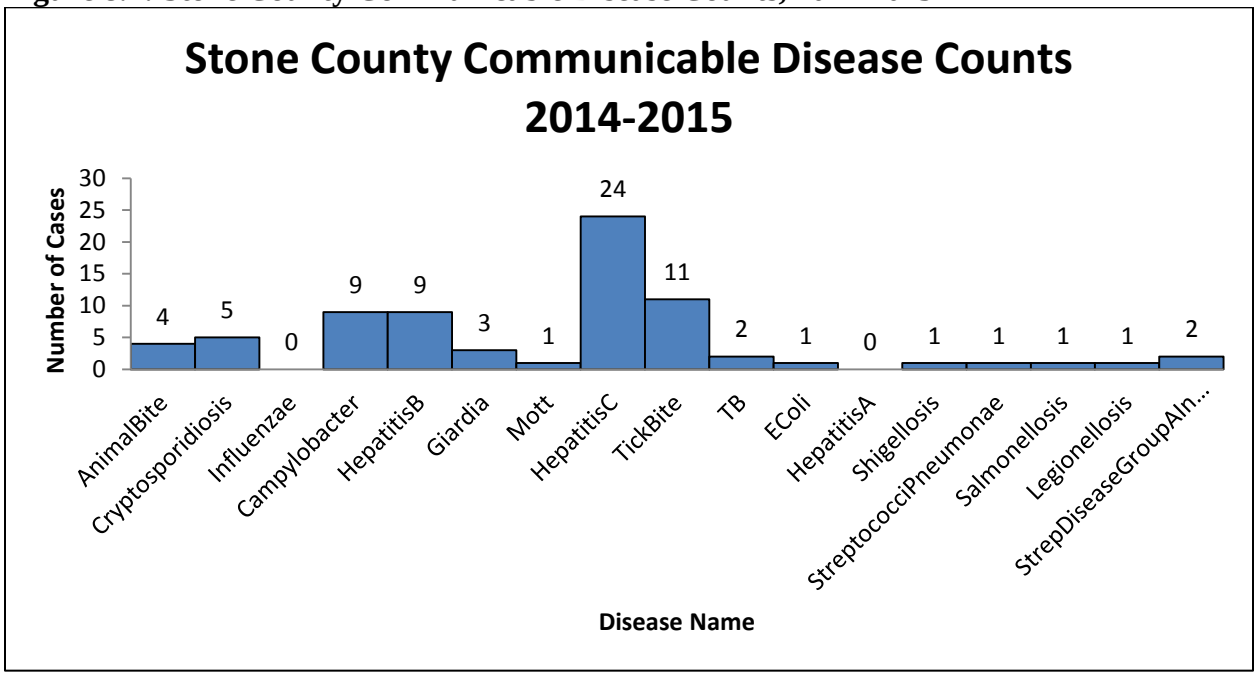
Influenza

Influenza is more commonly referred to as the "flu" and is caused by a number of influenza viral types. The severity of the disease varies from mild to severe illness, with life threatening complications and death occurring quite frequently. The Centers for Disease Control and Prevention estimates that 10-20% of the U.S. population contracts the disease annually, resulting in 36,000 deaths nationwide. Symptoms usually include fever, headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Symptoms such as nausea, vomiting, and diarrhea are associated more with children than adults (CDC, 2005). Those people who are at increased risk for developing severe illness include seniors**,** people who have chronic medical conditions, pregnant women, and children.

The best method of protection against the flu is by vaccination each fall. If the vaccine is unavailable, other ways to protect yourself and others from the virus include avoiding close contact with people who are sick; staying home when you are sick; covering your nose and mouth with a tissue when sneezing or coughing; washing your hands often; and avoiding hand contact with your eyes, nose, or mouth.

Figure 8.2 illustrates the number of communicable disease cases reported for Stone County from 2014-2015. Figure 8.3 is a complete display of Case Counts of Communicable Diseases for Missouri from 1997-2011.

Figure 8.2: Stone County Communicable Disease Counts, 2014-2015



Source: Stone County Health Department, 2015

Figure 8.3: Case Counts of Selected Communicable Diseases- Missouri (1997-2011)

Case Counts of Selected Communicable Diseases - Missouri
15 Year Report

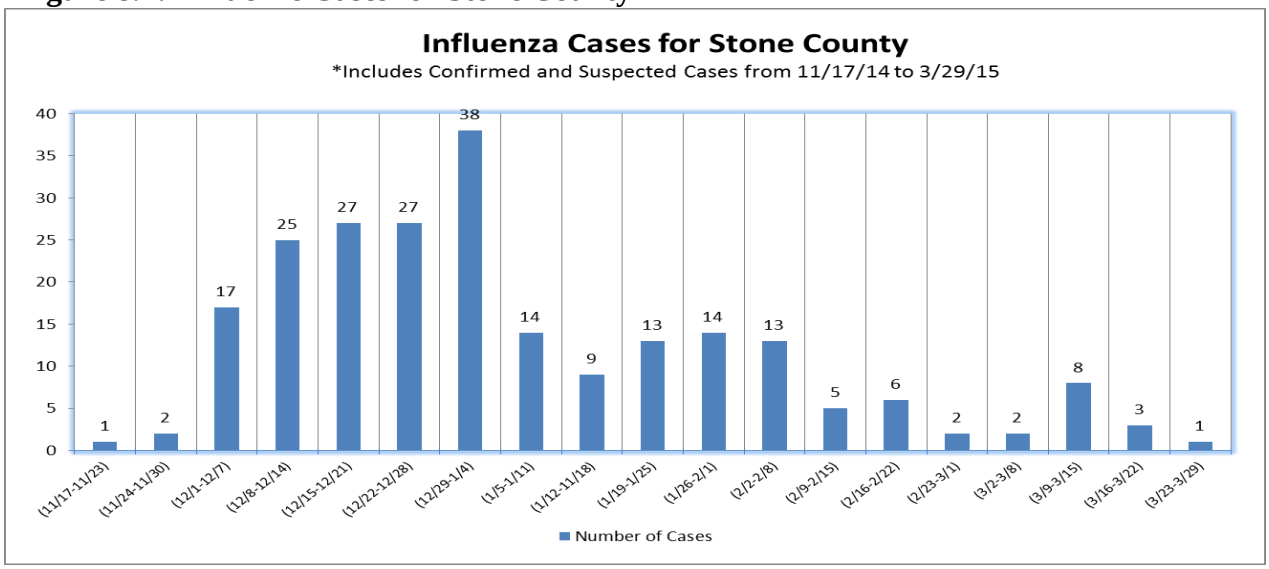
	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997
Animal Rabies	29	63	65	64	38	66	73	59	43	45	40	50	31	42	31
Campylobacteriosis	919	1054	770	815	722	686	714	745	655	557	628	693	569	535	574
Cryptosporidiosis	495	548	193	195	214	283	246	78	52	41	55	31	26	29	38
E coli O157:H7	122	105	68	76	80	90	75	98	85	70	66	111	47	55	58
Ehrlichiosis*	194	142	167	227	222	99	41	63	40	69	35	67	56	12	20
Giardiasis	344	426	524	468	515	548	522	578	515	512	715	839	807	790	800
Haemophilus influenzae**	80	87	63	72	42	39	37	43	42	13	20	23	14	12	8
Hepatitis A	17	30	27	45	24	45	32	34	60	84	88	258	712	637	1151
Hepatitis B, Acute	60	67	47	38	40	62	159	187	248	119	130	149	227	252	360
Hepatitis C, Acute***	8	6	0	2	5	27	13	4	165	11	9	37	33	14	6
Legionellosis	57	37	65	71	50	22	31	34	37	19	22	26	22	18	26
Lyme Disease	8	5	10	13	10	6	17	26	70	41	37	47	72	12	28
Meningococcal Disease	15	23	27	26	18	15	28	20	49	52	58	67	94	80	106
Mumps	11	10	15	8	12	170	4	3	5	4	4	5	1	4	0
Pertussis	438	604	1015	561	118	308	656	595	208	147	107	97	75	59	80
Q Fever	1	3	3	5	12	11	13	3	3	1	1	0	0	-	-
Rocky Mountain Spotted Fever	270	278	253	407	315	163	128	106	51	96	62	41	16	5	24
Salmonellosis	900	843	657	764	764	766	801	628	882	830	648	713	758	632	568
Shigellosis	182	1582	1046	227	1276	658	1017	184	356	217	321	671	721	221	222
Strep Disease, Group A Invasive	151	142	94	97	91	91	74	62	81	47	76	63	45	21	10
Strep Pneumoniae, Drug Resistant	105	94	74	93	65	44	37	20	16	5	11	2	0	-	-
Tuberculosis Disease	98	107	80	107	118	104	108	127	110^	136	157	211	208	184	248
Tularemia	21	18	13	21	35	14	27	28	32	16	27	28	19	12	18
West Nile Fever	4	0	0	3	16	12	13	9	30	47	-	-	-	-	-
West Nile Encephalitis/Meningitis	6	3	5	12	61	51	17	28	39	113	-	-	-	-	-
Season**	**11-12**	**10-11**	**09-10**	**08-09**	**07-08**	**06-07**	**05-06**	**04-05**	**03-04**	**02-03**	**01-02**	**00-01**	**99-00**	**98-99**	**97-98**
Influenza	20474	17739	30567	11137	30978	14845	12960	10855	17834	4318	4115	1896	3820	926	1104

*Ehrlichiosis (Beginning in 1999, numbers reflect a total incidence of both HGE and HME, beginning in 2006 also included is Ehrlichiosis, Other or Unspecified)
**Haemophilus influenzae (includes HIB Meningitis and Other Invasive - Other Invasive became reportable in 1990)
***Hepatitis C became reportable in 1997
****Influenza season crosses two calendar years beginning in Week 40 of the first year and ending in Week 20 of the second year.
^Tuberculosis Disease incidence officially reported to CDC through National Electronic Telecommunications Surveillance System. Actual incidence was 131 cases.

Source: Missouri Department of Health and Senior Services, 2015

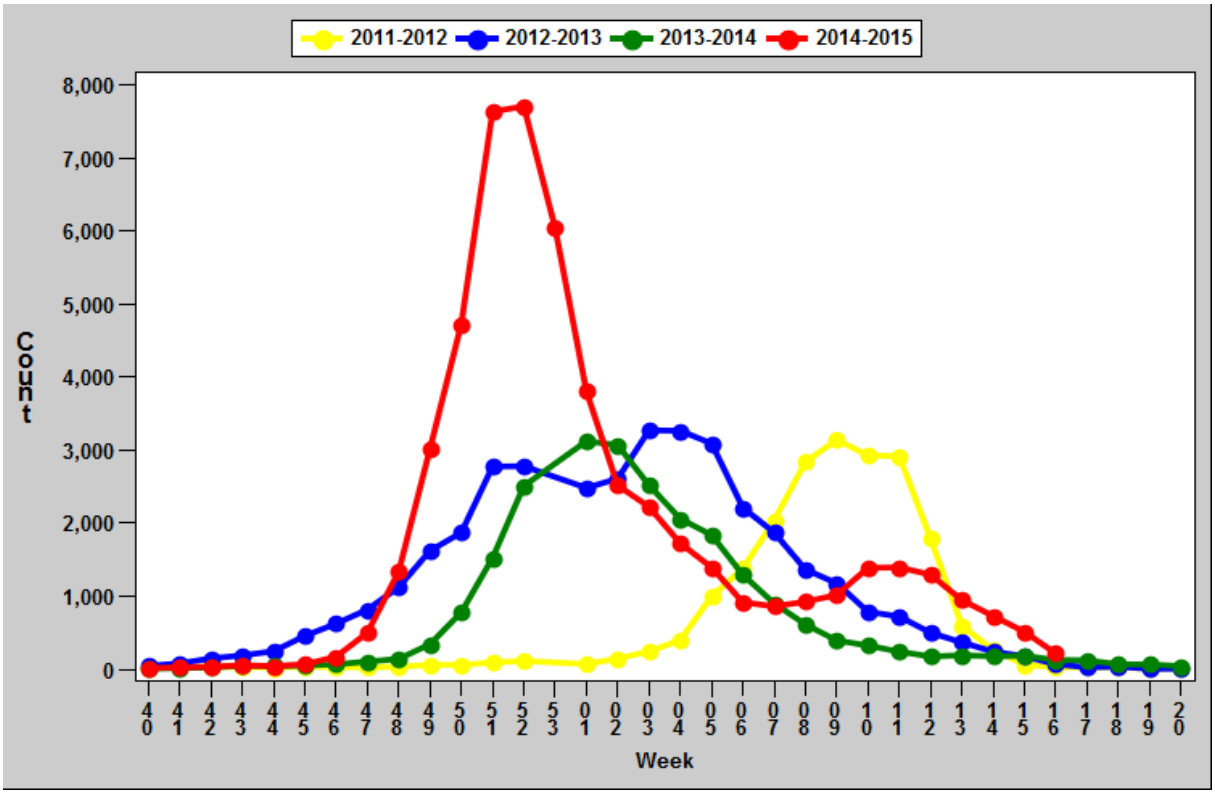
Figure 8.4 shows the trends in Influenze Cases in Stone County from November 2014- March 2015. A spike is shown in December/January and quickly decreases after that. Figure 8.5 shows the number of laboratory confirmed influenza in Missouri for 2011-2015.

Figure 8.4: Influenze Cases for Stone County



Source: Stone County Health Department, 2015

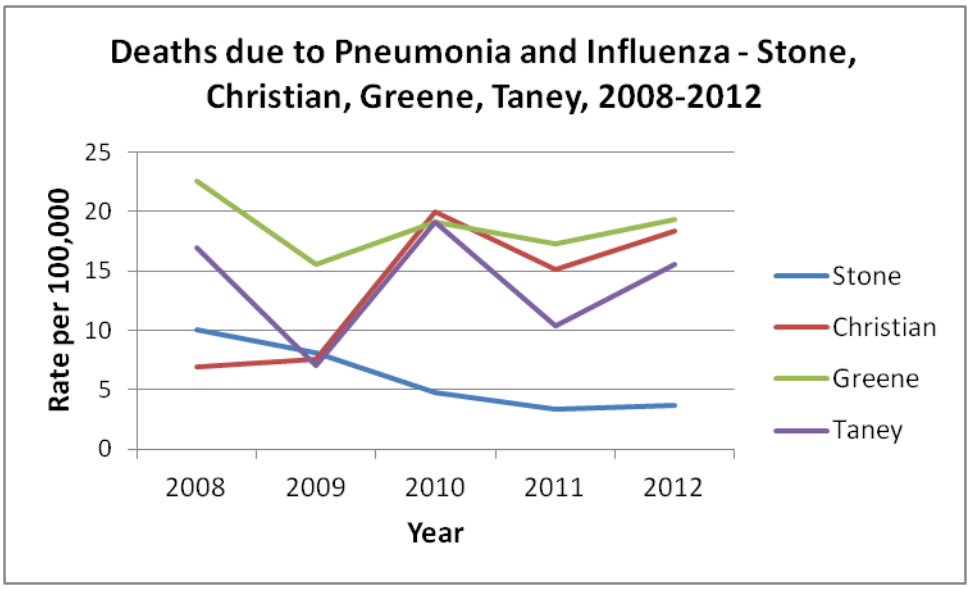
Figure 8.5: Number of Laboratory Positive Influenza Cases by CDC Week, Missouri, 2011-2015*



Source: Missouri Department of Health and Senior Services, April 2015

Of the four counties in Figure 8.6, Stone County had the fewest number of deaths from pneumonia and influenza. Each other county has had steep spikes and has been in a steady increase since 2011. Stone County is in a steady decline since 2008.

Figure 8.6: Deaths Due to Pneumonia and Influenza- Stone, Christian, Greene, Taney

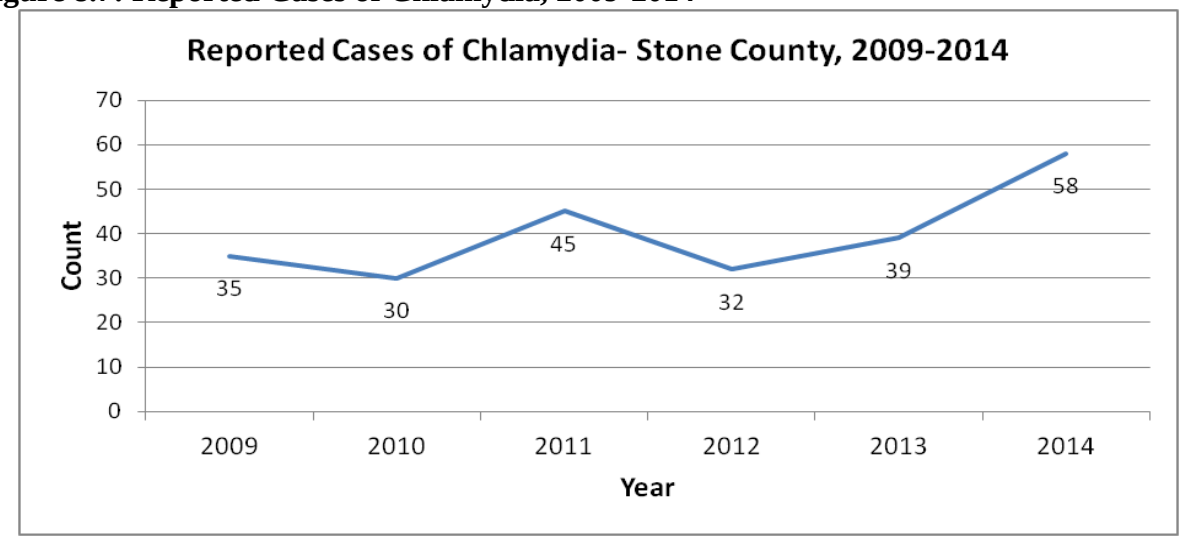


Source: Missouri Department of Health and Senior Services, 2012

Chlamydia

Chlamydia is a sexually transmitted infection caused by the bacteria *Chlamydia trachomatis.* Infection can occur in the anus, oral cavity, female cervix, and male urethra. If untreated, severe complications can occur. Figure 8.7 illustrates that there has been an increasing trend of chlamydia in Stone County in more recent years.

Figure 8.7: Reported Cases of Chlamydia, 2009-2014

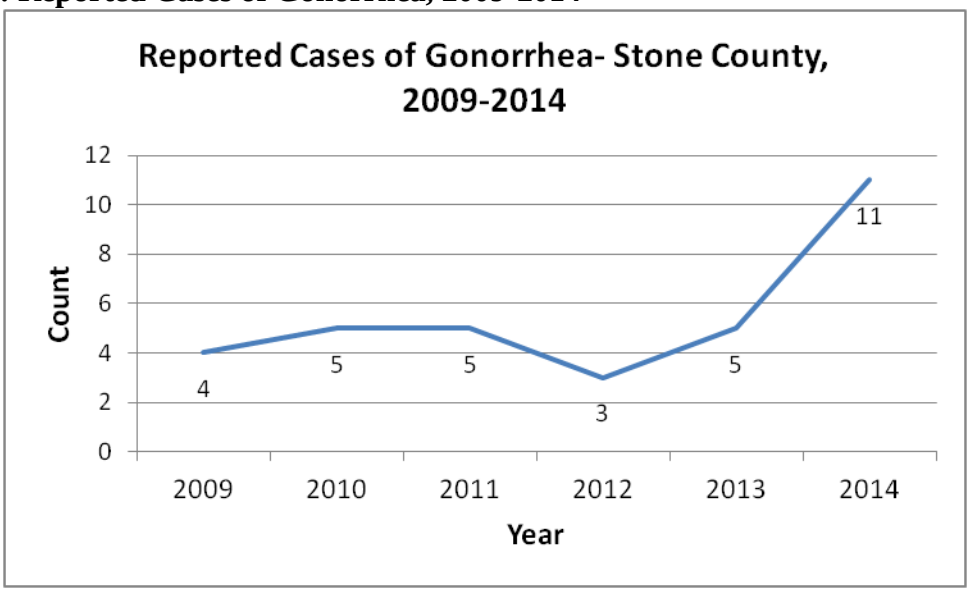


Source: Missouri Department of Health and Senior Services, 2014

Gonorrhea

Gonorrhea is a sexually transmitted infection caused by the bacteria *Neisseria gonorrhoeae.* The disease is characterized by a purulent discharge 2 to 7 days after exposure. If left untreated, females can develop pelvic inflammatory disease that can result in infertility. Figure 8.8 indicates the trend in Stone County by number from 2009 to 2014. The data presented indicates that there is a substantial increase in gonorrhea cases in 2014 compared to the previous years.

Figure 8.8: Reported Cases of Gonorrhea, 2009-2014



Source: Missouri Department of Health and Senior Services, 2014

HIV and AIDS

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

Vector-Borne Diseases

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

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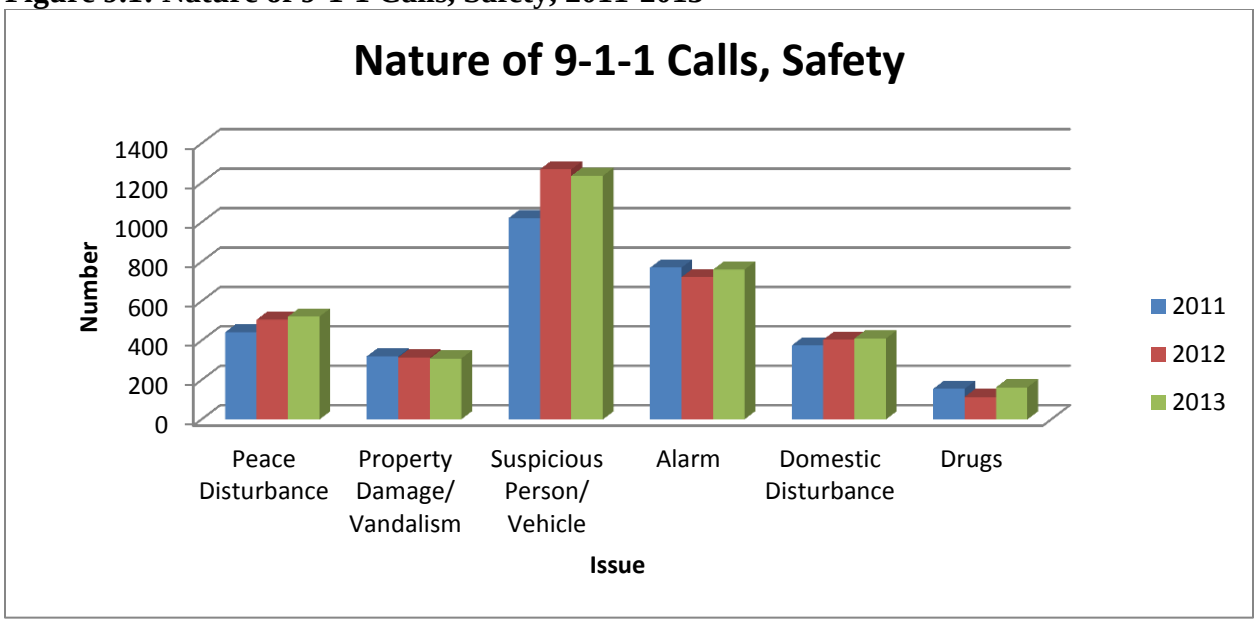
Chapter 9: Quality of Life/ Safety

The quality of life can be largely determined by several characteristics in a community. In this portion of the Assessment, Safety will be the primary focus. For more Quality of Life information, see the Community Themes and Strengths Assessment at the end of this document.

Figure 9.1 shows the nature of 9-1-1 calls relating to safety. A majority of calls have been to report a Suspicious Person/ Vehicle and Alarm. The number of Peace Disturbance calls and Domestic Disturbance calls have increased from 2011-2013.

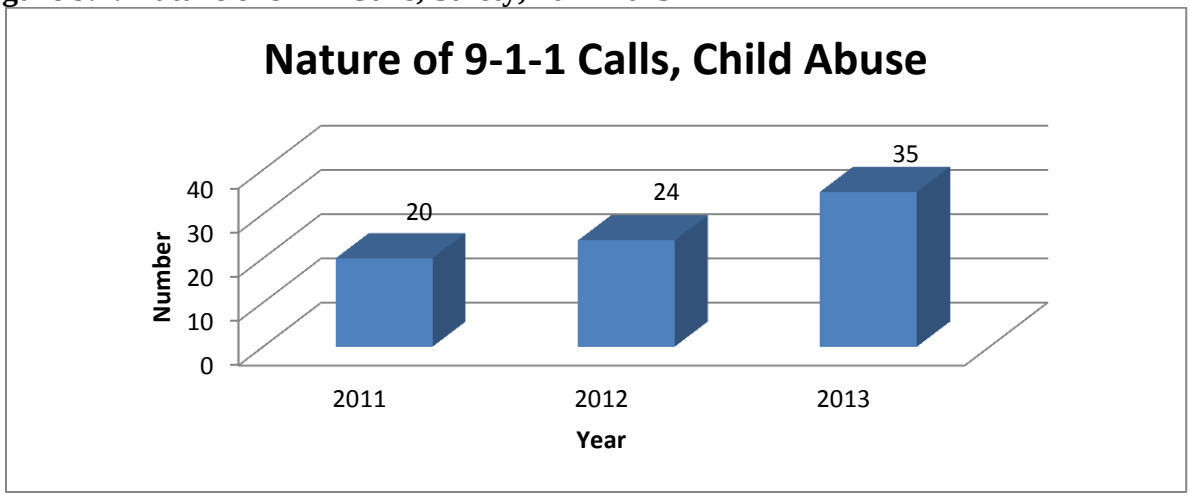
Figure 9.1: Nature of 9-1-1 Calls, Safety, 2011-2013



Source: Stone County Emergency Services, 2015

Figure 9.2 shows the 9-1-1 calls related to child abuse for 2011-2013. Child abuse issues may largely contribute to the quality of life in a community.

Figure 9.2: Nature of 9-1-1 Calls, Safety, 2011-2013



Source: Stone County Emergency Services, 2015

Chapter 10: Environmental Health Indicators

Physical Characteristics

Stone County is located on the Ozarks Plateau of the Interior Highlands physiographic province. The topography of Stone County is very rugged and is characterized by deep, narrow valleys below sharp ridges. Approximately 45 percent of Stone County has slopes of greater than 10 percent, with slopes of 20 percent or greater in the southern portion of the county. Ground travel throughout Stone County is difficult due to the widespread area of Table Rock Lake and congested, narrow, winding roads.

The topographic landscape exhibits features of karst, including sinkholes, losing streams, springs and caves. These features result from the weathering and dissolution of the underlying limestone bedrock by surface waters and carbonic acids in the atmosphere. These karst features allow surface water, including contaminants from development and poorly planned livestock operations, to enter the groundwater system relatively quickly with little filtration. Karst features are found throughout the county, with larger concentrations located near Blue Eye, Reeds Spring, and in the northern half of the county (Gregg, 2004, p. 13). The major source of groundwater supplies in the county today is from deep wells in the Cambrian and Ordovician aged dolostones which produce from 300 to over 1,000 gallons of water per minute (Gregg, 2004, p. 14).

Numerous springs and caves are found in the county, several of which were focal points of historical settlement in the county and today contribute to the tourism economy. One such community is Reeds Spring, first settled in the late 1800s near a spring that is the city's namesake. The spring, which pumps out over one million gallons of water per day, provided the water to operate the steam powered drills used to dig out a 2,000 foot tunnel through the hills for the construction of the White River-Iron Mountain Railroad in the early 1900s (Reeds Spring Historical Society, 1998, p. 233). Marvel Cave at Silver Dollar City and Talking Rocks Cavern, located south of Branson West on Highway 13, are two of the 176 known caves in the county and major tourist attractions (Burns & McDonnell, 1995, p. 3-17).

Sewage Control

Stone County, MO is the only county in Missouri with an established Onsite Wastewater Treatment System ordinance. Property Transfer Certificate (PTC's) regulations are located inside Section 5.11 of the Onsite Wastewater Treatment Systems Ordinance within the Stone County Health Code. This ordinance requires permits for the construction, modification, installation, and operation of Onsite Wastewater Treatment Systems with maximum flows of 3,000 gallons per day within Stone County. The ordinance does allow for penalties for violations as well.

The purpose of a Property Transfer Certificate is to, at the time of a property transfer (i.e. sale of a property), verify the adequacy of the existing Onsite Wastewater Treatment System (OWTS) if it was previously approved and permitted, or assure that an unapproved OWTS will be permitted and approved within one year of the property transfer. This ensures that septic systems are

operating properly. Septic systems that leak can potentially contaminate drinking water systems and recreational water sources.

According to the Table Rock Lake Water Quality, Inc. (TRLWQ) approximately half of Stone County is in the Table Rock Lake watershed, which includes about 5,600 OWTS's. A study done by the US Environmental Protection Act in March 2003 revealed that about 20% of septic systems are failing to some degree- that equates to about 1,100 failing septic systems in the Table Rock Lake watershed within Stone County- and that's only half the county!

It is very important that we are proactive in ensuring the functionality of the OWTS's in Stone County. The Stone County Health Department Environmental Health Section has issued 617 PTC's since 2009. Of those, 135 systems did require some sort of corrective action including pumping, tank replacement, lateral line, or full system replacement.

Not all properties require a PTC. Only a property that contains an OWTS that is ten (10) years old or older, or is not on file at Stone County Health Department, will need a certificate. At the time of property transfer, property owners with an approved OWTS that is 10 years old or older, or not on record, will need to obtain an onsite wastewater treatment system inspection report to ensure that it operates properly. The property owner might be required to obtain a repair permit to correct deficiencies or obtain an agreement signed by the new owners acknowledging they have accepted responsibility for the repair. The OWTS Inspection report must be filed with the SCHD office within 90 days, and the PTC is good for 4 years once approved.

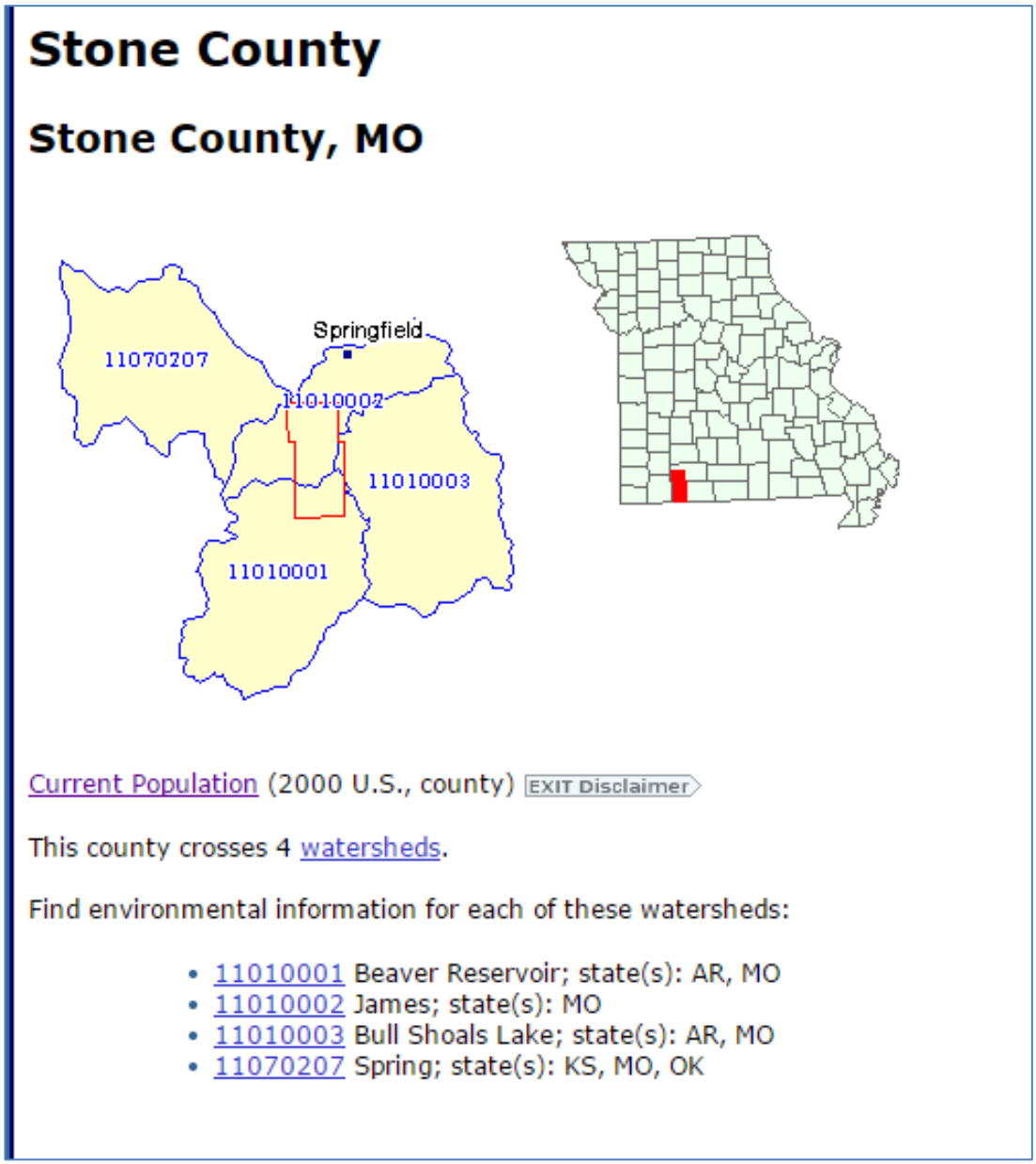
Water Quality

Stone County covers four different watersheds, meaning the runoff from the county impacts four different water supplies. Because of the terrain of the county, runoff is a very easy situation to have and concern could become large, especially in high water periods. Runoff concern comes from the high number of farms, resulting in both fertilizers and manure contamination in the water. Figure 10.1 shows the watershed areas of Stone County.

In order to ensure that the recreational waters affected by runoff remain safe to swim in, Stone County Health Department routinely tests the water from the public access points along the James River for coliform bacteria and E.coli. Results of the July 1, 2015 sampling are in Figure 10.2. This particular sampling was during a high water period, and show a slightly higher than average coliform count.

SCHD partners with the US Army Corps of Engineers to test the waters in the public access areas of Table Rock Lake. Figure 10.3 shows the June 30, 2015 results from that sampling. This is also during a period of high water. High water does increase the bacterial levels in the lakes and rivers because of the increased runoff.

Figure 10.1: Watersheds of Stone County



Source: US Environmental Protection Agency, 2015

Figure 10.2: James River Recreational Water Report

2015 Recreational Water Report

Date	Location	E.COLI/CFU'S/100 ML	Site Avg.
7/1/2015	Riverfork (Finley) ~ left	52.9	
	Riverfork (Finley) ~ right	81.6	67.25
7/1/2015	Hootentown ~ left	57.6	
	Hootentown ~ right	71.2	64.4
7/1/2015	McCall Bridge Rd/Greenway Dr ~ left	54.6	
	McCall Bridge Rd/Greenway Dr ~ right	47.2	50.9
7/1/2015	Kerr Access/Horse Creek ~ left	85.00	
	Kerr Access/Horse Creek ~ right	52.00	68.5
7/1/2015	Cox Access/Galena Y Bridge ~ left	24.00	
	Cox Access/Galena Y Bridge ~ right	31.6	27.8
7/1/2015	Camp Harlow ~ left	28.5	
	Camp Harlow ~ right	26.9	27.7

Source: Stone County Health Department, 2015

Figure 10.3: Table Rock Lake Recreational Water Report

BOTTLE #	SAMPLE LOCATION	DATE COLLECTED	DATE REPORTED	E-COLI/CFU'S/100 ML
R020	Aunts Creek / left side	6/30/2015	7/1/2015	34.1
R004	Aunts Creek / right side	6/30/2015	7/1/2015	13.1
R022	Baxter Park / left side	6/30/2015	7/1/2015	13.4
R001	Baxter Park/ right side	6/30/2015	7/1/2015	13.4
R038	Big M / left side	6/30/2015	7/1/2015	2.0
R043	Big M / right side	6/30/2015	7/1/2015	2.0
Z266	Campbell Point / left side	6/30/2015	7/1/2015	12.1
R041	Campbell Point / right side	6/30/2015	7/1/2015	12.1
R044	Cape Fair / left side	6/30/2015	7/1/2015	28.4
R061	Cape Fair / right side	6/30/2015	7/1/2015	27.5
R052	Eagle Rock / left side	6/30/2015	7/1/2015	1.0
R039	Eagle Rock / right side	6/30/2015	7/1/2015	238.2
R055	Indian Point / left side	6/30/2015	7/1/2015	2.0
R033	Indian Point / right side	6/30/2015	7/1/2015	6.3
R010	Mill Creek / left side	6/30/2015	7/1/2015	8.5
R040	Mill Creek / right side	6/30/2015	7/1/2015	140.1
R009	Moonshine Beach / left side	6/30/2015	7/1/2015	3.1
Z83	Moonshine Beach / right side	6/30/2015	7/1/2015	4.1
Z262	Old 86 / left side	6/30/2015	7/1/2015	6.3
R018	Old 86 / right side	6/30/2015	7/1/2015	1.0
R035	Viola Park / left side	6/30/2015	7/1/2015	19.9
R036	Viola Park / right side	6/30/2015	7/1/2015	14.5

Source: Stone County Health Department, US Army Corps of Engineers, 2015

Food Establishment Inspections

In order to ensure that restaurants are safely storing, preparing, and serving food to the residents and visitors of Stone County, the Stone County Health Department Environmental Health Division performs inspections on 177 food establishments. Some information about food inspections include:

- **Inspection Frequency:**
  Restaurant inspection frequency is based upon the priority rating of the facility. Establishments are rated high, medium or low depending on the complexity of the menu, how much food is made from raw products, and how much is made in advance rather than cooked-to-order. Food-borne illnesses can increase with the number of times that a food product is handled during preparation. (For example: restaurants that handle food more frequently are rated as high priority and are inspected more frequently than a facility that serves food such as a packaged sandwich.)

- **Violations (Two types of violations may be cited):**
  Critical Violations: Violations of the food service code, which, if left uncorrected, are more likely than other violations to directly contribute to food contamination and illness. Examples of critical violations include inadequate temperatures. Such problems can create environments that cause bacteria to grow and thrive, which puts the consumer at risk for food-borne illness.
  Non-Critical Violations: Violations not directly related to the cause of food-borne illness, but if uncorrected, could impede the operation of the restaurant. The likelihood of food-borne illness in these cases is very low. Examples of non-critical violations include a lack of facility cleanliness and maintenance or improper cleaning of non-food contact surfaces.

- **Types of Inspections:**
  Routine: This is scheduled inspection, unannounced to the restaurant. An inspector will conduct a complete inspection covering all items in the regulations for compliance.
  Follow-up Inspection: This is an inspection for the specific purpose of re-inspecting items that were not in compliance at the time of the routine inspection.
  Training: The inspector visits the restaurant to present a formal training event for the restaurant's staff.
  Complaint: This is an inspection conducted as a result of a complaint received by the health department. The specifics of the complaint will be evaluated and discussed with the person in charge.

More information on the Food, Lodging, and Child Care Inspections conducted by SCHD is available on the SCHD website.

MAPP Assessments

Community Themes and Strengths Assessment

The Community Themes and Strengths Assessment is a vital part of a community health improvement process. During this phase, community thoughts, opinions, and concerns are gathered, providing insight into the issues of importance to the community. Feedback about quality of life in the community and community assets is also gathered. This information leads to a portrait of the community as seen through the eyes of its residents. Mobilizing and engaging the community may be a daunting task. However, when successful, it ensures greater sustainability and enthusiasm for the process.

In order to prepare for this Assessment, the Community Health Coalition was presented with three (3) surveys to complete: Community Health Survey, Quality of Life Survey, and Assets Survey. The group completed the surveys during the June 2014 meeting and also participated in Wailing Wall discussions answering the same questions posed on the Assets Survey. The following questions were presented:

1. What is important to our community?
2. How is the quality of life perceived in our community?
3. What assets do we have that can be used to improve community health?

Open discussion was used to elicit community concerns, opinions, and comments in an unstructured way. Asking open-ended questions ensures that issues of concern and interest to the community are raised. Questions about the quality of life in the community can identify specific concerns. Information on perceptions about quality of life in a community can be gathered through a community survey or community discussions.

With the aim of gathering more community response, these surveys were disseminated throughout the community via printed format and online survey format through Survey Monkey. The more community input that can be gathered, the stronger the assessment will be. In total, there were 172 responses to the Community Health Survey, and 148 responses to the Quality of Life Survey.

The **Community Health Survey** asked three questions:

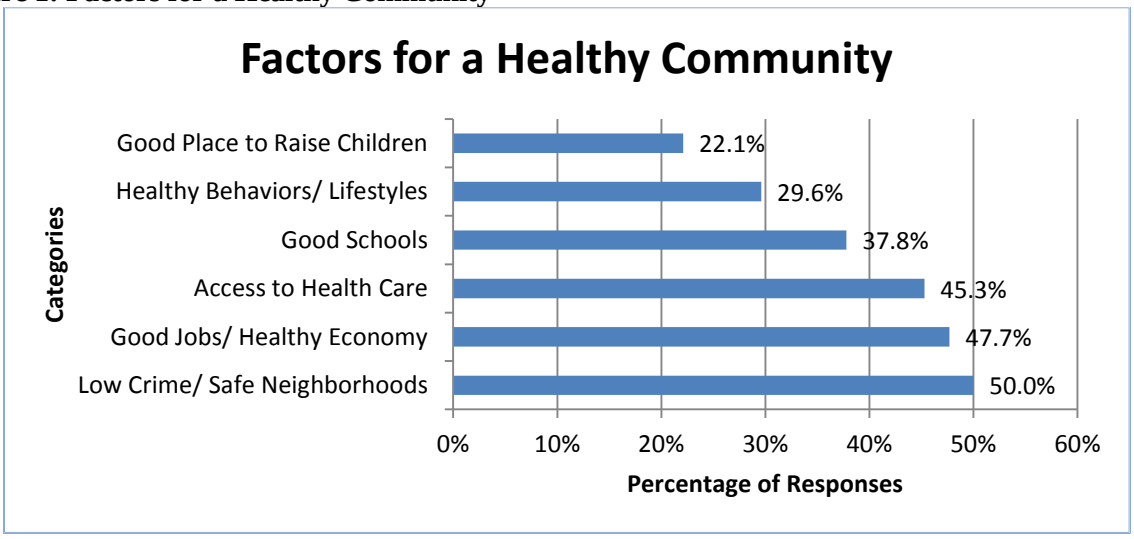
1. What do you think are the three most important factors for a "Healthy Community?"
2. What do you think are the three most important "health problems" in our community?
3. What do you think are the three most important "risky behaviors" in our community?

See list below and Figure 1 for results of Question 1:

- Low Crime/ Safe Neighborhoods: 50%
- Good Jobs and Healthy Economy: 47.7%
- Access to Health Care: 45.3%
- Good Schools: 37.8%

- Healthy Behaviors and Lifestyles: 29.6%
- Good Place to Raise Children: 22.1%

Figure 1: Factors for a Healthy Community

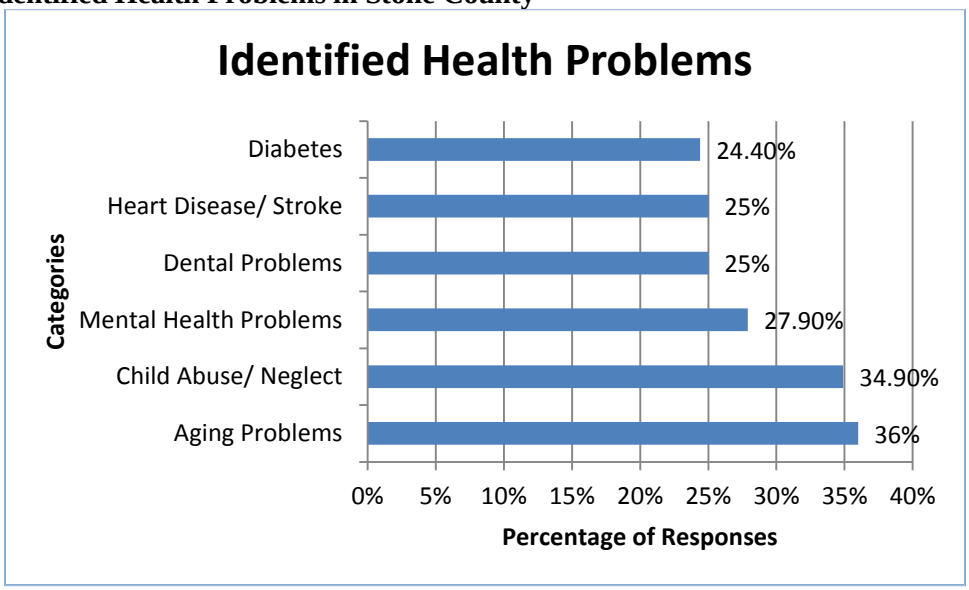


Source: Stone County Health Department, Community Health Survey 2014

See list below and Figure2 for results of Question 2:

- Aging Problems: 36%
- Child Abuse/ Neglect: 34.9%
- Mental Health Problems: 27.9%
- Dental Problems: 25%
- Heart Disease/ Stroke: 25%
- Diabetes: 24.4%

Figure 2: Identified Health Problems in Stone County

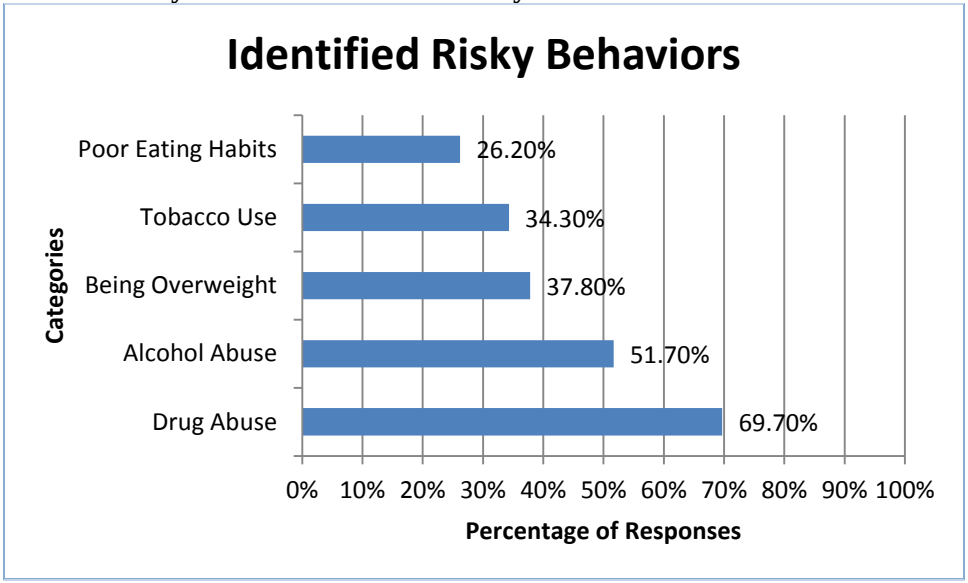


Source: Stone County Health Department, Community Health Survey 2014

See list below and Figure 3 for results of Question 3:

- Drug Abuse: 69.7%
- Alcohol Abuse: 51.7%
- Being Overweight: 37.8%
- Tobacco Use: 34.3%
- Poor Eating Habits: 26.2%

Figure 3: Identified Risky Behaviors in Stone County



Source: Stone County Health Department, Community Health Survey 2014

The **Quality of Life Survey** asked participants to rank their opinion on each topic from 1-5, with 5 being the most positive. Results of that survey are as follows:

1. Are you satisfied with the quality of life in our community? **4** (40.5%)

2. Are you satisfied with the health care system in the community? **3** (31.7%)

3. Is this community a good place to raise children? **4** (41.9%)

4. Is this community a good place to grow old? **4** (39.2%)

5. Is there economic opportunity in the community? **2** (36.5%)

6. Is the community a safe place to live? **4** (48.6%)

7. Are there networks of support for individuals and families? **4** (40.5%)

8. Do all individuals and groups have the opportunity to contribute to and participate in the community's quality of life? **3** (35.8%)

Paper surveys only:

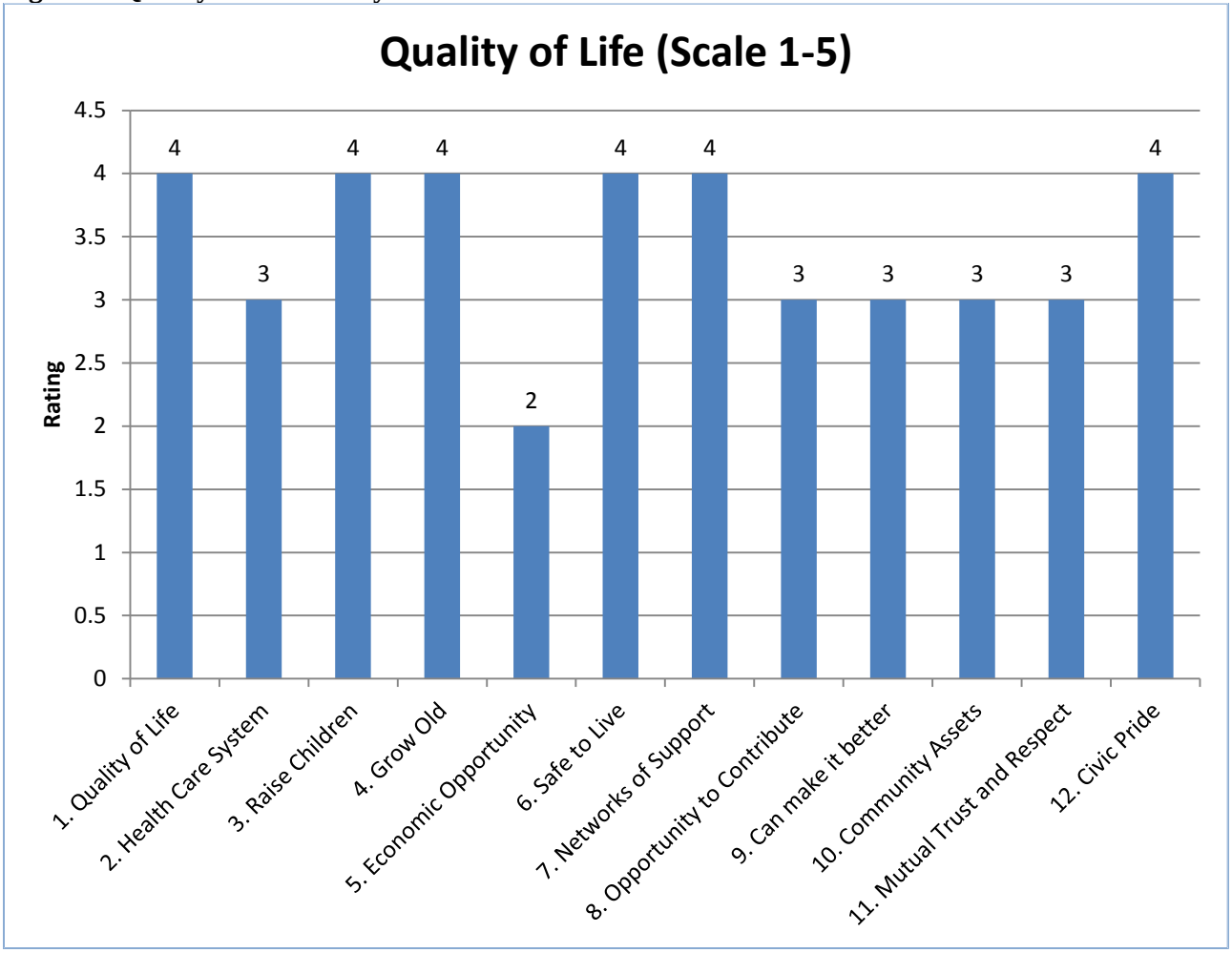
9. Do all residents perceive that they- individually and collectively- can make the community a better place to live? **3** (45.2%)

10. Are community assets broad-based and multi-sectoral? **3** (56.1%)

11. Are levels of mutual trust and respect increasing among community partners as they participate in collaborative activities to achieve shared community goals? **3** (39.4%)

12. Is there an active sense of civic responsibility and engagement, and of civic pride in shared accomplishments? **4** (36.1%)

Figure 4: Quality of Life Survey Results



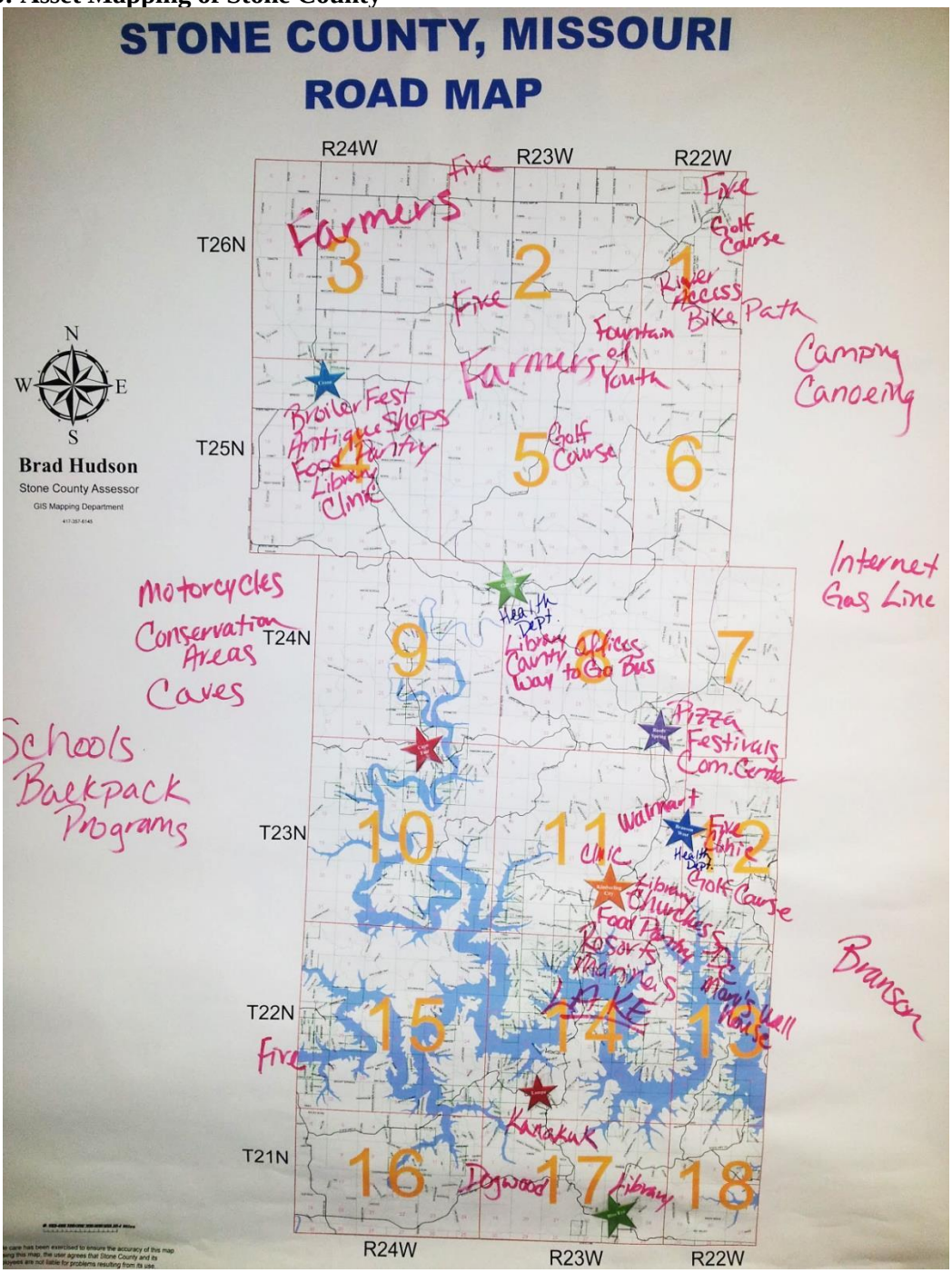
Source: Stone County Health Department, Community Health Survey 2014

Asset mapping is an important tool for mobilizing community resources. It is the process by which the capacities of individuals, civic associations, and local institutions are inventoried. The Community Health Coalition also charted the assets available in Stone County on a map provided by the Stone County Assessor's Office.

Resources identified in the county include both health department locations, health clinic locations, farmers, libraries, river/ lake, camping/ recreation, golf courses, schools, Way-to-Go bus, churches, county offices, food pantries, festivals, and gas/ internet access. Knowing these resources will better help

us to plan programs based on what we need and see which areas are less predominately populated with resources. Please see Figure 5 below for the map as completed by the Community Health Coalition.

Figure 5: Asset Mapping of Stone County



Source: Stone County Health Department, Asset Mapping 2014

Forces of Change Assessment

The Forces of Change Assessment is aimed at identifying forces—such as trends, factors, or events—that are or will be influencing the health and quality of life of the community and the work of the local public health system. Trends are patterns over time, such as migration in and out of a community or a growing disillusionment with government. Factors are discrete elements, such as a community's large ethnic population, an urban setting, or the jurisdiction's proximity to a major waterway. Events are one-time occurrences, such as a hospital closure, a natural disaster, or the passage of new legislation.

In order to prepare for this Assessment, the Community Health Coalition was presented with a worksheet to complete asking for examples of Forces occurring in the county, and then describe any opportunities or threats that could potentially arise from those forces. The group completed the worksheet during the July 2014 meeting and also participated in Wailing Wall discussions answering the same questions posed on the Worksheet. The following questions were presented to get the group thinking:

1. What has occurred recently that may affect our local public health system or community?
2. What may occur in the future?
3. Are there any trends occurring that will have an impact? Describe the trends.
4. What forces are occurring locally? Regionally? Nationally? Globally?
5. What characteristics of our jurisdiction or state may pose an opportunity or threat?
6. What may occur or has occurred that may pose a barrier to achieving the shared vision?

Open discussion was used to elicit community concerns, opinions, and comments in a structured way. Asking open-ended questions ensures that issues of concern and interest to the community are raised. Each member was encouraged to participate in the brainstorming session to ensure that a diversity of perspectives is represented.

Forces can include a variety of categories. It is important to include those that are:

- Social
- Economic
- Political
- Technological
- Environmental
- Scientific
- Legal
- Ethical

The following pages include the Forces, Opportunities, and Threats that the Stone County Community Health Coalition developed.

Table 1: Forces of Change Assessment

Forces	Threats	Opportunities
1. Flood	Damage to Structures and Economy	Rebuilding, Increased Preparedness, Increased Construction Employment
2. Tornado	Damage to Structures and Economy, Increase Homelessness, Animals Displaced	See # 1
3. Drug Abuse	Crime, Health, Mental Health, Employment, Dental Problems, Stress to County, Law Enforcement, Child Abuse Increases	Drug Court, Education, Grants, Partnerships, Jobs
4. Outbreaks	Health Care Demand, Economic Strain, Deaths, Fear, Decrease in Education	Increased Education, Public Health, Preparedness, New Science/ Vaccines
5. Water Contamination	Increase in Illness, Decrease in Tourism, Health/ Economic Strain	Treatment Advances, Ordinances
6. Tobacco-Free Policies	Resistance, Perceptions	Increased Tourism, Increased Health, Decreased Disease, Decreased Smoking Rate, Decreased ER Visits, Increased Business/ Jobs
7. Homelessness	Substance Abuse, Child Abuse/ Neglect, Unemployment, Housing, Stress to County	Collaborations, Shelters, Employment, Housing
8. Major Employers	Economic Failure, Stress to County, Taxes	Increase Jobs, Economy, Taxes, Insurance, Transportation
9. Domestic Violence	See # 7	Education, Programs, Increased Awareness, Housing
10. Increased Aging and Hispanic Populations	Health Care Demand, Public Assistance, Language Barriers, Schools, Transportation	Senior Health Centers, Increased Business/ Diversity, Local Giving, Open Horizons, Vacation Homes
11. Road Conditions	Accidents, Wear and Tear, No Shoulder, Child Safety, Tourism	Jobs, Increased Tourism, Cost Sharing, Partnerships, Taxes, Bridges, Ferries

12. Lack of identification with Stone County	Decreased Economy, Resources, Poor Engagement, Sense of Community	Educating, Programs, Public Relations, Work with Other Counties, Increase Parks, Outreach to Vacationers
13. Heating Costs	Financial Strain, Unsafe Living, Homelessness, Child Neglect, Crime	Assistance Programs, Tax Credits, Increased Efficiency, Go Green
14. Alcohol Abuse	See # 3 and #7	Taxes, Education, Employment
15. Transient Population	Crime, Unemployment Rate, High Emergency Room Visits, Fragmentation of Services, Utilization of Services, Decreased Education	Increased Tourism, Diversity, Housing
16. Anti-vaccination Groups	Outbreaks, Home Schooling	Education, Public Health, Decreased Healthcare Costs
17. Health Care Act	Confusion, Lack of Education, Financial Burden, Health Care Gaps	Education, Increase Health Care Access, Decrease Health Care Costs
18. Child Abuse	See # 7, Resources, Fosters Case Overload, Decreased Therapy/ Education	Programs, Education, Outreach, Increase Foster Families, Financial Benefits
19. State Agencies Re-organizing	Case Overload, Outsourcing, Insurance Delays, Patient Access, Inconsistency	Increase Efficiency, Money Re-Allocation
20. Budgets	Cutting Programs, More Work/ Less Pay, High Turnover	Grants, Efficiency, Collaboration, Volunteers

Source: Stone County Health Department; Forces of Change Worksheet August 2014

Conclusion:
After completing the Forces of Change worksheet and brainstorming session, the Community Health Coalition has discovered which Forces that are currently, have in the past, or could in the future, impact the Local Public Health System in Stone County. These forces each presented potential Opportunities and Threats in which the group, along with the whole community, need to be prepared. The list of forces in the table will act as a good indicator of which areas the coalition will need to focus priority when developing the goals and objectives as part of the Community Health Improvement Plan.

Local Public Health System Assessment

The Local Public Health System Assessment is assessed through the National Public Health Performance Standards Program (NPHPSP), which is intended to help users answer questions such as "What are the activities and capacities of our public health system?" and "How well are we providing the Essential Public Health Services in our community?" NPHPSP is a partnership effort to improve the practice of public health and the performance of public health systems. The assessment instruments are based on the framework of the ten Essential Public Health Services. The Essential Services represent the spectrum of public health activities that should be provided in any jurisdiction or community. The purpose of undertaking a performance assessment is to strengthen and improve the public health system.

NPHPSP provides an assessment workbook in which each essential service is broken down into standards and objectives. Each Essential Service was thoroughly evaluated by the Community Health Coalition and given a ranking of 0, 25, 50, or 100 based on the current status of work towards that essential service. The program then calculates the averages for each objective and standard and assigns each essential service with a score of 0-100.

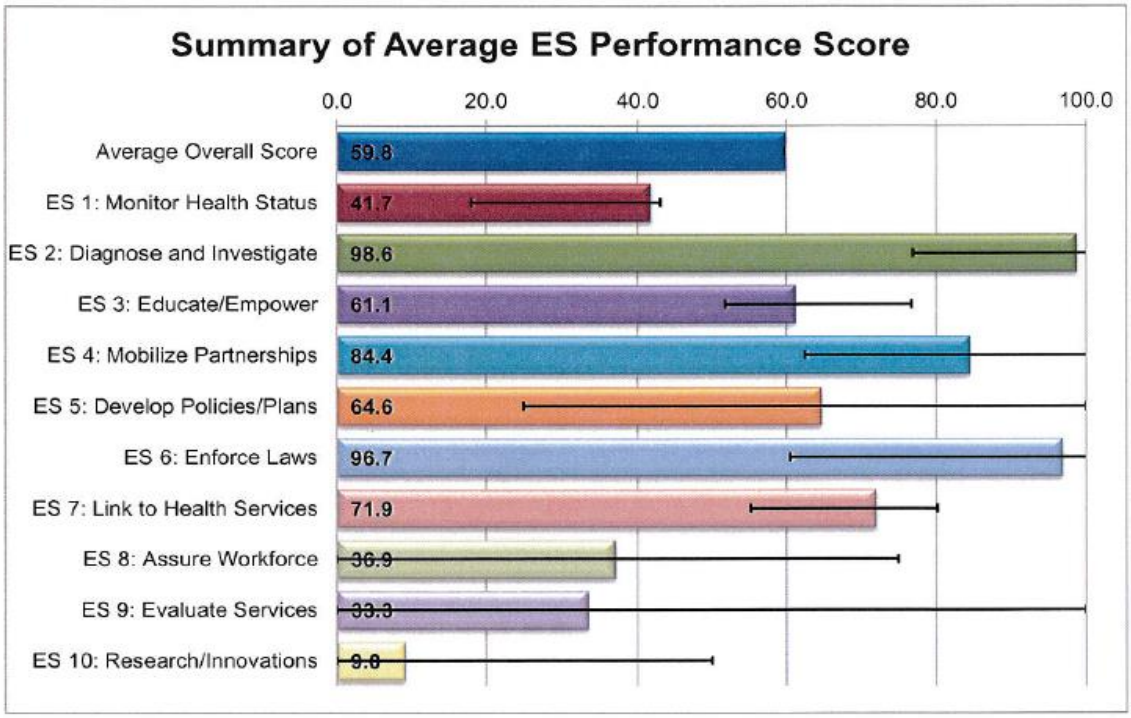
Table 1. Summary of Assessment Response Options

Optimal Activity (76-100%)	Greater than 75% of the activity described within the question is met.
Significant Activity (51-75%)	Greater than 50%, but no more than 75% of the activity described within the question is met.
Moderate Activity (26-50%)	Greater than 25%, but no more than 50% of the activity described within the question is met.
Minimal Activity (1-25%)	Greater than zero, but no more than 25% of the activity described within the question is met.

The scores of Stone County's Essential Services are as given:

Overall Scores for Each Essential Public Health Service

Figure 2. Summary of Average Essential Public Health Service Performance Scores



Performance Scores by Essential Public Health Service for Each Model Standard

Figure 3 and Table 2 on the following pages display the average performance score for each of the Model Standards within each Essential Service. This level of analysis enables you to identify specific activities that contributed to high or low performance within each Essential Service.

The entire narrative including the complete evaluation provided by NPHPSP is available in the Local Public Health System Assessment Narrative.

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