2014

# Lower 8 Community Health Assessment & Community Health Improvement Plan

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|---|---|---|---|
| | Wilson | Neosho | Crawford |
| Elk | | | |
| Chautauqua | Montgomery | Labette | Cherokee |

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# Executive Summary

The Lower 8 Region is considered to be a rural area. Community members in the Lower 8 counties are very satisfied with their quiet small town atmospheres, yet they are able to travel two hours to an urban area to experience the urban atmosphere. The community health assessment has revealed the huge concern that residents have for their families, the economy, health, and health care. Rural residents tend to be more independent and form their own solutions for concerns. This has been demonstrated many times by the community relying on their own resources rather than waiting for external governmental assistance during natural disasters such as the Franklin tornado in Crawford County, ice storms in Cherokee County, a tornado in Labette County, and flooding in Montgomery, Neosho, and Wilson counties. During these times the communities have come together as a county as well as a region to meet the needs of community members. Likewise, these communities have learned that teamwork is needed to address other issues such as poverty, health, education, economy, and lifestyle changes. That being said, there are endless issues remaining to be addressed.

Industry for the Lower 8 region consists of educational services, health care and social assistance with manufacturing and retail following as second and third. Agriculture is the primary industry for Elk and Chautauqua counties.

Lower 8 communities have watched their youth mature into young adults that leave our community for better educational and employment opportunities. The community health assessment revealed that community members thought that the schools were one of the most important aspects of their community. Yet, Crawford County has just seen the loss of a school in their community due to the poor economic state. The unemployment rate for the Lower 8 region is just under the 5% state unemployment rate. Despite the fact that the unemployment rate for the region was under 5%, the regional median household income is only $38,507.00 compared to the state of Kansas median income of $48,964.00 which is more than 20% lower than the state.

The health concerns of the region are similar to those of the state. However the level of need in the Lower 8 Region seems to be higher than those of the state. Two examples are the state obesity rate of 28.8% while the Lower 8 obesity rate is 32.4%; and the adult smoking rate for Kansas is 17.8% while the Lower 8 Region adult smoking rate is 22.7%. The Lower 8 region also stood out with the hospital admission rate due to unintentional injuries being almost double that of the Kansas rate. Deaths due to unintentional injuries were significantly higher proportionally than the state rate.

The Lower 8 region has a rate of 21.1% of uninsured as compared to the Kansas rate of 19.1%. Affordable health care leaves many unanswered questions at this point of time. Communities are awaiting the full implementation of the Affordable Care Act to identify what areas of service are met and what the remaining gaps in service are.

The community survey identified family social determinants of health as one of the community priorities.  Here there is a broad range of concerns that include teen pregnancy, healthy decisions, and completion of education, motivation to improve living conditions, teen violence, substance abuse, and a lack of activities for the youth.  Single female households are of a larger concern to Crawford and Montgomery counties.  These households are at an increased risk of economic, educational, social and health hardships.

The work group took all of these factors into consideration to identify four areas to address in the Community Health Improvement plan.

**The four major areas of concern identified by the regional work group are**

1. **Economic Development**
2. **Healthy Nutrition**
3. **Access to Affordable Health Care**
4. **Family Social Determinants**

A myriad of partners gave of their time and energy to assist in the development of this community health assessment.  These partners openly shared their talents, knowledge and beliefs during each phase of the community health assessment.  Without the collaboration of the Lower 8 regional partners, the development of this community health assessment would not have been possible.  Copies of this document may be found at www.crawfordcountykansas.org or by contacting your local county health department.

# Background

The Lower 8 Region Public Health Region of Southeast Kansas was formed in 2002. Originally, this regional focus was formed to address bioterrorism, however, after several natural disasters occurred throughout the region, it was determined that the Lower 8 could broaden its scope to include the ten essential services of public health in each county (See Appendix A). The Lower 8 Region has a solid foundation and strong history of collaboration. Therefore, the Lower 8 Region chose to do a Regional Community Health Assessment and Community Health Improvement Plan.

## Meet Our Counties

The Lower 8 consists of eight counties in Southeast Kansas. Let us first get to know each individual county and then we will also focus on the counties as a region.



Journey through Southeast Kansas traveling from the south through Miami, Oklahoma, or from the east through Joplin, Missouri and you'll cross into Cherokee County where the famous Route 66 winds through Galena and Baxter Springs, Kansas. Here you will find the only surviving Marsh Arch Bridge on the entire Route 66. Route 66 connects our shared heritage for rural USA.

Cherokee County is a rural county with a population of just over 21,000. The largest business in Cherokee County is Crossland Construction. The largest employment industries are education, health care and social services. Coal mining is an important part of Cherokee County's history and West Mineral is the location of Big Brutus, the largest electric coal shovel in the world. Cherokee County has a high injury hospitalization rate of 1,616.0 per 100,000 compared to the Kansas rate of 546.3 per 100,000. Additionally Cherokee County has the highest suicide rate and the highest rate of smokeless tobacco use in the Lower 8 Region.



Traveling west on Highway 160 then following Highway 59 you will come to Labette County where the home of the infamous Bloody Bender's is located. Labette is another rural county with a population of just over 21,000. The city of Parsons is home to half of the county population at 11,000 residents. Parsons is also the home of Labette Community College where health and science careers are available for multiple disciplines. The largest employer in Labette County is Labette Health Hospital. Residents in Labette County and the surrounding area enjoy the Big Hill Lake where hunting and fishing are the biggest tourist attractions.

Labette County does have access to medical care at a higher rate than the state average, and the lowest rate of uninsured adults within the region. Labette County has the highest level of cancer in the Lower 8 Region with a rate of 11.7% compared to the state rate of 9.9%. The violent crime rate of Labette is also above the state average with Labette County at a rate of 4.7% compared to the state rate of 3.5%. The highest birth rate in the Lower 8 region is in Labette County with a rate of 85 per 1,000 compared to the state of Kansas rate of 64 per 1,000.

As you travel west on Highway 400 you will enter Montgomery County. Montgomery County is one of the largest counties in the Lower 8 with a population of just over 34,000 making it a semi-urban county. Montgomery County is the home of nine museums with the



Little House on the Prairie and the Dalton Museum being popular tourist sites. There are also community colleges in Montgomery County with one being in Coffeyville and the other in Independence. The largest employers are educational services, health care, and social services. Montgomery County has the highest rate of single female households within the region with a rate of 6.7% compared to the state rate of 6.9%.

Unemployment is higher in Montgomery County with a rate of 6.5% compared to the region rate of 4.8%. Other concerns for Montgomery County are tobacco use, obesity, violent crimes, and drug arrests. Montgomery County has the lowest binge drinking of 9.7% compared with the state rate of 14.5%.

Heading west out of Independence, KS taking Highway 166 and Highway 99 you will enter Chautauqua County. Chautauqua has a population of just over 3,500 making it a frontier county. Agriculture, hunting and fishing are more common in Chautauqua County than any other counties in the region. The County Government of Chautauqua is one of the biggest employers in the county. The largest tourist attractions for Chautauqua



County are the Yellow Brick Road, Emmett Kelly Museum, and deer hunting. Chautauqua has the highest population median of 48.1 years. The lowest unemployment rate in the Lower 8 region is in Chautauqua County with a 3% rate compared to a 4.8% regional rate. Due to the small population, data for all core indicators could not be compiled for Chautauqua.

Now as you travel north on Highway 99 you will come to Elk County. Elk County has a population of just over 2,700 making it the smallest population in the region and also a frontier county. Like Chautauqua County, agriculture, hunting and fishing are more common than in any other counties in the region. Elk County has the smallest family size of 2.63 compared to the state family size of 3.12. It also has the lowest number of deaths attributed to tobacco both in the region and in the state. There is a high rate of unintentional injury deaths with the Elk County

rate of 78.1 per 100,000 compared to the Kansas rate of 41.1 per 100,000. Once again, due to the small population, data for all core indicators could not be compiled for Elk County.

Leaving Elk County on Highway 99 and traveling east on Highway 400 you enter Wilson County. Wilson County has a population of just over 9,000. It is considered to be a rural county. Unlike the other counties in the Lower 8, Wilson County's largest employer is manufacturing. One of the historic sites for Wilson County is the Norman No. 1 Oil Well, which marked the beginning of the Mid Continental Oil Field. Wilson County has the lowest number of single mothers with a rate of 3% compared to the Kansas rate of 6.9%. Completion of education is a large need in Wilson County as Wilson County was the lowest in percentile in the region with a rate of 81.8% completing a high school education compared to the state rate of 90%. Wilson County has concerns in regards to obesity and diabetes with rates well above the regional and state rates. Fruits and vegetables are most popular in Wilson County as they led the region in approximately 25.1% of residents eating 5 fruits or vegetable a day compared to the state rate of 18.6%.

Taking Highway 75 and 39 you will soon arrive in Neosho County. Neosho's population is just under 16,500, which is again considered to be a rural county. Neosho County houses the Martin and Osa Johnson Safari Museum and the Neosho County Community College. Education, health care and social services are the largest employers in Neosho County. Core indicators for Neosho County are similar for other counties within the region. Neosho County has the lowest immunization rate within the region.

Finally, traveling east and south using Highways 59 and 47 you arrive in Crawford County. Crawford County has a population of just over 39,000 making it a semi urban county. Crawford County houses Pittsburg State University. The city of Pittsburg is the location for multiple sport tournaments and community events. The World War II Memorial located near the University is one of the tourist sites in Crawford County. Crawford County had the lowest smokeless tobacco rate of 2.4% compared to the state rate of 5.9% and the lowest obesity rate of 23% compared to the Kansas rate of 28.8%. The rate of language other than English spoken in the home is highest in Crawford with 5.8%. This is still much lower than the Kansas rate of 11.4%. Crawford County had the highest number of single mother homes in the region.

Now traveling south on Highway 69 and 160, you have traveled the entire Lower 8 Region. As you can see there are many similarities and many differences in these counties. Each county has its own uniqueness with its own strengths and weaknesses. It is our hope that by

collaborating as a region we can change the weaknesses in our region to strengths and become one of the healthiest regions of Kansas, which is the purpose of the Lower 8 Community Health Assessment.

## Regional vs. Local

The total population of the Lower 8 of Southeast Kansas is just over 148,000.  The two largest counties in the Lower 8 are Crawford and Montgomery, both with a population just below 40,000. Elk has the smallest population of 2,720.  With the exception of Crawford, all of the counties decreased in population according to the 2010 Census data.  Crawford County saw a 2.9% increase in population. The Lower 8 consists of two semi urban counties, four rural counties, and two frontier counties.  Frontier counties are challenged to find available data for their community due to their size, and when the data is available there is a marked potential for a high rate of variability.  For the frontier counties the regional data would be more consistent and reliable.  Staffing is always a challenge in smaller health departments.  Consolidation of staff for the completion of the community health assessment would not only reduce the workforce burden on all of the Lower 8 counties, but it would also assist with the financial burdens.  Therefore, it was felt that we could consolidate our workforces, save money, save time, and have a larger impact in our region.   At the same time, several counties desired to see their data at the county level as well so they could utilize the data at the local level.  Therefore it was decided to complete the community health assessment as a region, but maintain individual county data to assist counties that would like to address issues more specific to their county.

# The Process

### A. Identify funding sources:

One of the initial steps in conducting the community health assessment was to find a funding source. Options for funding consisted of using regional monies, dividing the cost between counties, and applying for a grant. The Lower 8 opted to utilize regional monies for the initial costs. However, we became aware of a Kansas Department of Health and Environment grant to complete a community health assessment. A regional application was made and received for the Kansas Department of Health and Environment monies. Although the monies would not cover the entire cost of the community health assessment, they would be of great assistance towards completing the community health assessment.

### B. Partner identification:

The second step for the region was the identification of one person per county to serve as a member of the core leadership team.

### C. Model:

The next step was the selection of a community health assessment model to guide us through the community health assessment process.

### D. Structure:

Establishing a structure for the completion of the community health assessment was the final step.

# Phase I: Organization

In the spring of 2011 the Lower 8 began to lay the foundation for a regional community health assessment. The Lower 8 made a special effort to invite agencies within the region to become partners in our community health assessment journey. On May 20, 2011 partners across the region attended the Community Health Assessment Planning meeting at the Parsons Public Library. During the meeting Cindy Samuelson from the Kansas Hospital Association presented the Kansas Health Matters website and presented to the area hospitals the importance and requirement for community health assessments for the local hospitals.

Todd Durham from Wilson County Health Department presented the community health assessment needs for public health. During the next year, health department administrators of the Lower 8 of SEK met monthly to develop a timeline, form a key leadership team, and chose a model that would be utilized in the Lower 8 community health assessment. Kansas Health Institute was a key partner to the Lower 8 as during 2011 the region participated in a community health assessment learning collaborative.

In addition, we utilized the East Central Kansas Public Health Region (ECKPHR) as a mentor, as they were very similar to the Lower 8 region. After a long brainstorming session, it was determined that the public health region was well organized and could serve as the core team. Distance, time, and funding constraints kept other partners from participating on the core team. Therefore, each local health department administrator would hold community health assessment meetings in their community to keep local partners engaged in the community health assessment process.

The Lower 8 selected the Mobilizing For Action Through Planning and Partnerships (MAPP) model for the Lower 8 community health assessment. The MAPP model is an evidence-based model that would give us a clear picture of our community by completing four different assessments. In addition, the MAPP model includes strategic planning, assists with community change, and strengthens the local public health system. Another aspect of the MAPP model is that it builds public health leadership, increases the visibility of public health in the community, and takes a look at the community perspective, therefore creating a healthy community as an end product. Core team members identified potential partners throughout the community by a process similar to the Circles of Involvement process. The availability of technical assistance from East Central Kansas Public Health Region and also Sonja Armbruster, Sedgwick County Health Department, who both had previous experience with this model, was a leading factor in choosing the MAPP model. This model was developed by the National Association of City County Health Officials and the Centers for Disease Control and Prevention. MAPP consists of six phases:

I) **Organization**
II) **Visioning**
III) **The Four Assessments**
IV) **Identifying Strategic Issues**
V) **Formulating goals**
VI) **Strategies and Action Cycle**

Detailed information on the MAPP process can be found on the National Association of County and City Health Officials website, www.naccho.org.

# Phase II: Visioning

The visioning process serves as a guide that leads to a shared community vision. A vision statement is essential to a community health assessment as it provides focus and purpose to partners that have achieved a shared vision for the future. The Lower 8 of Southeast Kansas invited five community leaders from each county to attend a visioning meeting in Chanute, Kansas. This meeting was facilitated by Build The Square leaders, Liz Hendricks and Evelyn Hill. Attendees of this meeting and following meetings can be found in Appendix B.

During this meeting, regional leaders were presented with the 2010 county health rankings and an overview of the health of the Lower 8 region was discussed. After the presentation of the health status of the community, each table discussed what their vision was for their communities in Southeast Kansas. A vision statement was made at each table and then presented to the group. Through an active group discussion, the vision statement was developed. After final review by the core team, the vision statement was accepted.

***Vision Statement: Empowering all generations with mindful awareness to create an active and healthy community.***

This statement portrays the aspiration of the region to promote conscious awareness in all generations throughout the Lower 8 community to be active and healthy community members.

# Phase III: The Four Assessments

The four assessments are very thorough and required participation throughout the region. The Lower 8 core team chose to concentrate on one assessment at a time allowing approximately three months for each assessment to be completed.

A. **Community Themes and Strengths Assessment**: gives a picture of issues that community members feel is important to them. Community input is the key to a successful community assessment and improvement plan.

B. **Community Health Status Assessment**: identifies areas of concern/needs in the community and gives a reality check on the health of our community.

C. **The Local Public Health System Assessment** (LPHSA): assesses all entities that are integral in the local public health system. The LPHSA evaluates the competencies of the local public health system.

D. **Forces of Change Assessment**: identifies community forces that would impact or impede the community and the local public health system.  This could be legislative, technological, legal, economic, ethical social issues, environmental or political.

The Kansas Health Institute analyzed the Health Status, Quality of Life, and Forces of Change assessments. The summary can be found in Appendix C.

## Assessment A: Community Themes and Strengths

**Asset Mapping:**
The core team met to identify the assets in the community.  This was done by asking each team member
> *"What would you miss if it wasn't in your area?"*

*Assets for the Lower 8 counties*

- Emergency services
- Hospitals
- Grocery and drug store
- Small retail stores
- Schools/higher education
- Parks/walking trails
- Churches
- Public Health
- Medical Care
- Senior Centers
- Young people

- Volunteers
- Libraries
- Safe water supply
- Utilities
- Postal Service
- Service Organizations
- Youth Organizations
- Agriculture
- Energy productions
- Eating places
- Transportation

*Quality of Life Survey:*

Focus groups and community meetings have not been successful in our region, therefore the core team opted to develop a survey tool to acquire community views. Each team member was trained on the specific tool utilized and was responsible for distributing the tool in their local community. Efforts were made at both the local and regional levels to distribute the survey tool. To assist the region in collating the results, Southeast Education Center in Greenbush developed a scantron survey where data could be easily extracted. Kansas Health Institute was utilized to capture the individual written comments from the survey tool.

The Core Team distributed the quality of life survey as extensively as possible throughout the region. Surveys were available in an electronic format where team members forwarded the survey to list-serves with requests to forward it to anyone in the community. Hard copies were available at local libraries, each local health department, and at some local businesses. In addition, a Spanish version was made available due to the percentage of Spanish speaking individuals in Crawford and Montgomery counties. The media was also utilized and several web links were available. The results of the survey are available in Appendix E.

## Assessment B: Community Health Status

*Core Indicators Profile:*

The core indicators profile provided a snapshot of key measures of demographics and health status within the Lower 8 Region. The core indicators will be utilized with other data in the community health assessment to develop a comprehensive understanding of health in the region. These profiles should assist the region in the identification of more specific community health issues/priorities.

The core team selected indicators that were based on three criteria: need, statistical significance and relevance to the entire region. Indicators chosen by the core team were demographics, social and economic factors, education, mortality, violence and injury, disease and poor health, health behaviors, access to care, and maternal child health. The team engaged the assistance of the Kansas Health Institute in the selection of core indicators and data interpretation. The Kansas Health Institute added several indicators, including percent of obese adults, percent of infants fully immunized at 24 months, sexually transmitted disease rate, infant mortality rate, low birth weight rate, percent of adults who currently smoke, uninsured population rate, average monthly WIC participation rate, and violent crime rate.

Several of these indicators were available on a regional basis. When county data was available comparisons were made by county, as well as regional, and state comparison. Again, due to the small population in our frontier counties, data for all counties was not available for all indicators. Data from the core indicators was taken from the Kansas Information for Communities, US Census Bureau's American Community Survey, and the Kansas responses to the Behavioral Risk Factor Surveillance (See Appendix D)

## Assessment C: National Public Health System Performance Standards

Although not recognized by the community, the public health system consists of more than the local public health department.  The local public health system includes all organizations/service agencies that impact the health status of the community. The National Public Health System Performance Standards Assessment (**NPHSPS)** was intended to help assess what activities are being accomplished in the region, what is the capacity of the local public health region and how well the local public health system is providing the essential services.  To assist in the preparation for the National Public Health System Performance Standards assessment, one core team member from the Lower 8 participated in the State Public Health System Performance Assessment and all counties participated at the Regional Public Health System Assessment.

For this assessment, the core team collaborated with the nursing department at Pittsburg State University.  This allowed the Lower 8 the usage of the Pittsburg State electronic voting system and Nursing Department facility.  As each question was asked, members were able to vote electronically and see the results of voting almost instantaneously.  Through this assessment community members were educated on the broad spectrum of partners and their roles in the local public health system.  Jane Shirley from the Kansas Department of Health and Environment Office of Local and Rural Health facilitated the assessment.

One county (Crawford) also participated in a state and county Local Public Health System performance assessment.   LPHPSP scores were generated by the CDC system.

The Lower 8 region was strongest at Essential Service number 2, *Diagnose and investigate health problems and health hazards, which* received a score of 91.  The weakest link was Essential Service number 4: *Mobilize Community Partnerships to Identify and Solve Health Problems.*  Those in attendance felt that the Community Health Assessment was a big step to improving Essential Service number 4.  The table below lists the key results of the NPHSPS Assessments.  The full report can be found in Appendix G, along with those for the Crawford County LPHSPS.

# Lower 8 NPHPSP* Results
**\*National Public Health System Performance Standards Assessment**

| | Essential Public Health Service | Score |
|---|---|---|
| 1 | Monitor Health Status To Identify Community Health Problems | 29 |
| 2 | Diagnose And Investigate Health Problems and Health Hazards | 91 |
| 3 | Inform, Educate, And Empower People about Health Issues | 66 |
| 4 | Mobilize Community Partnerships to Identify and Solve Health Problems | 18 |
| 5 | Develop Policies and Plans that Support Individual and Community Health Efforts | 72 |
| 6 | Enforce Laws and Regulations that Protect Health and Ensure Safety | 73 |
| 7 | Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable | 60 |
| 8 | Assure a Competent Public and Personal Health Care Workforce | 61 |
| 9 | Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services | 47 |
| 10 | Research for New Insights and Innovative Solutions to Health Problems | 85 |
| | **Overall Performance Score** | **60 out of 100** |

## Assessment D: Forces of Change

The Forces of Change Assessment is utilized to evaluate opportunities and threats and current/pending policies and practices that will affect the region's health. Midge Ransom from the ECKPHR facilitated the forces of change assessment meeting. Forces of Change were categorized as legislative, technological, legal, economic, ethical social issues, environmental, or political. Some of the common denominators that occurred during the brainstorming were the Affordable Care Act which was viewed as both as an opportunity and a threat, poor local economy, and state involvement in local public health. The detailed work sheet can be found in Appendix F.

## Phase IV: Identify Strategic Issues

Once again Build the Square facilitated a regional meeting to assist the group in the identification of the strategic issues in June 2013. After a review of the MAPP process and presentation from the Kansas Health Institute on the data compiled during the past year, the participants were led in a quality improvement process where sticky dots were placed by all issues during a group discussion. After the strategies were identified, the participants were divided into groups and the following **strategic issues statements** were developed:

## Strategy #1    Economic Development
Be the best we can be with the assets we have by developing an economic development plan, creating a positive business climate, developing an educated and healthy workforce, developing a business incubator and creating a positive quality of life.

## Strategy #2    Chronic Disease
Provide personalized education to empower the citizens in our communities to prevent and manage chronic disease through accountability and environmental and cognitive change.

## Strategy #3    Access to Affordable Healthcare
Increase access to affordable quality healthcare and preventive services in the Lower 8 region by reducing barriers to healthcare, and through providing transportation, insurance and health providers.

## Strategy #4   Lifestyle/Family Management
Redefine the definition of family and utilize services available in the community to focus on creating a cohesive community and healthy home-life.

# Phase V: Formulating Goals and Strategies

Goals and strategies will be found in the Community Health Improvement Plan document below.

# Phase VI: Strategies and Action Cycle

The strategies and action cycle will be a continual process of addressing the objectives identified in the community health assessment.  Those endeavors will be documented elsewhere.
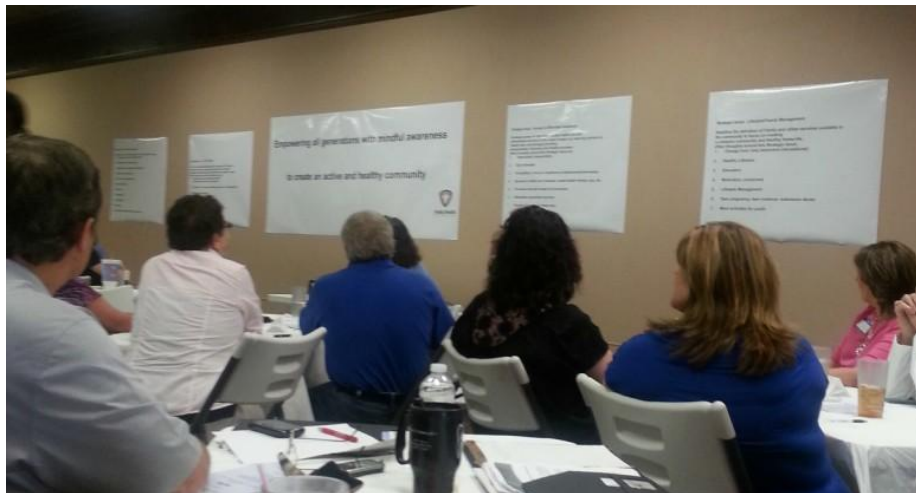
# Community Health Improvement Plan

Approximately fifty community leaders from Chautauqua, Cherokee, Crawford, Elk, Labette, Montgomery, Neosho, and Wilson counties met in August 2013 at Chanute, Kansas to develop a regional Community Health Improvement Plan.   It was felt that a regional plan would have a larger impact in the area, time savings, staff collaboration, and stretching the dollar.  The task for the regional community leaders was to develop a community health improvement plan from the community health assessment.

Economic development was high on the priority list for the Lower 8 of SEK.  The data substantiated the community's economic concerns with the Lower 8 Regions' unemployment rate of 4.8% just behind the state unemployment rate of 5.0%.  The most dramatic concern with economic development is the median household income of $38,507.00 for the region compared to the state of Kansas median income of 48,964.00 which is more than twenty percent lower than the state.  Elk and Chautauqua counties have an even lower median household income of $35,701 and 34,246 respectively.  Combine this data with the community themes and strengths assessment where 41.7% of the region identified the economy of the community as a high priority.  Additionally, the forces of change assessment revealed the threats to our region were loss of jobs, loss of economic stability and professionals leaving the area for better financial opportunities.

Chronic Disease – Healthy Behaviors
We defined chronic disease as heart disease/stroke, obesity, diabetes, poor diet, cancer and smoking.   Chronic disease will be referred to as **healthy behaviors** from this point forward. The Lower 8 was less healthy than the state of Kansas according to the following indicators:

| Indicator | Lower 8 Value | Kansas Value |
|---|---|---|
| Obese Adults | 32.4% | 28.8% |
| Diagnosed Arthritis | 30% | 24% |
| Diagnosed Diabetes | 10.2% | 8.5% |
| Adult Smoking | 22.7% | 17.8% |
| % Eating Five or More Fruits and Vegetables Per Day, On Average | 15.6% | 18.6% |

While the community identified cancer as one of the most important health issues in 40% of the survey responses, the Lower 8 region's rate of cancer was very close to that of the state of Kansas: 9.7% and 9.9% respectively. Labette County was higher than the state with a rate of 11.7%.

The third strategy identified was access to affordable health care. The Lower 8 region has a rate of 21.1% of uninsured as compared to the Kansas rate of 19.1%. The forces of change assessment indicated that there were concerns about health care gaps that could arise from the Affordable Care Act.
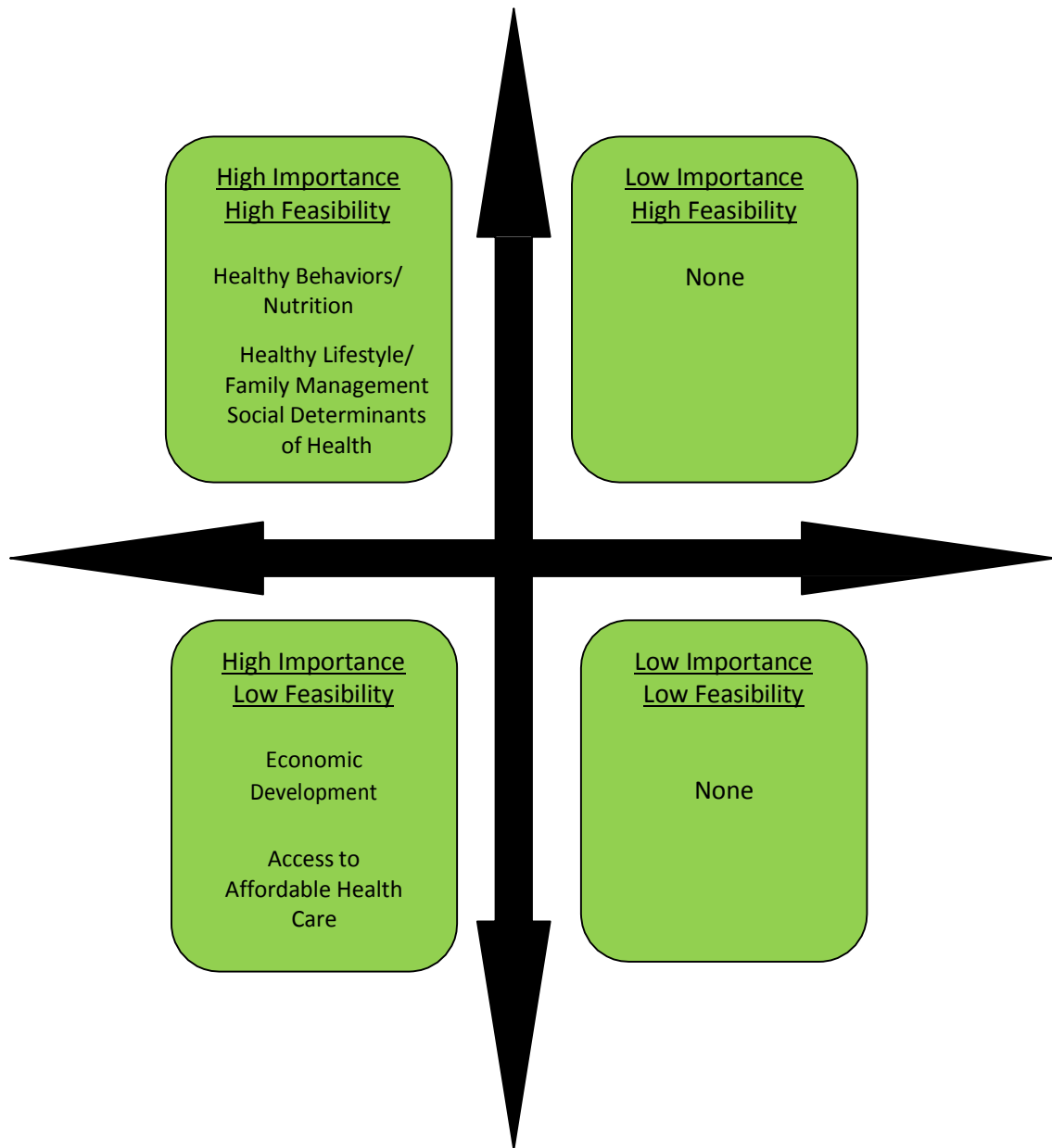
The final strategy was lifestyle/family which from this point forward will be known as social determinants of health. This is a broad range of concerns that include teen pregnancy, healthy decisions, completion of high school education, motivation to improve living conditions, teen violence, substance abuse, and a lack of activities for the youth.

The data for the Lower 8 region shows that 39.6% of births are out of wedlock in the region compared to a state rate of 30.5%. The region's birth rate is lower than the state's. However we know that unplanned pregnancies are at higher risk of economic hardships and inadequate family and social support systems.

| Indicator | Lower 8 Value | Kansas Value |
|---|---|---|
| Percent of Population with a High School Diploma or Higher | 87.2% | 90% |
| Percent of Population with a Bachelor or Graduate or Professional Degree | 19% | 30.1% |
| Low Birth Weight Infants | 8.0 per 100 | 7.2 per 100 |
| Infant Mortality Rate | 7.4 per 1,000 | 7.0 per 1,000 |
| Age-Adjusted Mortality | 9.1 per 1,000 | 7.7 per 1,000 |

Among the assets of the region are four junior colleges and Pittsburg State University. Even with the presence of advanced learning facilities, the region is well below the state rate of 30.1% for percentage of population with a bachelor/graduate degree.

The Core Team discussed the four priorities of the community health assessment at length. Utilizing the Matrix Feasibility Grid the priorities were placed as listed below.

High Importance
High Feasibility

Healthy Behaviors/
Nutrition

Healthy Lifestyle/
Family Management
Social Determinants
of Health

Low Importance
High Feasibility

None

High Importance
Low Feasibility

Economic
Development

Access to
Affordable Health
Care

Low Importance
Low Feasibility

None

# Feasibility Matrix

Using the feasibility matrix, the core group felt the two priorities of **healthy behaviors and healthy lifestyle/family management (social determinants of health) were the priorities where the most impact could be made.** However, the core group also felt that the priorities of **economic development and access to affordable health care priorities cannot be ignored.** It was at this point that we felt each county should look within itself and find champions and agencies who are already addressing the issues of access to affordable health care and economic development in their respective counties. The core team will work with the participants as a referral source to identify those champions and agencies for the community partners that were interested in addressing economic development and access to affordable health care.

**The alignment of the regional objectives with the Healthy People 2020 objectives is crucial** for a unified and successful approach to addressing the identified priorities. In the following pages you will find the goals, objectives, indicators and strategies that are proposed for the Lower 8 Region. These objectives were chosen at our regional strategic planning meeting with lead individuals from each of the Lower 8 counties.

# Priorities, Goals, Objectives, and Strategies

## Priority #1:  Healthy Nutrition

### Goal:  Improve the nutrition of the community

The priority issue began as chronic disease, and the region defined chronic disease as heart disease/stroke, obesity, diabetes, poor diet, cancer and smoking.  A closer look at this definition revealed that healthier nutrition would impact all of these health concerns with the exception of tobacco use.  The Lower 8 Core Indicators show that all counties within the region have a higher rate of diabetes than the state.  Wilson County has the highest rate of diabetes of 12.3% compared to the Kansas rate of 8.5% of population.   With the exception of Crawford County, all other counties in the region were above the Kansas rate of 28.8% of population being obese with Montgomery County having the highest rate of obesity at 39.6%.  The region was below the recommended fruit and vegetable intake in all counties except Wilson.  It was felt that addressing the need for nutritional changes would indirectly make an impact on the chronic diseases.

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**Healthy People 2020 Healthy Nutrition (Nutrition and Weight Status) objectives**

NWS 4 (Developmental) Increase the proportion of Americans who have access to a food retail outlet that sells a variety of foods that are encouraged by the Dietary Guidelines for Americans.

NWS 14 Increase the contribution of fruits to the diets of the population 2 years and older

NWS 15 Increase the variety and contribution of vegetables to the diets of the population 2 years and older

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# Priority #2 Healthy Lifestyle/Family Management
(Social Determinants of Health)

## Goal:  Improve family dynamics and youth transition into adulthood of community members

The foundation of our health starts in our homes, schools, workplaces and environments, but it is not limited to these areas alone.  Our health is also influenced by access to social and economic opportunities and the resources and support systems that are built in our communities.  The community themes and strengths assessment indicated that community members were strongly concerned about making our community more youth friendly

*Healthy People 2020: Social Determinants of Health Objectives*

AH-3 Increase the proportion of adolescents who are connected to a parent or other positive adult caregiver

AH3.2 Increase the proportion of parents who attend events and activities in which their adolescents participate.

AH 5.1 Increase the proportion of students who graduate with a regular diploma 4 years after starting 9th grade

AH 5.5 Increase the proportion of adolescents who consider their school work to be meaningful and important

PA-3 Increase the proportion of adolescents who meet current federal physical activity guidelines for aerobic physical activity and for muscle strengthening activity.

## LOWER 8 COMMUNITY HEALTH IMPROVEMENT PLAN

### ISSUE #1 Healthy Nutrition

| Strategy | By December 2014 | By 2015 | By 2016 | BY 2017 - 2018 |
|---|---|---|---|---|
| Strategy | Identification of Farmers markets and community gardens and their pay systems | Plan for and develop community gardens/farmer's markets in easily access locations. | Expand utilization of vouchers and credit/debit systems at farmer's markets to include WIC and SNAP | Identify unmet needs in the Farmer's Markets in the Lower 8 region. |
| INDICATORS | Develop and distribute a farmer's market/community garden resource list | At least three new community gardens and/or farmer's markets will be developed in the Lower 8 Region. | Increase the percentage of farmer's markets/community gardens that accept WIC checks or SNAP as a payment source | At least one identified need will be met |
| Barriers | Lack of contact information | Lack of community/vendor interest. Site availability | Availability, accessibility, affordability. Lack of consumer/vendor interest | Continuity of vendors |
| Evidence Based | Recommended Community Strategies and Measurements to Prevent Obesity in the United States, MMWR, July 24, 2009 58(RR07);1-26 | Recommended Community Strategies and Measurements to Prevent Obesity in the United States, MMWR, July 24, 2009 58(RR07);1-26 | Recommended Community Strategies and Measurements to Prevent Obesity in the United States, MMWR, July 24, 2009 58(RR07);1-26 | Recommended Community Strategies and Measurements to Prevent Obesity in the United States, MMWR, July 24, 2009 58(RR07);1-26 |
| Lead Agency(s) | K State Extension, Lower 8 | K State Extension, Lower 8 | K State Extension, Lower 8 | K State Extension, Lower 8 |
| Resources | KHF potential department of agriculture grants, local community foundations, faith based, schools | KHF potential department of agriculture grants, local community foundations, faith based, schools | KHF potential department of agriculture grants, local community foundations, faith based, schools | KHF potential department of agriculture grants, local community foundations, faith based, schools |

| | | LOWER 8 COMMUNITY HEALTH IMPROVEMENT PLAN<br>Issue #2 Healthy Lifestyle/Family Management<br>(Social Determinants of Health) | | |
|---|---|---|---|---|---|
| | By December 2014 | By 2015 | By 2016 | BY 2017 | BY 2018 |
| Strategy | Identify existing teen mentoring groups' potential new partners. | Provide healthy activities for the family unit | Work with local communities through literacy and positive youth development | Promote families to utilize walking trails, parks, community buildings for physical activity. | Educate families of the importance of eating nutritional foods and eating together |
| INDICATORS | Resource list of mentoring teen groups will be developed and distributed | Families will have a variety of options for recreation in the region | Increase graduation rates across the region | Families will have a variety of options for recreation in the region | Attendance in educational opportunities by families |
| Barriers | Readiness, interest, time, funding, training | Time involvement, knowledge of activities, disability/physically challenged.  Friendly age separation | Readiness, interest, time, funding, training | Lack of awareness of availability, lack of parks for special needs children, time, motivation, | Time, parent buy in, |
| Evidence Based | http://www.ncbi.nlm.nih.gov/pubmed/23584567 | http://www.ncbi.nlm.nih.gov/pubmed/22546151 | http://www.kansashealthmatters.org/index.php?module=promisepractice&controller=index&action=view&pid=3629 | http://www.ncbi.nlm.nih.gov/pubmed/22546151 | http://www.ncbi.nlm.nih.gov/pubmed/23601623 |
| Lead Agency | Schools, boy scouts, girl scouts, 4-H, K State Extension, faith based, Lower 8, YMCA,  and youth organizations | Schools, boy scouts, girl scouts, 4-H, K State Extension, faith based, Lower 8, YMCA,  and youth organizations | Schools, boy scouts, girl scouts, 4-H, K State Extension, faith based, Lower 8, YMCA,  and youth organizations | Schools, boy scouts, girl scouts, 4-H, K State Extension, faith based, Lower 8, YMCA,  and youth organizations | Schools, boy scouts, girl scouts, 4-H, K State Extension, faith based, Lower 8, YMCA,  and youth organizations |
| Resources | KHF, Community Foundations, SEK Education Centers, parents | KHF, Community Foundations, SEK Education Centers, parents, Health and Wellness coalition | KHF, Community Foundations, SEK Education Centers, parents | KHF, Community Foundations, SEK Education Centers, parents | KHF, Community Foundations, SEK Education Centers, parents |

# Appendix A


# American Public Health Association
## 10 Essential Public Health Services

# American Public Health Association
## 10 Essential Public Health Services

1.  **Monitor** health status to identify community health problems.

2.  **Diagnose and investigate** health problems and health hazards in the community.

3.  **Inform, educate, and empower** people about health issues.

4.  **Mobilize** community partnerships to identify and solve health problems.

5.  **Develop policies and plans** that support individual and community health efforts.

6.  **Enforce** laws and regulations that protect health and ensure safety.

7.  **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.

8.  **Assure** a competent public health and personal healthcare workforce.

9.  **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.

10. **Research** for new insights and innovative solutions to health problems.

# Appendix B


# Regional Participants

**Chautauqua County**
Jeanie Beason, Health Department
Goff Searle, County Commissioner
Annie Blankinship, Health Department
Sandy Wolfe, Health Department
Janis Chase, Sedan City Hospital
Cindy Alberts, County Clerk
Ed Garner, Lower 8
Michelle Williams, Sedan City Hospital
Jenny Matthews, Kansas State Research Extension
Jann Bowman, Twin Caney Farm
Sue Kill, Chamber of Commerce

**Cherokee County**
Betha Elliott, Health Department
Laura Ferlo, Licensed Professional Counselor
Theresa Cassidy, Health Department
Amy Root, Class LTD
Larry Hiatt, News Reporter
Mary Burke, Mercy Hospital
Bev Davis, Crossland Construction
Caleb Williamson, Spring River Mental Health
Brenda Clugston, Health Department
Misty Burke, SEK Education Service Center

**Crawford County**
Janis Goedeke, Health Department
Jan Hula, Mother To Mother
Victoria Hensley, Community Mental Health Center
Kristin Thomas, Health Department
Jan Schiefelbein, Pittsburg State University
Linda Grilz, County Commissioner (2012)
Blake Benson, Chamber of Commerce
Melody Cherry, SEK Education Service Center
Erin Fletcher, KS Department of Health & Environment
Pam Gilchrist, Red Cross
Jay Gilchrist, Via Christi Hospital
Nicole Foster, USD 250
Pat Rion, Health Department
Rebecca Adamson, Health Department
Brenda Engelman, USD 250
K.O. Noonoo, Pittsburg Presbyterian Church
Randy Cason, Via Christi Hospital
Richard Pfeiffer, Community Mental Health Center

Michelle Hart, Girard Medical Center
Sarah Hurd, Kansas Health Institute
Cathy White, Community Foundation of SEK
Debbie Noble, Addiction Treatment Center
Dawn McNay, Community Health Center of SEK
Amy Glines, Community Mental Health Center

**Elk County**
Teri Caudle, KS Department of Health & Environment
Kandy Dowell, Health Department
Kandice Metcalf, KSU Extension
Liz Hendricks, County Commissioner
Deina Rockhill, Health Department
Shirley Black
Byrdee Marcic, Elk County EMS
Jane Koster, Health Department

**Labette County**
Debbi Baugher, Health Department
Janelle Weidert, Health Department
Diane Salyers, Respite Care
Jeana Murphy, The Flesh Company
Becky Gray, SEK-CAP
Robert Sims. County Sherriff
Michelle Willis, USD 504 School Nurse
Riley Cartwright, Hamilton Chapel
LaDonna Melton, Hamilton Chapel
Rod Landrum, Labette Health Hospital
Lisa Bradley, Labette Community College
Dick Horton, SEK-CAP
Dee Bohnenblust, Labette Community College
Anne Allen, Parsons Community Foundation

**Montgomery County**
Amy Brodman, Health Department
Judy Sprague, Health Department
Susan Hill, 4 County Mental Health
Carolyn Muller, Health Department
Fred Brown, County Commissioner
Robert Stiles, Community Health Center of SEK
Nancy Barkley, Health Department
Lori Rexwinkle, Coffeyville Regional Medical Center
Sabrina Laurence, Coffeyville Regional Medical Center

**Neosho County**

Teresa Starr, Health Department
Stephanie Henry, Health Department
Donna Bates, Health Department
Raymond Hale, Chanute Police Department
Jesse Keppon, SRS
Rachel Harrington, Preferred Family Healthcare
Angela Johnson, Preferred Family Healthcare
Nancy Kubler, SRS
Pat Lucke, Neosho Regional Medical Center
Rick Wingate, Kansas Highway Patrol
Jay Kingery, County Commissioner
Trisha Morris, Neosho Regional Medical Center

**Wilson County**

Cassie Edson, Health Department
Kris Marple, County Coordinator
Annette Clark, 1st United Methodist Church
Todd Durham, Health Department
Karen Briggs, 1st United Methodist Church
Matt Kleopfer, Hometown Health Care
Janice Reese, Wilson County Medical Center
Kim McMunn, Long-term Care

# Appendix C


# Lower 8 of Southeast Kansas
# Community Health Profile
# Summary of Findings

# Lower 8 of Southeast Kansas
# Community Health Profile
# Summary of Findings

Local health departments from the eight counties in the Lower 8 of Southeast Kansas Public Health Preparedness Region ("Lower 8 Region") are conducting a community health assessment (CHA) as a regional collaborative effort. Four assessment approaches have been employed to gather and analyze information related to community health within the region:

A data profile providing historical and current information on a key set of core indicators.

1. A community survey soliciting input from residents about their perceptions of quality of life and health issues in the community.
2. Forces of Change exercises conducted at the regional level.
3. National Public Health Performance Standards Program.

Data collection has been largely completed by the Lower 8 Region CHA team members with assistance from the Kansas Health Institute in analyzing and synthesizing results for the data profile, community survey and forces of change components. Detailed reports for each of the assessments accompany this summary.

The assessments provide a broad view of health and health-related issues within the region. At the regional level, the following themes emerge across the assessments.

**Positive Benefits of Rural Life**    When asked what they like about living in their community, survey respondents consistently expressed satisfaction with the quality of life. The social environment, including a sense of community cohesiveness, friendliness and peacefulness, was the most commonly identified area of satisfaction. Additionally, respondents cited the small size, community activities and relative safety as particularly positive aspects of the community.

 **Need for Economic Improvement**   Concerns about unemployment, jobs and adequate wages surfaced as a predominant theme across the assessments. The top concern in the free response section of the survey across all counties was economic issues. The respondents indicated concerns about a lack of jobs, particularly those with a high enough wage to support a family. The core indicators profile aligns with some of these concerns. Median household incomes in all of the counties in the Lower 8 Region are below the state median, and some are substantially so. However, the unemployment rate for the Lower 8 Region as a whole is roughly equal to the state unemployment rate.  Additionally, the core indicators profile shows that educational attainment rates are lower in the Lower 8 Region than in Kansas as a whole, even with the presence of Pittsburg State University in Crawford County. Higher educational attainment could increase opportunities for higher-paying jobs in the region. Individuals who have higher income levels may find it easier to make healthy choices regarding food and exercise, and may be more capable of paying for and utilizing the health care system.

## Substance Abuse

Drug and alcohol abuse were cited as the most important "risky behavior" in the fixed-response survey section and the second-most important area of concern by survey respondents in the free-response section. These concerns were mostly related to youth engaging in the use of drugs and alcohol. There were 487 drug-related arrests in the Lower 8 Region in 2011, and some community members expressed concerns that officials could improve enforcement of laws, particularly those related to drugs. If enforcement of drug laws increases, the rates might appear to be higher in the near-term but could decrease over the long run. The core indicators profile shows that adult binge drinking rates are lower than the state average; however, these measures do not count youths under the age of 18. Additionally, the smoking rate in the Lower 8 Region is higher than the state average.

Other prominent regional issues emerged from one of the three assessments but were not cross-cutting. From the Forces of Change assessments, perceptions of how the Affordable Care Act would affect residents, both positively and negatively, were clearly evident. Some respondents who completed the Spanish version of the community survey also raised the issue of feelings of racial bias against Hispanics. Finally, the core indicators assessment reveals high rates of low birth weight infants, early mortality and hospitalization due to unintentional injuries.

Although the CHA is being conducted at the regional level, many of the measures included in the three assessments show significant variability among the eight counties in the region and suggest that some county-specific targeting and planning of interventions may be warranted. Some of those county-level distinctions follow.

**Chautauqua County:** Chautauqua County has the highest median age at 48.1 years. This county also has the highest proportion of the population not in the labor force. This combination suggests an elderly and retired population, which is consistent with the free-response survey section, where several respondents indicated that they were concerned about the aging population. Additionally, the core indicators profile shows an extremely high rate of motor vehicle crash deaths.

**Cherokee County:** Cherokee County has a very high birth rate to women between the ages of 15 and 19. Additionally, Cherokee County has the highest five-year mortality rates in the region. Survey respondents in Cherokee County rated child abuse and neglect as the second most important health problem behind cancer.

**Crawford County:** As the most populous county in the region, Crawford County also has the youngest population and has a somewhat different profile of issues than the other counties. Although Crawford County has the highest proportion of population with a bachelor or graduate degree, it is below the regional average for median income. Crawford County also has the highest injury hospital admission rate. Crawford County has the second-highest proportion of Hispanic population, and many of the respondents to the Spanish-language survey in Crawford County indicated that they were concerned about the prevalence of discrimination toward Hispanics in the community.

survey in Crawford County indicated that they were concerned about the prevalence of discrimination toward Hispanics in the community.

<u>Elk County:</u> Because Elk County is the least populous county in the region, several indicators did not have enough data to report. However, it is evident from the core indicators profile that Elk County has the lowest median income in the region and the highest rate of low birth weight infants between 2002 and 2011. Additionally, there is a high proportion of the workforce in the agriculture, forestry, fishing, hunting and mining industries as well as a very high rate of deaths due to unintentional injuries, and the two may or may not be connected. Survey respondents indicated the need for a dental clinic and more opportunities for recreation and cited the aging population as the most important health issue in the community.

<u>Labette County:</u> Survey respondents from Labette County were more concerned about health conditions than respondents from other counties. Health conditions were the fifth highest community concern in Labette County, compared to eighth in the region as a whole. Specifically, residents indicated being worried about cancer, teenage pregnancy, lack of physical activity, poor mental health and access to quality medical services. The concerns about cancer are consistent with the core indicators profile, as Labette County has the highest rate of cancer diagnoses in the region at 11.7 percent, which is higher than both the region and the state as a whole.

<u>Neosho County</u>**:** Respondents to the survey in Neosho County indicated particular concerns about the quality of schools in the area. High blood pressure was also rated as a particular "health problem" in the fixed-response section of the survey, with Neosho County residents ranking it third, as compared to its ranking of eighth in the region as a whole. Neosho County has high rates of infant mortality, with 12.9 deaths per 1,000 live births between 2005 and 2009. The region's rate is 7.4 per 1,000 and the state rate is 7 per 1,000. Finally, the percent of infants fully immunized by 24 months in Neosho County is just 47.5 percent. After reviewing time-series data for Neosho County on Kansas Health Matters, it appears there was a sharp decline in immunization rates between 2004–2005 and 2007–2008, when rates went from 68.8 percent to just 20.7 percent.

<u>Montgomery County</u>**:** Montgomery County is the second most populous and most diverse of all the counties in the region. It has the highest percentage of black and non-white Hispanic residents than any other county in the Lower 8. Montgomery County also has the highest percentage of single-female households with children and the highest unemployment rate, at 6.5 percent. It has the highest percent of adults who are currently smokers and the highest proportion of smoking-related deaths, though fewer survey respondents from Montgomery County identified smoking as a risky behavior than the rest of the region. Montgomery County residents indicated that they were particularly concerned about drug-related crime and safety and security, which is consistent with the fact that Montgomery County also has the highest number of drug arrests and the second-highest rate of violent crime.

Wilson County: Wilson County has the lowest rates of educational attainment in the region, with just 81.8 percent of the population having a high school diploma or higher. Additionally, Wilson County has the highest rates of births to teens age 15–19 and the highest proportion of births to unmarried women. Survey respondents from Wilson County indicated that they were particularly concerned about students who drop out of school and teen pregnancy rates, consistent with the findings from the core indicators report.

Taken together, the results of the three assessment approaches provide important insight into the health status and areas for improvement within the Lower 8 Region and will provide a solid foundation from which the region's stakeholders may begin to identify priorities and intervention strategies.

# Appendix D


# Core Indicators

# Lower 8 of Southeast Kansas
# Core Indicators Profile

**Introduction**

The purpose of the core indicators profile is to provide a snapshot of key measures of demographics and health status within the Lower 8 Region. In conjunction with other information collected as part of the community health assessment (CHA), the members of the Lower 8 Community Health Assessment team will use the data in this profile to develop a comprehensive understanding of health in their community and to begin to identify specific community health priorities.

The categories of measures included in this profile include:

1. Demographics
2. Social and Economic Factors
3. Education
4. Mortality
5. Violence and Injury
6. Disease and Poor Health
7. Health Behaviors
8. Access to Care
9. Maternal and Child Health

The majority of the indicators for this profile were selected by the members of the Lower 8 Region Community Health Assessment Team. According to team members, indicators were selected based on three criteria: need, statistical significance and relevance to the entire region. The Kansas Health Institute added several indicators, including percent of obese adults, percent of infants fully immunized at 24 months, sexually transmitted disease rate, infant mortality rate, low birth weight rate, percent of adults who currently smoke, uninsured population rate, average monthly WIC participation rate and violent crime rate.

Where possible, data are presented for each of the eight counties in the Lower 8 region as well as for the region as a whole and the state. Due the small population size of some of the counties, data for some indicators were not available for all counties. The data used in this profile are primarily collected from Kansas Information for Communities (KIC), the U.S. Census Bureau's American Community Survey (ACS) and the Kansas responses to the Behavioral Risk Factor Surveillance System (BRFSS) survey.

## 1. Demographics

*Population*

According to the 2011 ACS estimates, the total population for the Lower 8 region is 150,422. Crawford County is the most populous of the counties, followed by Montgomery. Chautauqua and Elk counties are the least populous in the region. From 2000 to 2012, the Lower 8 Region lost approximately 4.4 percent of its population, according to the 2000 Census and 2012 intercensal estimates. Each individual county in the region declined in population as well, with the exception of Crawford County. The region as a whole is 49 percent male and 51 percent female.

**Figure 1**
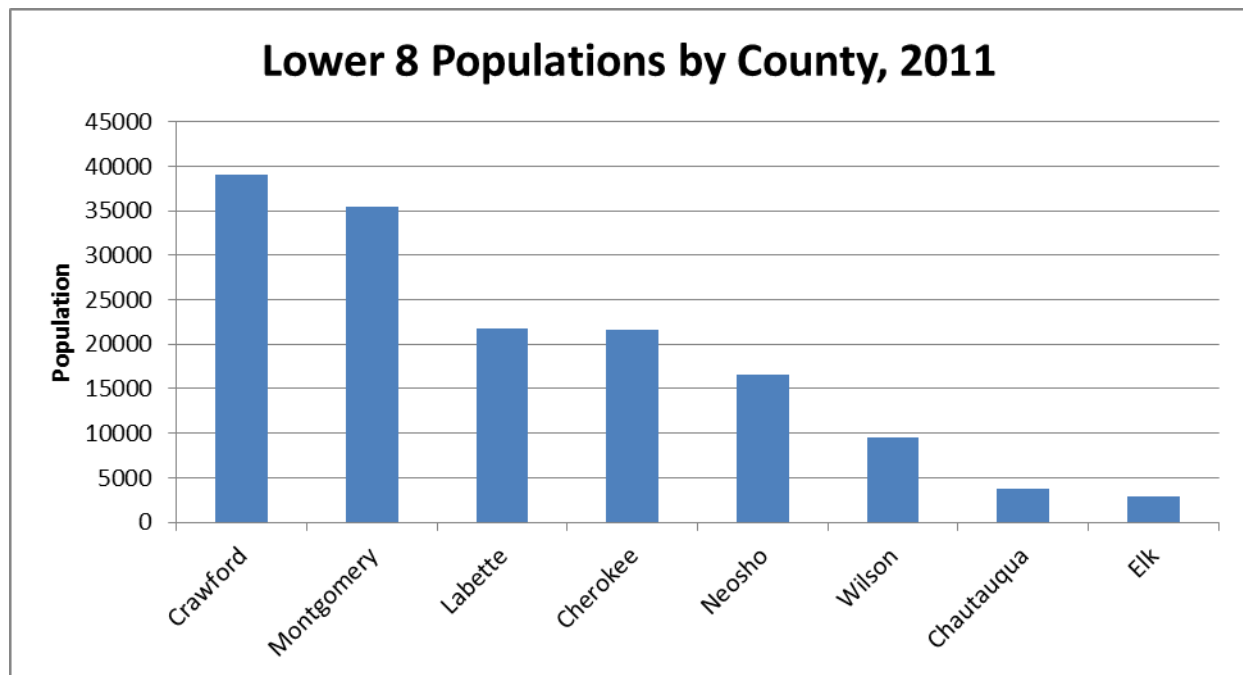


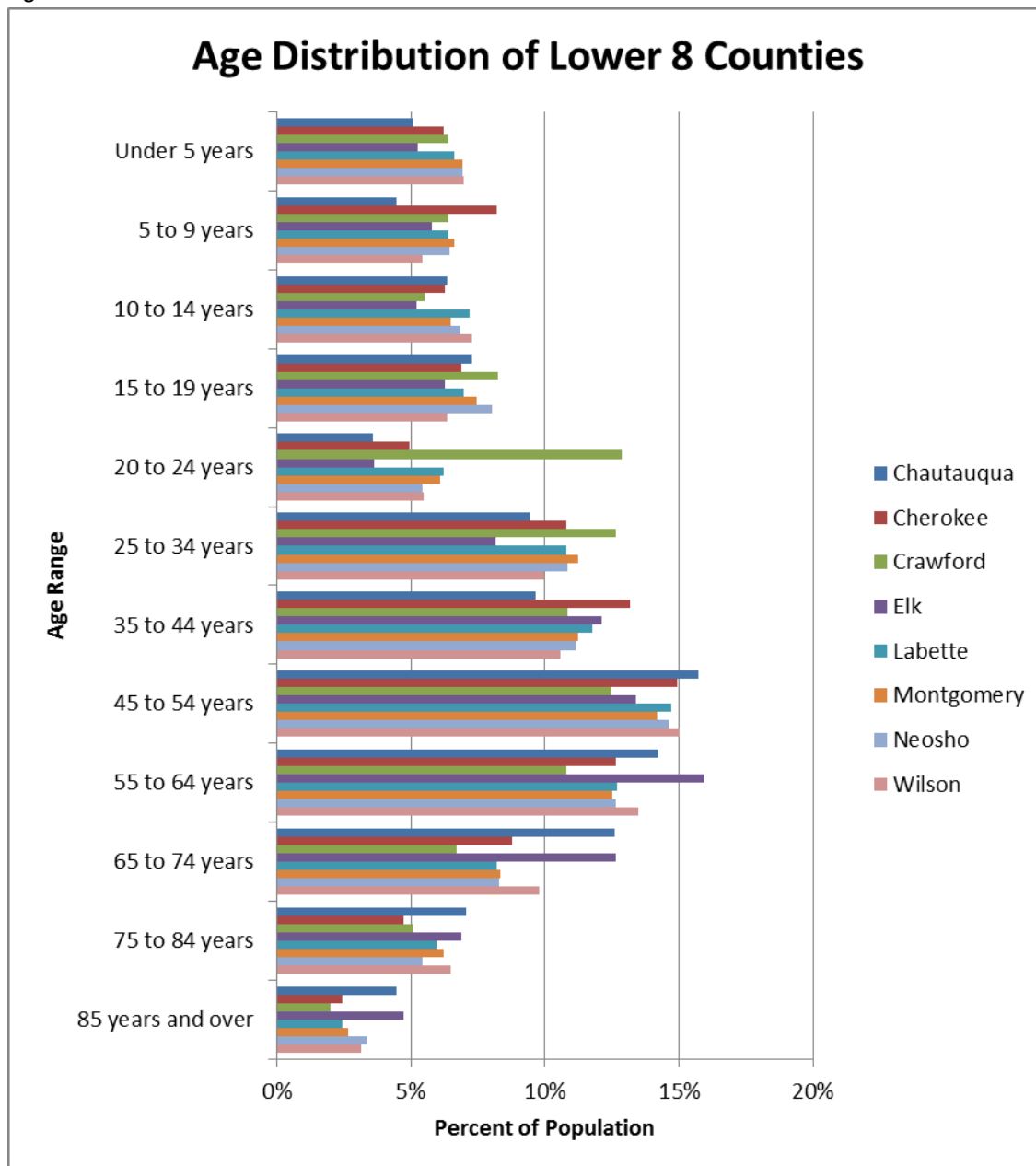Source: U.S. Census Bureau, 2007-2011 American Community Survey

**Table 1**

| Population Change, 2000-2012 | | | |
|---|---|---|---|
| | **2000** | **2012** | **Percent Change** |
| Chautauqua | 4,359 | 3,571 | -18.1% |
| Cherokee | 22,601 | 21,226 | -6.1% |
| Crawford | 38,248 | 39,361 | 2.9% |
| Elk | 3,261 | 2,720 | -16.6% |
| Labette | 22,821 | 21,284 | -6.7% |
| Montgomery | 36,267 | 34,459 | -5.0% |
| Neosho | 16,996 | 16,406 | -3.5% |
| Wilson | 10,341 | 9,105 | -12.0% |
| **Lower 8 Region** | **154,894** | **148,132** | **-4.4%** |
| **Kansas** | **2,668,925** | **2,885,905** | **8.1%** |

Source: U.S. Census Bureau, 2000 Census and 2010 Population Estimates

*Population by Age*

The age profile varies slightly across counties. The median age is lowest in Crawford County at 33.1 years and highest in Chautauqua County at 48.1 years. Elk County is a close second at 48.0 years. The age distribution is similar across counties, with the notable exception of the 20-24 age group in Crawford County. The larger percent of the population in that age group is likely due to the presence of Pittsburg State University and the college-aged population in residence there. This also explains why the median age is lower in Crawford County. Additionally, Elk and Chautauqua counties have the highest proportions of residents 65 and over.

**Figure 2**



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

*Population by Race and Ethnicity*

According to the 2011 ACS estimates, 91.2 percent of the population in the Lower 8 counties identifies as being white, non-Hispanic. The second largest race grouping is black/African-American, non-Hispanic with 2.7 percent of the population region wide. Additionally, 4.1 percent of the region identifies as being of Hispanic ethnicity. In general, the region is less racially and ethnically diverse than the overall Kansas population. Within the Lower 8, Montgomery County is the most diverse with the highest rates of Hispanics as well as blacks/African-Americans.

**Table 2**

| | Race | | | | | | | Ethnicity |
|---|---|---|---|---|---|---|---|---|
| | White | Black/ African American | American Indian/ Alaska Native | Asian | Native Hawaiian/ Pacific Islander | Other | Two or more races | Hispanic or Latino |
| **Chautauqua** | 92.0% | 1.6% | 3.7% | 0.0% | 0.0% | 0.0% | 2.7% | 2.4% |
| **Cherokee** | 91.4% | 0.2% | 4.3% | 0.3% | 0.0% | 0.0% | 3.8% | 2.2% |
| **Crawford** | 93.2% | 2.1% | 0.6% | 1.4% | 0.0% | 0.1% | 2.5% | 4.7% |
| **Elk** | 96.0% | 0.6% | 0.3% | 0.5% | 0.0% | 0.0% | 2.6% | 2.7% |
| **Labette** | 89.4% | 4.0% | 0.7% | 0.5% | 0.1% | 0.1% | 5.1% | 4.3% |
| **Montgomery** | 85.7% | 5.9% | 1.9% | 0.7% | 0.3% | 0.1% | 5.4% | 5.3% |
| **Neosho** | 95.6% | 1.4% | 0.5% | 0.1% | 0.1% | 0.1% | 2.3% | 4.2% |
| **Wilson** | 96.4% | 0.1% | 0.7% | 0.2% | 0.0% | 0.0% | 2.6% | 2.2% |
| **Lower 8 Region** | **91.2%** | **2.7%** | **1.5%** | **0.7%** | **0.1%** | **0.1%** | **3.7%** | **4.1%** |
| **Kansas** | 87.0% | 6.4% | 0.8% | 2.6% | 0.1% | 0.1% | 0.1% | 12.0% |

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

*Place of Birth*

The population in the Lower 8 Region that was born outside the United States is 2.2 percent, which is substantially lower than the statewide percentage of 6.9 percent.

**Figure 3**
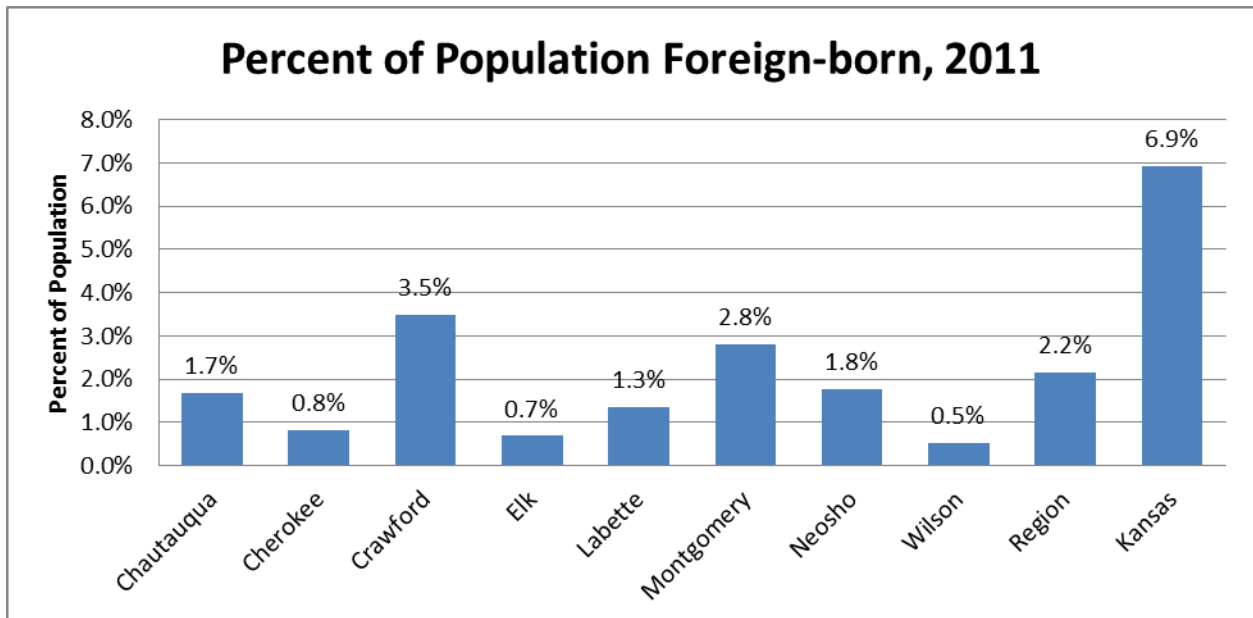


Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Language Spoken at Home*

The percent of the population in the Lower 8 Region that is older than five years of age and speaks a language other than English in the home is 3.9 percent. All counties in the Lower 8 Region have a much lower percent of non-English speaking households compared to the Kansas average, which is 11.4 percent. The county with the highest percentage is Crawford County, with 5.8 percent of the population speaking a language other than English in the home.

**Figure 4**
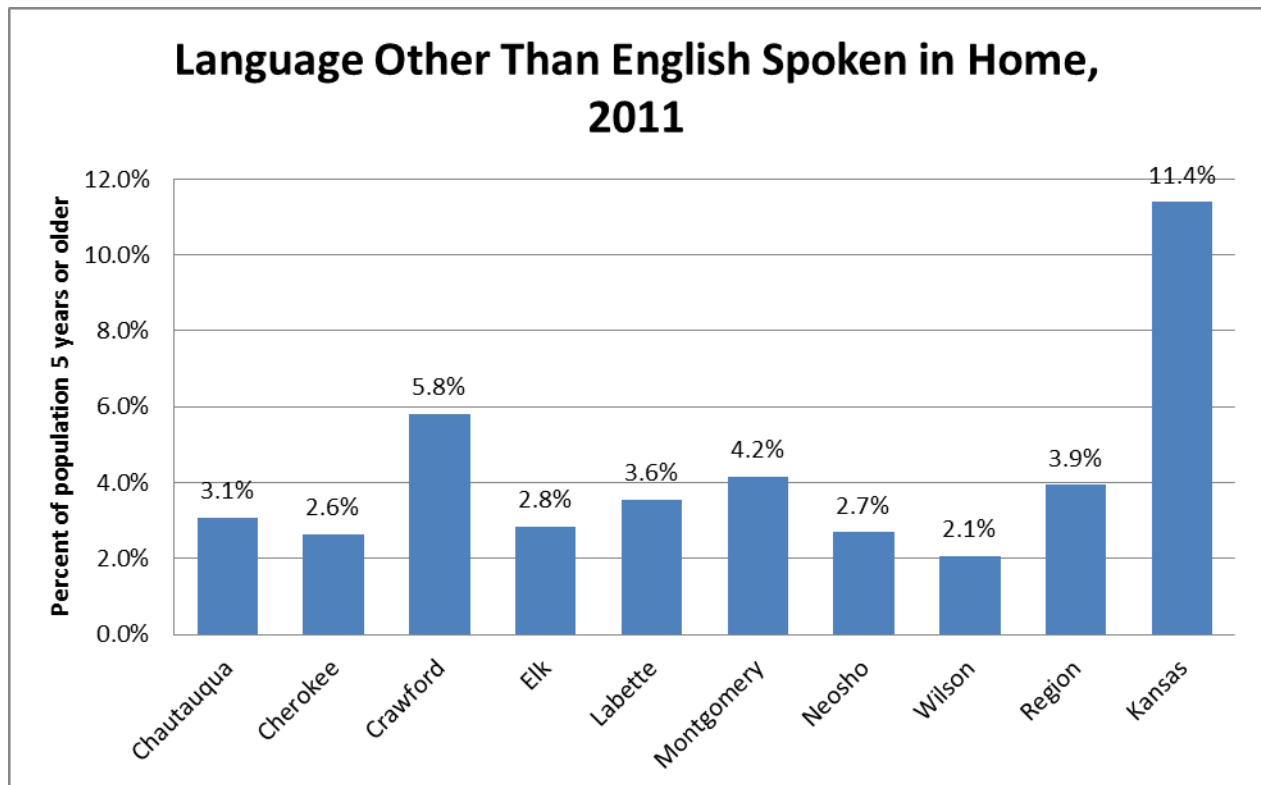


Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Family Size*

The average family size in the Lower 8 Region is 2.90 people, which is slightly lower than the Kansas average of 3.12 people per family. Within the Lower 8, Elk County has the smallest average family size, at 2.63, while Cherokee County has the largest family size at 3.13. Cherokee County is the only county in the region that has an average family size larger than the Kansas average.

**Figure 5**
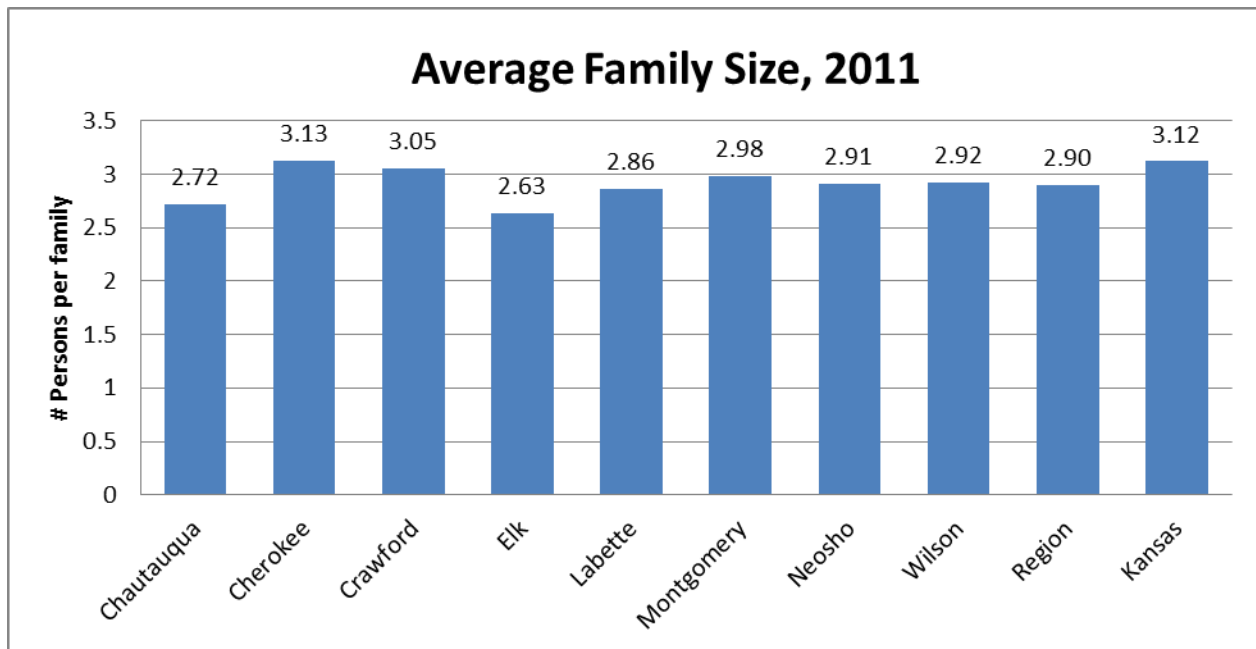


Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Marital Status*

In the Lower 8 Region, the majority of adults over age 15 are married. A slightly higher percentage of males (54.4 percent) are married as compared to females (51.7 percent). Nearly 9 percent more males (30.2 percent) than females (21.4 percent) have never been married. However, there are more divorced females (12.3 percent) and widowed females (12.7 percent) than divorced and widowed males (10.8 percent and 2.9 percent, respectively). The percent of the population that is married is slightly higher in the Lower 8 than in Kansas as a whole.
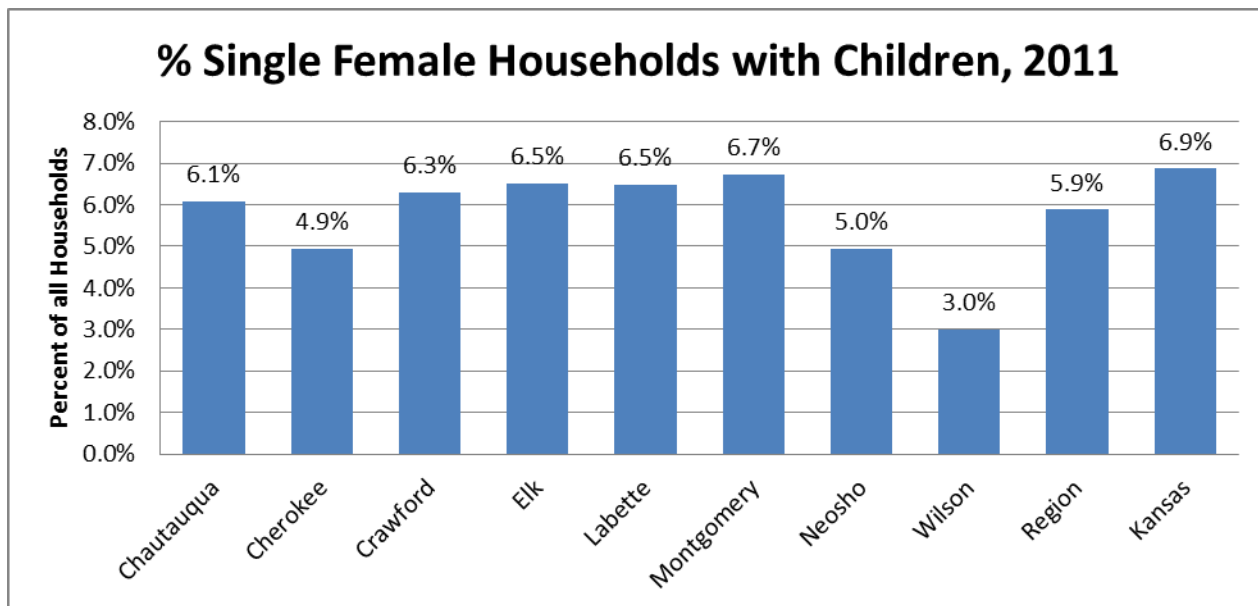
**Figure 6**
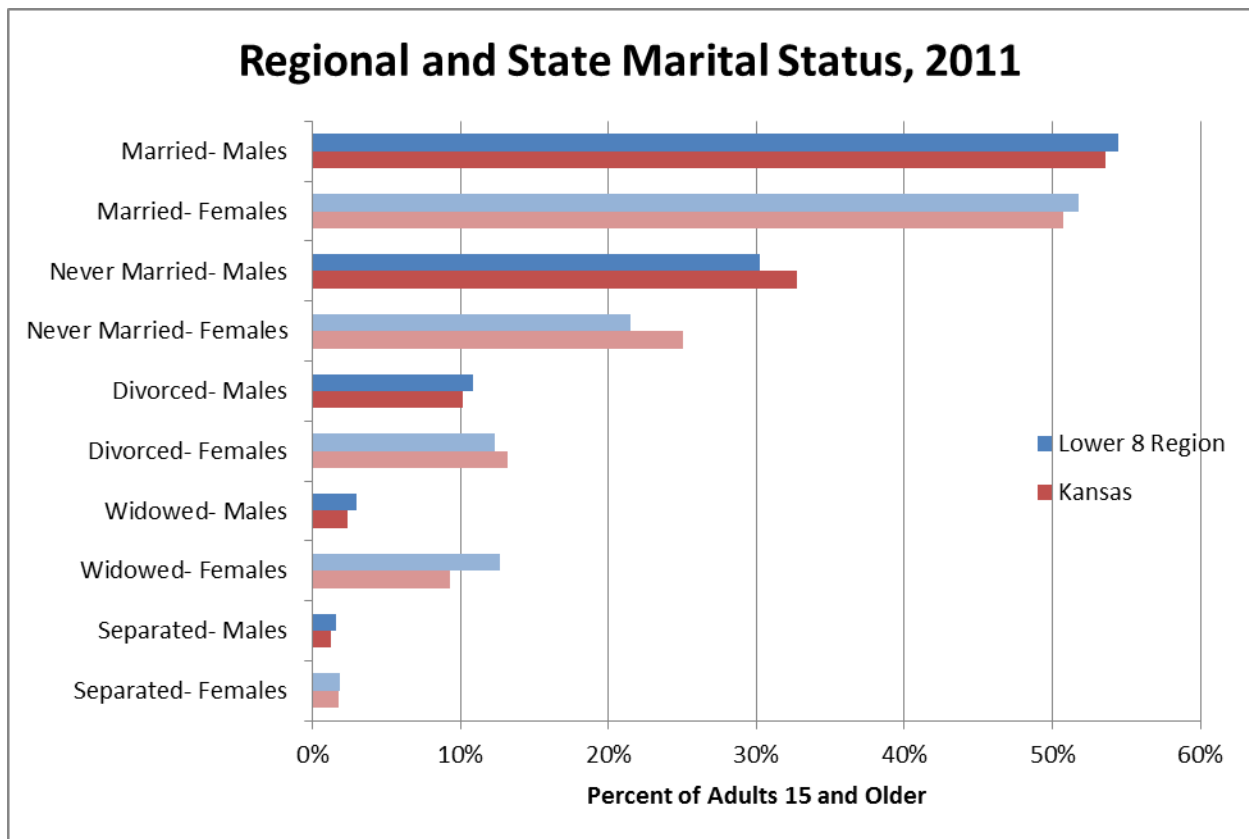


Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Single-Parent Households*

Single-parent households, particularly those headed by women, are at increased risk for economic difficulties.[1] Within the Lower 8 Region, most counties have percentages of single-mother households that are similar to or below the state average. The region wide percent of single-mother households is 5.9 percent, while the state average is 6.9 percent. Within the Lower 8 Region, Wilson County has the lowest percent of single-mother households at 3.0 percent, while Montgomery County has the highest in the region at 6.7 percent. The largest number of single-mother households is in Crawford County with 967. Montgomery County is a close second for number of single-mother households at 953.

**Figure 7**



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

**Figure 8**
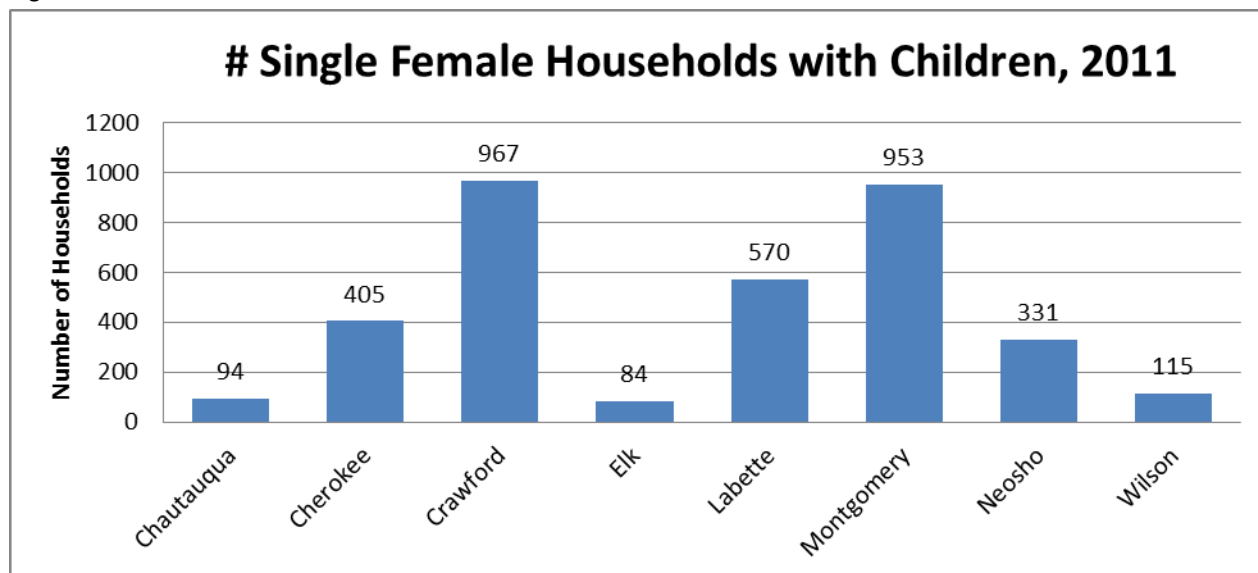


Source: U.S. Census Bureau, 2007-2011 American Community Survey

[1] National Center for Law and Economic Justice, http://www.nclej.org/poverty-in-the-us.php.

## 2. Economics

*Employment Status*

The working-age population (16 years and older) in the Lower 8 Region is 118,962. Of those, 62.4 percent are in the labor force. The 37.6 percent who are not in the labor force may be elderly or retired people, youths not holding a job or those who are not looking for work. Not being in the labor force is different than not being employed. Unemployed people are in the labor force but are unable to find work. Additionally, 0.1 percent of the Lower 8 Region's population is in the Armed Forces. The unemployment rate in the Lower 8 Region is 4.8 percent, which is slightly below the Kansas unemployment rate of 5.0 percent. The unemployment rate is highest in Montgomery County at 6.5 percent and lowest in Chautauqua County at 3.0 percent.

**Figure 9**



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

**Figure 10**

## Unemployment, 2011

*% of Working-age Population*

| | |
|---|---|
| Chautauqua | 3.0% |
| Cherokee | 3.4% |
| Crawford | 4.1% |
| Elk | 4.3% |
| Labette | 4.6% |
| Montgomery | 6.5% |
| Neosho | 6.1% |
| Wilson | 4.2% |
| Lower 8 Region | 4.8% |
| Kansas | 5.0% |
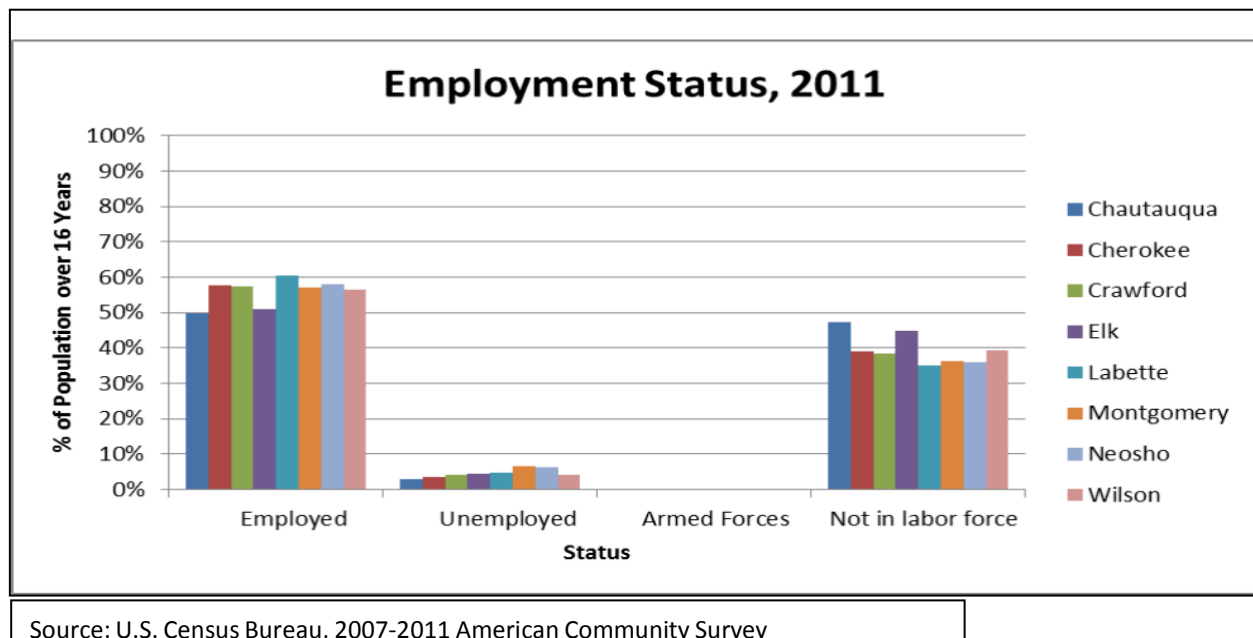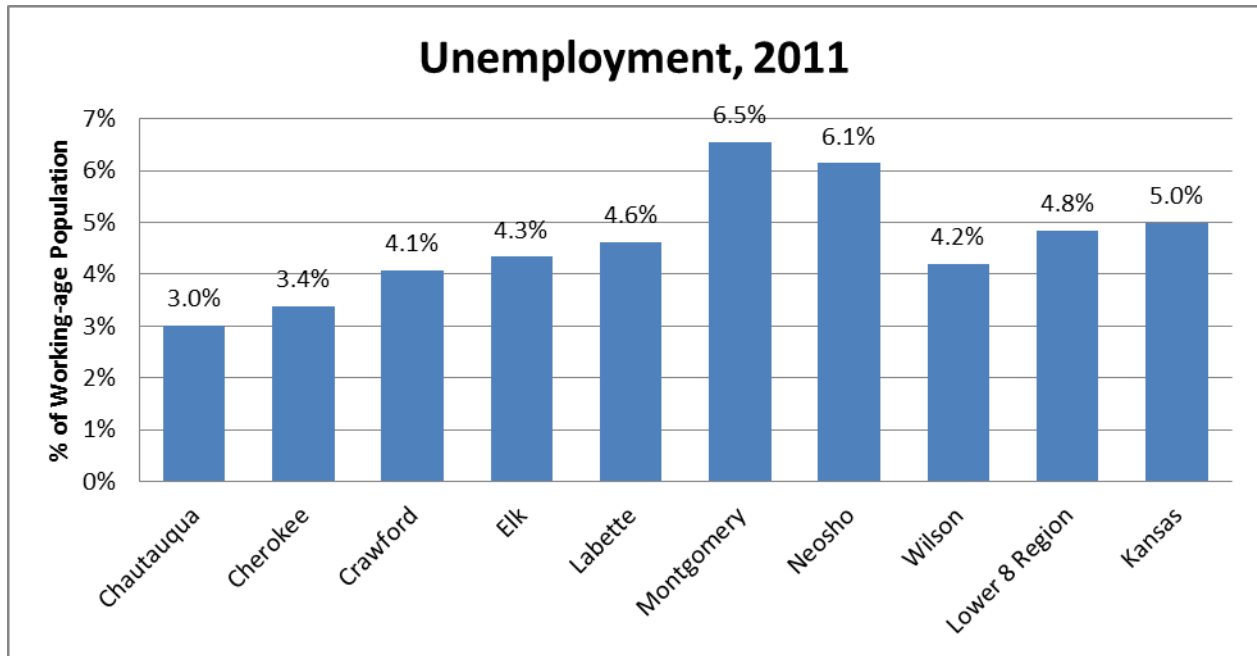
Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Income*

The median household income in the Lower 8 region is $38,507. This is substantially lower than the Kansas median household income of $48,964. Cherokee County has the highest median household income in the region at $41,513; however, this is still lower than the Kansas median household income.

**Figure 11**
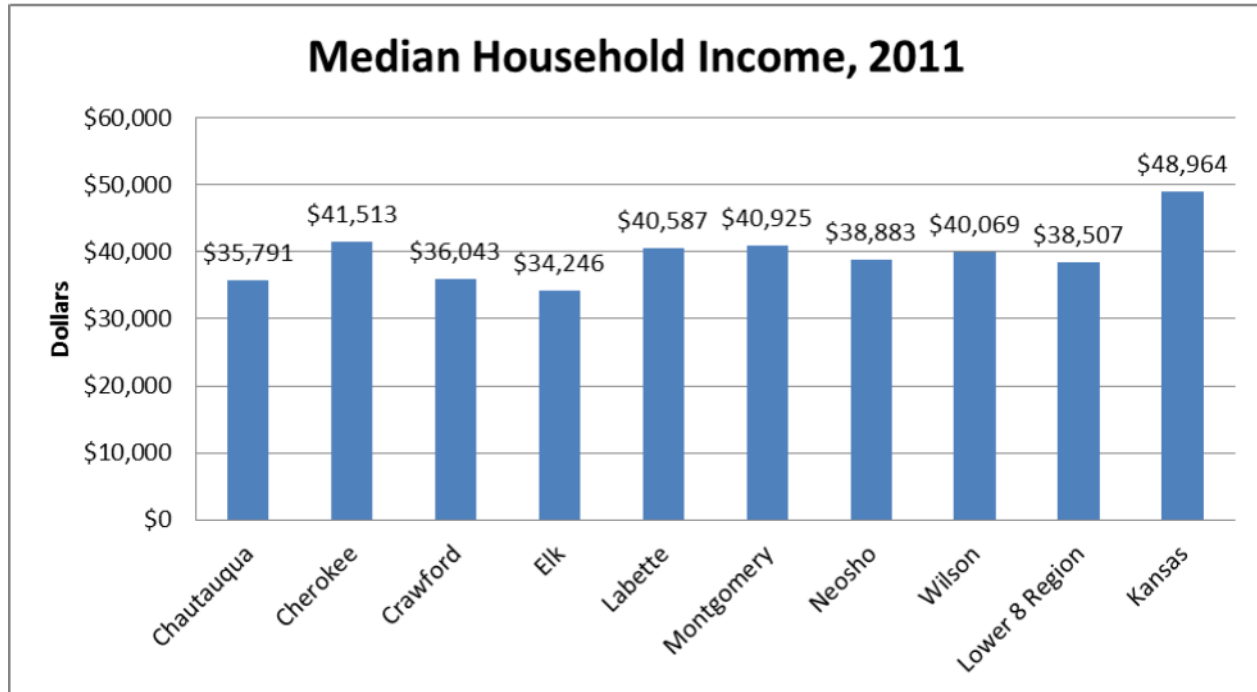


Source: U.S. Census Bureau, 2007-2011 American Community Survey

The distribution of household income is similar across counties, with the greatest percentage of houses falling within either the $35,000 -$49,999 or $50,000-$74,999 range in every county. This is similar to the income distribution statewide as well. It is notable, however, that a greater percentage of households in the Lower 8 Region fall in the lower income ranges than the higher ranges as compared to the Kansas averages. In the Lower 8 Region, the percent of households making less than $10,000 annually is 9 percent and the percent making $10,000-$14,999 is 8 percent, versus the Kansas averages of 7 percent and 5 percent respectively. Additionally, the Lower 8 Region has a smaller proportion of households that fall within the $75,000 and above income categories as compared to the Kansas averages.

**Figure 12**
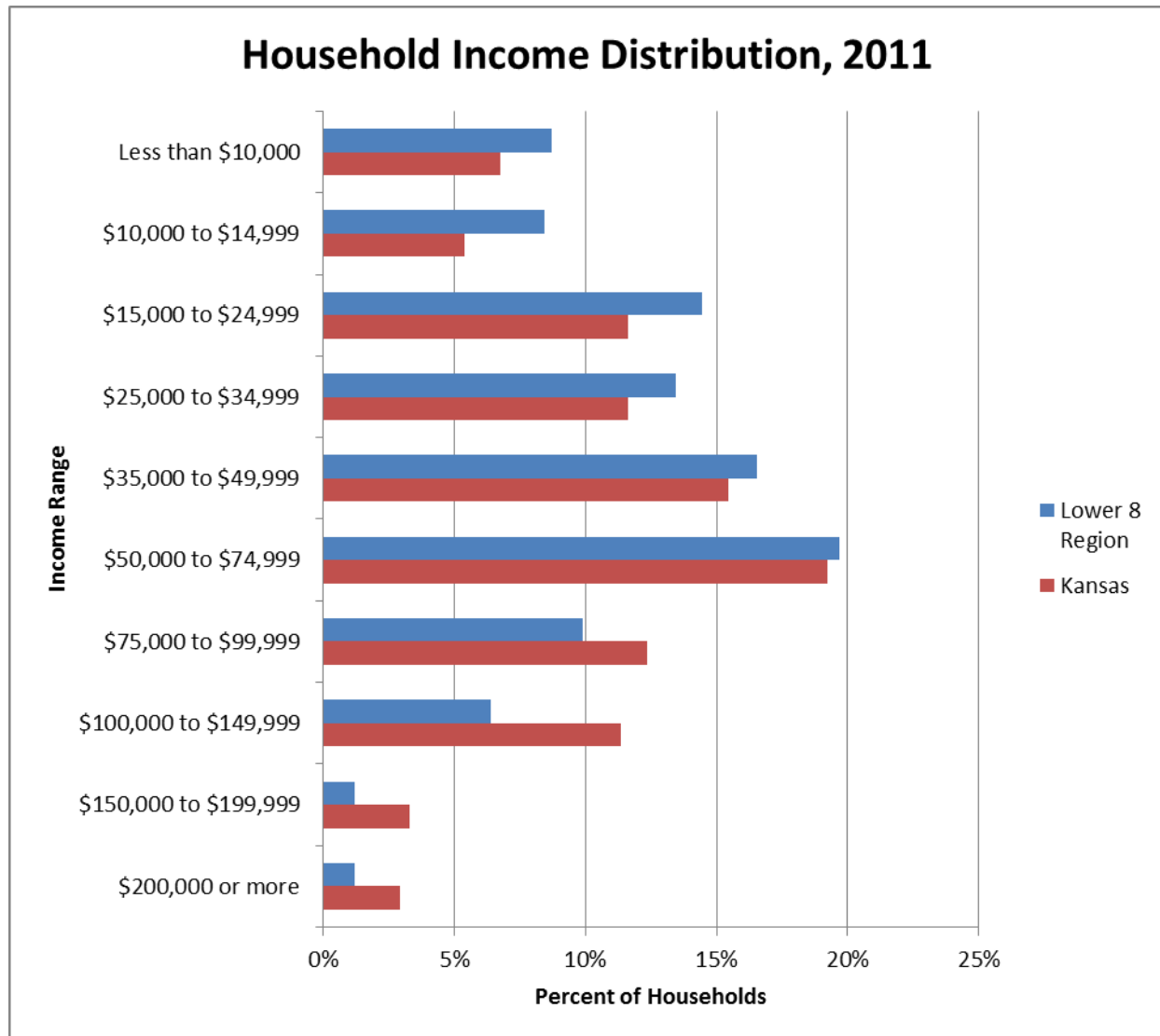


Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Industry/Employer*

Of the civilian (non-military) population that is employed, the most common source of employment in the region is the education, health, and social assistance sector. Twenty-nine percent of the region's population is employed in this category. The next two most common sectors are manufacturing (17.4 percent) and retail (10.8 percent). The profile of the sectors is similar across the counties in the region, with some exceptions. The agriculture, forestry, fishing, hunting and mining category is more common in Chautauqua and Elk counties, where it makes up 17.0 percent and 15.5 percent of the employed workforce respectively. In these two counties, it is the second most common industry, compared to the region as a whole, where it is the ninth most common industry. Another exception is the manufacturing sector in Wilson County. In all other counties, the education, health, and social assistance industry category is the most common, however, manufacturing ranks first in Wilson County with 22.9 percent of the workforce, while education, health, and social assistance is second at 21.1 percent.

**Figure 13**



## Industry by County, 2011
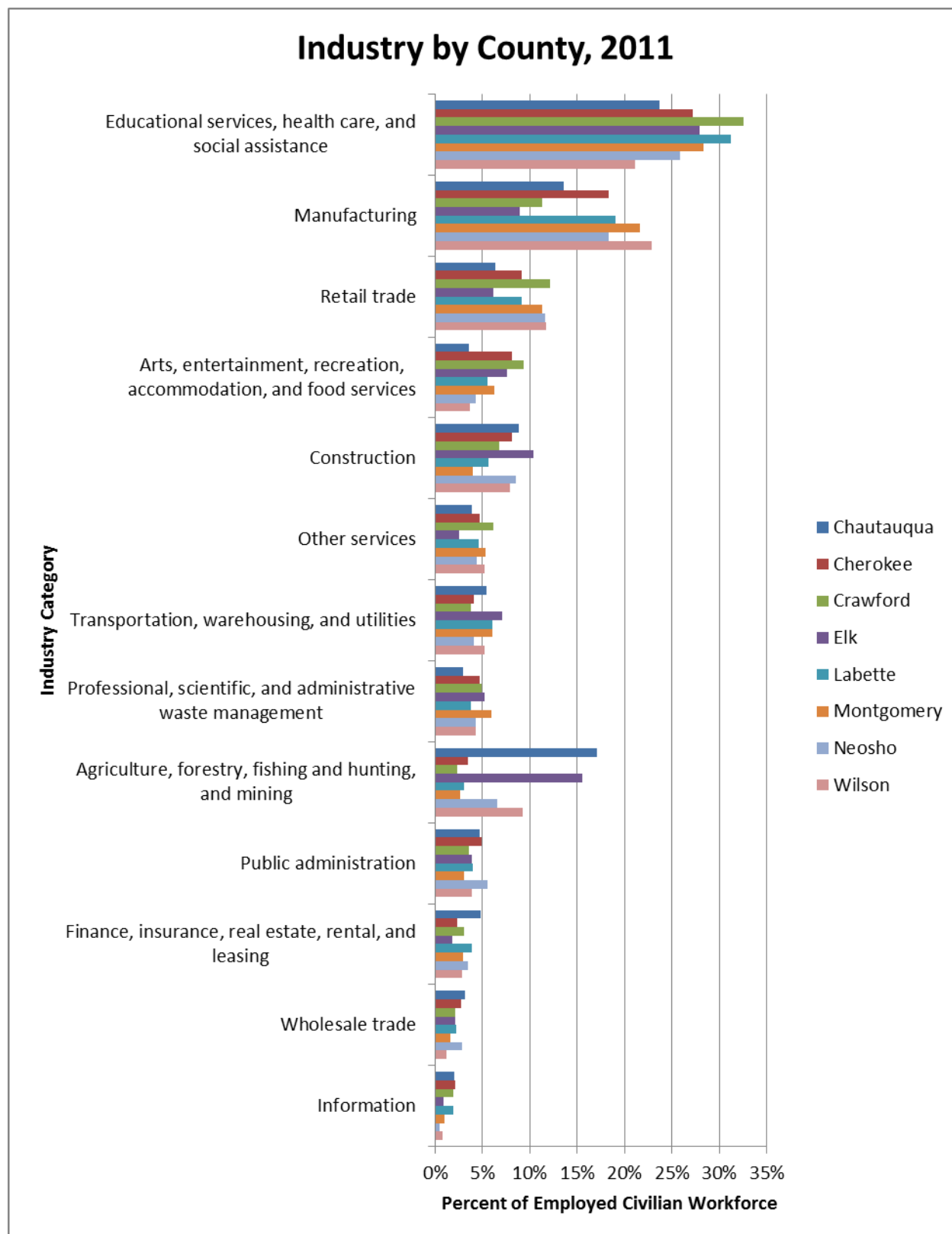
**Source: U.S. Census Bureau, 2007-2011 American Community Survey**

Nearly three in four workers (74.7 percent) in the Lower 8 are employed by private business, while the remaining workers are employed by government (17.2 percent), are self-employed (7.8 percent) or are unpaid family workers (0.3 percent). The profile across counties is very similar.

**Figure 14**



**Employer Category, 2011**

- Unpaid family workers 0.3%
- Self-employed 7.8%
- Government 17.2%
- Private wage and salary workers 74.7%
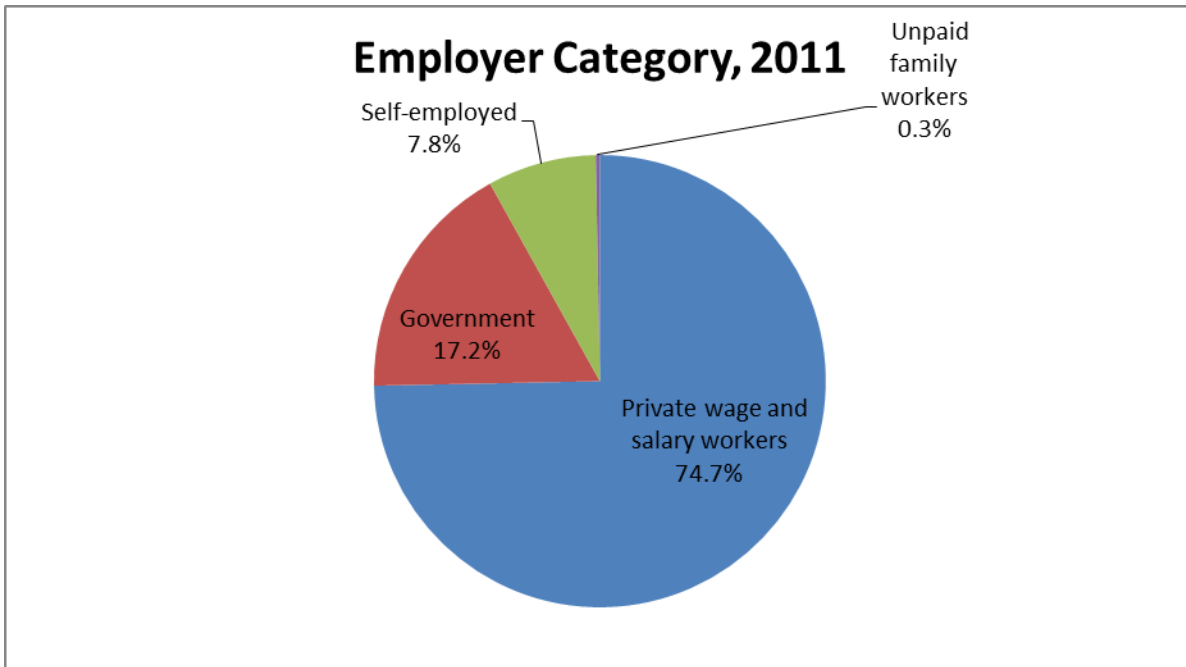
Source: U.S. Census Bureau, 2007-2011 American Community Survey

*Commute to Work*

Research shows that people who spend more time commuting to work are more likely to weigh more, have decreased cardiorespiratory fitness and have metabolic risk factors. People who have to travel more than 15 miles to work every day are also less likely to fulfill exercise recommendations and are more likely to be obese. Meanwhile, hypertension is linked with having to travel more than 10 miles to work.[2] The majority (81.6 percent) of workers in the region drive alone to work. An additional 9.6 percent drive to work but carpool. Just 3.6 percent of workers in the region walk to work. The modes of commute to work are very similar across all counties.

**Table 3**

| COMMUTING TO WORK | |
|---|---|
| **Mode of Commute** | **Percent** |
| Car, truck or van -- drove alone | 81.6% |
| Car, truck or van -- carpooled | 9.6% |
| Public transportation (excluding taxicab) | 0.1% |
| Walked | 3.6% |
| Other means | 1.6% |
| Worked at home | 3.4% |
| *Number of workers 16 years and over: 66,941* | |

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

[2] Hoehner, C.M., Barlow, C.E., Allen, P. Schootman, M. (2012). Commuting distance, cardiorespiratory fitness, and metabolic risk. *American Journal of Preventive Medicine.*

## 3. Education

Educational attainment levels of the adult population are closely tied to employability and earnings potential,[3] which are in turn associated with improved health outcomes. At the regional level, educational attainment is slightly lower than that of Kansas overall. In the Lower 8 Region, 87.2 percent of the population age 25 and over has a high school diploma or higher, while in Kansas, 90.0 percent of the population has a high school diploma or higher (this includes the categories of high school diploma, some college, associate's degree, bachelor's degree, and graduate or professional degree). There is, however, variation in the educational attainment levels among the counties that comprise the region. Adults age 25 and over in Wilson County have the lowest levels of educational attainment, with just 81.8 percent of the population having a high school diploma or higher.

**Figure 15**
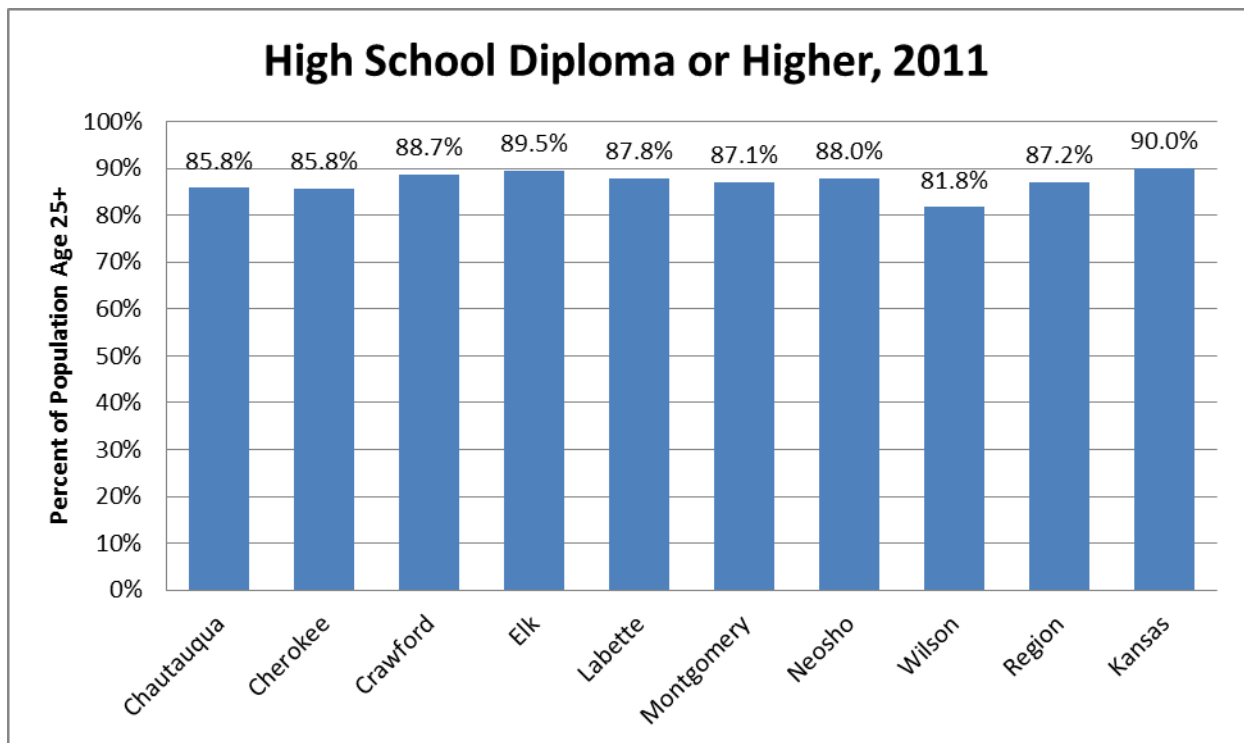


Source: U.S. Census Bureau, 2007-2011 American Community Survey

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[3] United States Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/emp/ep_chart_001.htm.

Additionally, when assessing the attainment of university-level education (including bachelor's degree and graduate or professional degree), the counties are substantially lower than Kansas overall. The Lower 8 Region has a university-level education rate of about one in five people age 25 and over, while in Kansas, about one in three people has a university-level degree. Again, Wilson County has the lowest rates of educational achievement, while Crawford County is the highest, at 27.8 percent. This may be due to the presence of Pittsburg State University in Crawford County.

**Figure 16**



Bachelor or Graduate Degree, 2011
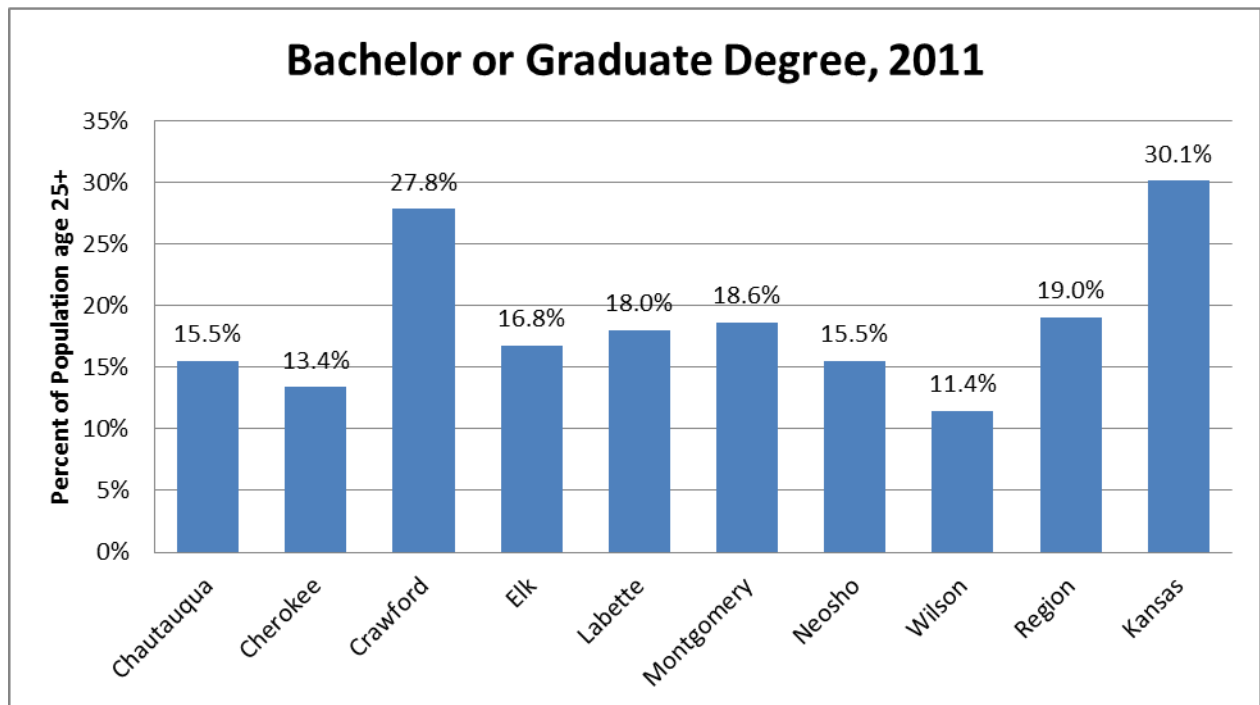
Source: U.S. Census Bureau, 2007-2011 American Community Survey

## 4. Mortality

*Age-Adjusted Mortality Rates*

Mortality rates are calculated as the number of deaths in a defined time period per 1,000 people. Although many factors affect the risk of death, age is by far the strongest. Because populations often differ in age composition, it is important to interpret crude mortality rates with caution. The way to standardize death rates is to control for differences in age distributions by "age-adjusting" death rates when making comparisons among geographic regions. After age-adjusting, Elk County has the lowest mortality rate, at 8.1 deaths per 1,000 people, and Cherokee County has the highest rate, at 10.7 deaths per 1,000 people. Of note, the Lower 8 Region as well as each individual county has mortality rates above the Kansas average, even after adjusting for age.

**Figure 17**
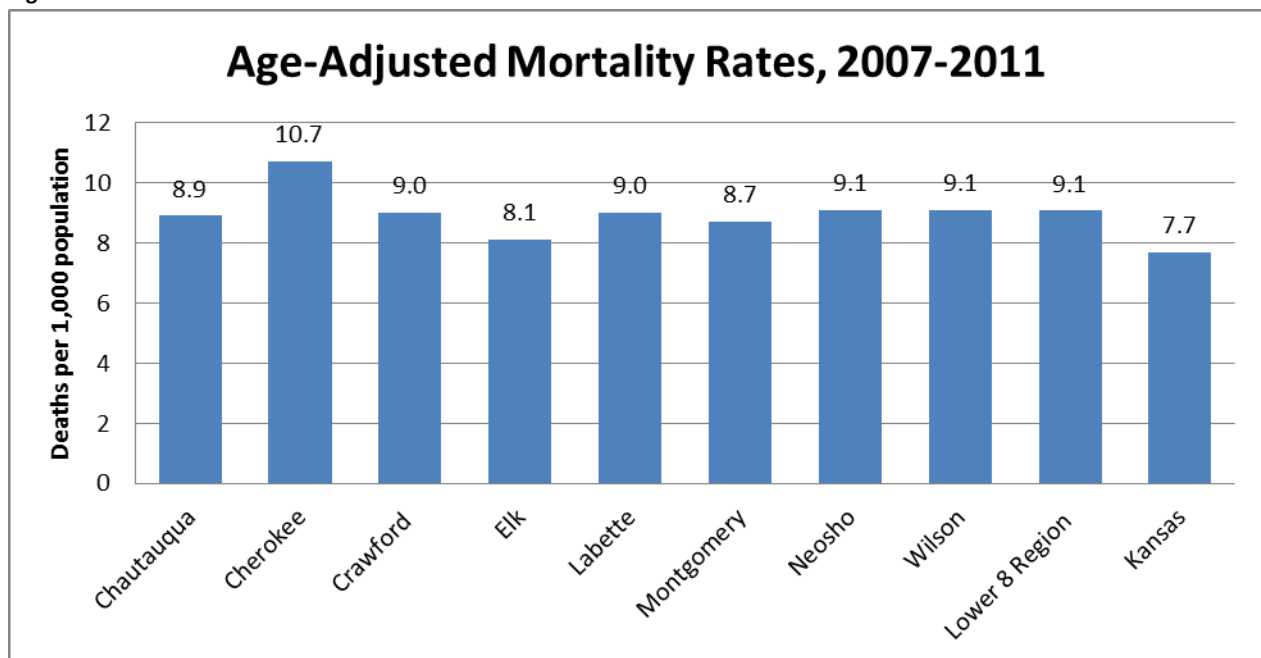


Source: Kansas Department of Health and Environment, Annual Summary of Vital Statistics, 2011

Since 2002, mortality rates in Kansas have been steadily declining. Over the same period, the mortality rates of the Lower 8 Region have remained steady.

**Figure 18**
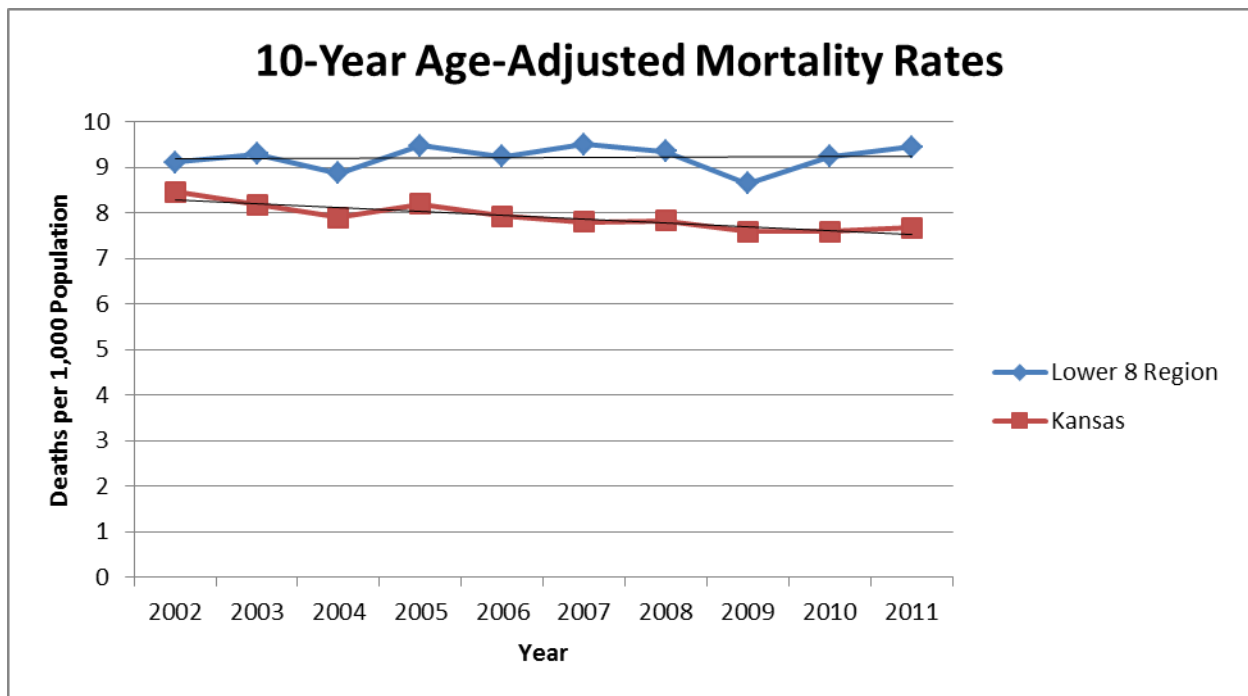


**10-Year Age-Adjusted Mortality Rates**

Source: Kansas Department of Health and Environment, Kansas Information for Communities Database, 2013

*Cause of Death*

The top five leading causes of death among Kansas residents in 2011 were cardiovascular disease (heart disease and stroke), malignant neoplasms (cancer), chronic lower respiratory diseases, unintentional injuries and Alzheimer's disease. Proportions of total deaths attributable to each of these five categories were fairly similar across the counties comprising the Lower 8 Region.

**Figure 19**
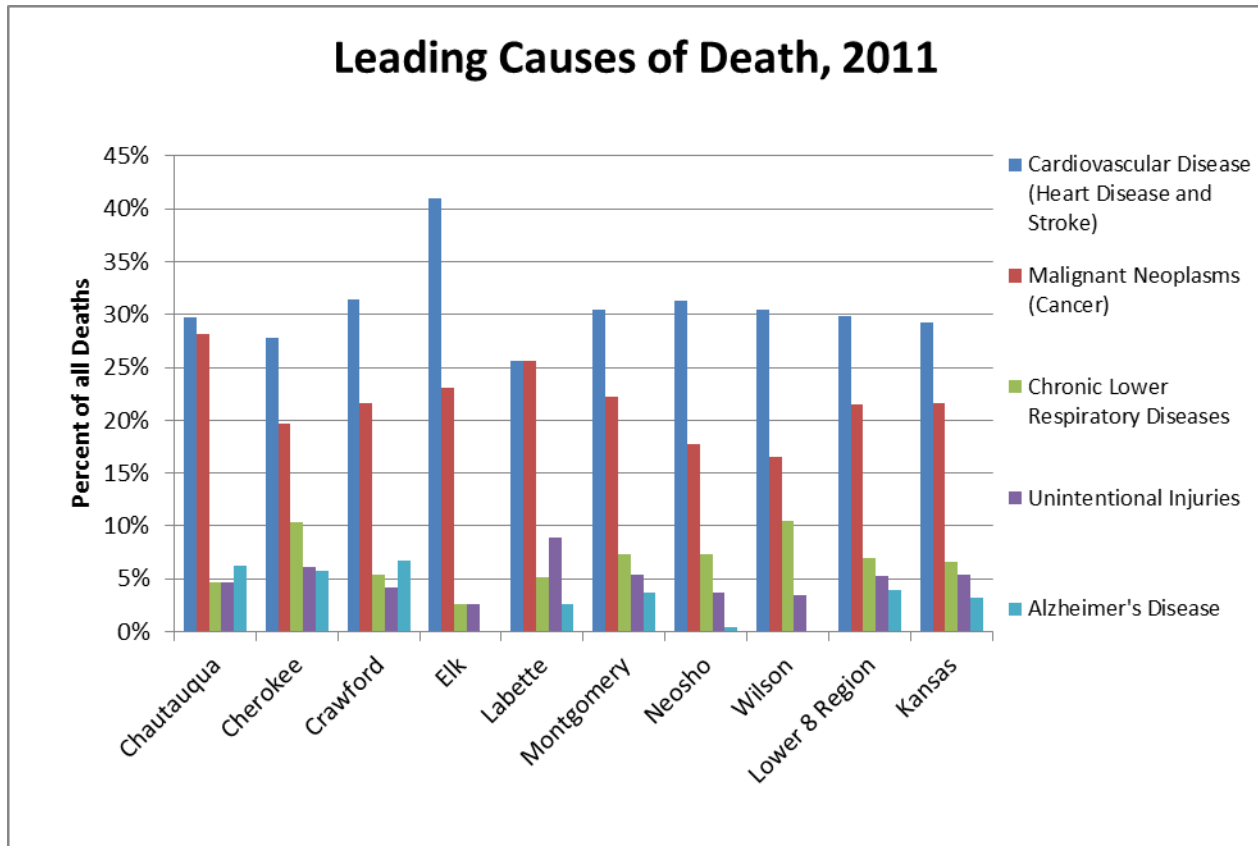


Source: Kansas Department of Health and Environment, Annual Summary of Vital Statistics, 2011

*Tobacco-Associated Deaths*

Use of tobacco products can be linked to the top two causes of death in Kansas. It can influence cardiovascular health and increase risks for certain kinds of cancers.[4] The percent of deaths attributable to tobacco use in the Lower 8 Region as a whole is virtually the same as that for the state of Kansas overall. There is much variety in the percent of deaths attributable to tobacco use in the region, however. Elk County has the lowest at 7.1 percent, while Montgomery County has the highest proportion with more than one-third of deaths attributable to tobacco use. However, these numbers should be interpreted with caution due to small numbers in many of the counties.

**Figure 20**
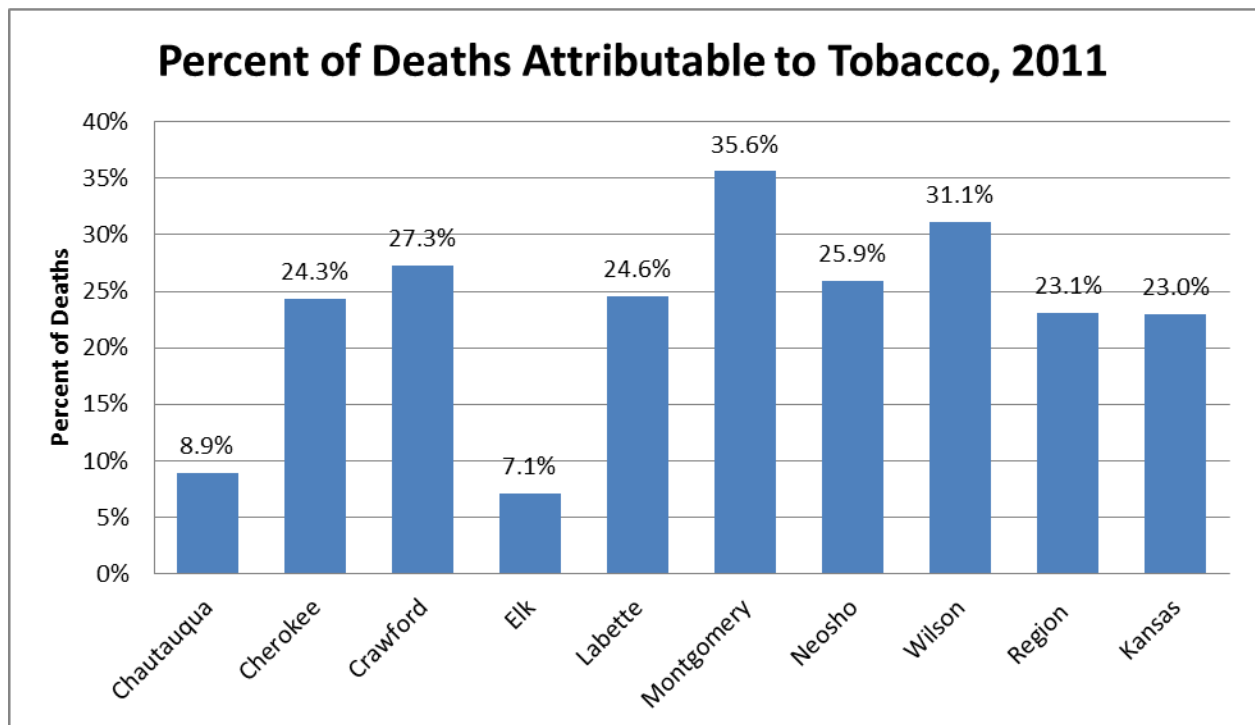


Source: Kansas Department of Health and Environment, Annual Summary of Vital Statistics, 2011

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[4] Centers for Disease Control, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking//

## 5. Violence and Injury

*Violent Crime*

Violent crime can significantly affect the health of community residents, both in terms of physical injuries and quality of life. Many survey respondents were concerned about security and criminal activity in the Lower 8 Region.  During 2009, the rate of violent crimes per 1,000 residents was very slightly below the Kansas crime rate. Most counties in the region are near or below the state rate with the exception of Labette and Montgomery counties, at 4.7 and 4.3 violent crimes per 1,000 residents, respectively.

**Figure 21**
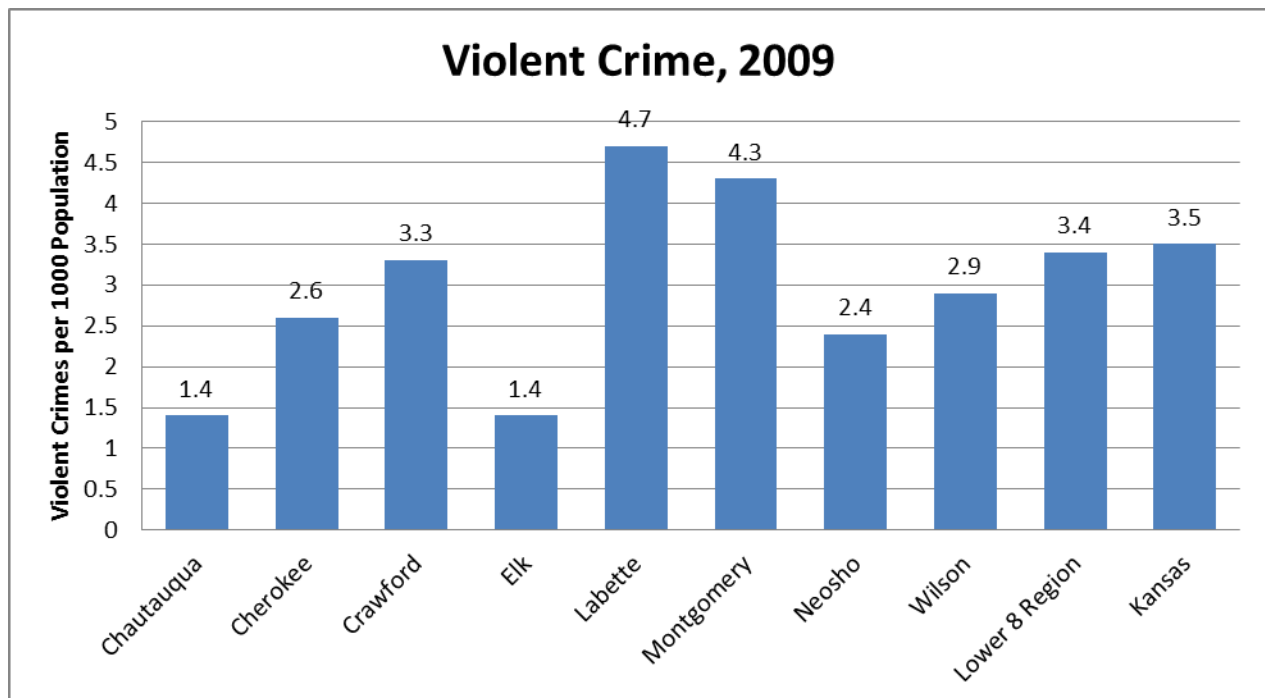


Source:  Kansas Health Matters, www.kansashealthmatters.org, 2013

*Traffic*

The motor vehicle crash death rate in Lower 8 Region between 2002 and 2011 was higher as a whole than the Kansas rate. The Lower 8's average yearly death rate was 24.0 deaths per 100,000 people, while the average rate in Kansas was 15.0 deaths per 100,000.   Figure 22 shows the region's share of the total deaths in the state each year between 2002 and 2011. As of 2012, the region had 5.1 percent of the Kansas population. The region's share of motor vehicle deaths is expected to be close to the region's share of the total population, and a higher rate may indicate an underlying cause of increased crash deaths.

**Figure 22**
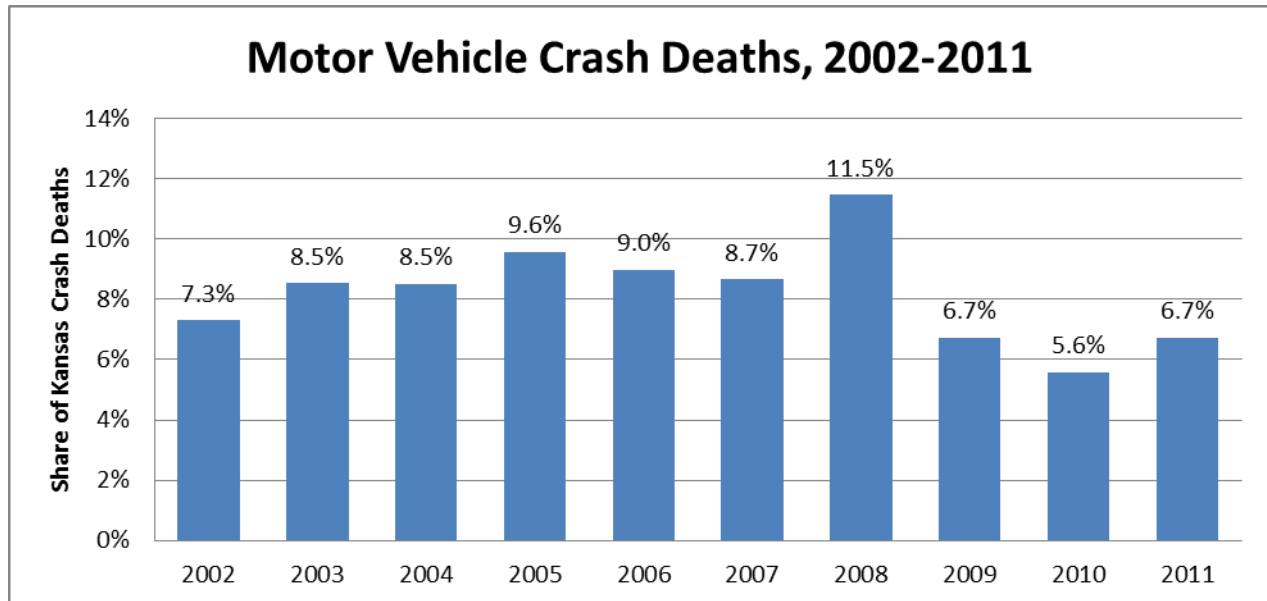


Source:  Kansas Department of Transportation.

*Injury*

The hospital admission rate for unintentional injuries was substantially higher in the Lower 8 Region in 2009 than Kansas as a whole. The rate for the Lower 8 was 1,231.8 admissions per 100,000 people, which was more than twice the Kansas rate of 546.3 admissions per 100,000 people. Cherokee County stands out among the region as having a particularly high hospital admissions rate for unintentional injuries, at 1,616.0 per 100,000. Chautauqua County is the lowest in the region, with 596.1 admissions per 100,000 people.

**Figure 23**
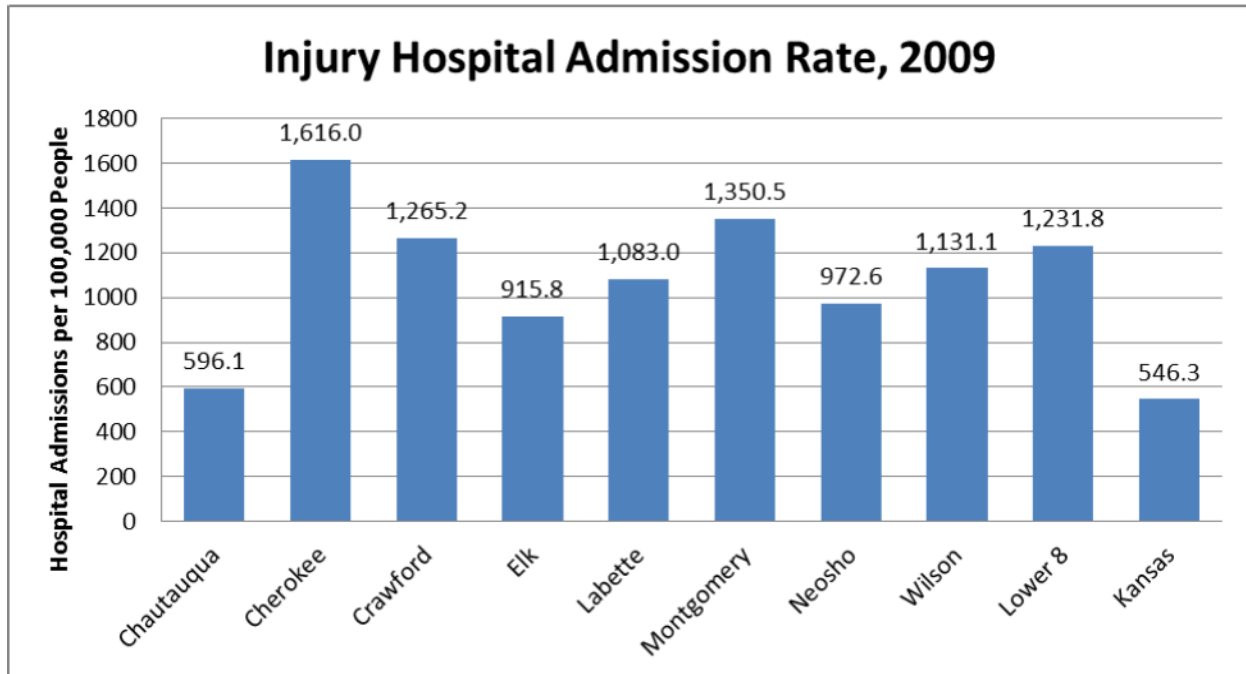


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

The unintentional injury death rate in the Lower 8 Region was higher than the Kansas rate for 2009, with 54.2 deaths per 100,000 people in the Lower 8 versus 41.1 per 100,000 in Kansas overall. There is some variability among the counties, with Elk County having the highest death rate at 78.1 deaths per 100,000; however, this high rate may be due limited data for that county.

**Figure 24**



**Unintentional Injury Death Rate, 2009**

| County | Deaths per 100,000 |
|---|---|
| Chautauqua | 54.5 |
| Cherokee | 47.7 |
| Crawford | 48.1 |
| Elk | 78.1 |
| Labette | 72.5 |
| Montgomery | 49.4 |
| Neosho | 58.1 |
| Wilson | 63 |
| Lower 8 | 54.2 |
| Kansas | 41.1 |
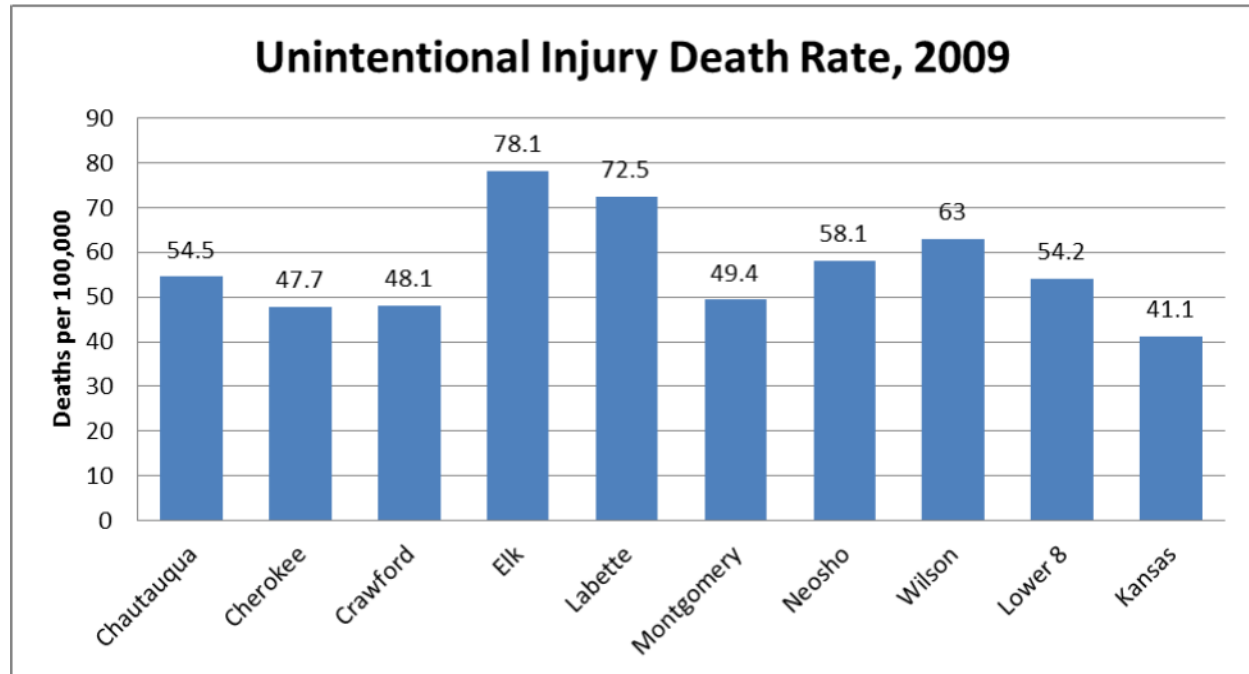
Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

*Suicide*

The Lower 8 Region as a whole had a similar rate of suicide deaths as compared to Kansas overall. There was some variability among counties, with Cherokee County standing out as having a higher rate than all other counties, at 24.2 deaths per 100,000.

**Figure 25**
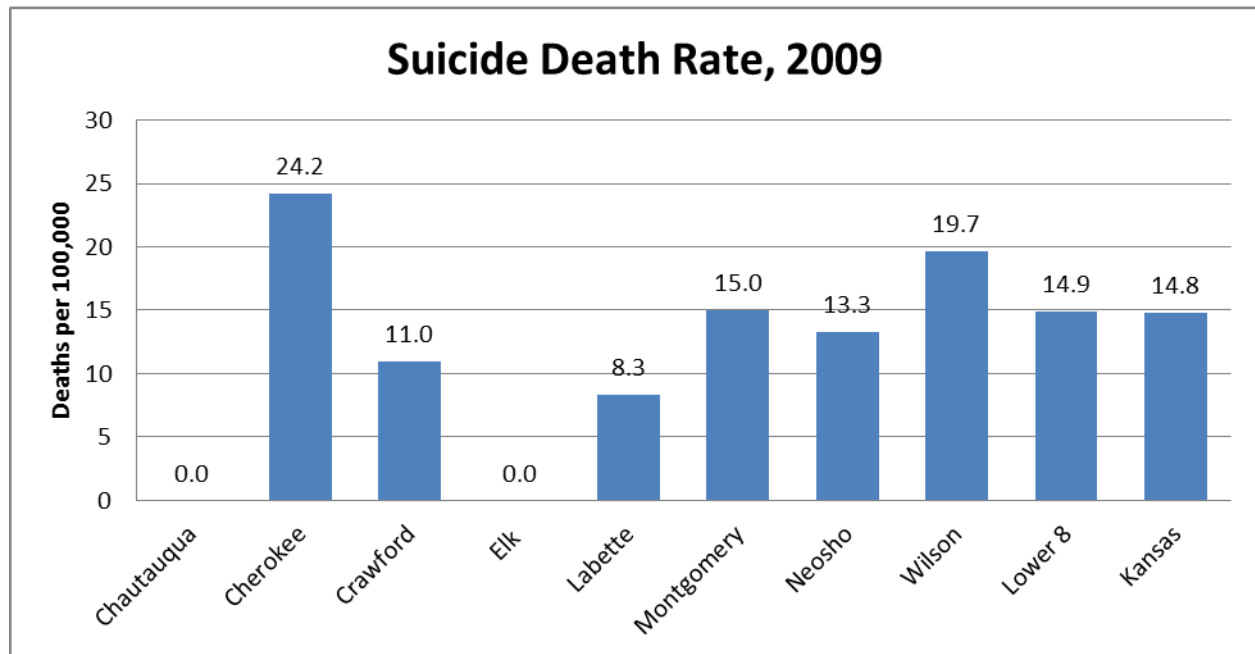


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

## 6. Disease and Poor Health

*Cancer Diagnosis*

Cancer was the second leading cause of death in the United States[5], in Kansas and in the Lower 8 Region in 2011. While a cancer diagnosis is not always fatal, it typically is time consuming, emotionally draining, and financially burdensome for the individual and his or her relatives.[6] When respondents in the Lower 8 Community health survey were asked the question, "*What do you think are the three most important health problems in your community?*" cancer was the most frequently identified health issue. The Lower 8 Region as a whole has nearly the same rate of cancer diagnoses as Kansas overall. However, within the region there is some variability. Labette County has the highest rate of cancer diagnoses, at 11.7 percent. Data are not available for Chautauqua and Elk counties.

**Figure 26**
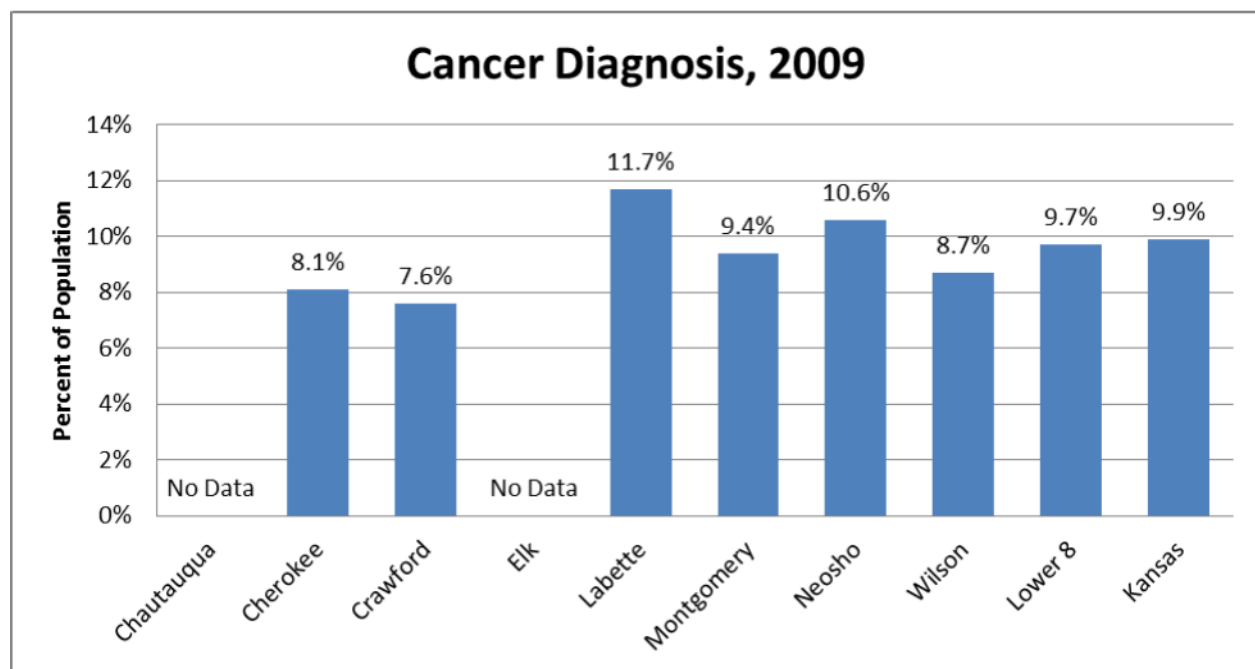


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

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[5] Centers for Disease Control, http://www.cdc.gov/nchs/fastats/lcod.htm.
[6] American Cancer Society, http://www.cancer.org/index.

*Diagnosed Arthritis*

Arthritis affects the aged population more often than younger adults and can reduce mobility and quality of life. The Lower 8 Region as a whole has a higher percent of doctor-diagnosed arthritis than Kansas overall, which may be due to a higher population of residents over 65 years of age. Wilson County has the highest rate of diagnosed arthritis at 38 percent. Data are not available for Chautauqua and Elk counties.

**Figure 27**
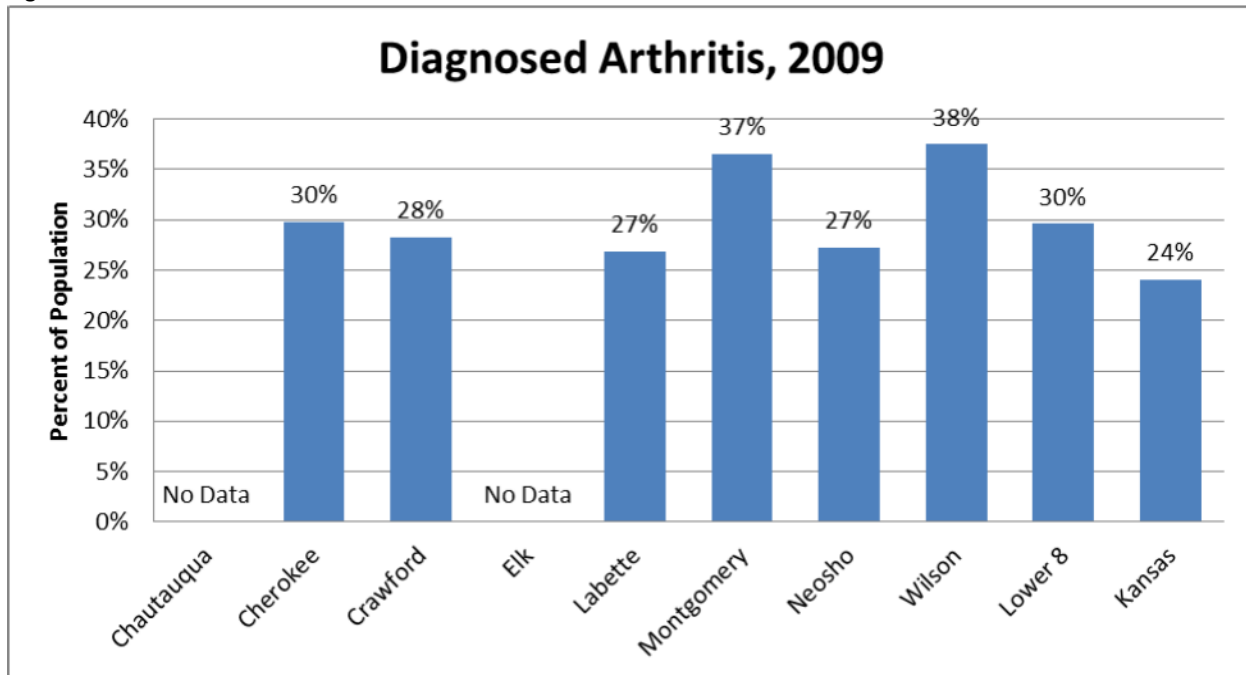


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

*Diagnosed Diabetes*

Diabetes, particularly Type 2 diabetes, is linked with many other health conditions, including obesity and heart disease.[7] This was the second most commonly cited health problem on the Lower 8 Community health survey. The Lower 8 Region has slightly higher rates of diagnosed diabetes than Kansas overall with 10.2 percent of the region's population having doctor-diagnosed diabetes versus 8.5 percent statewide. Wilson County has the highest percentage of diagnosed diabetes in the region with 12.3 percent.

**Figure 28**
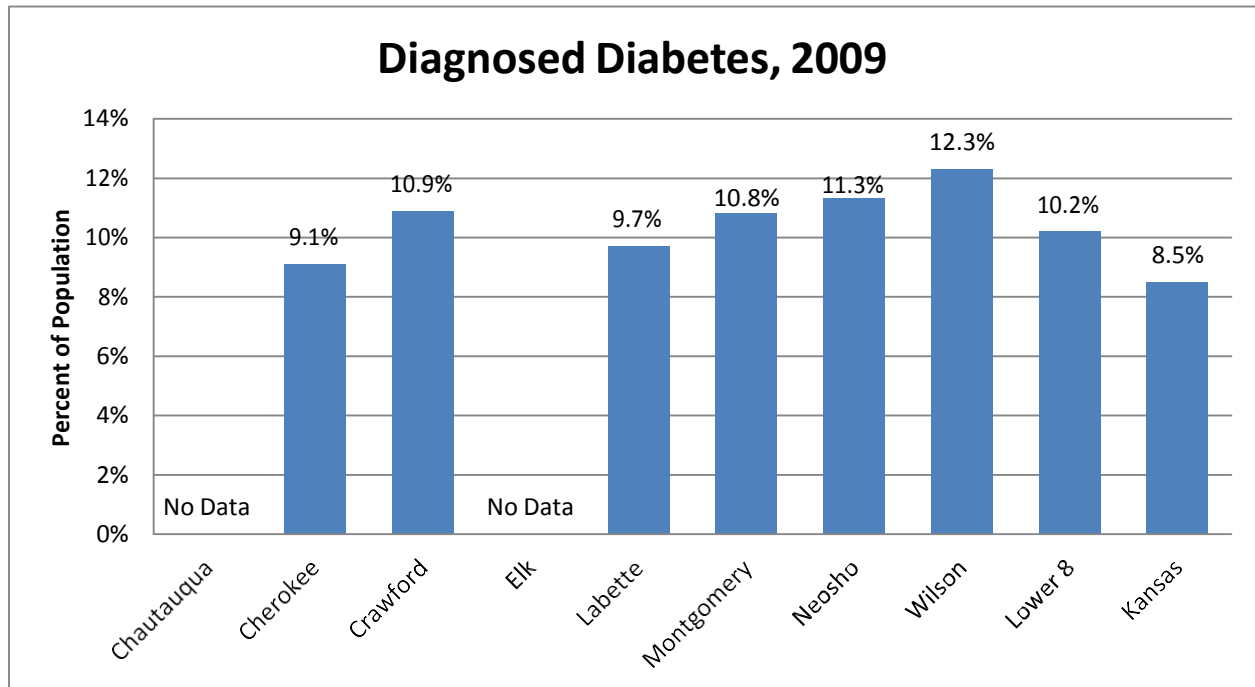


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

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[7] Centers for Disease Control, http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf.

## 7. Health Behaviors

### *Tobacco Use*

Tobacco use is one of the most preventable causes of illness and death in the United States. More deaths are caused each year by tobacco use than by all deaths from HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides and murders combined.[8] Locations with high smoking prevalence also have greater exposure for non-smokers to secondhand smoke, which can cause or exacerbate a range of adverse health conditions, including cancer, heart disease, respiratory infections and asthma.[9] The Healthy People 2020 national target is to reduce the proportion of the adult population age 18 and over who smoke cigarettes to 12 percent.

Across the Lower 8 Region, 22.7 percent of adults were smokers in 2009, a rate higher than the state rate of 17.8 percent. Within the region, rates ranged from 15.2 percent in Cherokee County to 30.4 percent in Montgomery County. Rates were not available for Chautauqua and Elk counties due to small population sizes.

**Figure 29**
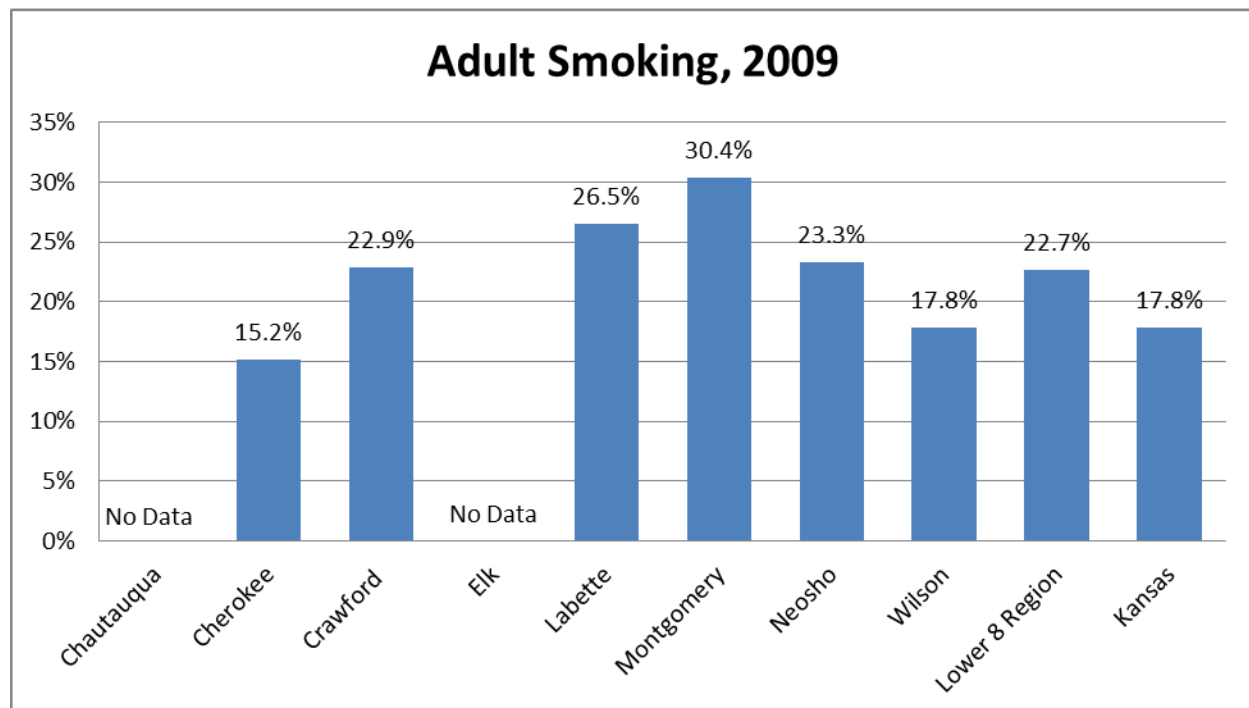


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

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[8] Centers for Disease Control, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/
[9] Centers for Disease Control, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/.

Smokeless tobacco is also associated with higher risks of certain types of cancers, cavities, gum disease and heart disease.[10] Additionally, it can cause nicotine addiction and lead to other forms of tobacco use. Rates of smokeless tobacco use in the Lower 8 Region are similar to the rates in Kansas as a whole. There is wide variability between counties in the rates of smokeless tobacco use, from 2.4 percent in Crawford County to 11 percent in Cherokee County. The county-level numbers should be interpreted cautiously due to small numbers in the region.

**Figure 30**
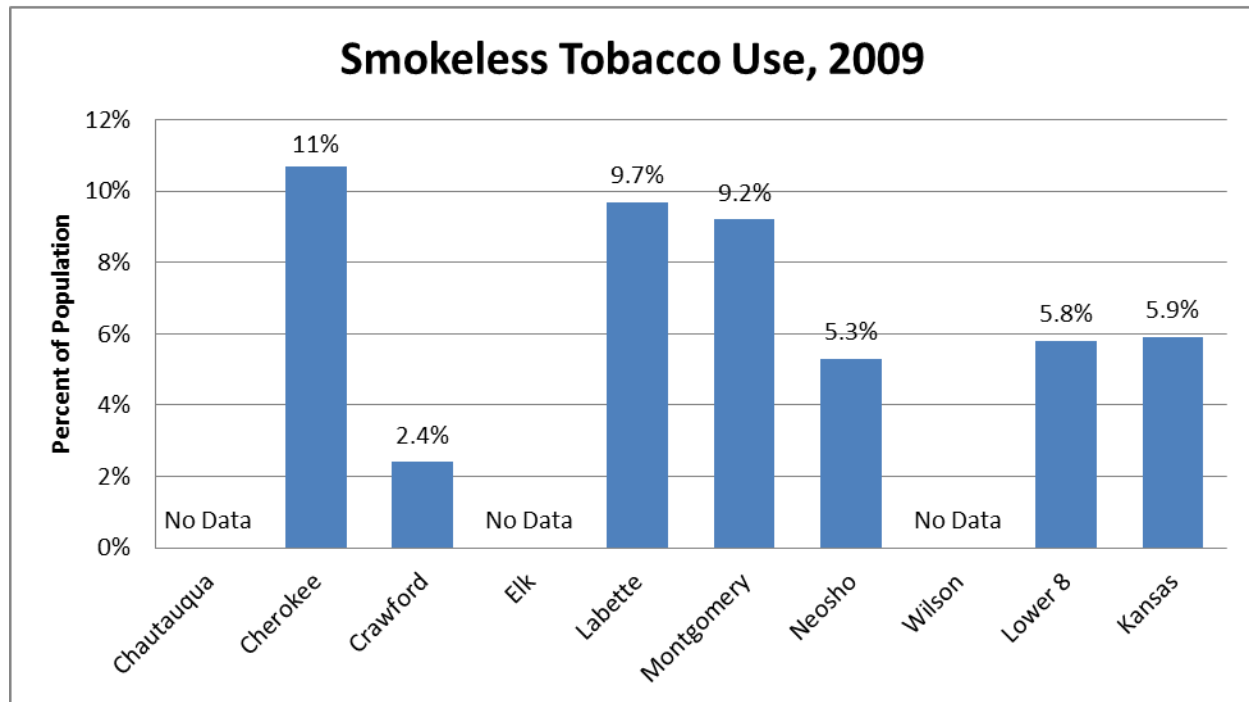


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

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[10] Mayo Clinic, http://www.mayoclinic.com/health/chewing-tobacco/CA00019.

*Obesity*

The percentage of residents who are obese is an important indicator of the overall health of a community. Being obese affects quality of life and puts people at risk for developing many diseases, especially heart disease, stroke, diabetes and cancer. The percentage of adults who are obese is determined according to the body mass index (BMI), which is calculated by taking a person's weight and dividing it by their height squared in metric units. A BMI equal to or greater than 30 is considered obese.

At the regional level, the percentage of adults age 18 and over who were obese in 2009 was above the state level. Among the counties in the Lower 8 Region, Montgomery County had the highest share of obese individuals, with more than one-third of the population qualifying as obese. Crawford County had the lowest share of obese adults, at just 23.0 percent.

**Figure 31**
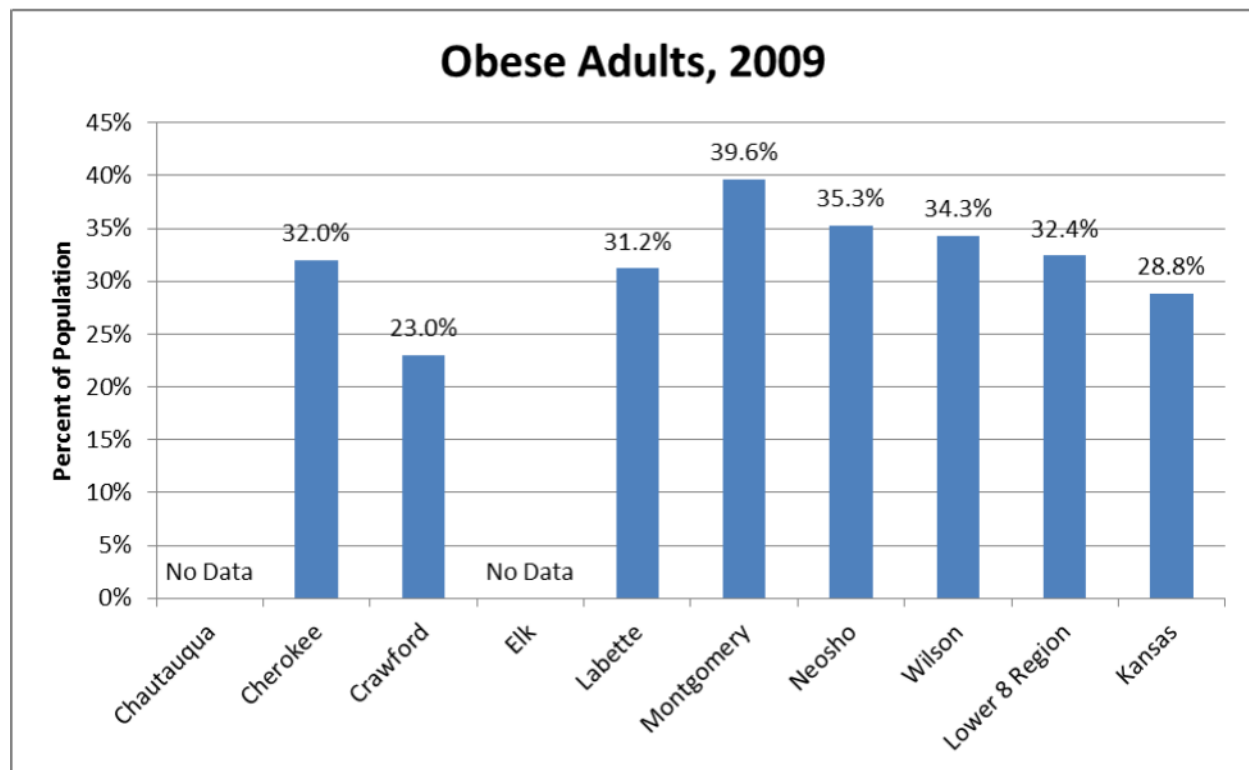


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

*Healthy Foods*

Eating a balanced diet of healthy foods, including fruits and vegetables, is key to maintaining a healthy weight and preventing chronic disease. Many studies have shown a link between the amount and variety of fruits and vegetables consumed and rates of chronic diseases, especially cancer.[11] The U.S. Department of Agriculture recommends four and one-half cups of fruits and vegetables per day for a standard 2,000-calorie diet, with higher or lower amounts depending on the number of calories. Despite the benefits of fruits and vegetables, many people still do not eat the recommended levels. This is especially true of people with lower incomes and educational levels, who are unable to access healthy foods due to actual or perceived higher cost.[12]  Statewide, the percent of adults who indicated that they ate fruits or vegetables five or more times per day is just 18.6 percent. In the Lower 8 Region, that percent is lower, at just 15.6 percent of adults eating five or more vegetables per day. At the county level, there is some variation, though the differences should be interpreted cautiously due to small numbers in some counties. In Neosho County, just 8.7 percent of adults meet the fruit and vegetable recommendations, while in Wilson County, more than a quarter of adults eat fruits and vegetables five or more times per day, on average.

**Figure 32**
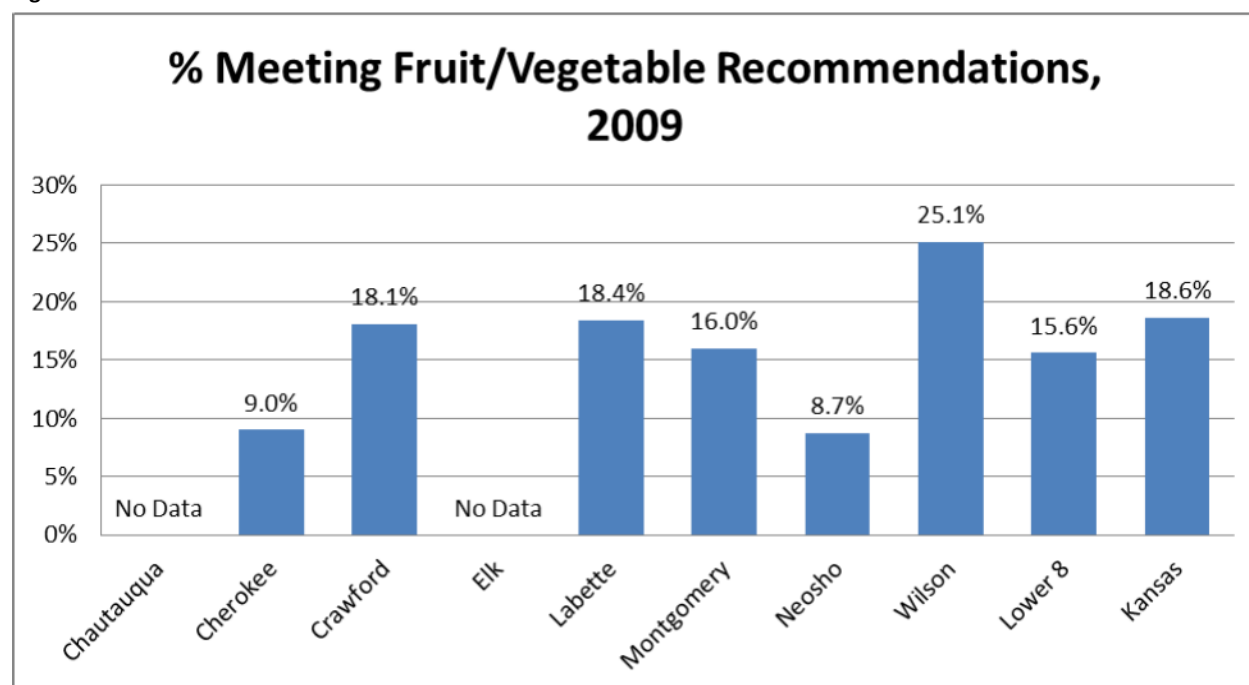


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

[11] Lin, J.S., O'Connor, E., Whitlock, E.P, Beil, T.L. (2010). Behavioral Counseling to Promote Physical Activity and a Healthful Diet to Prevent Cardiovascular Disease in Adults: A Systematic Review for the U.S. Preventive Services Task Force. *Annals of Internal Medicine*. 153(11):736-750.
[12] Dammann, K.W. and Smith, C. (2009). Factors Affecting Low-income Women's Food Choices and the Perceived Impact of Dietary Intake and Socioeconomic Status on Their Health and Weight. *Journal of nutrition education and behavior*; volume 41 issue 4 Pages 242-253 DOI: 10.1016/j.jneb.2008.07.003.

*Binge Drinking*

This indicator shows the percentage of adults 18 years and older who reported binge drinking during the 30 days prior to the BRFSS interview. Binge drinking is defined as having five or more drinks on one occasion in the past 30 days for males, or having four or more drinks on one occasion in the past 30 days for females. Alcohol abuse is associated with a variety of negative health and safety outcomes, including domestic violence, and hospitalization due to unintentional injury.[13] The Healthy People 2020 national target is to reduce the proportion of adults 18 and older engaging in binge drinking during the past 30 days to 24.3 percent.

Across Kansas, rates of binge drinking among adults are already 10 percent below the national target, with a statewide rate of 14.3 percent in 2009. The Lower 8 Region as a whole also has lower rates of binge drinking than Kansas overall, although there is wide variety among the counties in the region. While just 9.7 percent of Montgomery County residents report binge drinking, nearly one-fifth of Labette County and Neosho County residents have participated in binge drinking in the past month.

**Figure 33**
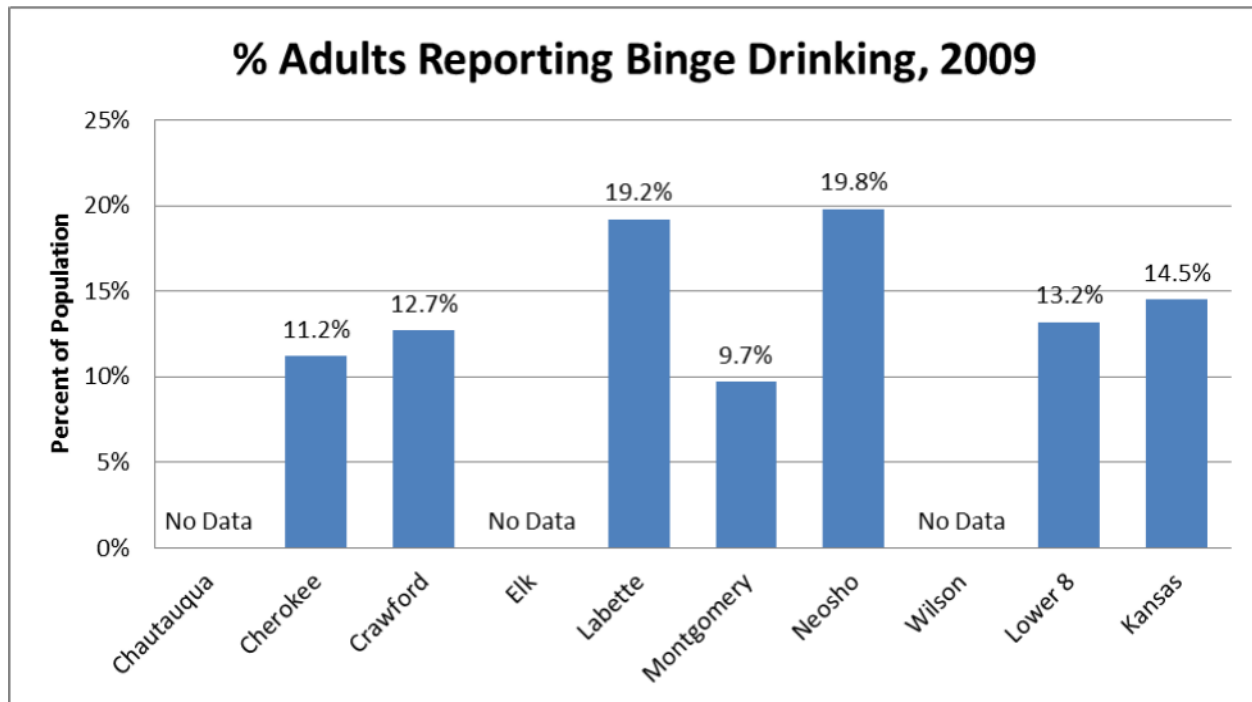


Source: Kansas Department of Health and Environment, BRFSS 2009 Data

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[13] Centers for Disease Control, http://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm.

*Sexually Transmitted Diseases*

This indicator shows the incidence rate per 1,000 people of sexually transmitted diseases (STDs), including chlamydia, gonorrhea and syphilis. Because many STDs go untreated, the reported cases represent only a fraction of the true burden of STDs. Untreated STDs can lead to serious long-term health consequences, especially for adolescent girls and young women, and are a significant cause of infertility among women.

In 2011, the STD rate across the Lower 8 Region was 3.3 per 1,000 residents. This is lower than the state rate of 4.5 per 1,000. Within the region, all counties also had a rate lower than the state rate.

**Figure 34**
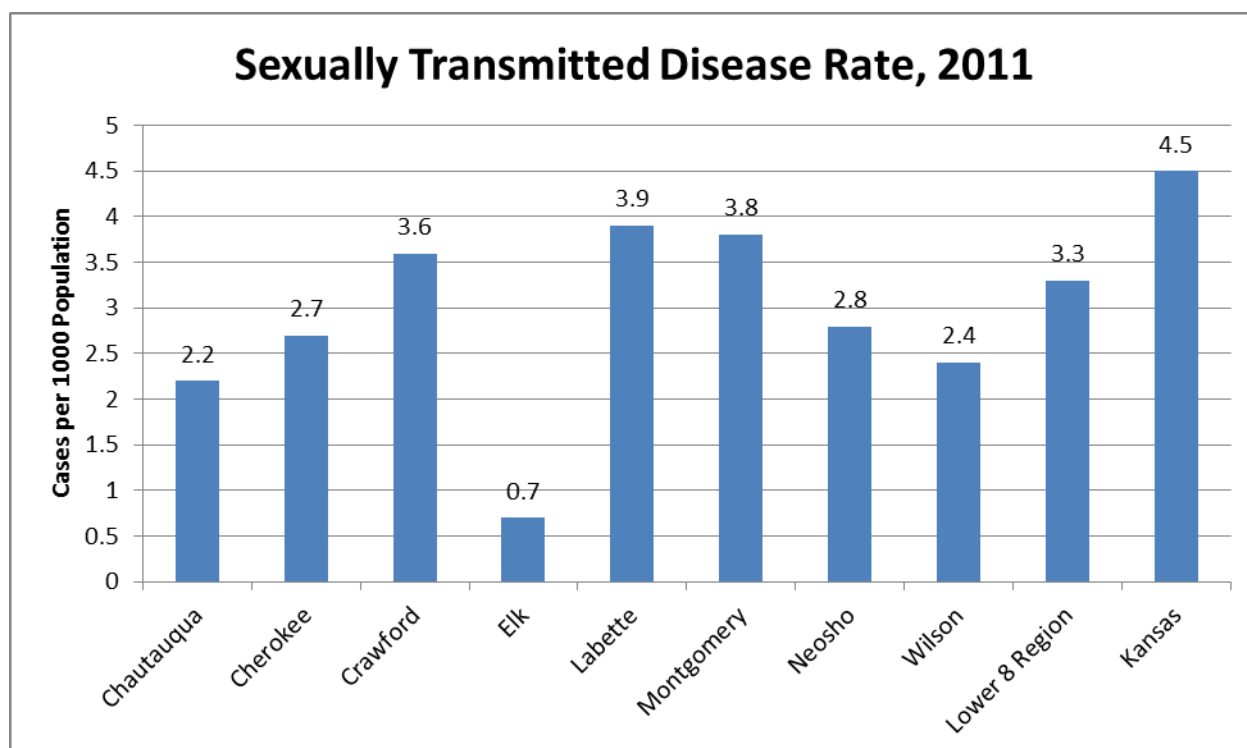


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

*Drug Arrests*

Substance abuse is an issue that was frequently identified as a problem in the survey. The number and rate of people arrested for drugs could reflect both substance abuse and law enforcement's response to the behavior. The Lower 8 Region as a whole had an average of 3.2 arrests per 1,000 people in 2011. Arrest rates vary across counties in the region, from 0.3 arrests per 1,000 people in Elk County to 4.5 arrests per 1,000 people in Montgomery County. In 2011, Montgomery County also had the highest number of arrests at 159.

**Figure 35**
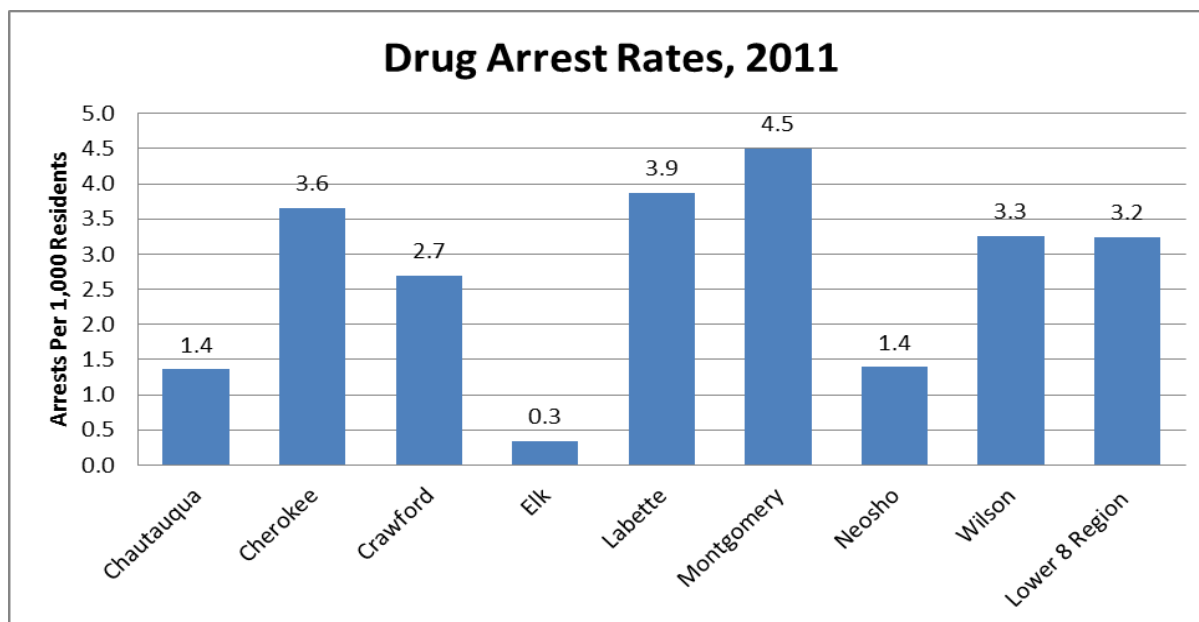


Source: Kansas Bureau of Investigation

**Table 4**

| Drug Arrests, 2011 | |
| --- | --- |
| | **Number of Drug Arrests** |
| Chautauqua | 5 |
| Cherokee | 79 |
| Crawford | 105 |
| Elk | 1 |
| Labette | 84 |
| Montgomery | 159 |
| Neosho | 23 |
| Wilson | 31 |
| **Lower 8 Region** | **487** |

Source: Kansas Bureau of Investigation

## 8. Access to Care

*Uninsured Adults*

This indicator shows the estimated percentage of people age 18 to 64 that lack health insurance of any type. Lack of adequate health coverage makes it difficult for people to get the health care that they need or to pay for the health care that they do receive. Uninsured adults are also at risk for extreme financial hardship in the event of a significant illness or injury.

Across the Lower 8 Region, uninsurance rates are higher than the Kansas average. Every county in the region except Labette County has a higher percent of uninsured adults than the Kansas average.

**Figure 36**
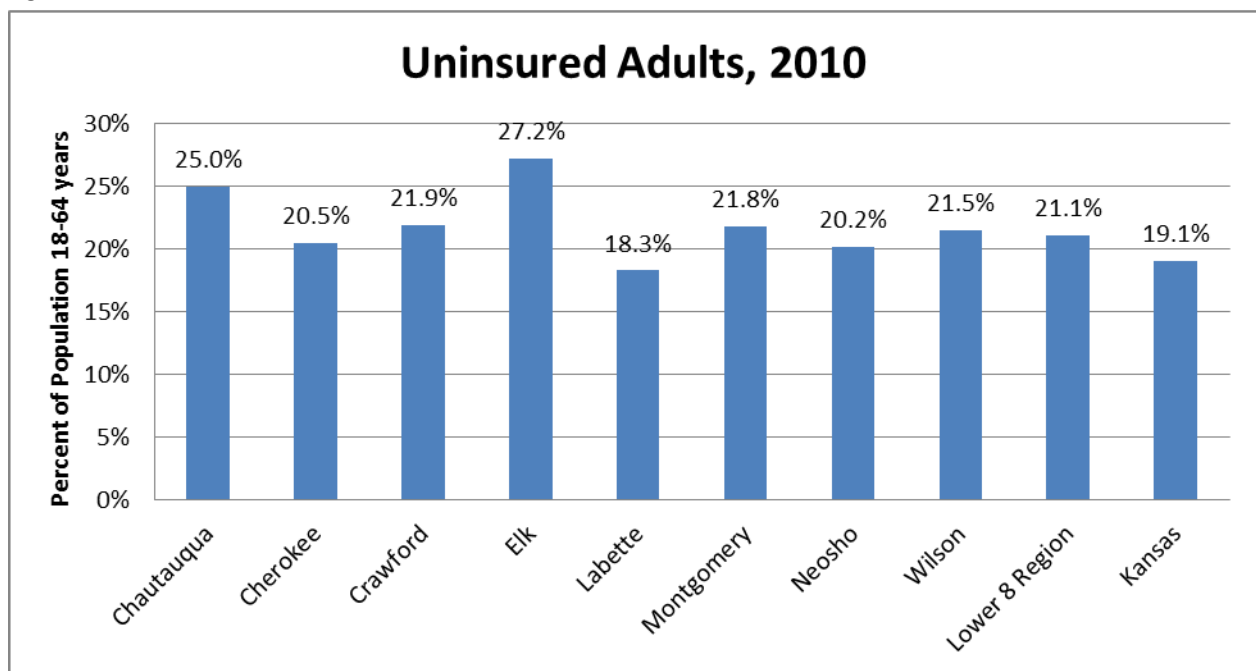


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

*WIC Participation*

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides nutrition education services and vouchers for the purchase of specified food items to low-income pregnant and lactating mothers and infants and children up to age five. Qualifying households must have incomes below 185 percent of the federal poverty level.

The Kansas Health Matters data system includes WIC participation rates, calculated as the average number of women and children participating monthly, divided by the total population in thousands. These suggest that rates of WIC participation in the Lower 8 Region are higher than the state rate for all counties except Elk County. Some caution should be exercised when evaluating these rates because the denominator is the whole population, not the population that would be eligible for WIC.

**Figure 37**
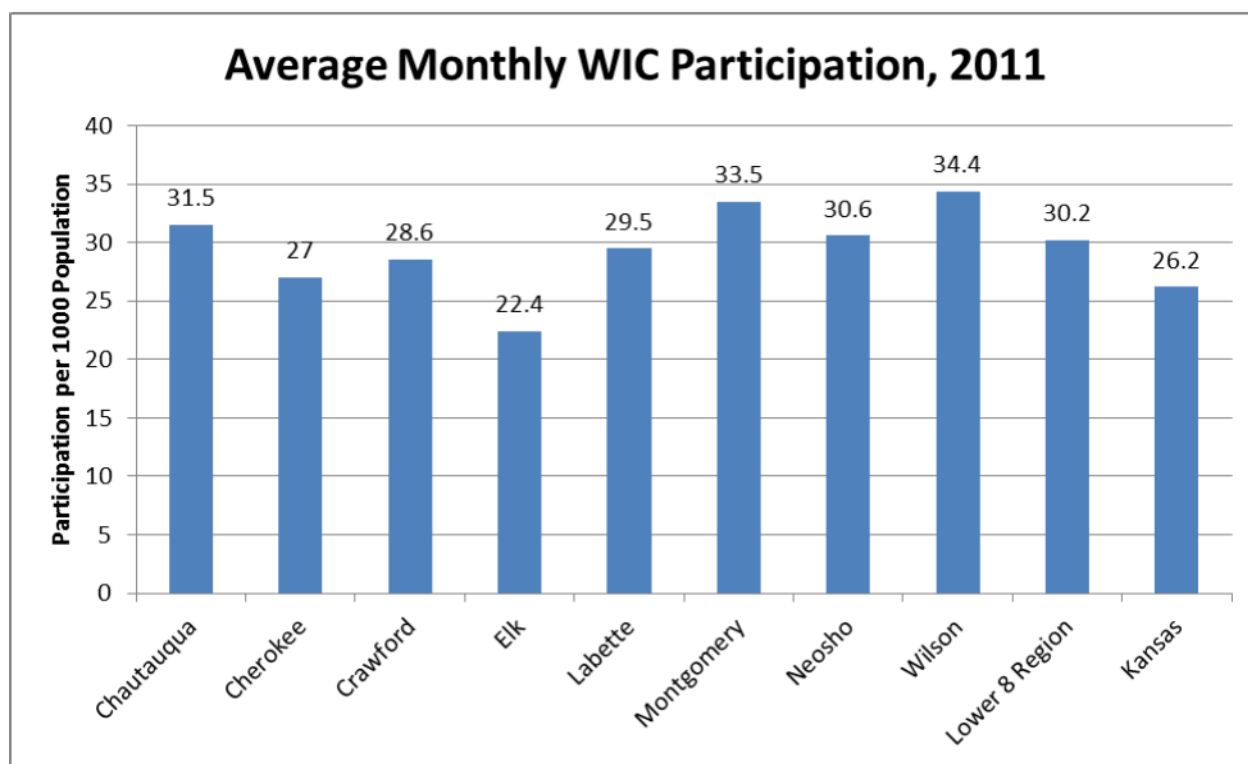


Source: Kansas Health Matters, www.kansashealthmatters.org, 2013

### 9. Maternal and Child Health

*Low Birth Weight Infants*

Infants born weighing less than 2,500 grams (5 pounds, 8 ounces) are defined as "low birth weight" babies. Babies born with a low birth weight are more likely than babies of normal weight to require specialized medical care and are at increased risk for infant death or long-term disability.[14]

For all births between 2002 and 2011, the rate of low birth weight infants in the Lower 8 Region was 8.0 per 100 births. This is higher than the state rate of 7.2 per 100 births. Using the 10-year average rate removes some concern over small numbers because of the volume of babies born over that time period, so these results can be given serious consideration. Additionally, the rates of low birth weight infants vary among counties, from 6.6 in Wilson County to 8.8 per 100 in Elk County.

The region's rate of low birth weight infants has been trending downward since 2002, though it is still above the Kansas rate. The variability seen between the yearly numbers for the region is due to the smaller number of births compared to the state. Year-to-year changes should be interpreted cautiously.

**Figure 38**
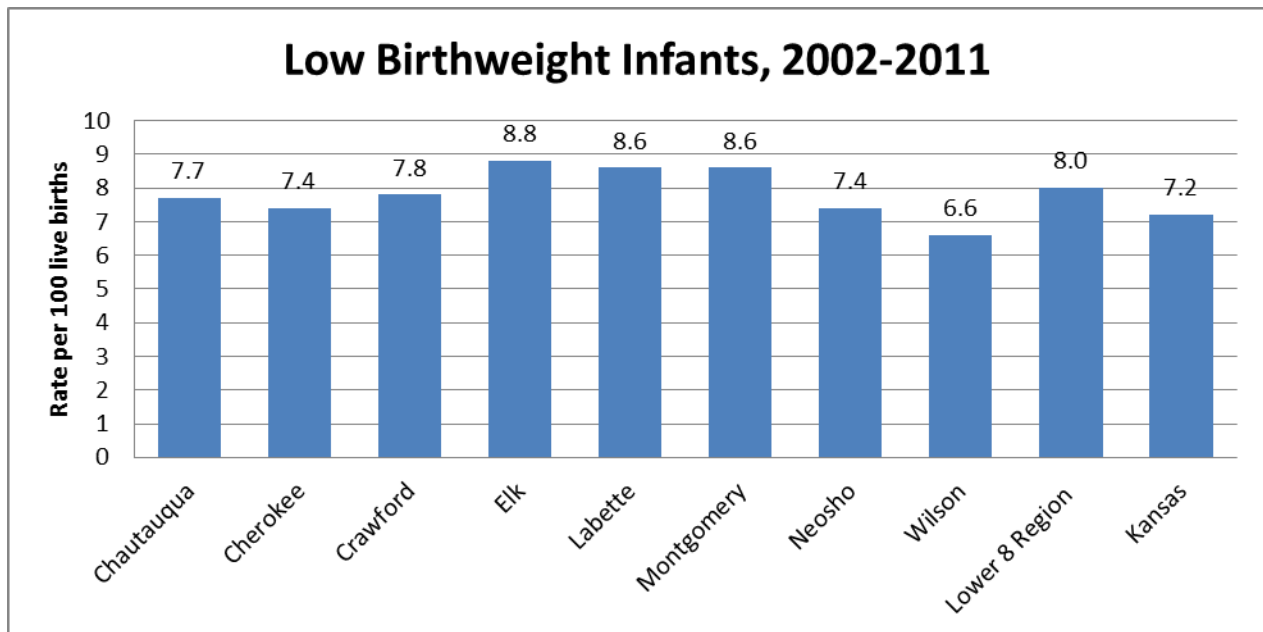


Source: Kansas Department of Health and Environment, Kansas Information for Communities Database, 2013

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[14] Centers for Disease Control, http://ephtracking.cdc.gov/showRbLBWGrowthRetardationEnv.action.
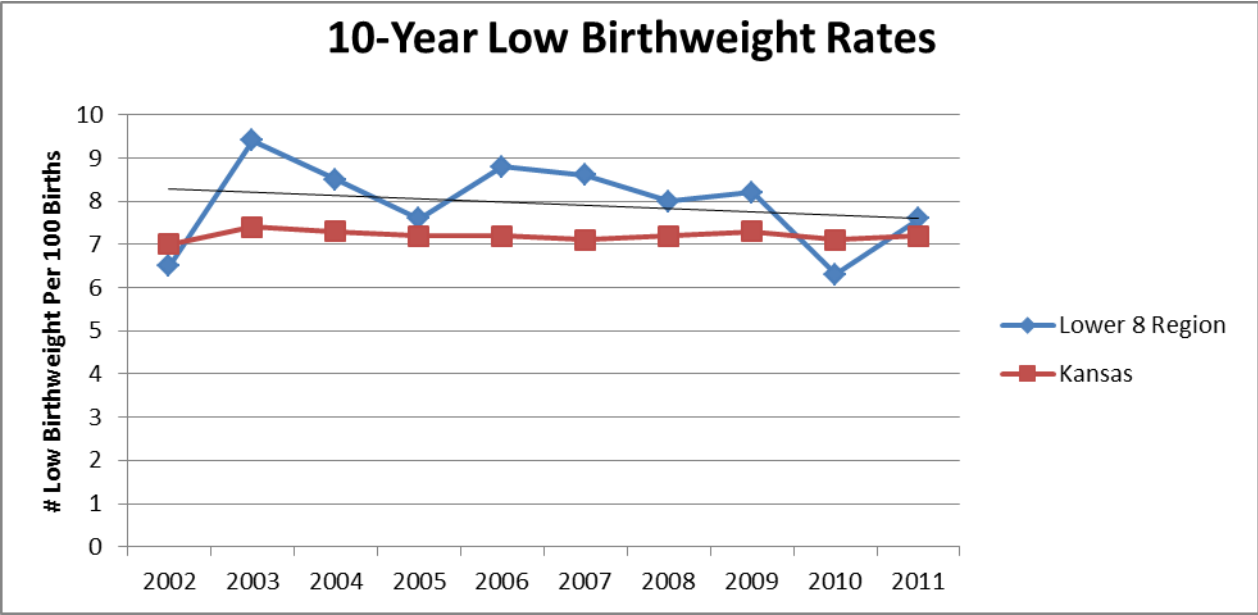
**Figure 39**



## 10-Year Low Birthweight Rates

Source: Kansas Department of Health and Environment, Kansas Information for Communities Database, 2013

*Infant Mortality Rate*

The infant mortality rate is defined as the rate of infant deaths (prior to one year of age) per 1,000 live births. Leading causes of death among infants are birth defects, pre-term delivery, low birth weight, sudden infant death syndrome (SIDS) and maternal complications during pregnancy. The Healthy People 2020 national target is 6.0 infant deaths per 1,000 live births.

The Lower 8 Regional infant mortality rate of 7.4 infant deaths per 1,000 live births is slightly higher than the Kansas rate of 6.9.  Within in the region, county rates vary widely from 3.3 to 21.9. However, these rates should be interpreted with extreme caution and examined over time due to the very small numbers infant deaths at the county level.

**Figure 40**
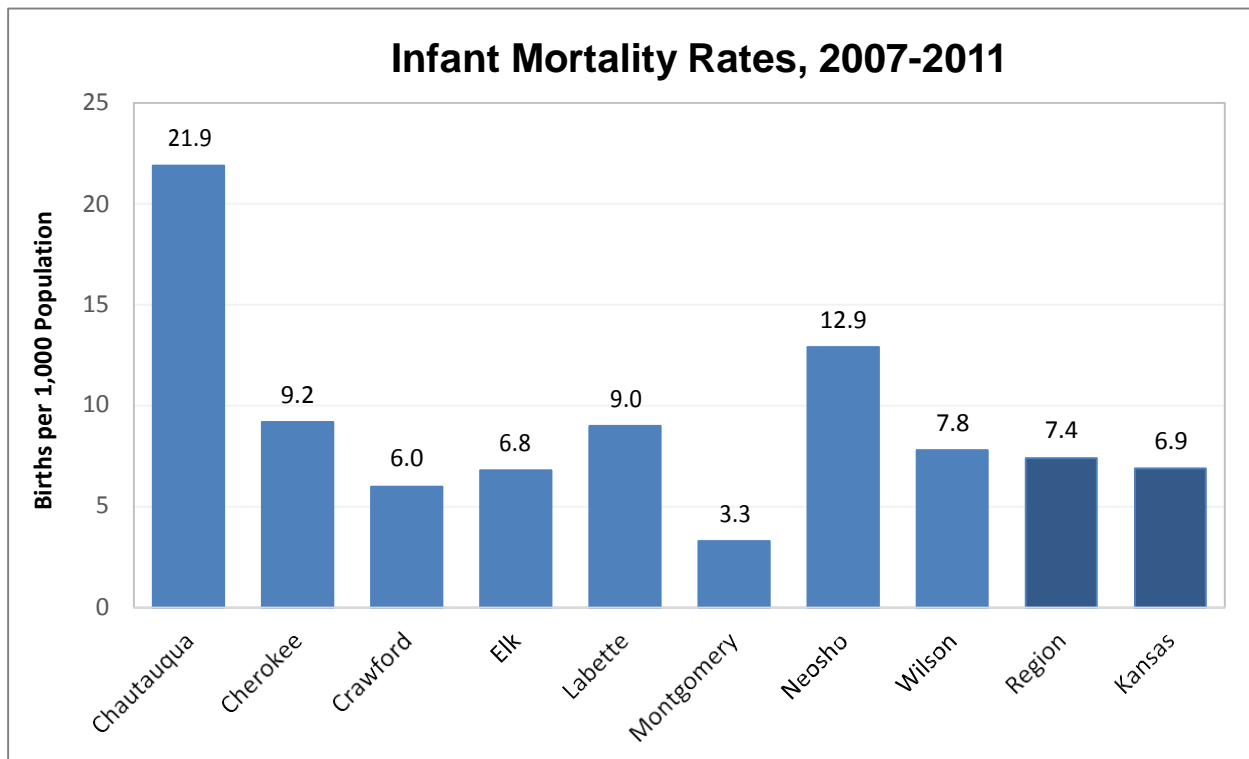


Source: Kansas Department of Health and Environment, Kansas Annual Summary of Vital Statistics, 2011

*Birth Rates*

Birth rates are one of the major factors influencing population growth. Birth rates for the Lower 8 Region as a whole are lower than rate for Kansas overall, 14.5 versus 13.2 per 1,000 population. Within the Lower 8 Region, Chautauqua and Elk have the lowest rates at 9.9 births per 1,000 population.

**Figure 41**
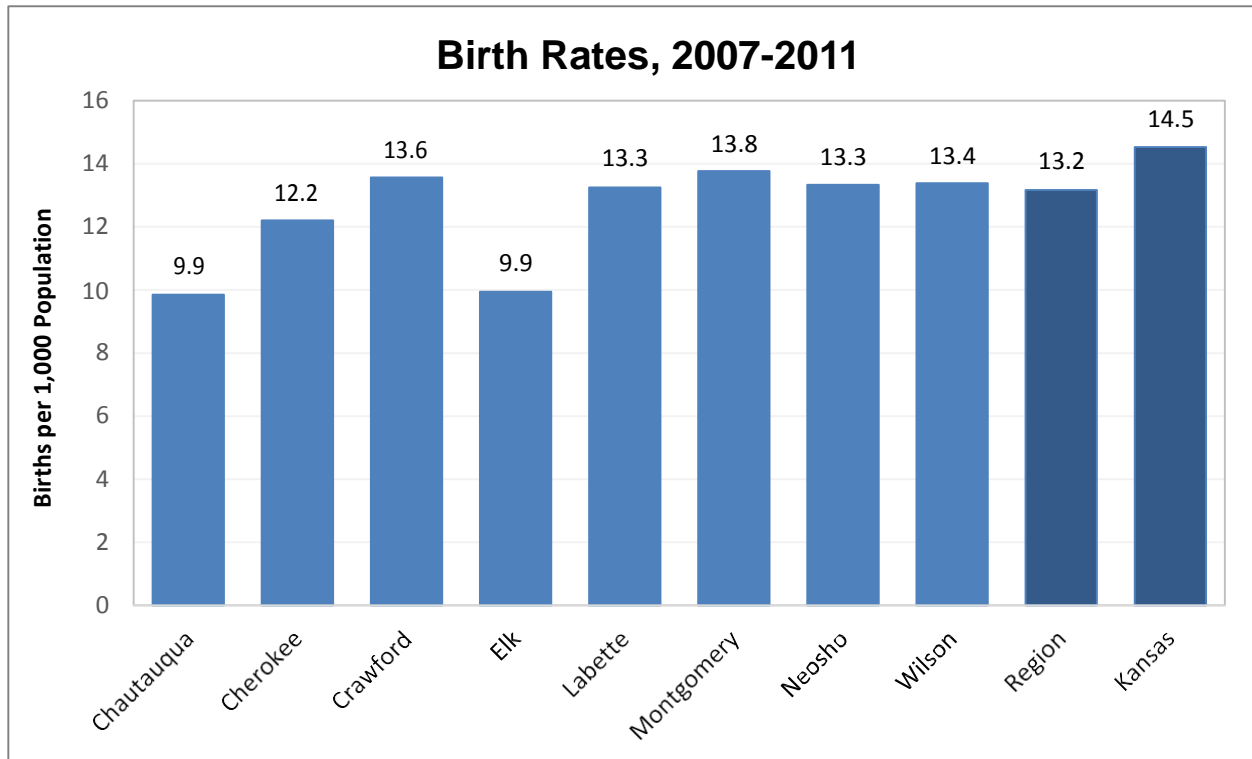


Source: Kansas Department of Health and Environment, Kansas Annual Summary of Vital Statistics, 2011

In all counties, as well as the region and state, the birth rate is highest in women between age 20 and 34. However, the birth rate to women between the ages of 15 and 19 years is notably higher for the Lower 8 Region compared to statewide: 54 versus 41 births per 1,000 women in that age group. Lower 8 counties with the highest teen birth rate are Labette, Wilson, and Montgomery with rates of 69, 60, and 59, respectively. The majority of pregnancies for women age 15 to 19 are unintended, and the negative consequences associated with unintended pregnancies are greater for teen parents and their children.[15]

**Figure 42**
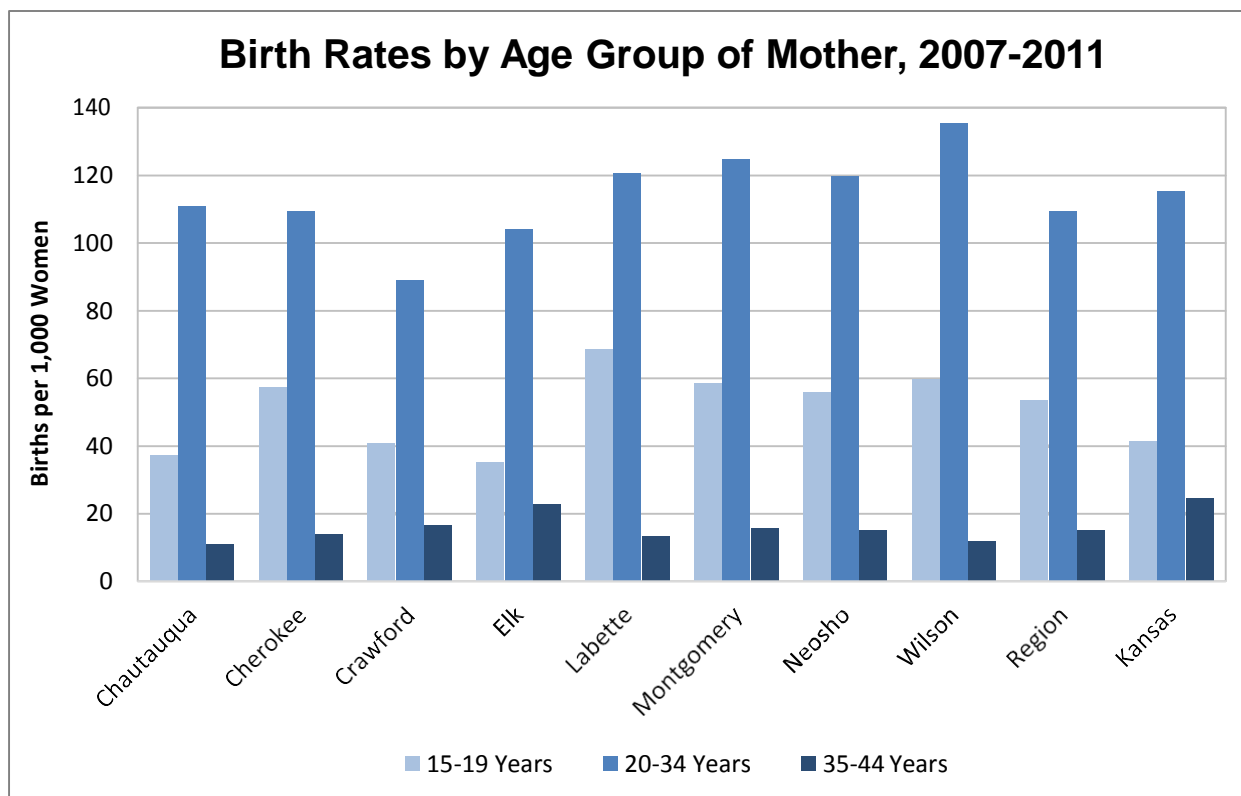


**Birth Rates by Age Group of Mother, 2007-2011**

Source: Kansas Department of Health and Environment, Kansas Information for Communities Database, 2007-2011

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[15] Centers for Disease Control, http://www.cdc.gov/reproductivehealth/unintendedpregnancy/.

*Births to Unmarried Women*

This measure describes the proportion of births to unmarried women. These pregnancies may be planned or unplanned. Again, unplanned pregnancies are linked to more negative outcomes, and single-female households are at higher risk for economic hardship than two-parent households. The percentage of births out of wedlock in the Lower 8 Region (44.9%) is notably higher than Kansas overall (37.2%). Over half the births in Labette and Montgomery counties are to unmarried mothers. Percentages for the smallest counties in particular should be interpreted cautiously due to small numbers in these counties.

**Figure 43**
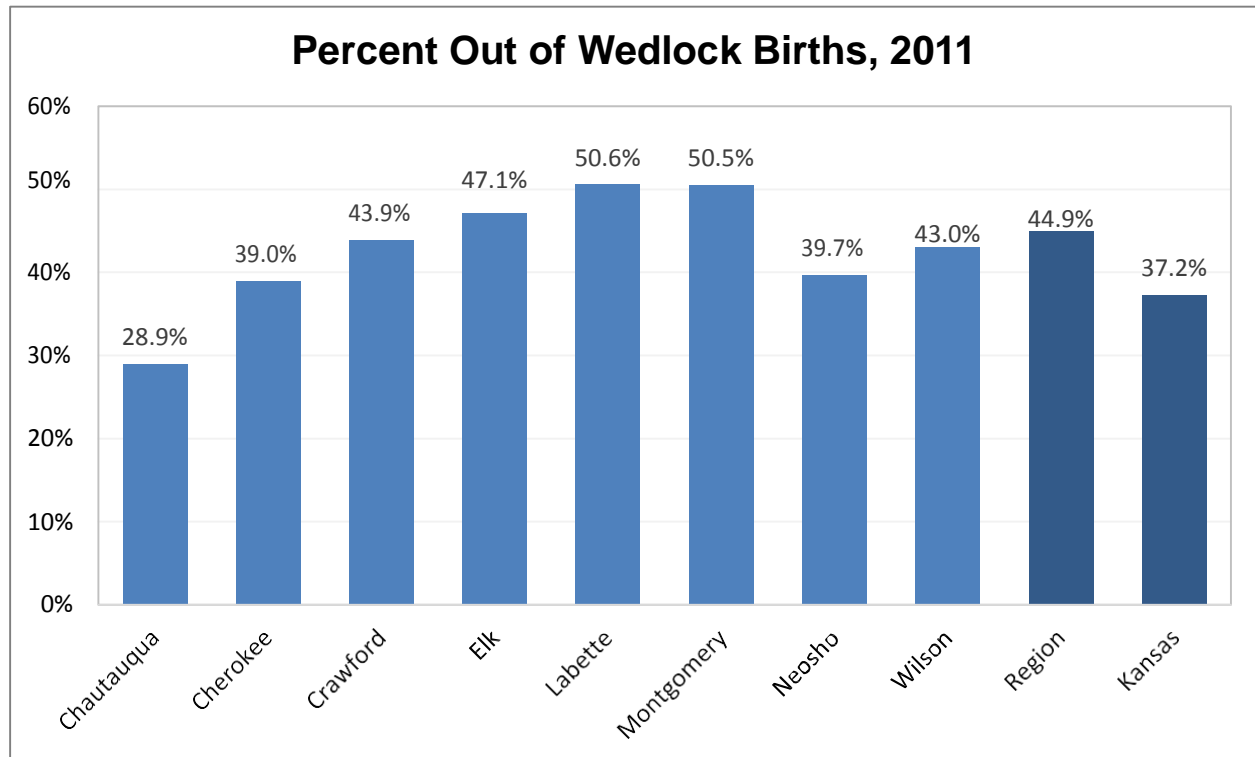


Source: Kansas Department of Health and Environment, Kansas Annual Summary of Vital Statistics, 2011

*Immunizations*

Vaccine coverage is extremely important to maintaining population health. Greater vaccine coverage increases collective immunity, which leads to lower disease incidence and an ability to limit the size of disease outbreaks. There is some debate over whether people should be exempt from vaccinations due to personal freedoms. However, due to under vaccinated and unvaccinated individuals, disease rates are rising in the United States for some illnesses that were previously at very low levels, specifically measles and pertussis.

The Lower 8 Region as a whole has a slightly lower percentage of infants fully immunized by 24 months compared to Kansas overall. Most of the counties are near or above the state average with the exception of Neosho County, which has a much lower rate at just 47.5 percent fully immunized. After reviewing time-series data for Neosho County on Kansas Health Matters, it appears there was a sharp decline in immunization rates between 2004-2005 and 2007-2008, when rates went from 68.8 percent to just 20.7 percent.

**Figure 44**
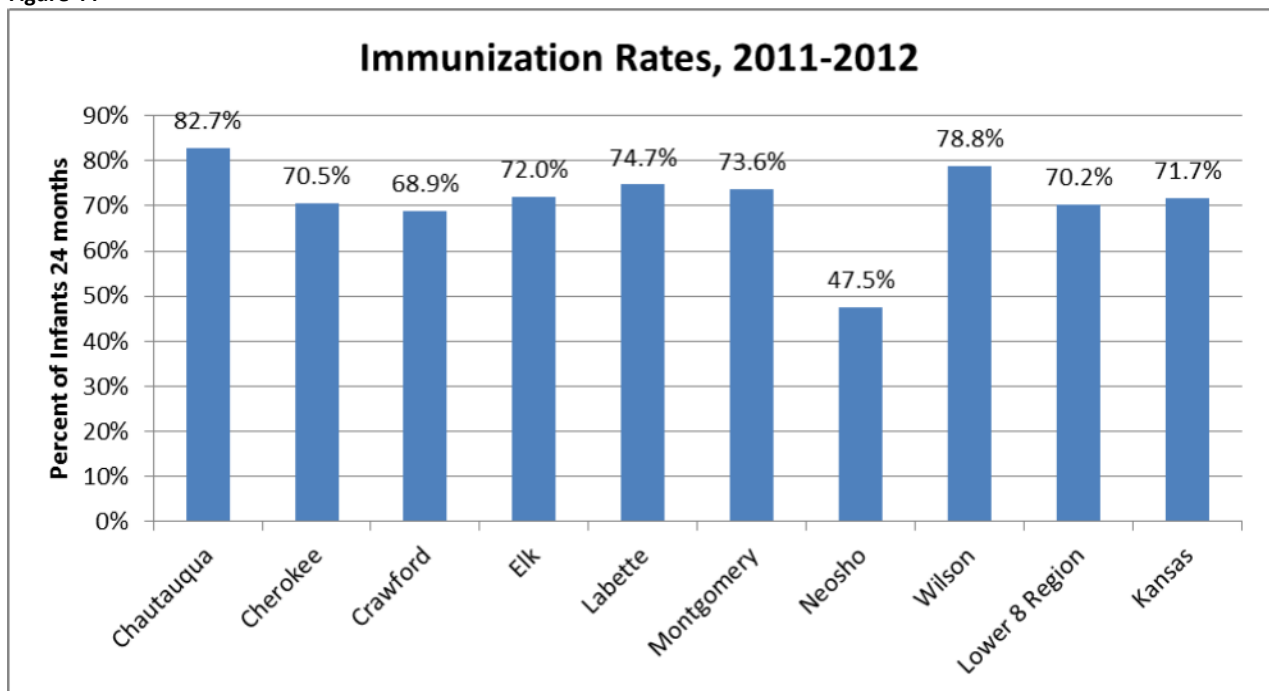


Source:  Kansas Health Matters, www.kansashealthmatters.org, 2013

## Summary

Here are the measures in which the Lower 8 Region as a whole is less healthy than the state of Kansas.

**Table 5**

| Indicator | Lower 8 Value | Kansas Value |
|---|---|---|
| Median Income | $38,507 | $48,964 |
| Percent of Population with a High School Diploma or Higher | 87.2% | 90% |
| Percent of Population with a Bachelor or Graduate or Professional Degree | 19% | 30.1% |
| Low Birth Weight Infants | 8.0 per 100 | 7.2 per 100 |
| Infant Mortality Rate | 7.4 per 1,000 | 7.0 per 1,000 |
| Age-Adjusted Mortality | 9.1 per 1,000 | 7.7 per 1,000 |
| Hospital Admission Rate Due to Unintentional Injuries | 1,231.8 per 100,000 | 546.3 per 100,000 |
| Deaths Due to Unintentional Injuries | 54.2 per 100,000 | 41.1 per 100,000 |
| Obese Adults | 32.4% | 28.8% |
| Diagnosed Arthritis | 30% | 24% |
| Diagnosed Diabetes | 10.2% | 8.5% |
| Adult Smoking | 22.7% | 17.8% |
| % Eating Five or More Fruits and Vegetables Per Day, On Average | 15.6% | 18.6% |
| Uninsured Adults | 21.1% | 19.1% |
| Average Monthly WIC Participation Rate | 30.2 per 1,000 | 26.2 per 1,000 |

## Sources:

National Center for Law and Economic Justice, http://www.nclej.org/poverty-in-the-us.php.

Hoehner, C.M., Barlow, C.E., Allen, P. Schootman, M. (2012). Commuting distance, cardiorespiratory fitness, and metabolic risk. *American Journal of Preventive Medicine.*

United States Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/emp/ep_chart_001.htm.

Centers for Disease Control,
http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking//

Centers for Disease Control, http://www.cdc.gov/nchs/fastats/lcod.htm.

American Cancer Society, http://www.cancer.org/index.

Centers for Disease Control, http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf.

Centers for Disease Control,
http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/

Centers for Disease Control,
http://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/.

Mayo Clinic, http://www.mayoclinic.com/health/chewing-tobacco/CA00019.

Lin, J.S., O'Connor, E., Whitlock, E.P, Beil, T.L. (2010). Behavioral Counseling to Promote Physical Activity and a Healthful Diet to Prevent Cardiovascular Disease in Adults: A Systematic Review for the U.S. Preventive Services Task Force. *Annals of Internal Medicine*. 153(11):736-750.

Dammann, K.W. and Smith, C. (2009). Factors Affecting Low-income Women's Food Choices and the Perceived Impact of Dietary Intake and Socioeconomic Status on Their Health and Weight. *Journal of nutrition education and behavior*; volume 41 issue 4 Pages 242-253 DOI: 10.1016/j.jneb.2008.07.003.

Centers for Disease Control, http://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm.

Centers for Disease Control, http://ephtracking.cdc.gov/showRbLBWGrowthRetardationEnv.action.

Centers for Disease Control, http://www.cdc.gov/reproductivehealth/unintendedpregnancy/.

# Appendix E




# Lower 8 of Southeast Kansas
# Community Survey Analysis and Findings

# Lower 8 of Southeast Kansas

# Community Survey Analysis and Findings

This report provides a summary of KHI's analysis of data from the community survey completed by residents of Chautauqua, Cherokee, Crawford, Elk, Labette, Montgomery, Neosho and Wilson counties. Public Health staff in the Lower 8 Region designed the survey and asked area residents to complete it. The survey was administered in English or Spanish and was available on paper and in electronic form. This report is based on the analysis of the 3,261 surveys that included either the resident's county or a five-digit ZIP code.

**KEY FINDINGS**

Most Important Factors for a Healthy Community

Across the region and for most individual counties, respondents identified the most important factors for a healthy community as: *good place to raise children*, *good schools*, *good jobs and healthy economy* and *low crime safe neighborhoods*.

Most Important Health Problems in Community

*Cancer* was identified most often as one of the most important health problems across the region and in six of the eight counties (it ranked second in the other two). Four of the top ten health problems that community members identified are health conditions related to nutrition, physical activity and obesity. These include *cancer* (first), *diabetes* (second), *heart disease and stroke* (third) and *high blood pressure* (eighth). Three of the top ten most frequently identified health problems or conditions—*teenage pregnancy*, *child abuse/ neglect* and *domestic violence*—are experienced by children and youths in these communities.

# Most Important Risky Behaviors in Community

More than half of survey participants identified substance abuse (*drug abuse* or *alcohol abuse*) as one of the three most important risky behaviors in their community. After substance abuse, *being overweight* is the leading concern, with close to half of respondents identifying this as an important risky behavior. More than one in five survey participants identified *poor eating habits* or *lack of exercise* as important risky behaviors. *Tobacco use* was one of the three most important risky behaviors in six of the counties where it was selected by more than 20 percent of survey participants. Risky behaviors primarily engaged in by teens and young adults, such as *dropping out of school*, *not using birth control*, or *unsafe sex,* were identified as most important by around 10 to 15 percent of survey participants.

Variations in Responses by County and Respondent's Age Group

Though largely similar across the region, some findings differed among counties. Some differences were also found based on the age group of survey respondents. Regional and age differences as well as demographic information are described more fully in the "Results" section.

# METHODS

*Survey Methods and Participants Per Capita*

The survey consisted of a fixed-response section that asked residents about important factors for a healthy community, health problems and risky behaviors in the community, and allowed them to select from a fixed list of choices. A free-response section asked respondents to report their main concern, one thing they would change about their community and what they liked about living in their community, giving them space to write anything they wished. A copy of the survey instrument can be found at the end of this section, and the free response entries are available upon request.

*Non-Random Sampling Method*

The survey was distributed in various ways to community members in paper and Internet-based forms with English and Spanish versions of the paper form. Of the 3,261 surveys analyzed, 2,409 were English paper surveys (73.9 percent), 749 were English online surveys (23.0 percent) and 103 were Spanish paper surveys (3.1 percent). Nearly 90 percent (92) of the Spanish surveys were completed by residents of Crawford County. In the free-response section, 1,449 responded to the first question "*What is your biggest concern about your community?*" 1,323 responded to the second question "*What is one thing you would change about your community?*" and 1,516 responded to the third question "*What do you like most about your community?*" Because the survey was not distributed according to a statistically random selection of the population, it can't be considered scientific or necessarily representative of the surveyed communities. This means that results should be interpreted with the understanding that there may be differences in opinion between survey respondents and the broader population of Lower 8 residents. The survey data represent the opinions and interests of individuals in each community who learned of the survey and had the time and inclination to answer the survey questions.

*Response Rates Per Capita*

As shown in Figure 1, the largest number of surveys came from Crawford County, which has the largest population in the region. Montgomery County is second both in terms of number of surveys and population size.



Figure 1: Surveys by County of Residence
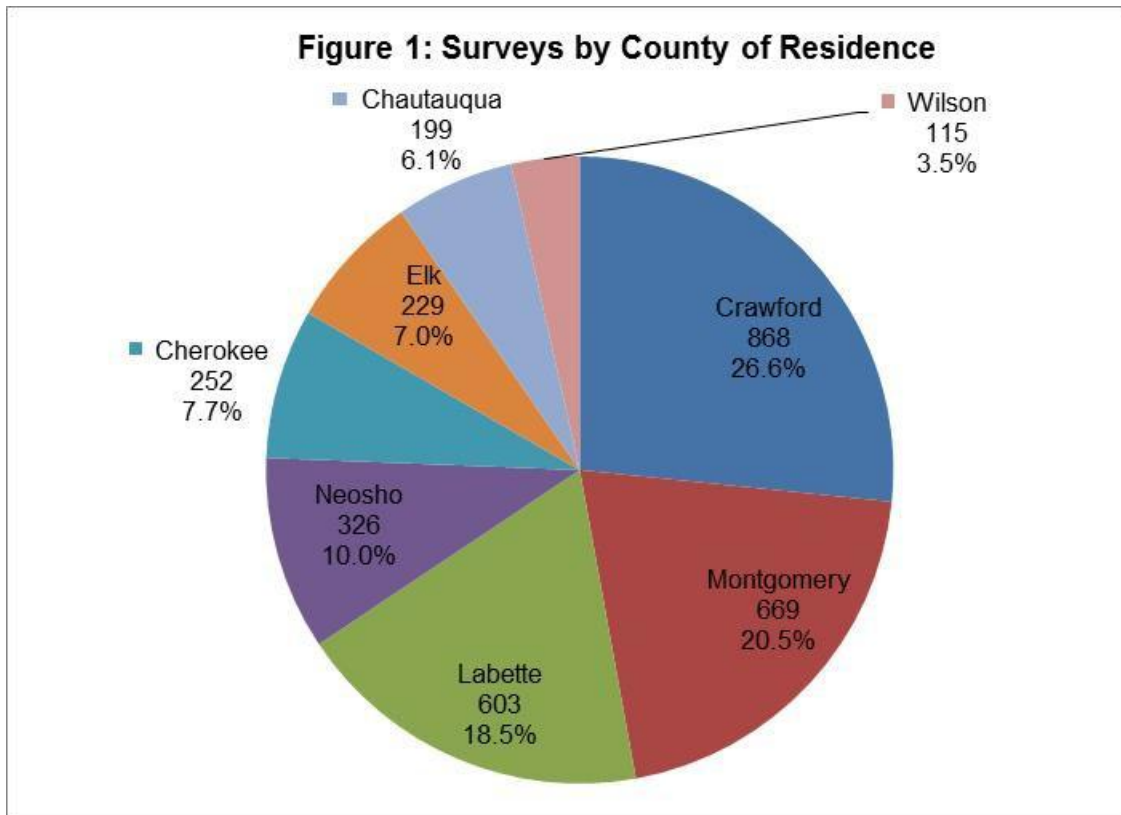
Source: KHI Analysis of Lower 8 Community Survey, 2013

Population data from the 2010 Census was used to calculate the number of surveys per capita for each county. Those rates vary from 84.2 participants per 1,000 residents in Elk County to 11.9 participants per 1,000 residents in Cherokee County. Due to wide variation in participants per capita across the eight counties (represented by the blue bars in Figure 2), population weights were applied for the regional analysis.
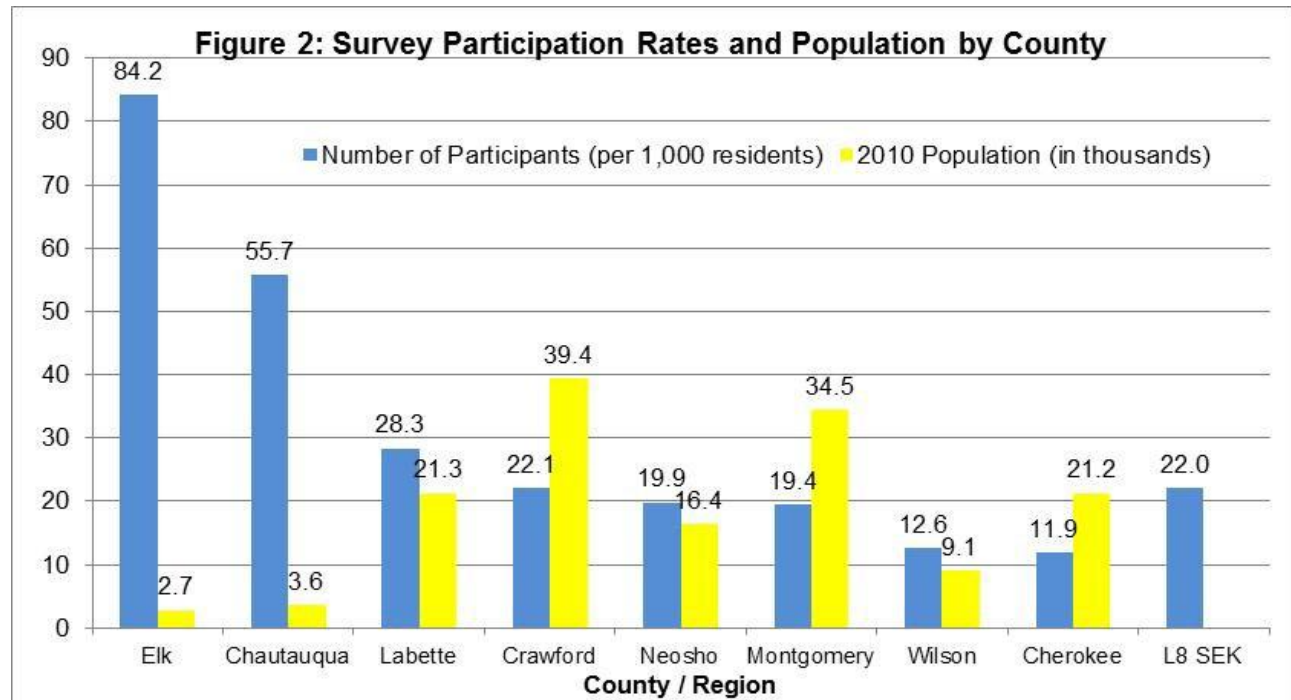


Source: KHI Analysis of Community Health Assessment Survey Data, 2013

*Weighting Methods*

To account for different survey participation rates across the region, population weights were applied based on each county's share of the total regional population. When survey responses for the region as a whole were calculated, the weights gave the largest county (Crawford) the most influence and the smallest county (Elk) the least influence. Figure 3 shows the relative influence of each county on the regional scores based on population.



Figure 3: Proportion of Total Population by County
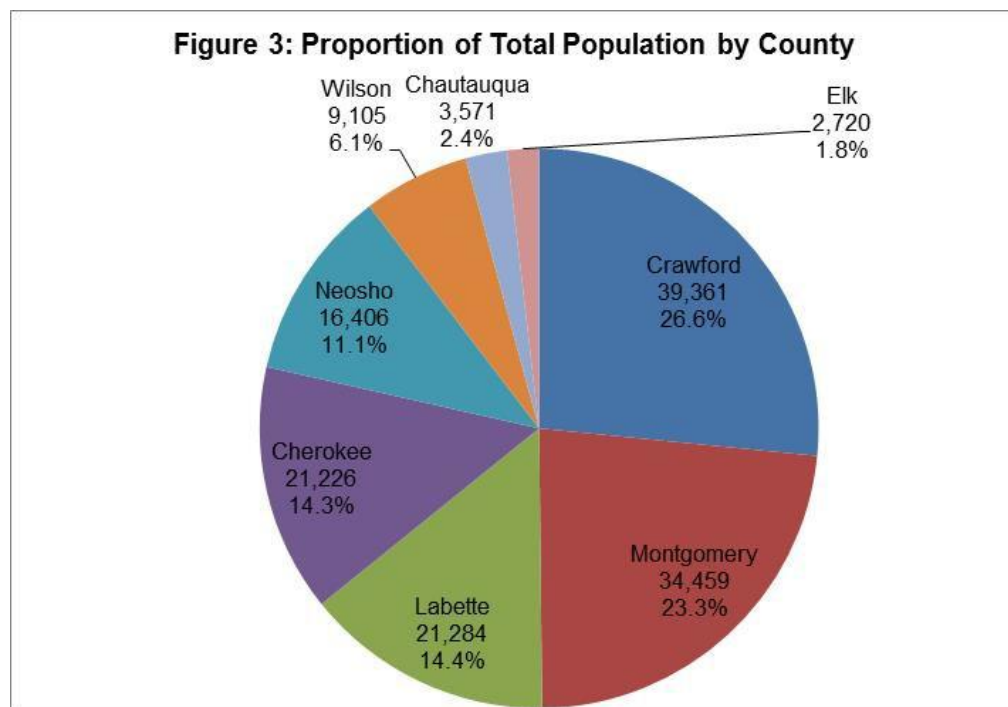
Source: KHI Analysis of Community Health Assessment Survey Data, 2013

*Analysis Methods*

For the fixed-response questions, KHI analyzed the county-level survey data (unweighted) and regional-level data (population weighted) using frequencies and rank ordering as well as comparative statistics such as chi-square tests. Closed-ended questions were analyzed by ranking the response frequencies from high to low and then identifying which responses fell under similar themes.

Entries for the free-response questions were analyzed by categorizing the written response and assigning meta-themes that grouped similar responses.

All analyses were conducted using SPSS version 19 or Microsoft Excel. The results of these analyses are summarized in the following sections. Although numerous statistical tests were conducted, in the interest of clarity and brevity only the most pertinent results are included in this memo. All of the SPSS output as well as the results of specific tests are available upon request.

# RESULTS

<u>SURVEY PARTICIPANT DEMOGRAPHICS</u>

**By Age Group**

KHI staff compared proportions of survey respondents by age group to 2010 Census proportions of adults in similar age groups to assess the representativeness of survey participants. Groups that are underrepresented had less influence on the survey results than expected based on their share of the adult population. Similarly, groups that are overrepresented had greater influence on the survey results than expected based on their share of the adult population.

For the Lower 8 Region as whole, adults 62 and above are underrepresented based on their survey participation rate, whether population weighted or unweighted. Adults 26 to 40 years old are overrepresented with 31.3 percent (weighted) of the surveys and 21.9 percent of the population.

| Table 1. L8 SEK Age Distribution of Survey Participants and the Adult Population | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Survey Participants | | | 2010 Census Data | | Differences Between Census and Participants | |
| Age Group | Number | Percent | Weighted Percent | Age Group | Percent | Percent | Weighted Percent |
| 18 - 25 | 394 | 12.5% | 13.1% | 18-24 | 14.2% | -1.7% | -1.1% |
| 26 - 40 | 978 | 31.0% | 31.3% | 25-39 | 21.9% | 9.1% | 9.4% |
| 41 - 62 | 1333 | 42.3% | 42.1% | 40-61 | 37.6% | 4.6% | 4.5% |
| 62 & above | 449 | 14.2% | 13.6% | 62 + | 26.3% | -12.0% | -12.7% |
| Total | 3154 | | | | | | |

Source: KHI Analysis of Community Health Assessment Survey data.

<u>Age Group Differences Between Participants/Population by County</u>

**Chautauqua County**: The age distribution of survey respondents is generally representative of the population of Chautauqua County.

**Cherokee County**: The 62 and above age group is underrepresented.

**Crawford County**: The 18-25 and 62 and older age groups are underrepresented while the 26-40 and 41-62 age groups are overrepresented.

**Elk County**: Those 62 and above are underrepresented while those 26-40 are overrepresented.

**Labette County**: Those 62 and above are underrepresented while those 41-62 are overrepresented.

**Montgomery County**: Those 62 and above are underrepresented while those 26-40 are overrepresented.

**Neosho County**:  Those 62 and above underrepresented while those 26-40 are overrepresented.

**Wilson County**: The proportions of survey participants by age group are quite similar to the proportions in the population.

### Race/Ethnicity

The vast majority of survey participants (88.8 percent regionwide) are white non-Hispanic. The two largest counties (Montgomery and Crawford) had the highest rates of minority participation. Three of the smallest counties (Wilson, Chautauqua and Elk) had the lowest rates with 5 percent or fewer non-white survey participants.

| Table 2. Survey Participant Race / Ethnicity by County | | | White | Hispanic | American Indian/ Alaskan Native | African- American | Asian | Native Hawaiian / Pacific Islander | Total | Diversity Index (0-1) |
|---|---|---|---|---|---|---|---|---|---|---|
| Counties with Least Diversity of Survey Participants | Wilson | Percent | 96.4% | 1.8% | 0.9% | 0.0% | 0.9% | 0.0% | 100% | 0.930 |
| | | Number | 107 | 2 | 1 | | 1 | | 111 | |
| | Chautauqua | Percent | 95.4% | 0.5% | 4.1% | 0.0% | 0.0% | 0.0% | 100% | 0.912 |
| | | Number | 187 | 1 | 8 | | | | 196 | |
| | Elk | Percent | 95.0% | 2.7% | 1.8% | 0.0% | 0.0% | 0.5% | 100% | 0.904 |
| | | Number | 211 | 6 | 4 | | | 1 | 222 | |
| | Neosho | Percent | 94.3% | 3.2% | 1.6% | 0.3% | 0.6% | 0.0% | 100% | 0.890 |
| | | Number | 296 | 10 | 5 | 1 | 2 | | 314 | |
| | Labette | Percent | 91.9% | 3.9% | 2.0% | 1.7% | 0.3% | 0.2% | 100% | 0.846 |
| | | Number | 541 | 23 | 12 | 10 | 2 | 1 | 589 | |
| | Cherokee | Percent | 89.9% | 3.2% | 5.6% | 0.4% | 0.4% | 0.4% | 100% | 0.813 |
| | | Number | 223 | 8 | 14 | 1 | 1 | 1 | 248 | |
| Counties with Most Diversity of Survey Participants | Crawford | Percent | 84.1% | 12.1% | 0.6% | 3.0% | 0.2% | 0.0% | 100% | 0.722 |
| | | Number | 717 | 103 | 5 | 26 | 2 | | 853 | |
| | Montgomery | Percent | 83.8% | 5.9% | 4.8% | 4.1% | 0.8% | 0.6% | 100% | 0.710 |
| | | Number | 527 | 37 | 30 | 26 | 5 | 4 | 629 | |
| | L8 SEK | Percent | 88.8% | 6.0% | 2.5% | 2.0% | 0.4% | 0.2% | 100% | 0.794 |
| | | Number | 2,809 | 190 | 79 | 64 | 13 | 7 | 3,162 | |

Source: KHI Analysis of Community Health Assessment Survey data.

## *Fixed-Response Questions*

This section describes the results of the analysis of fixed-responses. Although it focuses on the results for the region as a whole, it also includes county-level data and analysis.

## HEALTHY COMMUNITY RESULTS

*Question: What do you think are the three most important factors for a "healthy community?"*

Responses to this question were analyzed by ranking the response frequencies from high to low and identifying which responses were selected most often.

Across the region and for most of the counties, respondents identified the three most important factors for a healthy community as: *good place to raise children*, *good schools* and *good jobs and healthy economy*. *Low crime/safe neighborhoods* was the fourth most important factor region-wide and was no lower than fifth for each individual county. Six of the factors, including *low infant death*, *low adult death and disease rates* and *arts and cultural events* were identified as important by less than 10 percent of survey respondents either across the region or within any one county. In general, identification of the importance of factors for the entire region was quite similar to the results for individual counties. An exception to this is identification of *religious or spiritual values* as the fourth most important factor in Chautauqua County but eighth in the region as a whole.

Table 3 shows the percent of respondents who selected each factor and the related rankings for each county and the region as a whole.

| Table 3. What do you think are the three most important factors for a "healthy community"? | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | | L8 SEK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Factors | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank |
| Factors most frequently identifed as important for a "healthy" community | Good place to raise children | 53.8% | 1 | 40.5% | 2 | 43.2% | 1 | 62.4% | 1 | 41.0% | 3 | 45.1% | 1 | 46.9% | 1 | 42.6% | 3 | 43.9% | 1 |
| | Good schools | 41.2% | 2 | 47.6% | 1 | 41.1% | 3 | 47.2% | 2 | 45.9% | 1 | 37.8% | 3 | 43.3% | 2 | 47.0% | 2 | 42.7% | 2 |
| | Good jobs and healthy economy | 30.2% | 5 | 38.5% | 3 | 43.2% | 1 | 32.8% | 4 | 42.5% | 2 | 39.8% | 2 | 43.6% | 3 | 51.3% | 1 | 41.7% | 3 |
| | Low crime/ safe neighborhoods | 31.7% | 3 | 34.1% | 4 | 30.1% | 4 | 36.2% | 3 | 32.2% | 4 | 35.1% | 4 | 32.5% | 4 | 24.3% | 5 | 32.2% | 4 |
| | Access to health care | 29.6% | 6 | 20.6% | 9 | 27.2% | 5 | 23.1% | 6 | 21.6% | 7 | 24.7% | 5 | 19.6% | 5 | 25.2% | 4 | 23.9% | 5 |
| | Strong family life | 28.1% | 7 | 25.4% | 5 | 21.2% | 7 | 25.8% | 5 | 23.9% | 5 | 23.0% | 7 | 24.5% | 6 | 23.5% | 6 | 23.4% | 6 |
| ↕ | Healthy behaviors and lifestyles | 16.6% | 10 | 21.8% | 7 | 22.4% | 6 | 15.7% | 9 | 22.9% | 6 | 21.8% | 9 | 22.4% | 7 | 16.5% | 9 | 21.6% | 7 |
| | Religious or spiritual values | 30.7% | 4 | 23.8% | 6 | 17.1% | 9 | 19.7% | 8 | 19.9% | 8 | 24.1% | 6 | 21.8% | 8 | 18.3% | 7 | 21.0% | 8 |
| | Clean environment | 20.6% | 8 | 21.4% | 8 | 20.6% | 8 | 21.4% | 7 | 19.6% | 9 | 22.0% | 8 | 20.6% | 9 | 17.4% | 8 | 20.7% | 9 |
| | Affordable housing | 13.6% | 11 | 6.3% | 11 | 12.4% | 10 | 12.2% | 10 | 10.4% | 10 | 14.1% | 10 | 9.8% | 10 | 11.3% | 10 | 11.3% | 10 |
| | Parks and recreation | 20.1% | 9 | 9.1% | 10 | 12.4% | 10 | 7.4% | 11 | 6.1% | 11 | 13.6% | 11 | 5.8% | 11 | 9.6% | 11 | 10.5% | 11 |
| Factors least frequently identified as important for a "healthy" community | Low level of child abuse | 9.0% | 12 | 5.2% | 12 | 5.3% | 12 | 3.9% | 12 | 3.8% | 12 | 5.8% | 12 | 4.9% | 12 | 2.6% | 12 | 5.0% | 12 |
| | Excellent race relations | 1.0% | 16 | 2.0% | 13 | 2.4% | 13 | 2.2% | 13 | 1.8% | 15 | 2.7% | 13 | 2.8% | 13 | 2.6% | 12 | 2.3% | 13 |
| | Arts and cultural events | 2.0% | 15 | 0.8% | 16 | 2.4% | 13 | 1.7% | 14 | 2.8% | 13 | 2.4% | 14 | 1.2% | 14 | 2.6% | 12 | 2.1% | 14 |
| | Low adult death and disease rates | 0.5% | 17 | 2.0% | 13 | 1.8% | 15 | 1.3% | 16 | 2.5% | 14 | 1.5% | 16 | 0.6% | 15 | 1.7% | 15 | 1.7% | 15 |
| | Low infant deaths | 3.0% | 13 | 0.8% | 16 | 1.5% | 16 | 1.7% | 14 | 1.7% | 16 | 1.6% | 15 | 1.8% | 16 | 1.7% | 15 | 1.5% | 16 |
| | Other | 2.5% | 14 | 1.6% | 15 | 0.7% | 17 | 0.0% | 17 | 0.2% | 17 | 0.6% | 17 | 0.6% | 17 | 0.0% | 17 | 0.7% | 17 |

Source: KHI Analysis of Community Health Assessment Survey data.

Healthy Community Results by Age Group[16]

The type of factors that are most important for a healthy community varies somewhat depending on the age group of the survey respondents. The following comparisons across age groups are shown in rank order for those items identified most often as important for a healthy community.

*Good place to raise children:* Young adults (18-25) identified this factor as important for a healthy community more frequently than adults 41 or older.

*Good schools:* Working age adults (26-40) identified this factor as important for a healthy community more frequently than either young adults (18-25) or middle-age adults (41-62).

*Good jobs and healthy economy*: Middle-age adults (41-62) identified this factor as important for a healthy community more frequently than any other age group.

*Low crime/safe neighborhoods*: Young (18-25), working age (26-40) and middle-age (41-62) adults all identified this factor as important for a healthy community more frequently than older adults (those 62 or older).

*Access to health care*: Older adults (62 and above) identified this factor as important for a healthy community more frequently than any group of younger adults.

*Strong family life*: Middle-age (41-62) and older adults (62 and above) identified this factor as important for a healthy community more frequently than younger adults (40 and under).

*Healthy behaviors and lifestyles*: No age group identified this factor significantly more or less often than any other age group.

*Religious or spiritual values*: Older (62 and above) and middle-age (41-62) adults identified this factor as important for a healthy community more often than younger adults (40 and under).

*Clean environment*: Young adults (18-25) identified this factor as important for a healthy community more often than either working age (26-40) or middle-age (41-62) adults.

[16] All differences reported in this section are statistically significant with a less than 5 percent probability (p<.05) that they are due to chance alone.

**Table 4.  Three most important factors for a "healthy community" by age group.**

| L8 SEK Rank | | 18 - 25 years old | | 26 - 40 years old | | 41-62 years old | | 62 & above | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Numbeer | Percent | Numbeer | Percent |
| 1 | Good place to raise children | 215 | 55.1% | 478 | 49.2% | 544 | 41.3% | 193 | 43.0% |
| 2 | Good schools | 151 | 38.7% | 463 | 47.6% | 538 | 40.9% | 195 | 43.4% |
| 3 | Good jobs and healthy economy | 130 | 33.3% | 370 | 38.1% | 624 | 47.4% | 172 | 38.3% |
| 4 | Low crime/ safe neighborhoods | 150 | 38.5% | 339 | 34.9% | 429 | 32.6% | 103 | 22.9% |
| 5 | Access to health care | 81 | 20.8% | 201 | 20.7% | 329 | 25.0% | 151 | 33.6% |
| 6 | Strong family life | 74 | 19.0% | 200 | 20.6% | 340 | 25.8% | 128 | 28.5% |
| 7 | Healthy behaviors and lifestyles | 85 | 21.8% | 198 | 20.4% | 300 | 22.8% | 91 | 20.3% |
| 8 | Religious or spiritual values | 43 | 11.0% | 147 | 15.1% | 321 | 24.4% | 155 | 34.5% |
| 9 | Clean environment | 110 | 28.2% | 187 | 19.2% | 257 | 19.5% | 98 | 21.8% |
| 10 | Affordable housing | 41 | 10.5% | 105 | 10.8% | 159 | 12.1% | 64 | 14.3% |
| 11 | Parks and recreation | 43 | 11.0% | 147 | 15.1% | 103 | 7.8% | 42 | 9.4% |
| 12 | Low level of child abuse | 35 | 9.0% | 48 | 4.9% | 50 | 3.8% | 27 | 6.0% |
| 13 | Excellent race relations | 9 | 2.3% | 21 | 2.2% | 25 | 1.9% | 19 | 4.2% |
| 14 | Arts and cultural events | 9 | 2.3% | 26 | 2.7% | 24 | 1.8% | 10 | 2.2% |
| 15 | Low adult death and disease rates | 4 | 1.0% | 20 | 2.1% | 17 | 1.3% | 9 | 2.0% |
| 16 | Low infant deaths | 7 | 1.8% | 11 | 1.1% | 17 | 1.3% | 19 | 4.2% |
| 17 | Other | 2 | 0.5% | 8 | 0.8% | 8 | 0.6% | 4 | 0.9% |
| | Total Number of Surveys with Responses | 390 | | 972 | | 1317 | | 449 | |

Source: KHI Analysis of Community Health Assessment Survey data.

HEALTH PROBLEM RESULTS

*Question: What do you think are the three most important "health problems" in your community?*

Cancer

*Cancer* was identified most often as one of the most important health problems both across the region and in six of the eight counties. It also was the second most-identified health problem in Chautauqua and Elk counties. At least four in ten survey respondents in the region as a whole and in each individual county identified *cancer* as an important health problem.

Nutrition, Physical Activity and Obesity Related Problems/Conditions

Four of the top ten "health problems" that community members identified are conditions related to nutrition, physical activity and obesity.[17] These include *cancer* (first), *diabetes* (second), *heart disease and stroke* (third) and *high blood pressure* (eighth). According to HealthyPeople.gov[18], a website sponsored by the Centers for Disease Control (CDC), National Institutes of Health and other federal agencies:

> *Good nutrition, physical activity, and a healthy body weight are essential parts of a person's overall health and well-being. Together, these can help decrease a person's risk of developing serious health conditions, such as high blood pressure, high cholesterol, diabetes, heart disease, stroke, and cancer. A healthful diet, regular physical activity, and achieving and maintaining a healthy weight also are paramount to managing health conditions so they do not worsen over time.*

Child/Youth Related Problems/Conditions

Two of the top ten most frequently identified health problems/conditions, *teenage pregnancy* and *child abuse/ neglect,* are experienced by children and youths in these communities. Although they are top ten concerns in all eight counties, their rankings do vary substantially from county to county. *Child abuse/neglect* was ranked third in Montgomery County, with 26.9 percent of respondents identifying it as an important health problem but was ranked eighth in Chautauqua (18.1 percent) and Elk counties (14.4 percent). Similarly, *teenage pregnancy* was ranked second in Montgomery County (35.7 percent) and was ranked eighth in Elk County (14.4 percent). *Domestic violence*, another problem that often affects children, also ranks as one of the top ten health problems across the region as well as in each county.

Least Frequently Identified "Health Problems"

Several health problems were identified by only a small percentage of those who completed a survey as one of the most important health problems in the community. Less than 5 percent of survey participants, regardless of their county, identified *homicide*, *firearm-related injuries*, *infant death*, *HIV/AIDS*, *rape/sexual assault*, or *infectious diseases* as one of the most important health problems in their community.

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[17] Healthy People 2020 website: http://www.healthypeople.gov/2020/LHI/nutrition.aspx
[18] Ibid

Table 5 shows the percent of respondents who identified each health problem and the related rankings for each county and the region as a whole.

| Table 5. What do you think are the three most important "health problems" in your community? | | | | | | | | | | | | | | | | | | | |
| | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | | L8 SEK | |
| | Health Problems | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank |
| | Cancers | 48.7% | 2 | 56.3% | 1 | 44.8% | 1 | 50.7% | 2 | 49.8% | 1 | 48.9% | 1 | 56.7% | 1 | 49.6% | 1 | 49.6% | 1 |
| Most frequently identified "health problems" | Diabetes | 30.2% | 4 | 26.2% | 3 | 35.5% | 2 | 33.6% | 3 | 26.0% | 5 | 24.7% | 5 | 29.8% | 2 | 30.4% | 4 | 29.6% | 2 |
| | Heart disease and stroke | 50.3% | 1 | 24.6% | 4 | 29.8% | 3 | 29.3% | 4 | 28.9% | 3 | 22.1% | 6 | 27.6% | 4 | 33.9% | 3 | 28.8% | 3 |
| | Teenage pregnancy | 20.1% | 6 | 19.4% | 7 | 22.8% | 6 | 14.4% | 8 | 29.0% | 2 | 35.7% | 2 | 26.1% | 5 | 24.3% | 5 | 26.0% | 4 |
| | Aging problems | 46.7% | 3 | 19.8% | 6 | 21.9% | 7 | 54.1% | 1 | 26.0% | 5 | 16.0% | 8 | 22.1% | 7 | 42.6% | 2 | 25.8% | 5 |
| | Child abuse/ neglect | 18.1% | 8 | 32.9% | 2 | 26.2% | 4 | 14.4% | 8 | 28.2% | 4 | 26.9% | 3 | 25.5% | 6 | 17.4% | 7 | 25.5% | 6 |
| | Mental health problems | 19.1% | 7 | 22.2% | 5 | 26.0% | 5 | 17.9% | 6 | 25.4% | 7 | 26.2% | 4 | 19.0% | 8 | 15.7% | 8 | 23.6% | 7 |
| | High blood pressure | 26.6% | 5 | 19.4% | 7 | 18.9% | 10 | 26.2% | 5 | 20.6% | 8 | 19.3% | 7 | 27.9% | 3 | 21.7% | 6 | 21.4% | 8 |
| | Domestic violence | 13.1% | 9 | 15.5% | 9 | 19.5% | 9 | 11.8% | 10 | 10.6% | 9 | 15.8% | 9 | 16.3% | 9 | 12.2% | 10 | 15.3% | 9 |
| | Dental problems | 9.5% | 10 | 15.1% | 10 | 19.6% | 8 | 17.0% | 7 | 9.5% | 10 | 14.2% | 10 | 9.2% | 11 | 12.2% | 10 | 14.1% | 10 |
| | Respiratory/ lung disease | 8.5% | 12 | 11.5% | 11 | 6.7% | 11 | 4.8% | 13 | 5.5% | 14 | 6.9% | 13 | 9.5% | 10 | 13.9% | 9 | 7.3% | 11 |
| | Motor vehicle crash injuries | 5.0% | 14 | 9.1% | 12 | 6.6% | 13 | 6.1% | 12 | 6.3% | 12 | 8.5% | 12 | 5.5% | 13 | 1.7% | 15 | 6.8% | 12 |
| | Sexually transmitted diseases | 5.5% | 13 | 3.6% | 15 | 5.0% | 14 | 1.7% | 15 | 6.1% | 13 | 10.9% | 11 | 6.1% | 12 | 7.0% | 13 | 6.3% | 13 |
| | Other | 3.5% | 15 | 6.7% | 13 | 6.7% | 11 | 3.5% | 14 | 7.0% | 11 | 4.9% | 14 | 3.7% | 14 | 7.8% | 12 | 5.7% | 14 |
| | Farming-related injuries | 9.0% | 11 | 2.8% | 17 | 1.7% | 17 | 8.3% | 11 | 2.2% | 16 | 1.8% | 19 | 1.5% | 17 | 4.3% | 14 | 3.0% | 15 |
| | Infectious diseases | 1.0% | 17 | 2.8% | 17 | 4.7% | 16 | 0.9% | 16 | 2.0% | 17 | 3.7% | 15 | 1.8% | 16 | 0.0% | 19 | 2.9% | 16 |
| Least frequently identified "health problems" | Rape/ sexual assault | 0.5% | 19 | 4.4% | 14 | 2.6% | 16 | 0.9% | 16 | 2.3% | 15 | 3.0% | 16 | 2.1% | 15 | 0.9% | 16 | 2.4% | 17 |
| | HIV/ AIDS | 1.0% | 17 | 1.6% | 20 | 1.7% | 17 | 0.0% | 19 | 1.5% | 18 | 1.9% | 18 | 0.3% | 20 | 0.9% | 16 | 1.4% | 18 |
| | Infant death | 0.0% | 20 | 3.6% | 15 | 0.9% | 19 | 0.0% | 19 | 1.5% | 18 | 1.5% | 21 | 1.2% | 18 | 0.9% | 16 | 1.3% | 19 |
| | Firearm-related injuries | 1.5% | 16 | 1.6% | 20 | 0.8% | 20 | 0.9% | 16 | 0.5% | 20 | 2.5% | 17 | 0.9% | 19 | 0.0% | 19 | 1.2% | 20 |
| | Homicide | 0.0% | 20 | 2.0% | 19 | 0.8% | 20 | 0.0% | 19 | 0.5% | 20 | 1.8% | 19 | 0.0% | 21 | 0.0% | 19 | 0.8% | 21 |

Source: KHI Analysis of Community Health Assessment Survey data.

## Health Problem Results by Age Group[19]

The type of health problems that are most important for a healthy community varies somewhat depending on the age group of the survey respondents. The following comparisons across age groups are shown in rank order for those items identified most often as important health problems.

*Cancers*: Older adults (62 and above) identified cancer as an important health problem for their community more frequently than younger adults. Cancer was identified as an important health problem more frequently as the age group of the survey participant increased.

*Diabetes*: Diabetes was identified as a health problem at the same rate, regardless of the survey participant's age. In other words, no age group identified this problem as important either significantly more or less often than any other age group.

*Heart disease and stroke*: Adults 41 and older identified heart disease and stroke as important health problems in their community more often than adults 40 and under.

*Teenage pregnancy*: Both young adults (18-25) and working age adults (26-40) identified teen pregnancy as an important health problem in their community more often than adults over 40.

*Aging problems*: Older adults (62 and above) identified aging problems as important much more often than younger adults, particularly those 40 and under. Middle-age adults (41-62) also identified aging problems as important more often than younger adults (those 40 and under) but not as often as older adults—those 62 or older.

[19] All differences reported in this section are statistically significant with a less than 5 percent probability (p<.05) that they are due to chance alone.

*Child abuse/neglect*: Younger adults, those 40 and under, identified child abuse/neglect as an important health problem more often than older adults (62 and above).

*Mental health problems*: Working and middle-age adults (26-62), identified mental health problems as important more often than older adults (62 and above).

*High blood pressure*: Older adults (62 and above) identified high blood pressure as an important health problem more often than any group of younger adults.

| Table 6. Three most important "health problems" in community by age group. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 18 - 25 years old | 18 - 25 years old | 26 - 40 years old | 26 - 40 years old | 41-62 years old | 41-62 years old | 62 & above | 62 & above |
| L8 SEK Rank | Health Problem | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1 | Cancers | 146 | 37.5% | 445 | 46.1% | 706 | 53.7% | 279 | 62.3% |
| 2 | Diabetes | 104 | 26.7% | 293 | 30.4% | 389 | 29.6% | 155 | 34.6% |
| 3 | Heart disease and stroke | 70 | 18.0% | 237 | 24.6% | 435 | 33.1% | 174 | 38.8% |
| 4 | Teenage pregnancy | 167 | 42.9% | 277 | 28.7% | 282 | 21.4% | 85 | 19.0% |
| 5 | Aging problems | 51 | 13.1% | 167 | 17.3% | 381 | 29.0% | 220 | 49.1% |
| 6 | Child abuse/ neglect | 106 | 27.2% | 278 | 28.8% | 333 | 25.3% | 87 | 19.4% |
| 7 | Mental health problems | 84 | 21.6% | 257 | 26.6% | 335 | 25.5% | 72 | 16.1% |
| 8 | High blood pressure | 80 | 20.6% | 179 | 18.5% | 289 | 22.0% | 128 | 28.6% |
| 9 | Domestic violence | 64 | 16.5% | 180 | 18.7% | 186 | 14.1% | 47 | 10.5% |
| 10 | Dental problems | 67 | 17.2% | 201 | 20.8% | 146 | 11.1% | 28 | 6.3% |
| 11 | Respiratory/ lung disease | 17 | 4.4% | 58 | 6.0% | 117 | 8.9% | 37 | 8.3% |
| 12 | Motor vehicle crash injuries | 51 | 13.1% | 85 | 8.8% | 53 | 4.0% | 24 | 5.4% |
| 13 | Sexually transmitted diseases | 59 | 15.2% | 69 | 7.2% | 57 | 4.3% | 7 | 1.6% |
| 14 | Other | 9 | 2.3% | 47 | 4.9% | 108 | 8.2% | 18 | 4.0% |
| 15 | Farming-related injuries | 21 | 5.4% | 27 | 2.8% | 33 | 2.5% | 9 | 2.0% |
| 16 | Infectious diseases | 12 | 3.1% | 26 | 2.7% | 43 | 3.3% | 8 | 1.8% |
| 17 | Rape/ sexual assault | 27 | 6.9% | 26 | 2.7% | 19 | 1.4% | 4 | 0.9% |
| 18 | HIV/ AIDS | 13 | 3.3% | 12 | 1.2% | 14 | 1.1% | 6 | 1.3% |
| 19 | Infant death | 15 | 3.9% | 14 | 1.5% | 6 | 0.5% | 5 | 1.1% |
| 20 | Firearm-related injuries | 6 | 1.5% | 18 | 1.9% | 8 | 0.6% | 6 | 1.3% |
| 21 | Homicide | 4 | 1.0% | 9 | 0.9% | 10 | 0.8% | 3 | 0.7% |
| | Total Number of Surveys with Responses | 389 | | 965 | | 1315 | | 448 | |

Source: KHI Analysis of Community Health Assessment Survey data.

RISKY BEHAVIORS RESULTS

*Question: What do you think are the three most important "risky behaviors" in your community?*

Substance Abuse

Risky behaviors related to substance abuse are clearly viewed as the most important by community members who completed a survey. More than half of survey participants identified substance abuse (*drug abuse* or *alcohol abuse*) as one of the three most important risky behaviors in their community. Nearly

three out of four individuals surveyed from Chautauqua County identified *drug abuse* as one of the most important risky behaviors in their county/community. Although less than half (37.7 percent) of Wilson County survey participants identified *alcohol abuse* as an important risky behavior, more than half identified *drug abuse*.

Nutrition, Physical Activity and Obesity

Behaviors related to nutrition, physical activity and obesity are generally the second most important category of risky behaviors to community members who completed a survey. After substance abuse, *being overweight* is the leading concern with close to half of respondents identifying this as an important risky behavior. More than one in five survey participants identified the related behaviors of *poor eating habits* or *lack of exercise* as important risky behaviors.

Tobacco

Except for in Cherokee and Montgomery counties, one in five survey participants identified *tobacco use* as one of the three most important risky behaviors in their community.

Teen Choices

Three types of risky behaviors primarily engaged in by teens and young adults were identified as most important by about 10 to 15 percent of survey participants. These issues were identified most often in Montgomery County with 17 to 18 percent selecting *dropping out of school*, *not using birth control* or *unsafe sex*.

| 7. What do you think are the three most important "risky behaviors" in your community? | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | | L8 SEK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank | Percent | Rank |
| **Substance Abuse** | Drug abuse | 73.4% | 1 | 74.9% | 1 | 69.7% | 1 | 57.1% | 2 | 68.5% | 1 | 72.4% | 1 | 66.1% | 1 | 57.9% | 1 | 69.6% | 1 |
| | Alcohol abuse | 66.3% | 2 | 52.2% | 2 | 54.6% | 2 | 70.4% | 1 | 54.9% | 2 | 52.7% | 2 | 57.8% | 2 | 37.7% | 3 | 53.7% | 2 |
| **Obesity/ Diet/ Exercise** | Being overweight | 47.2% | 3 | 44.6% | 3 | 48.3% | 3 | 50.9% | 3 | 49.9% | 3 | 45.0% | 3 | 50.6% | 3 | 57.9% | 1 | 48.1% | 3 |
| | Poor eating habits | 24.6% | 4 | 24.3% | 5 | 25.9% | 4 | 27.9% | 4 | 27.8% | 4 | 21.5% | 4 | 27.0% | 4 | 36.8% | 4 | 25.7% | 4 |
| | Lack of exercise | 21.6% | 6 | 27.5% | 4 | 24.8% | 5 | 23.0% | 6 | 23.3% | 5 | 18.6% | 5 | 22.7% | 5 | 26.3% | 5 | 23.3% | 5 |
| **Tobacco** | Tobacco use | 23.6% | 5 | 16.7% | 6 | 24.2% | 6 | 24.8% | 5 | 20.4% | 6 | 16.8% | 9 | 22.7% | 5 | 23.7% | 6 | 20.7% | 6 |
| **Teen Choices** | Not using birth control | 15.6% | 7 | 15.5% | 7 | 12.6% | 8 | 8.8% | 9 | 15.8% | 7 | 17.8% | 7 | 12.7% | 8 | 15.8% | 8 | 14.9% | 7 |
| | Dropping out of school | 7.0% | 11 | 13.5% | 8 | 14.9% | 7 | 7.1% | 10 | 12.8% | 8 | 18.0% | 6 | 9.3% | 9 | 16.7% | 7 | 14.3% | 8 |
| | Unsafe sex | 12.6% | 9 | 13.5% | 8 | 10.2% | 9 | 11.1% | 7 | 11.9% | 9 | 17.4% | 8 | 13.4% | 7 | 12.3% | 9 | 13.1% | 9 |
| **Vehicle Safety** | Not using seat belts/ child safety seats | 11.6% | 10 | 6.4% | 11 | 5.2% | 11 | 11.1% | 7 | 6.3% | 10 | 9.4% | 10 | 6.8% | 10 | 6.1% | 10 | 7.0% | 10 |
| **Racism** | Racism | 13.6% | 8 | 3.2% | 12 | 9.1% | 10 | 2.7% | 12 | 3.1% | 12 | 5.0% | 11 | 3.1% | 12 | 3.5% | 11 | 5.4% | 11 |
| **Vaccinations** | Not getting "shots" to prevent disease | 1.5% | 12 | 8.8% | 10 | 3.4% | 12 | 4.4% | 11 | 4.3% | 11 | 3.8% | 12 | 4.3% | 11 | 3.5% | 11 | 4.5% | 12 |
| | Other | 1.5% | 12 | 1.6% | 13 | 1.3% | 13 | 2.7% | 12 | 1.0% | 13 | 1.4% | 13 | 0.9% | 13 | 0.9% | 13 | 1.3% | 13 |

Source: KHI Analysis of Community Health Assessment Survey data.

<u>Risky Behavior Results by Age Group</u>[20]

The type of risky behaviors that are most important for a community varies somewhat depending on the age group of the survey respondents. The following comparisons across age groups are shown in rank order for those items identified most often as risky behaviors.

*Drug abuse:* Drug abuse was identified as an important risky behavior at very close to the same rate, regardless of the survey participant's age. In other words, no age group identified this risky behavior as important either significantly more or less often than any other age group.

*Alcohol abuse*: Younger adults, those 40 and under, identified alcohol abuse as an important risky behavior more often than older adults (62 and above).

*Being overweight*: The older the age group, the more often they identified being overweight as an important risky behavior. Almost twice as many older adults (62 and above) identified being overweight as an important risky behavior than young adults (18-25).

*Poor eating habits*: Adults 41 and older identified poor eating habits as an important risky behavior more often than adults 40 and under. Twice as many older adults (62 and above) identified poor eating habits as an important risky behavior than young adults (18-25).

*Lack of exercise*: Adults over 25 identified lack of exercise as an important risky behavior more often than adults 25 and under.

*Tobacco use*: Tobacco use was identified as an important risky behavior at very close to the same rate, regardless of the survey participant's age. In other words, no age group identified this risky behavior as important either significantly more or less often than any other age group.

*Teen Choices*: Young adults (18-25 year-olds) identified *not using birth control*, *dropping out of school* and *unsafe sex* as important risky behaviors more often than adults 41 and older.

_____

[20] Ibid

| L8 SEK Rank | Health Problem | 18 - 25 years old | | 26 - 40 years old | | 41-62 years old | | 62 & above | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 1 | Drug abuse | 278 | 71.3% | 690 | 71.4% | 885 | 67.1% | 306 | 68.5% |
| 2 | Alcohol abuse | 243 | 62.3% | 543 | 56.2% | 731 | 55.5% | 217 | 48.5% |
| 3 | Being overweight | 124 | 31.8% | 414 | 42.9% | 706 | 53.6% | 274 | 61.3% |
| 4 | Poor eating habits | 61 | 15.6% | 215 | 22.3% | 385 | 29.2% | 146 | 32.7% |
| 5 | Lack of exercise | 52 | 13.3% | 223 | 23.1% | 307 | 23.3% | 129 | 28.9% |
| 6 | Tobacco use | 78 | 20.0% | 182 | 18.8% | 301 | 22.8% | 97 | 21.7% |
| 7 | Not using birth control | 77 | 19.7% | 151 | 15.6% | 186 | 14.1% | 40 | 8.9% |
| 8 | Dropping out of school | 85 | 21.8% | 139 | 14.4% | 140 | 10.6% | 60 | 13.4% |
| 9 | Unsafe sex | 85 | 21.8% | 135 | 14.0% | 148 | 11.2% | 34 | 7.6% |
| 10 | Not using seat belts/ child safety seats | 44 | 11.3% | 95 | 9.8% | 63 | 4.8% | 28 | 6.3% |
| 11 | Racism | 32 | 8.2% | 92 | 9.5% | 36 | 2.7% | 19 | 4.3% |
| 12 | Not getting "shots" to prevent disease | 13 | 3.3% | 28 | 2.9% | 55 | 4.2% | 28 | 6.3% |
| 13 | Other | 4 | 1.0% | 11 | 1.1% | 21 | 1.6% | 5 | 1.1% |
| | Total Number of Surveys with Responses | 390 | | 966 | | 1318 | | 447 | |

**Table 8. Three most important "risky behaviors" in community by age group.**

Source: KHI Analysis of Community Health Assessment Survey data.

*Free-Response Questions*

This section describes the results of the analysis of the free-response questions. Although it focuses on the results for the region as a whole, it also includes county-level data.

CONCERN RESULTS

*What is your biggest concern about your community?*

For most of the region and in individual counties, respondents identified the three biggest concerns in their community as *economic issues, risky behaviors* and *violence/crime. Economic issues* included such responses as the job market, affordable housing and cost of living. *Risky behavior* includes alcohol/drug use and reckless driving. *Violence/crime* includes domestic violence, child abuse, and general crime. *Youth choices* (school dropout and teenage pregnancy) were frequently chosen as the fourth biggest concern. Additionally, it was apparent from the Spanish-language survey answers for this question that there were concerns about discrimination among Hispanic individuals.

| Table 9. Most important "concern" about the community | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meta-Theme | Lower 8 Region | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | |
| | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank |
| Economic Issues | 580 | 1 | 40 | 1 | 31 | 1 | 137 | 1 | 22 | 1 | 115 | 1 | 145 | 1 | 77 | 1 | 13 | 1 |
| Risky Behavior | 351 | 2 | 25 | 2 | 31 | 1 | 71 | 2 | 13 | 2 | 55 | 2 | 102 | 2 | 44 | 2 | 10 | 2 |
| Violence/Crime | 176 | 3 | 3 | 8 | 23 | 3 | 39 | 3 | 4 | 7 | 17 | 4 | 67 | 3 | 18 | 4 | 5 | 3 |
| Social Environment | 128 | 4 | 22 | 3 | 4 | 7 | 18 | 4 | 7 | 4 | 13 | 8 | 47 | 4 | 14 | 5 | 3 | 6 |
| Youth Choices | 136 | 5 | 11 | 4 | 10 | 4 | 17 | 5 | 10 | 3 | 23 | 3 | 40 | 5 | 20 | 3 | 5 | 4 |
| Community Resources | 76 | 6 | 6 | 5 | 2 | 9 | 13 | 7 | 6 | 5 | 14 | 7 | 23 | 7 | 11 | 6 | 1 | 7 |
| Health Conditions | 69 | 7 | 4 | 7 | 4 | 5 | 12 | 8 | 1 | 8 | 15 | 5 | 24 | 6 | 8 | 7 | 1 | 8 |
| Physical Environment | 58 | 8 | 5 | 6 | 4 | 6 | 11 | 9 | 6 | 6 | 14 | 6 | 10 | 9 | 4 | 9 | 4 | 5 |
| Other | 47 | 9 | 1 | 9 | 3 | 8 | 17 | 6 | 1 | 9 | 4 | 9 | 13 | 8 | 8 | 8 | | |
| Grand Total | 1632 | | 117 | | 112 | | 335 | | 70 | | 270 | | 482 | | 204 | | 42 | |

Source: KHI Analysis of Lower 8 Community Survey, 2013

CHANGE RESULTS

*What is one thing you would change about your community?*

Throughout the region and in most counties, respondents suggested changes in the following three categories *economic improvement, increased community activities* and *decreased substance abuse and criminal activity*. *Economic improvement* includes such responses as expanded job market, affordable housing or taxes. *Increased community activity* consists primarily of responses related to youth activities, exercise and parks and recreation. *Decreased substance abuse and criminal activity* includes alcohol and drug use, law enforcement as well as child abuse and neglect. A common fourth-place answer was improved community resources (education, local government, and resources for elderly and parents). Of the eight factors ranked, three consistently placed at the bottom: social environment (sense of community, population, diversity), improved health resources and access (number of health care providers and access to healthy food) and the physical environment (infrastructure, recycling).

| Table 10. Desired "change" to the community | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Lower 8 Region | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | |
| Meta-Theme | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank |
| Economic Improvement | 466 | 1 | 28 | 1 | 30 | 1 | 72 | 1 | 25 | 1 | 105 | 1 | 125 | 1 | 71 | 1 | 10 | 1 |
| Increase in Community Activities | 343 | 2 | 20 | 2 | 22 | 2 | 63 | 2 | 16 | 2 | 60 | 2 | 118 | 2 | 40 | 2 | 4 | 4 |
| Decrease Substance Abuse/Criminal Activity | 182 | 3 | 9 | 4 | 15 | 3 | 55 | 3 | 5 | 4 | 23 | 3 | 46 | 4 | 24 | 3 | 5 | 3 |
| Improve Community Resources | 165 | 4 | 15 | 3 | 12 | 4 | 34 | 4 | 5 | 5 | 22 | 4 | 50 | 3 | 24 | 4 | 3 | 5 |
| Social Environment | 129 | 5 | 5 | 6 | 7 | 6 | 32 | 5 | 13 | 3 | 16 | 5 | 43 | 5 | 7 | 6 | 6 | 2 |
| Improve Health Resources and Access | 79 | 6 | 2 | 7 | 7 | 5 | 20 | 6 | 3 | 6 | 12 | 6 | 28 | 6 | 5 | 7 | 2 | 6 |
| Physical Environment | 64 | 7 | 9 | 5 | 3 | 7 | 17 | 7 | 1 | 7 | 11 | 7 | 15 | 7 | 8 | 5 | - | |
| Other | 24 | 8 | - | | 3 | 8 | 5 | 8 | - | | 6 | 8 | 5 | 8 | 4 | 8 | 1 | 7 |
| Grand Total | 1463 | | 88 | | 99 | | 298 | | 68 | | 255 | | 430 | | 183 | | 42 | |

Source: KHI Analysis of Lower 8 Community Survey, 2013

LIKE RESULTS

*What do you like most about living in your community?*

Within the Lower 8 Region, respondents established a common theme for responses. The most frequently cited themes were about the *social environment* (atmosphere, neighborliness), the *physical attributes of the community* (small town, location, rural/country) and the *quality of life in the area* (good schools, affordable housing, cost of living).

The less-frequently cited themes were community activities (parks and recreation, arts and cultural events) and community resources (health care, government). The factors selected as most important for a healthy community in the fixed-response survey *were a good place to raise children, good schools and low crime/safe neighborhoods*, which are consistent with the predominating responses to this question.

| Table 11. What respondents "like most" about their community | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lower 8 Region | | Chautauqua | | Cherokee | | Crawford | | Elk | | Labette | | Montgomery | | Neosho | | Wilson | |
| Meta-Theme | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank | Count | Rank |
| Social Environment | 823 | 1 | 70 | 1 | 72 | 1 | 151 | 1 | 50 | 1 | 143 | 1 | 208 | 1 | 103 | 1 | 26 | 1 |
| Physical Attributes | 509 | 2 | 34 | 3 | 40 | 2 | 88 | 2 | 29 | 3 | 99 | 2 | 141 | 2 | 66 | 3 | 12 | 2 |
| Quality of Life | 288 | 3 | 26 | 2 | 13 | 3 | 67 | 3 | 13 | 2 | 55 | 3 | 64 | 3 | 42 | 2 | 8 | 3 |
| Community Resources | 46 | 4 | 3 | 4 | 4 | 4 | 15 | 4 | | | 2 | 6 | 12 | 4 | 9 | 4 | 1 | 4 |
| Community Activities | 34 | 5 | 1 | 6 | 2 | 6 | 10 | 5 | 1 | 4 | 5 | 5 | 12 | 5 | 3 | 5 | - | |
| Other | 25 | 6 | 3 | 5 | 4 | 5 | 7 | 6 | 1 | 5 | 5 | 4 | 4 | 6 | - | | 1 | 5 |
| Grand Total | 1725 | | 137 | | 135 | | 338 | | 94 | | 309 | | 441 | | 223 | | 48 | |

Source: KHI Analysis of Lower 8 Community Survey, 2013

## LIMITATIONS

The primary limitation of this survey is the use of a non-random sample. As a result of the sampling methods used the results can't be generalized to those individuals who didn't complete a survey. How representative the surveys are or aren't of various age groups as well as racial and ethnic groups should be considered when interpreting either the regional or county-level results. In short, the results from this survey may reflect opinions that are different than those of the communities they are meant to represent, so the survey results should be interpreted cautiously. Any substantive findings from or recommendations based on them should incorporate information that is independently verified by other sources such as relevant core indicators.

## DISCUSSION AND CONCLUSIONS

The "health problems" residents provided in the free response section were consistent with the fixed-response selection of cancers, diabetes and teenage pregnancy as concerns for the community, although respondents ranked "health problem" concerns behind other concerns in the free-response section. By and large, both the free- and fixed-response surveys elicited similar results and are consistent with one another. The free-response survey provides themes outside the realm of typical health issues, but the questions themselves provide for a broader range of content.

Despite the limitations of a non-representative survey, the results of this survey can serve as a useful component of the Lower 8 Region's CHA. They can provide insights about the perceptions of health from some community members and can assist in the setting of priorities when taken together with other quantitative data.

* All differences reported in this section are statistically significant with a less than 5 percent probability ($p<.05$) that they are due to chance alone.
* Healthy People 2020 website: http://www.healthypeople.gov/2020/LHI/nutrition.aspx
* All differences reported in this section are statistically significant with a less than 5 percent probability ($p<.05$) that they are due to chance alone.

# Appendix F

# Forces of Change

# Lower 8 of Southeast Kansas
# Forces of Change Assessment

This report summarizes the findings from the Forces of Change assessments conducted by the Lower 8 Region CHA team.

This report contains the following components:

1. Introduction
2. Summary of Findings and Recurrent Themes
3. Forces of Change Summary Table
4. Forces of Change Wall Sheets
5. Forces of Change Brainstorming Worksheet

## 1. Introduction

As a component of the CHA process outlined by the Mobilizing for Action through Planning and Partnerships (MAPP) tool, the Forces of Change (FOC) assessment is designed to help participants answer two questions: "What is occurring or might occur that affects the health of our community or the local public health system?" and "What specific threats or opportunities are generated by these occurrences?" The exercise is designed to produce a comprehensive but focused list that identifies key forces and describes their effects.

For the purpose of the FOC exercise, forces are defined as broad and all-encompassing, to include trends, events and factors.

- Trends: patterns over time
- Events: one-time occurrences
- Factors: discrete elements or attributes of a community

Participants in the FOC assessment engage in brainstorming sessions to identify forces pertinent to their community. Once they develop comprehensive list of forces, the identified items are reviewed and discussed more fully. An organized list is developed by combining smaller or linked forces and deleting or adding items as needed. Each force on the final list is then evaluated further, and associated threats and opportunities for the community and local public health system are identified.

The Lower 8 Region selected this tool as a part of the MAPP process for assessment. The FOC tool is designed to identify outside factors that shape the environment where change for better health will occur. The force categories generated in the Lower 8 Region brainstorming sessions were categorized into eight domains: ethical, social, environmental, political, technological, economic, legal, and scientific. This report includes a summary of the combined results from the sessions and the identified threats and opportunities.

## 2. Summary of Findings and Recurrent Themes

Results from the FOC assessment are presented in the summary table, beginning on page 5. They are categorized by domain and assigned as opportunities or threats according to recommendations from the Lower 8 Region CHA team.

Items listed in the summary table were reviewed for areas of repetition or recurrent themes. Although the brainstorming exercise identified a variety of issues, some common themes did emerge.

Health Reform

The Affordable Care Act (ACA) appears several times in the summary table, represented in the ethical, economic, political and scientific domains. The ACA was perceived to present opportunities as well as threats. Some opportunities identified by Lower 8 Region stakeholders include the provisions of the ACA that allow pre-existing conditions to be covered and children to stay on parents' insurance until age 26, as well as enhanced collaboration and efficiency in the medical system. Among the threats listed by the stakeholders are the perception that the ACA might give the government access to personal bank accounts, and questions regarding whether it is ethical to restrict care or require insurance for all. Additional threats identified include political discontent, loss of personal freedoms and the possibility that the ACA may make certain research possible in the future that may have negative effects. Furthermore, there was one mention of KanCare guidelines in the legal domain, with threats including difficulty getting mental health services reimbursed and opportunities related to medications.

Poor Local Economy

Forces related to a slow economy, including decreased state funding, lack of new jobs, poverty, and underemployment, were cited numerous times in the FOC table. These forces were primarily associated with the economic domain, but also fell into the social, legal, political and environmental domains. Threats associated with these forces included higher costs of transportation, more competition for existing jobs, professionals leaving the community in search of better jobs, loss of jobs, and less economic instability. There were, however, some opportunities created in relation to the poor state of the economy. Some of these included more "out of the box" thinking, enhanced collaborations, the opportunity to elect new people for political office and multi-generational families being able to live together, help each other, and share wisdom and knowledge.

State Involvement in Local Public Health

There were several mentions of forces related to state involvement in public health. Some included training programs to assist with issues such as behavior change and violence, collaborative sessions with public health partners and KDHE involvement in regional meetings to interact with local health department directors. The opportunities associated with these forces included the evidence-based nature of state trainings, opportunities for public health department accreditation, collaboration and utilization of others' strengths, and facilitation increased tolerance for systems change. Threats included concerns about the ethical nature of trying to elicit behavioral change, the concern that interacting with the state would reduce local control of local public health and result in unfavorable treatment, and the possibility of unfunded mandates. Additionally, reduced public health funding by the Legislature was perceived as a threat that could affect services.

# Appendix G

# National Public Health
# Performance Standards Program

# NPHPSP

National Public Health Performance Standards Program

## Local Public Health System Performance Assessment

## Report of Results

### Lower 8 of Southeast Kansas

3/8/2013

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## A. The NPHPSP Report of Results

## B. Performance Assessment Instrument Results

## Appendix

# The National Public Health Performance Standards Program

## Local Public Health System Performance Assessment
## Report of Results

### A. The NPHPSP Report of Results

### I. INTRODUCTION

The National Public Health Performance Standards Program (NPHPSP) assessments are 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 jurisdiction?" The dialogue that occurs in answering these questions can help to identify strengths and weaknesses and determine opportunities for improvement.

The NPHPSP is a partnership effort to improve the practice of public health and the performance of public health systems. The NPHPSP assessment instruments guide state and local jurisdictions in evaluating their current performance against a set of optimal standards. Through these assessments, responding sites consider the activities of all public health system partners, thus addressing the activities of all public, private and voluntary entities that contribute to public health within the community.

The NPHPSP is a collaborative effort of seven national partners:

- Centers for Disease Control and Prevention, Office of Chief of Public Health Practice (CDC/OCPHP)
- American Public Health Association (APHA)
- Association of State and Territorial Health Officials (ASTHO)
- National Association of County and City Health Officials (NACCHO)
- National Association of Local Boards of Health (NALBOH)
- National Network of Public Health Institutes (NNPHI)
- Public Health Foundation (PHF)

Three assessment instruments have been designed to assist state and local partners in assessing and improving their public health systems or boards of health. These instruments are the:

- State Public Health System Performance Assessment Instrument,
- Local Public Health System Performance Assessment Instrument, and
- Local Public Health Governance Performance Assessment Instrument.

This report provides a summary of results from the NPHPSP Local Public Health System Assessment (OMB Control number 0920-0555, expiration date: August 31, 2013). The report, including the charts, graphs, and scores, are intended to help sites gain a good understanding of their performance and move on to the next step in strengthening their public system.

## II. ABOUT THE REPORT

### Calculating the scores

The NPHPSP assessment instruments are constructed using the Essential Public Health Services (EPHS) as a framework. Within the Local Instrument, each EPHS includes between 2-4 model standards that describe the key aspects of an optimally performing public health system. Each model standard is followed by assessment questions that serve as measures of performance. Each site's responses to these questions should indicate how well the model standard - which portrays the highest level of performance or "gold standard" - is being met.

Sites responded to assessment questions using the following response options below. These same categories are used in this report to characterize levels of activity for Essential Services and model standards.

| | |
|---|---|
| NO ACTIVITY | 0% or absolutely no activity. |
| MINIMAL ACTIVITY | Greater than zero, but no more than 25% of the activity described within the question is met. |
| MODERATE ACTIVITY | Greater than 25%, but no more than 50% of the activity described within the question is met. |
| SIGNIFICANT ACTIVITY | Greater than 50%, but no more than 75% of the activity described within the question is met. |
| OPTIMAL ACTIVITY | Greater than 75% of the activity described within the question is met. |

Using the responses to all of the assessment questions, a scoring process generates scores for each first-tier or "stem" question, model standard, Essential Service, and one overall score. The scoring methodology is available from CDC or can be accessed on-line at http://www.cdc.gov/nphpsp/conducting.html.

### Understanding data limitations

Respondents to the self-assessment should understand what the performance scores represent and potential data limitations. All performance scores are a composite; stem question scores represent a composite of the stem question and subquestion responses; model standard scores are a composite of the question scores within that area, and so on. The responses to the questions within the assessment are based upon processes that utilize input from diverse system participants with different experiences and perspectives. The gathering of these inputs and the development of a response for each question incorporates an element of subjectivity, which can be minimized through the use of particular assessment methods. Additionally, while certain assessment methods are recommended, processes can differ among sites. The assessment methods are not fully standardized and these differences

in administration of the self-assessment may introduce an element of measurement error. In addition, there are differences in knowledge about the public health system among assessment participants. This may lead to some interpretation differences and issues for some questions, potentially introducing a degree of random non-sampling error.

Because of the limitations noted, the results and recommendations associated with these reported data should be used for quality improvement purposes. More specifically, results should be utilized for guiding an overall public health infrastructure and performance improvement process for the public health system. These data represent the collective performance of all organizational participants in the assessment of the local public health system. The data and results should not be interpreted to reflect the capacity or performance of any single agency or organization.

## *Presentation of results*

The NPHPSP has attempted to present results - through a variety of figures and tables - in a user-friendly and clear manner. Results are presented in a Microsoft Word document, which allows users to easily copy and paste or edit the report for their own customized purposes. Original responses to all questions are also available.

For ease of use, many figures in tables use short titles to refer to Essential Services, model standards, and questions. If in doubt of the meaning, please refer to the full text in the assessment instruments.

Sites may choose to complete two optional questionnaires - one which asks about priority of each model standard and the second which assesses the local health department's contribution to achieving the model standard. Sites that submit responses for these questionnaires will see the results included as an additional component of their reports. Recipients of the priority results section may find that the scatter plot figures include data points that overlap. This is unavoidable when presenting results that represent similar data; in these cases, sites may find that the table listing of results will more clearly show the results found in each quadrant.

## III. TIPS FOR INTERPRETING AND USING NPHPSP ASSESSMENT RESULTS

The use of these results by respondents to strengthen the public health system is the most important part of the performance improvement process that the NPHPSP is intended to promote. Report data may be used to identify strengths and weaknesses within the local public health system and pinpoint areas of performance that need improvement. The NPHPSP User Guide describes steps for using these results to develop and implement public health system performance improvement plans. Implementation of these plans is critical to achieving a higher performing public health system. Suggested steps in developing such improvement plans are:
1. Organize Participation for Performance Improvement
2. Prioritize Areas for Action
3. Explore "Root Causes" of Performance Problems
4. Develop and Implement Improvement Plans
5. Regularly Monitor and Report Progress

Refer to the User Guide section, "After We Complete the Assessment, What Next?" for details on the above steps.

Assessment results represent the collective performance of all entities in the local public health system and not any one organization. Therefore, system partners should be involved in the discussion of results and improvement strategies to assure that this information is appropriately used. The assessment results can drive improvement planning within each organization as well as system-wide. In addition, coordinated use of the Local Instrument with the Governance Instrument or state-wide use of the Local Instrument can lead to more successful and comprehensive improvement plans to address more systemic statewide issues.

Although respondents will ultimately want to review these results with stakeholders in the context of their overall performance improvement process, they may initially find it helpful to review the results either individually or in a small group. The following tips may be helpful when initially reviewing the results, or preparing to present the results to performance improvement stakeholders.

### *Examine performance scores*

First, sites should take a look at the overall or composite performance scores for Essential Services and model standards. These scores are presented visually in order by Essential Service (Figure 1) and in ascending order (Figure 2). Additionally, Figure 3 uses color designations to indicate performance level categories. Examination of these scores can immediately give a sense of the local public health system's greatest strengths and weaknesses.

### *Review the range of scores within each Essential Service and model standard*

The Essential Service score is an average of the model standard scores within that service, and, in turn, the model standard scores represent the average of stem question scores for that standard. If there is great range or difference in scores, focusing attention on the model standard(s) or questions with the lower scores will help to identify where performance inconsistency or weakness may be. Some figures, such as the bar charts in Figure 4, provide "range bars" which indicate the variation in scores. Looking for long range bars will help to easily identify these opportunities.

Also, refer back to the original question responses to determine where weaknesses or inconsistencies in performance may be occurring. By examining the assessment questions, including the subquestions and discussion toolbox items, participants will be reminded of particular areas of concern that may most need attention.

### *Consider the context*

The NPHPSP User Guide and other technical assistance resources strongly encourage responding jurisdictions to gather and record qualitative input from participants throughout the assessment process. Such information can include insights that shaped group responses, gaps that were uncovered, solutions to identified problems, and impressions or early ideas for improving system performance. This information should have emerged from the general discussion of the model standards and assessment questions, as well as the responses to discussion toolbox topics.

The results viewed in this report should be considered within the context of this qualitative information, as well as with other information. The assessment report, by itself, is not intended to be the sole "roadmap" to answer the question of what a local public health system's performance improvement priorities should be. The original purpose of the

assessment, current issues being addressed by the community, and the needs and interests for all stakeholders should be considered.

Some sites have used a process such as Mobilizing for Action through Planning and Partnerships (MAPP) to address their NPHPSP data within the context of other community issues. In the MAPP process, local users consider the NPHPSP results in addition to three other assessments - community health status, community themes and strengths, and forces of change - before determining strategic issues, setting priorities, and developing action plans. See "Resources for Next Steps" for more about MAPP.

### *Use the optional priority rating and agency contribution questionnaire results*

Sites may choose to complete two optional questionnaires - one which asks about priority of each model standard and the second which assesses the local health department's contribution to achieving of the model standard. The supplemental priority questionnaire, which asks about the priority of each model standard to the public health system, should guide sites in considering their performance scores in relationship to their own system's priorities. The use of this questionnaire can guide sites in targeting their limited attention and resources to areas of high priority but low performance. This information should serve to catalyze or strengthen the performance improvement activities resulting from the assessment process.

The second questionnaire, which asks about the contribution of the public health agency to each model standard, can assist sites in considering the role of the agency in performance improvement efforts. Sites that use this component will see a list of questions to consider regarding the agency role and as it relates to the results for each model standard. These results may assist the local health department in its own strategic planning and quality improvement activities.

## IV. FINAL REMARKS

The challenge of preventing illness and improving health is ongoing and complex. The ability to meet this challenge rests on the capacity and performance of public health systems. Through well equipped, high-performing public health systems, this challenge can be addressed. Public health performance standards are intended to guide the development of stronger public health systems capable of improving the health of populations. The development of high-performing public health systems will increase the likelihood that all citizens have access to a defined optimal level of public health services. Through periodic assessment guided by model performance standards, public health leaders can improve collaboration and integration among the many components of a public health system, and more effectively and efficiently use resources while improving health intervention services.

## B. Performance Assessment Instrument Results

### I. How well did the system perform the ten Essential Public Health Services (EPHS)?

**Table 1:** Summary of performance scores by Essential Public Health Service (EPHS)

| EPHS | | Score |
|------|------|-------|
| 1 | Monitor Health Status To Identify Community Health Problems | 29 |
| 2 | Diagnose And Investigate Health Problems and Health Hazards | 91 |
| 3 | Inform, Educate, And Empower People about Health Issues | 66 |
| 4 | Mobilize Community Partnerships to Identify and Solve Health Problems | 18 |
| 5 | Develop Policies and Plans that Support Individual and Community Health Efforts | 72 |
| 6 | Enforce Laws and Regulations that Protect Health and Ensure Safety | 73 |
| 7 | Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable | 60 |
| 8 | Assure a Competent Public and Personal Health Care Workforce | 61 |
| 9 | Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services | 47 |
| 10 | Research for New Insights and Innovative Solutions to Health Problems | 85 |
| Overall Performance Score | | 60 |

**Figure 1:** Summary of EPHS performance scores and overall score (with range)
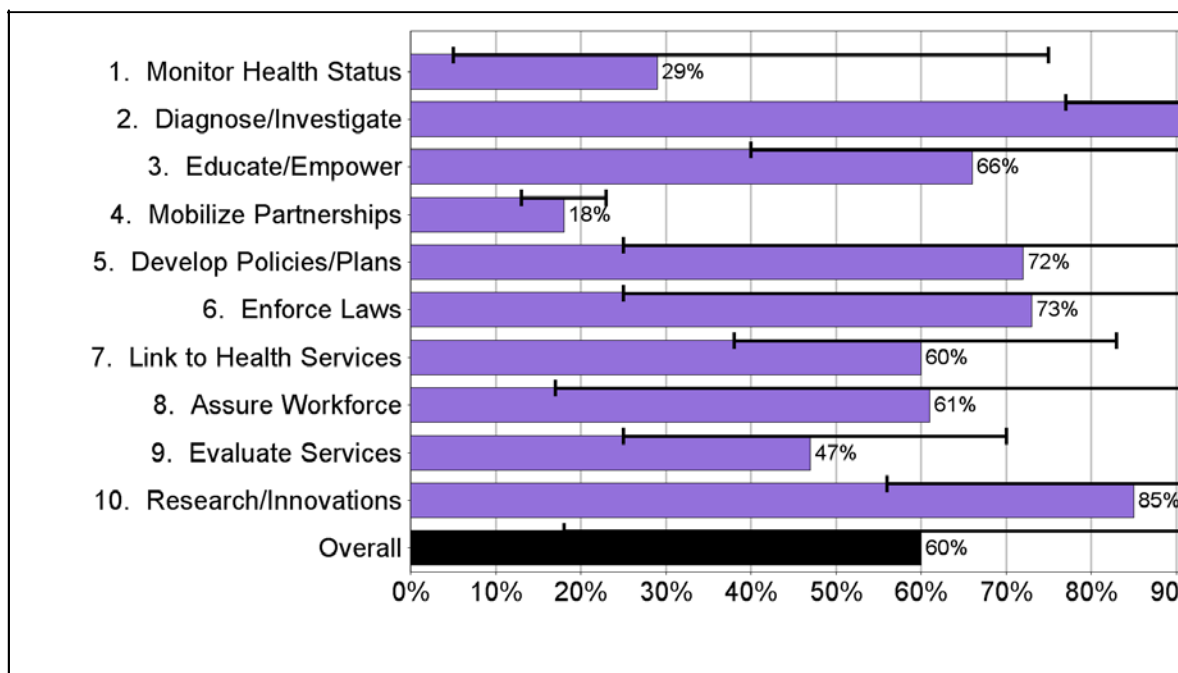
**Table 1** (above) provides a quick overview of the system's performance in each of the 10 Essential Public Health Services (EPHS). Each EPHS score is a composite value determined by the scores given to those activities that contribute to each Essential Service. These scores range from a minimum value of 0% (no activity is performed pursuant to the standards) to a maximum of 100% (all activities associated with the standards are performed at optimal levels).

**Figure 1** (above) displays performance scores for each Essential Service along with an overall score that indicates the average performance level across all 10 Essential Services. The range bars show the minimum and maximum values of responses within the Essential Service and an overall score. Areas of wide range may warrant a closer look in **Figure 4** or the raw data.

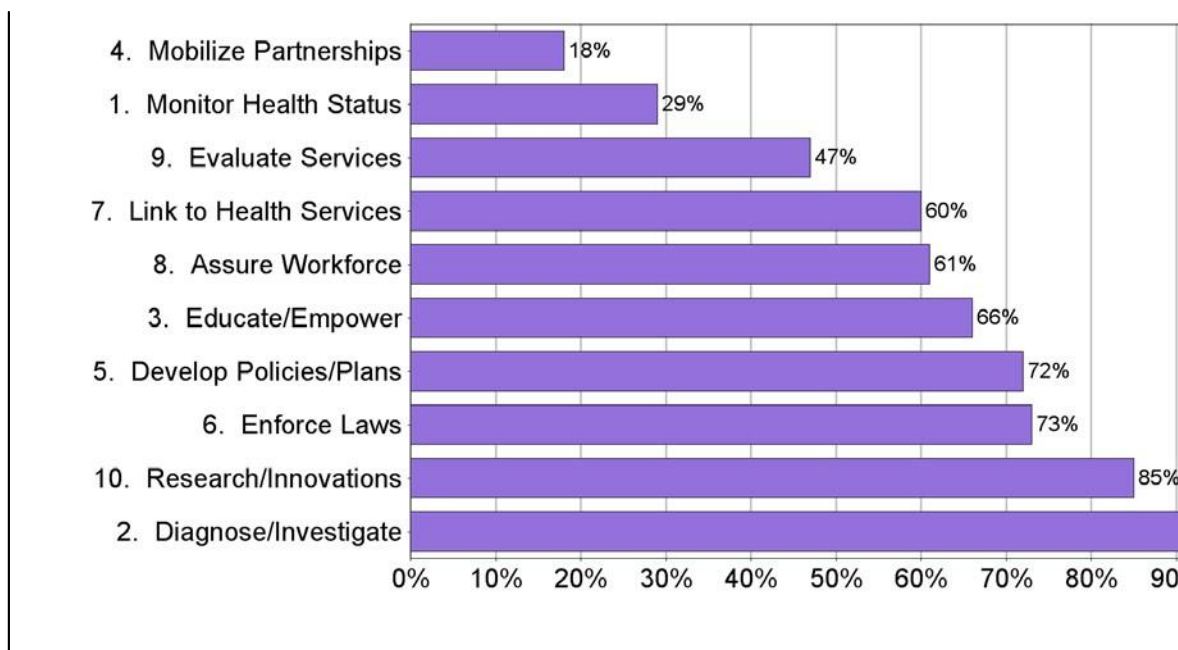**Figure 2:** Rank ordered performance scores for each Essential Service



**Figure 3:** Rank ordered performance scores for each Essential Service, by level of activity
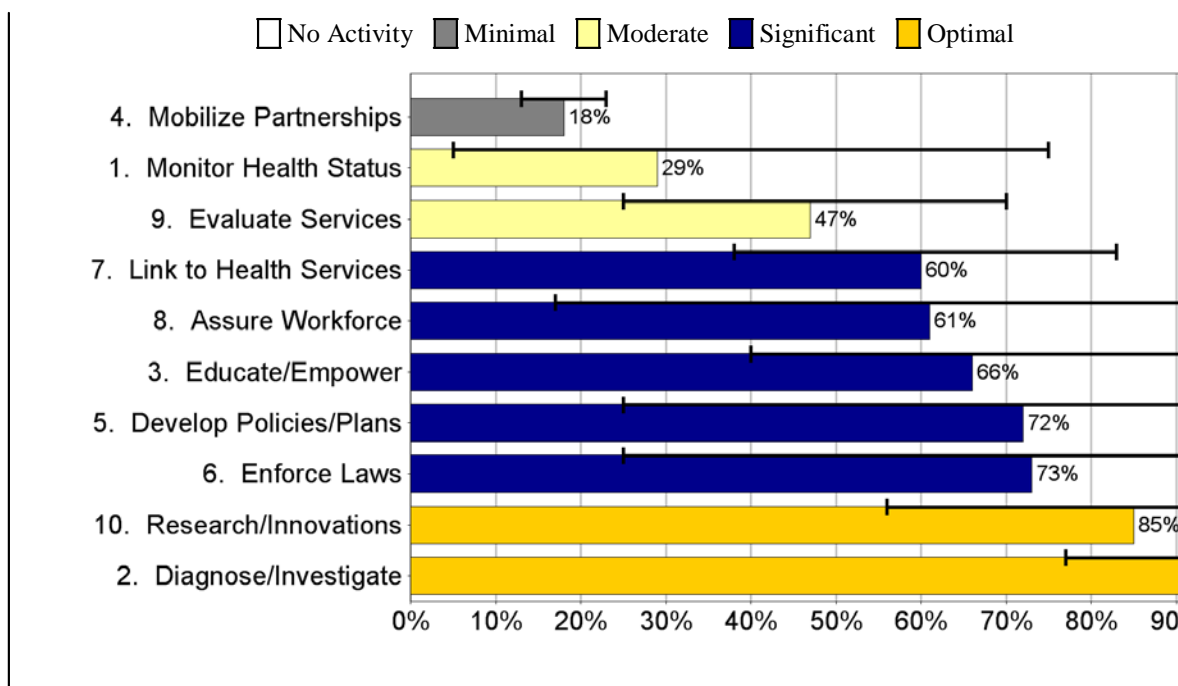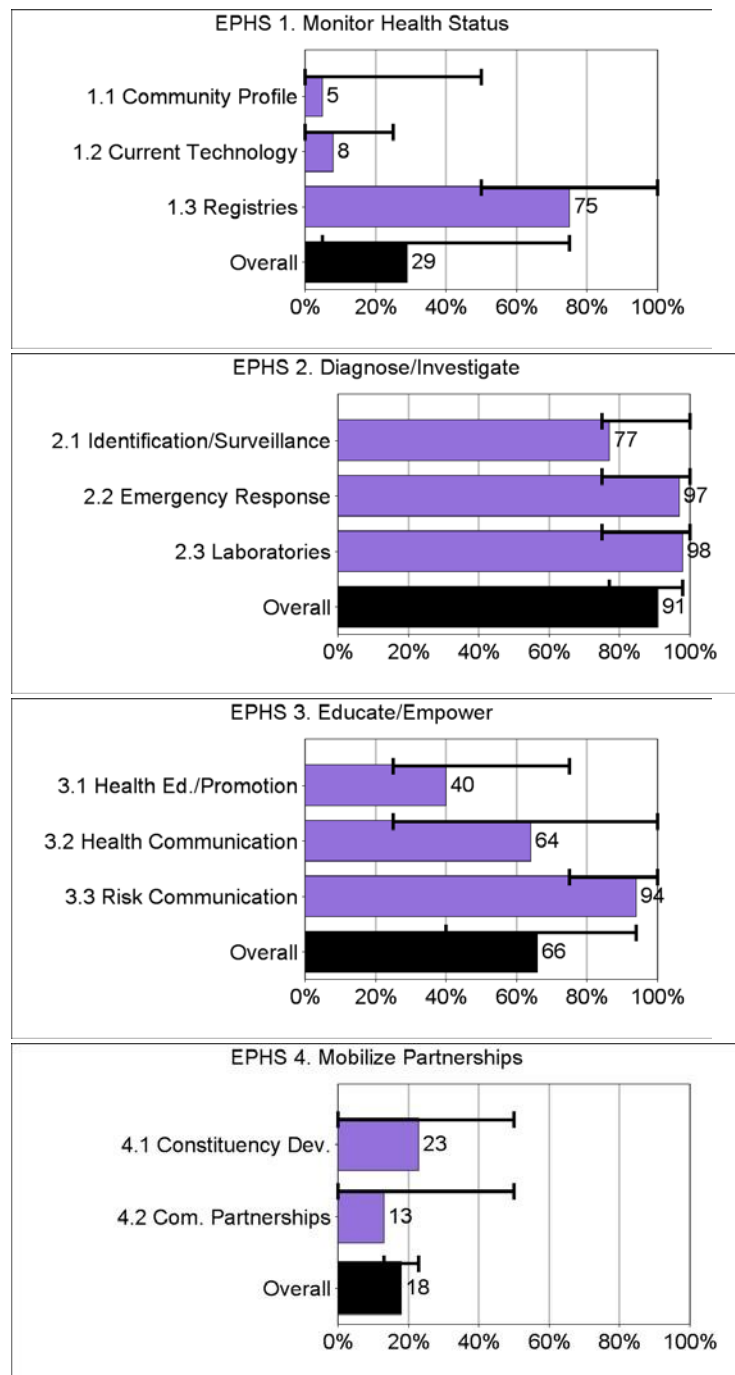
**Figure 2** (above) displays each composite score from low to high, allowing easy identification of service domains where performance is relatively strong or weak.
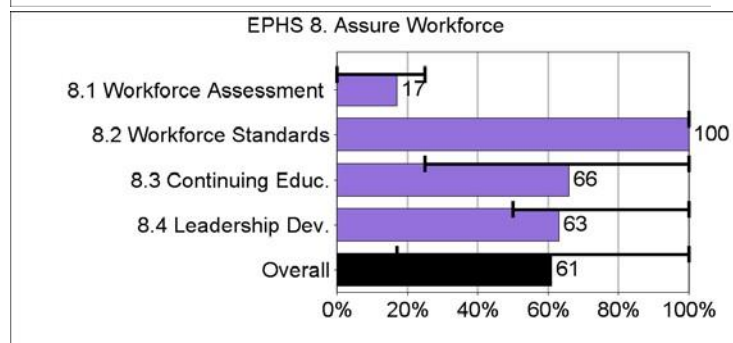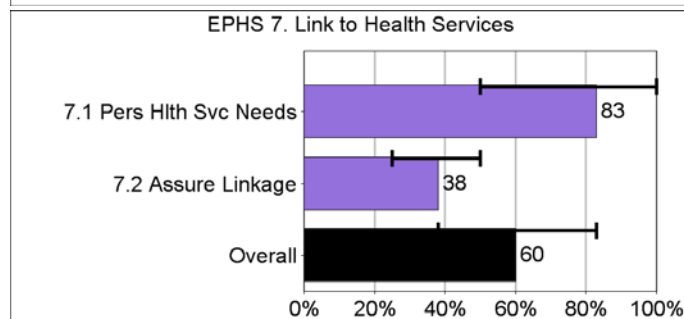
**Figure 3** (above) provides a composite picture of the previous two graphs. The range lines show the range of responses within an Essential Service. The color coded bars make it easier to identify which of the Essential Services fall in the five categories of performance activity.

**Figure 4** (next page) shows scores for each model standard. Sites can use these graphs to pinpoint specific activities within the Essential Service that may need a closer look. Note these scores also have range bars, showing sub-areas that comprise the model standard.

## II. How well did the system perform on specific model standards?

**Figure 4:** Performance scores for each model standard, by Essential Service

EPHS 5. Develop Policies/Plans

| | |
|---|---|
| 5.1 Gov. Presence | 79 |
| 5.2 Policy Development | 25 |
| 5.3 CHIP/Strat Planning | 82 |
| 5.4 Emergency Plan | 100 |
| Overall | 72 |

EPHS 6. Enforce Laws

| | |
|---|---|
| 6.1 Review Laws | 95 |
| 6.2 Improve Laws | 25 |
| 6.3 Enforce Laws | 100 |
| Overall | 73 |

EPHS 7. Link to Health Services

| | |
|---|---|
| 7.1 Pers Hlth Svc Needs | 83 |
| 7.2 Assure Linkage | 38 |
| Overall | 60 |

EPHS 8. Assure Workforce

| | |
|---|---|
| 8.1 Workforce Assessment | 17 |
| 8.2 Workforce Standards | 100 |
| 8.3 Continuing Educ. | 66 |
| 8.4 Leadership Dev. | 63 |
| Overall | 61 |

## EPHS 9. Evaluate Services

| Measure | Value |
|---|---|
| 9.1 Eval of Pop Health | 47 |
| 9.2 Eval of Pers Health | 70 |
| 9.3 Eval of LPHS | 25 |
| Overall | 47 |

## EPHS 10. Research/Innovations

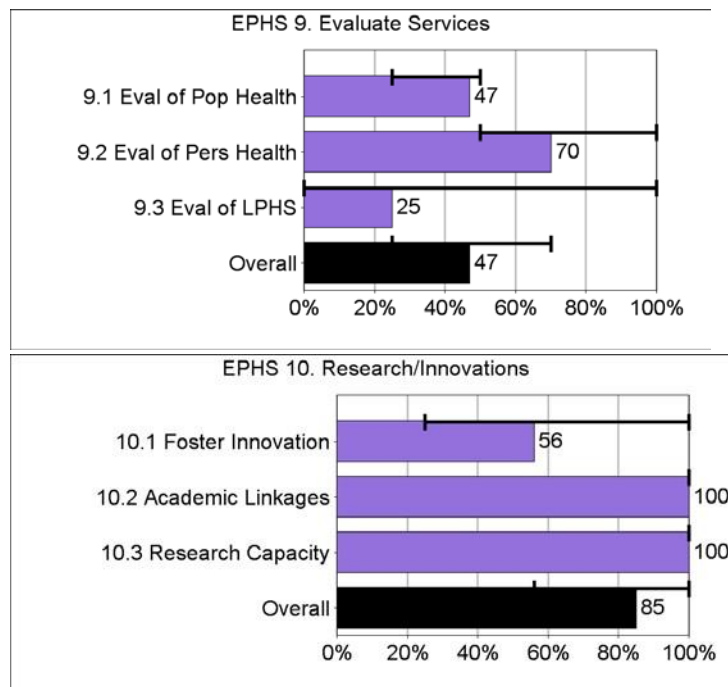| Measure | Value |
|---|---|
| 10.1 Foster Innovation | 56 |
| 10.2 Academic Linkages | 100 |
| 10.3 Research Capacity | 100 |
| Overall | 85 |

NPHPSP

**Table 2:** Summary of performance scores by Essential Public Health Service (EPHS) and model standard

| Essential Public Health Service | Score |
|---|---|
| EPHS 1. Monitor Health Status To Identify Community Health Problems | 29 |
| 1.1 Population-Based Community Health Profile (CHP) | 5 |
| 1.1.1 Community health assessment | 0 |
| 1.1.2 Community health profile (CHP) | 2 |
| 1.1.3 Community-wide use of community health assessment or CHP data | 13 |
| 1.2 Access to and Utilization of Current Technology to Manage, Display, Analyze and Communicate Population Health Data | 8 |
| 1.2.1 State-of-the-art technology to support health profile databases | 25 |
| 1.2.2 Access to geocoded health data | 0 |
| 1.2.3 Use of computer-generated graphics | 0 |
| 1.3 Maintenance of Population Health Registries | 75 |
| 1.3.1 Maintenance of and/or contribution to population health registries | 75 |
| 1.3.2 Use of information from population health registries | 75 |
| EPHS 2. Diagnose And Investigate Health Problems and Health Hazards | 91 |
| 2.1 Identification and Surveillance of Health Threats | 77 |
| 2.1.1 Surveillance system(s) to monitor health problems and identify health threats | 75 |
| 2.1.2 Submission of reportable disease information in a timely manner | 75 |
| 2.1.3 Resources to support surveillance and investigation activities | 81 |
| 2.2 Investigation and Response to Public Health Threats and Emergencies | 97 |
| 2.2.1 Written protocols for case finding, contact tracing, source identification, and containment | 88 |
| 2.2.2 Current epidemiological case investigation protocols | 100 |
| 2.2.3 Designated Emergency Response Coordinator | 100 |
| 2.2.4 Rapid response of personnel in emergency / disasters | 97 |

| | |
|---|---|
| 2.2.5 Evaluation of public health emergency response | 100 |
| 2.3 Laboratory Support for Investigation of Health Threats | 98 |
| 2.3.1 Ready access to laboratories for routine diagnostic and surveillance needs | 100 |
| 2.3.2 Ready access to laboratories for public health threats, hazards, and emergencies | 94 |
| 2.3.3 Licenses and/or credentialed laboratories | 100 |
| 2.3.4 Maintenance of guidelines or protocols for handling laboratory samples | 100 |
| EPHS 3. Inform, Educate, And Empower People about Health Issues | 66 |
| 3.1 Health Education and Promotion | 40 |
| 3.1.1 Provision of community health information | 44 |
| 3.1.2 Health education and/or health promotion campaigns | 50 |
| 3.1.3 Collaboration on health communication plans | 25 |
| 3.2 Health Communication | 64 |
| 3.2.1 Development of health communication plans | 25 |
| 3.2.2 Relationships with media | 67 |
| 3.2.3 Designation of public information officers | 100 |
| 3.3 Risk Communication | 94 |
| 3.3.1 Emergency communications plan(s) | 100 |
| 3.3.2 Resources for rapid communications response | 100 |
| 3.3.3 Crisis and emergency communications training | 75 |
| 3.3.4 Policies and procedures for public information officer response | 100 |

| Essential Public Health Service | Score |
|---|---|
| EPHS 4. Mobilize Community Partnerships to Identify and Solve Health Problems | 18 |
| 4.1 Constituency Development | 23 |
| 4.1.1 Identification of key constituents or stakeholders | 31 |
| 4.1.2 Participation of constituents in improving community health | 25 |
| 4.1.3 Directory of organizations that comprise the LPHS | 13 |
| 4.1.4 Communications strategies to build awareness of public health | 25 |
| 4.2 Community Partnerships | 13 |
| 4.2.1 Partnerships for public health improvement activities | 40 |
| 4.2.2 Community health improvement committee | 0 |
| 4.2.3 Review of community partnerships and strategic alliances | 0 |
| EPHS 5. Develop Policies and Plans that Support Individual and Community Health Efforts | 72 |
| 5.1 Government Presence at the Local Level | 79 |
| 5.1.1 Governmental local public health presence | 100 |
| 5.1.2 Resources for the local health department | 88 |
| 5.1.3 Local board of health or other governing entity (not scored) | 0 |
| 5.1.4 LHD work with the state public health agency and other state partners | 50 |
| 5.2 Public Health Policy Development | 25 |
| 5.2.1 Contribution to development of public health policies | 25 |
| 5.2.2 Alert policymakers/public of public health impacts from policies | 25 |
| 5.2.3 Review of public health policies | 25 |
| 5.3 Community Health Improvement Process | 82 |
| 5.3.1 Community health improvement process | 46 |
| 5.3.2 Strategies to address community health objectives | 100 |

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| 5.3.3 Local health department (LHD) strategic planning process | 100 |
| 5.4 Plan for Public Health Emergencies | 100 |
| 5.4.1 Community task force or coalition for emergency preparedness and response plans | 100 |
| 5.4.2 All-hazards emergency preparedness and response plan | 100 |
| 5.4.3 Review and revision of the all-hazards plan | 100 |
| EPHS 6. Enforce Laws and Regulations that Protect Health and Ensure Safety | 73 |
| 6.1 Review and Evaluate Laws, Regulations, and Ordinances | 95 |
| 6.1.1 Identification of public health issues to be addressed through laws, regulations, and ordinances | 100 |
| 6.1.2 Knowledge of laws, regulations, and ordinances | 100 |
| 6.1.3 Review of laws, regulations, and ordinances | 78 |
| 6.1.4 Access to legal counsel | 100 |
| 6.2 Involvement in the Improvement of Laws, Regulations, and Ordinances | 25 |
| 6.2.1 Identification of public health issues not addressed through existing laws | 25 |
| 6.2.2 Development or modification of laws for public health issues | 25 |
| 6.2.3 Technical assistance for drafting proposed legislation, regulations, or ordinances | 25 |
| 6.3 Enforce Laws, Regulations and Ordinances | 100 |
| 6.3.1 Authority to enforce laws, regulation, ordinances | 100 |
| 6.3.2 Public health emergency powers | 100 |
| 6.3.3 Enforcement in accordance with applicable laws, regulations, and ordinances | 100 |
| 6.3.4 Provision of information about compliance | 100 |
| 6.3.5 Assessment of compliance | 100 |

| Essential Public Health Service | Score |
|---|---|
| EPHS 7. Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable | 60 |
| 7.1 Identification of Populations with Barriers to Personal Health Services | 83 |
| 7.1.1 Identification of populations who experience barriers to care | 100 |
| 7.1.2 Identification of personal health service needs of populations | 100 |
| 7.1.3 Assessment of personal health services available to populations who experience barriers to care | 50 |
| 7.2 Assuring the Linkage of People to Personal Health Services | 38 |
| 7.2.1 Link populations to needed personal health services | 50 |
| 7.2.2 Assistance to vulnerable populations in accessing needed health services | 25 |
| 7.2.3 Initiatives for enrolling eligible individuals in public benefit programs | 50 |
| 7.2.4 Coordination of personal health and social services | 25 |
| EPHS 8. Assure a Competent Public and Personal Health Care Workforce | 61 |
| 8.1 Workforce Assessment Planning, and Development | 17 |
| 8.1.1 Assessment of the LPHS workforce | 0 |
| 8.1.2 Identification of shortfalls and/or gaps within the LPHS workforce | 25 |
| 8.1.3 Dissemination of results of the workforce assessment / gap analysis | 25 |
| 8.2 Public Health Workforce Standards | 100 |
| 8.2.1 Awareness of guidelines and/or licensure/certification requirements | 100 |
| 8.2.2 Written job standards and/or position descriptions | 100 |
| 8.2.3 Annual performance evaluations | 100 |
| 8.2.4 LHD written job standards and/or position descriptions | 100 |
| 8.2.5 LHD performance evaluations | 100 |
| 8.3 Life-Long Learning Through Continuing Education, Training, and Mentoring | 66 |
| 8.3.1 Identification of education and training needs for workforce development | 100 |

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| 8.3.2 Opportunities for developing core public health competencies | 25 |
| 8.3.3 Educational and training incentives | 63 |
| 8.3.4 Interaction between personnel from LPHS and academic organizations | 75 |
| 8.4 Public Health Leadership Development | 63 |
| 8.4.1 Development of leadership skills | 75 |
| 8.4.2 Collaborative leadership | 50 |
| 8.4.3 Leadership opportunities for individuals and/or organizations | 75 |
| 8.4.4 Recruitment and retention of new and diverse leaders | 50 |

| Essential Public Health Service | Score |
|---|---|
| EPHS 9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-Based Health Services | 47 |
| 9.1 Evaluation of Population-based Health Services | 47 |
| 9.1.1 Evaluation of population-based health services | 38 |
| 9.1.2 Assessment of community satisfaction with population-based health services | 50 |
| 9.1.3 Identification of gaps in the provision of population-based health services | 50 |
| 9.1.4 Use of population-based health services evaluation | 50 |
| 9.2 Evaluation of Personal Health Care Services | 70 |
| 9.2.1.In Personal health services evaluation | 50 |
| 9.2.2 Evaluation of personal health services against established standards | 100 |
| 9.2.3 Assessment of client satisfaction with personal health services | 50 |
| 9.2.4 Information technology to assure quality of personal health services | 100 |
| 9.2.5 Use of personal health services evaluation | 50 |
| 9.3 Evaluation of the Local Public Health System | 25 |
| 9.3.1 Identification of community organizations or entities that contribute to the EPHS | 100 |
| 9.3.2 Periodic evaluation of LPHS | 0 |
| 9.3.3 Evaluation of partnership within the LPHS | 0 |
| 9.3.4 Use of LPHS evaluation to guide community health improvements | 0 |
| EPHS 10. Research for New Insights and Innovative Solutions to Health Problems | 85 |
| 10.1 Fostering Innovation | 56 |
| 10.1.1 Encouragement of new solutions to health problems | 50 |
| 10.1.2 Proposal of public health issues for inclusion in research agenda | 25 |
| 10.1.3 Identification and monitoring of best practices | 100 |
| 10.1.4 Encouragement of community participation in research | 50 |

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| 10.2 Linkage with Institutions of Higher Learning and/or Research | 100 |
| 10.2.1 Relationships with institutions of higher learning and/or research organizations | 100 |
| 10.2.2 Partnerships to conduct research | 100 |
| 10.2.3 Collaboration between the academic and practice communities | 100 |
| 10.3 Capacity to Initiate or Participate in Research | 100 |
| 10.3.1 Access to researchers | 100 |
| 10.3.2 Access to resources to facilitate research | 100 |
| 10.3.3 Dissemination of research findings | 100 |
| 10.3.4 Evaluation of research activities | 100 |

### III. Overall, how well is the system achieving optimal activity levels?

**Figure 5:** Percentage of Essential Services scored in each level of activity
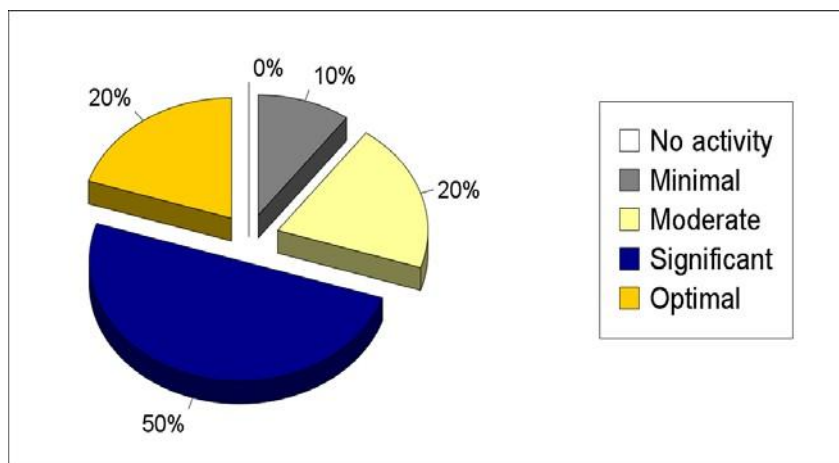


**Figure 5** displays the percentage of the system's Essential Services scores that fall within the five activity categories. This chart provides the site with a high level snapshot of the information found in **Figure 3**.

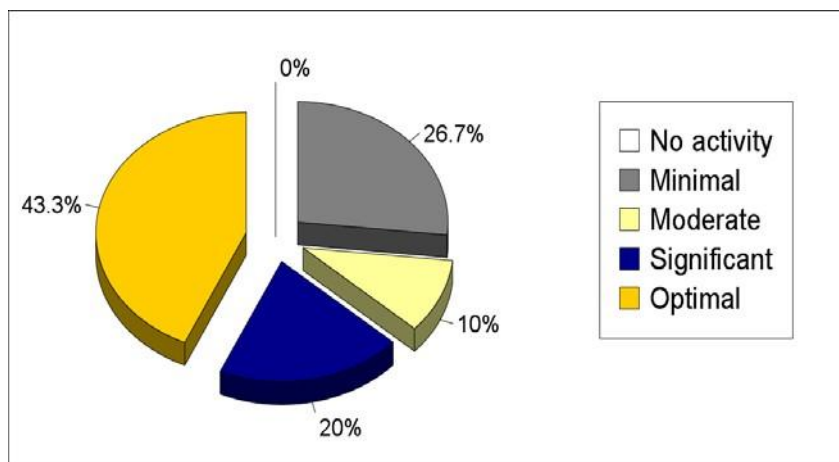**Figure 6:** Percentage of model standards scored in each level of activity



**Figure 6** displays the percentage of the system's model standard scores that fall within the five activity categories.

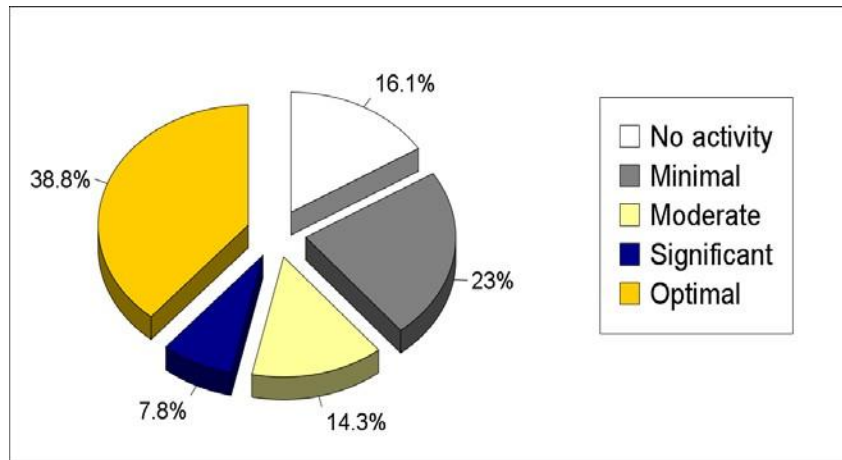**Figure 7:** Percentage of all questions scored in each level of activity

**Figure 7** displays the percentage of all scored questions that fall within the five activity categories. This breakdown provides a closer snapshot of the system's performance, showing variation that may be masked by the scores in **Figures 5** and **6**.

## APPENDIX: RESOURCES FOR NEXT STEPS

The NPHPSP offers a variety of information, technical assistance, and training resources to assist in quality improvement activities. Descriptions of these resources are provided below. Other resources and websites that may be of particular interest to NPHPSP users are also noted below.

- **Technical Assistance and Consultation -** NPHPSP partners are available for phone and email consultation to state and localities as they plan for and conduct NPHPSP assessment and performance improvement activities. Contact 1-800-747-7649 or phpsp@cdc.gov.

- **NPHPSP User Guide -** The NPHPSP User Guide section, "After We Complete the Assessment, What Next?" describes five essential steps in a performance improvement process following the use of the NPHPSP assessment instruments. The NPHPSP User Guide may be found on the NPHPSP website (http://www.cdc.gov/NPHPSP/PDF/UserGuide.pdf).

- **NPHPSP Online Tool Kit -** Additional resources that may be found on, or are linked to, the NPHPSP website (http://www.cdc.gov/NPHPSP/generalResources.html) under the "Post Assessment/ Performance Improvement" link include sample performance improvement plans, quality improvement and priority-setting tools, and other technical assistance documents and links.

- **NPHPSP Online Resource Center -** Designed specifically for NPHPSP users, the Public Health Foundation's online resource center (www.phf.org/nphpsp) for public health systems performance improvement allows users to search for State, Local, and Governance resources by model standards, essential public health service, and keyword.;

- **NPHPSP Monthly User Calls -** These calls feature speakers and dialogue on topic of interest to users. They also provide an opportunity for people from around the country to learn from each other about various approaches to the NPHPSP assessment and performance improvement process. Calls occur on the third Tuesday of each month, 2:00 - 3:00 ET. Contact phpsp@cdc.gov to be added to the email notification list for the call.

- **Annual Training Workshop -** Individuals responsible for coordinating performance assessment and improvement activities may attend an annual two-day workshop held in the spring of each year. Visit the NPHPSP website (http://www.cdc.gov/nphpsp/annualTrainingWorkshop.html) for more information.

- **Public Health Improvement Resource Center at the Public Health Foundation -** This website (www.phf.org/improvement) provides resources and tools for evaluating and building the capacity of public health systems. More than 100 accessible resources organized here support the initiation and continuation of quality improvement efforts. These resources promote performance management and quality improvement, community health

information and data systems, accreditation preparation, and workforce development.

- **Mobilizing for Action through Planning and Partnerships (MAPP) -** MAPP has proven to be a particularly helpful tool for sites engaged in community-based health improvement planning. Systems that have just completed the NPHPSP may consider using the MAPP process as a way to launch their performance improvement efforts. Go to www.naccho.org/topics/infrastructure/MAPP to link directly to the MAPP website.