



**NATIONAL PARTNERSHIP FOR ACTION**  
to End Health Disparities



# Heartland Regional Health Equity Council Environmental Scan

# Table of Contents

<b>Introduction</b>	1
The National Partnership for Action (NPA)	1
The National Stakeholder Strategy for Achieving Health Equity (NSS)	1
<b>Regional Context</b>	3
Demographics and Geographic Distribution	3
Basic Demographic information	3
Immigration	4
Immigration by Race & Hispanic Origin	6
National Origin and Educational Attainment	6
Language	7
Resources to Address Immigration Needs	8
Rural vs. Urban	8
Income	9
Rural vs. Urban: Education	10
Rural vs. Urban: Race	11
Infant Mortality	12
Overview	12
Infant Mortality by Race and Ethnicity	12
Infant Mortality by Income	12
Infant Mortality by Education Level	12
Infant Mortality by County	13
Infant Mortality-Oriented Initiatives and Non-profit Organizations	14
Obesity and Exercise Levels within the Heartland Region	15
Overview	15
Obesity and Exercise by Race	15
Obesity and Exercise by Income	16
Combating Obesity and Reinforcing Exercise—Initiatives	16
Healthcare Quality	17
Overview	17
Healthcare Quality by Race	18
Healthcare Quality by Education	19
Healthcare Quality by Zip Code	19
Healthcare Provider Distribution	19
Healthcare Facilities by Education Level	20
Healthcare Facilities by Race	20
Healthcare Facilities by Income	20
Resources in the Region to Address Healthcare Facility Distribution	20
Medically Underserved Areas/Populations	21
Overview	21
MUAs by Income	22
MUAs Oriented Initiatives and Organizations	22
Physician Attrition	23
Overview	23
Disparities in Health Outcomes	24
Social Determinants of Health	24
Residential Segregation	24
Neighborhood Racial Composition in RHEC Metropolitan Cities	27
Transportation	28
Transportation by Education Level	29
Transportation by Race	29
Transportation by Income	30

Resources in the Region to Address Transportation Needs.....	30
Education.....	31
Overview.....	31
Educational Attainment by Race .....	31
Educational Attainment by Income.....	32
Educational Attainment by County.....	32
Educational Attainment-related Initiatives and Groups .....	33
School Distribution .....	34
School Distribution by Education Level .....	34
School Distribution by Race .....	34
School Distribution by Income.....	34
Income .....	35
Income by Education Level.....	35
Income by Race .....	35
Income by County .....	38
Resources in the Region to Address Income Disparities .....	38
Unemployment.....	39
Overview.....	39
Unemployment by Race .....	39
Unemployment by Educational Attainment .....	40
Unemployment by County .....	41
Unemployment by Gender .....	41
Poverty .....	41
Overview.....	41
Poverty by Age .....	42
Poverty by Race .....	42
Poverty by Gender .....	42
Poverty by County .....	43
Homelessness.....	43
Overview.....	43
Homelessness by Race.....	44
Crime .....	44
Crime by Education Level.....	45
Crime by Race: .....	45
Crime by Income .....	46
Resources in the Region to Address Crime.....	46
Natural Environment.....	47
Annual Rainfall .....	47
Parks Within the Region.....	48
Air Quality.....	48
Land Pollution & Chemical Contamination.....	49
Organic Food.....	49
Tornadoes .....	49
Resources in the Region to Address Environmental Concerns .....	50
<b>Regional Challenges, Opportunities, and Next Steps.....</b>	<b>52</b>
Challenges and Disparities.....	52
Assets and Opportunities .....	52
General Guidelines.....	53

# Introduction

The United States is among the richest countries in the world, yet disparities in health and health care continue to exist for many of its vulnerable populations. These persistent and pervasive disparities carry a high societal burden in terms of the loss of valuable resources, such as financial capital, healthy children and families, and workforce capacity. A health disparity is a particular type of health difference closely linked with social or economic disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater social and economic obstacles to health and a clean environment based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health, cognitive, sensory, or physical disability; sexual orientation; geographic location; or other characteristics historically linked to discrimination or exclusion.

## **The National Partnership for Action (NPA)**

In order to close the health gap for the nation's racial, ethnic, and underserved communities, the NPA has been established. The vision for the NPA has been shaped by the voices of more than 5,000 individuals who shared their experiences and expertise through a series of regional conversations and meetings held by the U.S. Department of Health and Human Services (HHS) Office of Minority Health. The driving force of the NPA is the conviction that a nationally based strategy is needed—one that relies on multiple layers of partnerships across sectors in order to leverage resources and talent. The NPA is the first national, multi-sector, community and partnership-driven effort on behalf of health equity. The mission of the NPA is to increase the effectiveness of programs that target the elimination of health disparities through the coordination of partners, leaders, and stakeholders committed to action.

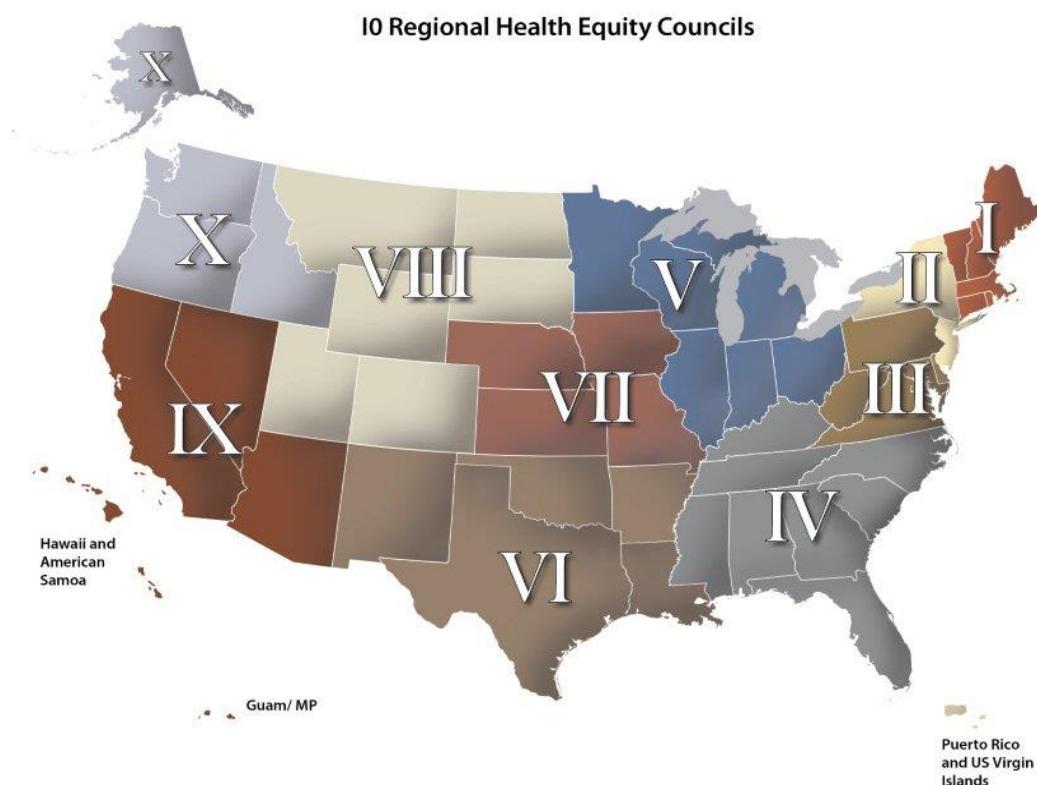
## **The National Stakeholder Strategy for Achieving Health Equity (NSS)**

The NPA planning period culminated with the April 8, 2011, release of the NSS, which provides an overarching roadmap for eliminating health disparities through cooperative and strategic actions. The NSS was developed through a sequence of activities involving the collaboration of stakeholders from across the country.

It was clear by the end of the sequence of activities used to develop the NSS that the following five goals were imperative:

Goal 1: Awareness	<ul style="list-style-type: none"> <li>• Increase awareness of the significance of health disparities, their impact on the nation, and the actions necessary to improve health outcomes for racial, ethnic, and underserved populations.</li> </ul>
Goal 2: Leadership	<ul style="list-style-type: none"> <li>• Strengthen and broaden leadership for addressing health disparities at all levels.</li> </ul>
Goal 3: Health System and Life Experience	<ul style="list-style-type: none"> <li>• Improve health and healthcare outcomes for racial, ethnic, and underserved populations.</li> </ul>
Goal 4: Cultural and Linguistic Competency	<ul style="list-style-type: none"> <li>• Improve cultural and linguistic competency and the diversity of the health-related workforce.</li> </ul>
Goal 5: Data, Research, and Evaluation	<ul style="list-style-type: none"> <li>• Improve data availability and coordination, utilization, and diffusion of research and evaluation outcomes</li> </ul>

With the intent of creating sustainable growth and structure, the NSS includes the formation of Regional Health Equity Councils (RHEC) with members who serve as leaders and catalysts to improve health equity. Formed in each of the 10 HHS regions, the RHECs play a critical role in coordinating and enhancing state and local efforts to address health disparities and the social determinants of health. They also play a critical role in driving collective action at the regional level. Region VII encompasses Iowa, Kansas, Missouri, and Nebraska.





# Regional Context

The Region VII Health Equity Council, known as the Heartland RHEC, conducted an environmental scan designed to collect data on our regions and describe challenges and opportunities. This scan will be used to demonstrate why the RHEC is pursuing particular priorities and show the extent of health disparities throughout the region. The rest of this document describes the results of our region's scan.<sup>1</sup>

## Demographics and Geographic Distribution

Understanding the demographics and geographic distribution of population groups is important in planning for varying health needs in different parts of the region. The following demographic conditions uniquely impact the health and outcomes of individuals and communities within Region VII:

- Immigration
- Rural vs. urban

## Basic Demographic Information

The Heartland region has a gender distribution consistent with the nation average with 51% females and 49% males. Minors (persons under 18 years of age) comprise slightly less than 25% of the region's population. Approximately 39% Region VII are 35-64 years old, with 14%% of the adult population aged 65 or over. The Heartland region contains a relatively homogenous racial/ethnic population, with more than 80% of the population identifying as White, Non-Hispanic. African Americans and Hispanic/Latinos are the most highly represented racial/ethnic minorities, comprising seven and six percent of the Heartland Region, respectively.

Distribution of Race/Ethnicity across the Four States of Region VII					
Race/Ethnicity	Iowa	Kansas	Missouri	Nebraska	% of Region
White	2,846,133	2,514,124	5,093,436	1,646,657	80.5%
African American	113,518	202,415	746,117	99,558	7.1%
American Indian/Alaska Native	29,127	61,477	80,300	31,845	0.6%
Asian	64,532	83,116	122,288	40,295	1.7%
Native Hawaiian/Pacific Islander	2,912	3,893	9,738	2,323	0.1%
Other	51,283	80,559	72,892	49,297	2.2%
Identified by two or more	56,045	88,695	134,300	39,295	2.1%
Hispanic or Latino (all races)	151,027	298,636	212,152	167,155	6.1%
Source: American Community Survey 5-Year Estimates 2008-2012, <a href="http://quickfacts.census.gov/qfd/index.html">http://quickfacts.census.gov/qfd/index.html</a>					

<sup>1</sup> This report draws on available data from multiple sources. When sources are based on a sample, such as the American Community Survey (ACS), the report employs the point estimate and ignores sampling error. Therefore, differences between states in this report may not be statistically significant and visual relationships suggested by two maps may be subject to error.

## Immigration

The Heartland Region has experienced a significant increase in immigration over the last two decades. As the table below shows, the foreign-born population in the region is increasing ahead of the national average. The term foreign-born refers to people currently living in the United States who were born outside of the United States<sup>2</sup>. In the decade from 2000 to 2010, the United States experienced a 28.4% increase in its foreign-born population. In the same decade, Iowa, Nebraska, and Missouri experienced roughly a 50% increase in their foreign-born populations and Kansas experienced roughly a 38% increase in its foreign-born population. The higher proportion of foreign-born residents settling in the Heartland Region may be due to the draw of jobs in Midwestern agriculture and meatpacking industries and to negative perceptions of violence in U.S. urban areas.<sup>3</sup> These increases in the immigrant population bring about new concerns for a region that might be unfamiliar with overcoming language barriers within the public health and education systems.

Foreign-Born Population by State 1990-2010							
State	1990	2000	2010	Change: 1990 to 2000		Change: 2000 to 2010	
	Estimate	Estimate	Estimate	Percent Change	Rank	Percent Change	Rank
<b>United States</b>	<b>19,767,316</b>	<b>31,107,889</b>	<b>39,955,854</b>	<b>57.4%</b>	--	<b>28.4%</b>	--
Missouri	83,633	151,196	232,537	80.8%	26	53.8%	16
Iowa	43,316	91,085	139,477	110.3%	15	53.1%	17
Nebraska	28,198	74,638	112,178	164.7%	7	50.3%	18
Kansas	62,840	134,735	186,942	114.4%	14	38.7%	26

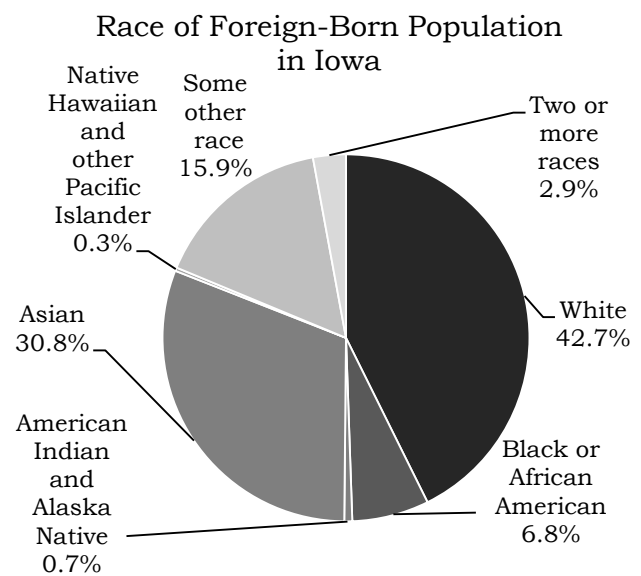
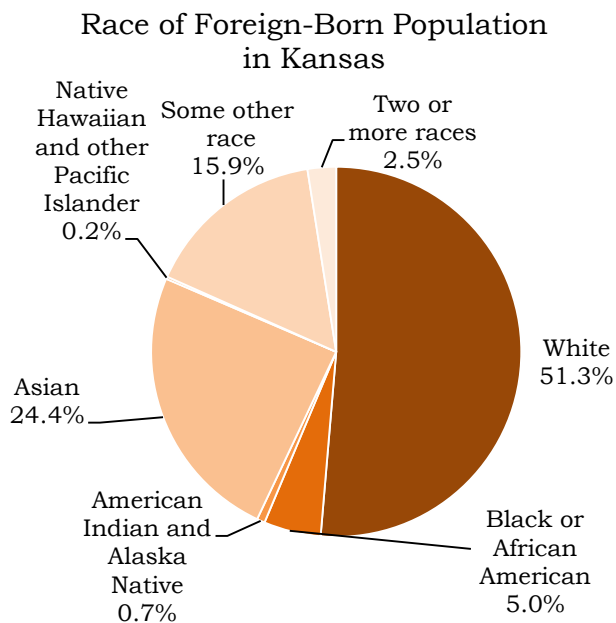
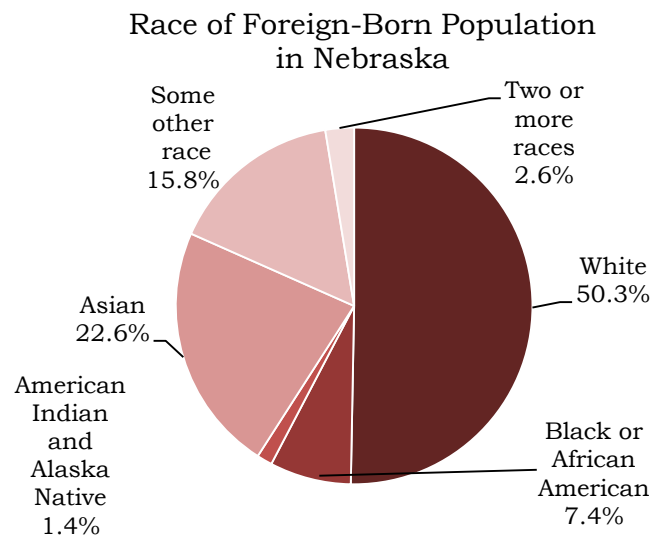
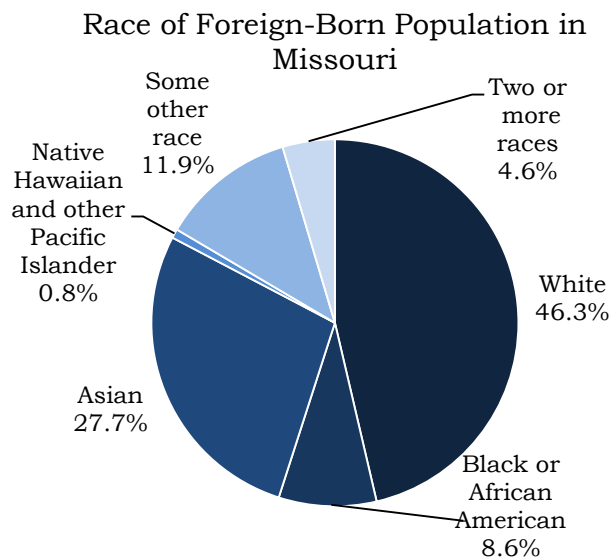
Source: Table generated by Jeanne Batalova of the MPI Data Hub (Migration Policy Institute). Estimates for 1990 and 2000 are from the US Census Bureau, Summary File 3, 1990 and 2000 US Decennial Censuses; 2010 estimates are from the US Census Bureau's American Community Survey. Download link for table can be found here:  
<http://www.migrationinformation.org/datahub/acscensus.cfm>

<sup>2</sup> [http://www.census.gov/how/infographics/foreign\\_born.html](http://www.census.gov/how/infographics/foreign_born.html)

<sup>3</sup> Immigrants of the Heartland: How Immigration is Revitalizing America's Midwest, <http://www.robparal.com/downloads/Midwest%20report%20final> Access date: 4/2/13

As the figures below show, Asians make up the largest non-white foreign born population in all four Heartland RHEC states.<sup>4</sup>

### Race of Foreign-Born Population in Four States of Region VII



<sup>4</sup> US Census Bureau, 2011 American Community Survey (ACS) 1-Year Estimates



## Immigration by Race & Hispanic Origin

People of Hispanic/Latino origin make up between a quarter and a half of the foreign-born population in the four states of the Heartland region. Nebraska has the largest concentration of people of Hispanic/Latino origin in terms of proportion of the total foreign-born population (55.4%) and Missouri has the smallest concentration (28.3%). However, in Missouri, the Hispanic foreign-born population is almost as large as the white (non-Hispanic) foreign-born population.

Hispanic Origin of Foreign-Born Population <sup>5</sup>		
State	Hispanic or Latino	White (not Hispanic or Latino)
Iowa	39.4%	21.3%
Kansas	53.0%	15.4%
Missouri	28.3%	31.1%
Nebraska	55.4%	13.9%
Source: Migration Policy Institute analysis of American Community Survey (ACS) 2011 1-Year Estimates		

## National Origin and Educational Attainment

This section provides an overview of nativity and educational attainment by state and a closer look at the possible relationship between these two factors.

The table below shows that Missouri's foreign-born residents are the most educated in the Heartland Region with 76.5% receiving at least a high school diploma. Nebraska's foreign-born residents are the least educated in the Heartland Region with 54.7% receiving at least a high school diploma.

Educational Attainment in Foreign-Born Population 25 years and over				
Level of Education	Iowa	Kansas	Missouri	Nebraska
Less than high school graduate	34.5%	36.8%	23.5%	45.3%
High school graduate	20.8%	20.7%	22%	21.7%
Some college or associate's degree	16.5%	16%	20.5%	14.6%
Bachelor's degree	11.3%	14.1%	16.8%	9.3%
Graduate or professional degree	16.9%	12.4%	17.2%	9.1%
Source: Migration Policy Institute analysis of American Community Survey (ACS) 2011 1-Year Estimates				

Kansas has a concentration of foreign-born residents in the southwest corner of the state.<sup>6,7</sup> This same part of the state has a concentration of residents who did not graduate high school. Further investigation of the possible correlation between

<sup>5</sup> Migration Policy Institute analysis of American Community Survey (ACS) 2011 1-Year Estimates

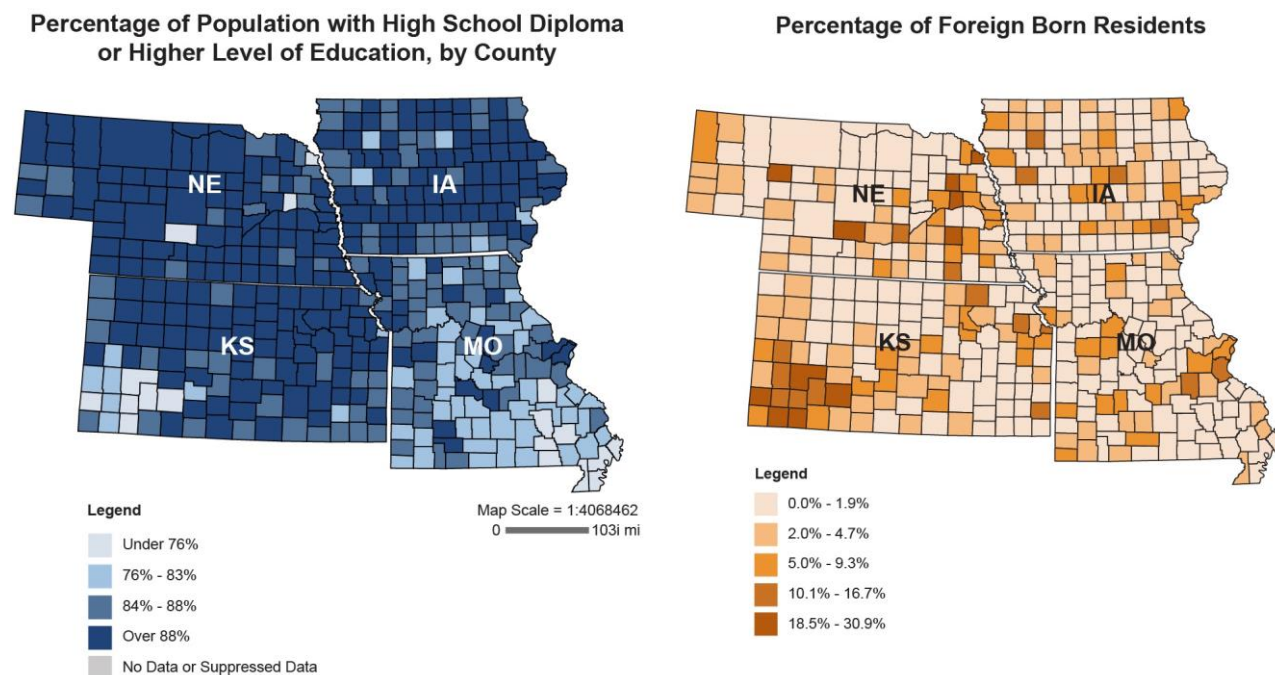
<sup>6</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of ACS 5-yr estimates 2007-2011 Available from Community Commons:

<http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>7</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of ACS 5-yr estimates 2007-2011 Available from Community Commons:

<http://initiatives.communitycommons.org/tool/maps/default.aspx>

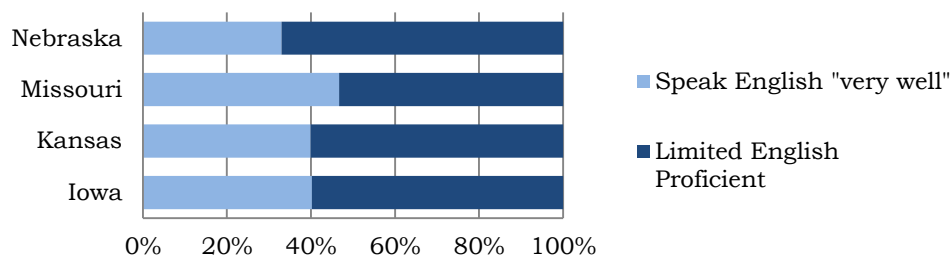
educational attainment and nativity may prove useful in serving this population in the future.



## Language

Immigration trends have many implications for public health and education systems within the Heartland Region. The chart below shows that less than half of the individuals in foreign-born households in the Heartland Region who speak a foreign language also indicated speaking English “very well.” The foreign born population of Missouri reported the highest rate of proficiency, while that of Nebraska reported the lowest. This corresponds to the relative education levels of these populations noted earlier.

**English Proficiency of the Foreign-Born Population<sup>8</sup>**



The generally low level of English proficiency highlights the need for the Heartland Region to respond to the language needs of immigrants through public policy and services—especially within the education and healthcare systems. It stands to reason that children growing up in households with parents with “Limited English Proficient”

<sup>8</sup> US Census Bureau, 2011 American Community Survey (ACS) 1-Year Estimates

(from the figure) may fail to learn English well and thus struggle in the education system. Additionally, a greater effort to teach ESL would benefit the region and thus help better integrate the immigrant population into the community and the workforce.

## Resources to Address Immigration Needs

**MIRA (Missouri Immigrant & Refugee Advocates):** MIRA advocates for the rights of all immigrants within Missouri and works towards comprehensive immigration reform. The organization offers services such as Know Your Rights presentations that include discussions led by immigration attorneys and social service providers.

<http://www.mira-mo.org>

**U.S. Citizenship & Immigration Services:** USCIS is the official government agency that deals with legal immigration to the United States. The agency offers Green Card resources, family-based resources, civic integration assistance, citizenship applications and more. Offices are located throughout the heartland region.

<http://www.uscis.gov>

**University of Nebraska College of Law—Immigration Clinic:** Helps mostly low-income immigrants to Nebraska with USCIS filings, deportation defense, Federal court appeals, and representation at Asylum Interviews. The clinic also offers assistance in the areas of debt, housing, life planning and public benefits as well as family and juvenile resources. Immigration clients are represented by law students under the supervision of a law professor.

<http://law.unl.edu/academics/curriculum.shtml#clinics>

**Iowa International Center:** Provides interpretation and translation services. Interpretation services help interpret for medical appointments, legal meetings, court hearings, parent-teacher meetings, immigration services, etc. Translation services include birth & marriage certificates, legal documents and web content. Also offers a multi-lingual online resource center, [www.welcometoia.org](http://www.welcometoia.org). The site is available in 64 languages and offers information on topics ranging from ESL classes to employment opportunities and housing, food or clothing assistance.

<http://iowainternationalcenter.org/>

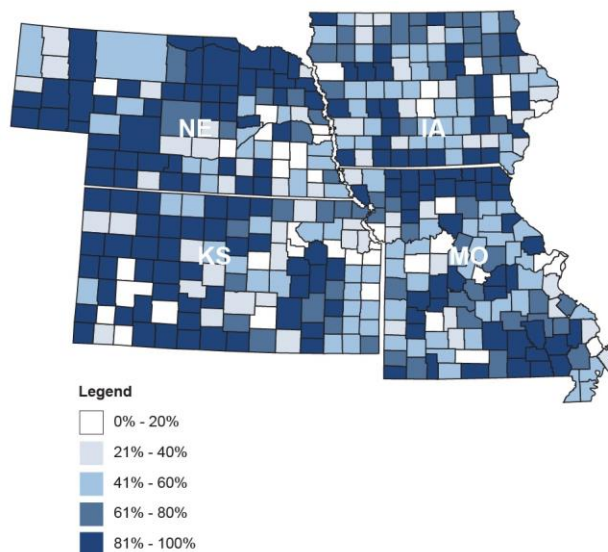
## Rural vs. Urban

Agriculture drives most local economies in the Heartland region. As a result, there is a large percentage of the population that lives in rural areas. A map below shows the percentage of the population within each county living in a U.S. Census-designated rural area. Rural and urban areas each bring different challenges and issues to the public health environment. People living in rural areas may have less immediate access to specialty care than people living in urban areas. Urban populations, however, may encounter over-crowded schools and hospitals that hinder their access to quality education and health care.

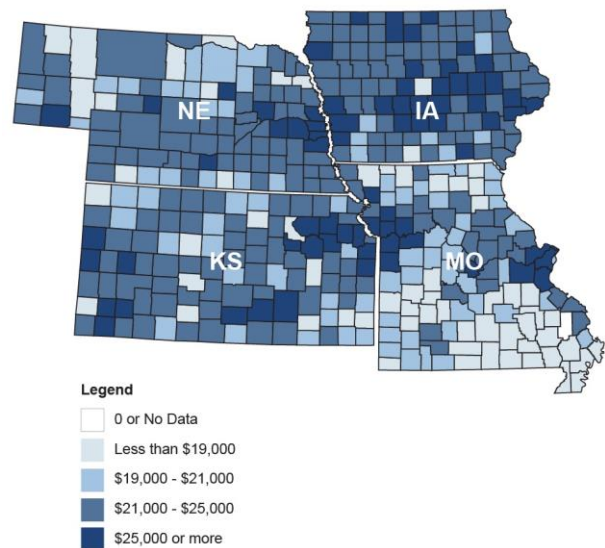
## Income

Visual inspection of the two maps below suggests a correlation between income level and rural areas, especially in the southeast and northern regions of Missouri.<sup>9,10</sup> The more urban areas, such as St. Louis, also appear to have the highest median household incomes. However, a larger percentage of those living in urban areas live below the poverty line as compared to those living in rural areas. Further investigation of the possible correlation between household income and rural-designated areas may prove useful in serving both rural and urban populations.

**Percentage of County Population Living in Rural Areas**



**Median Household Income**



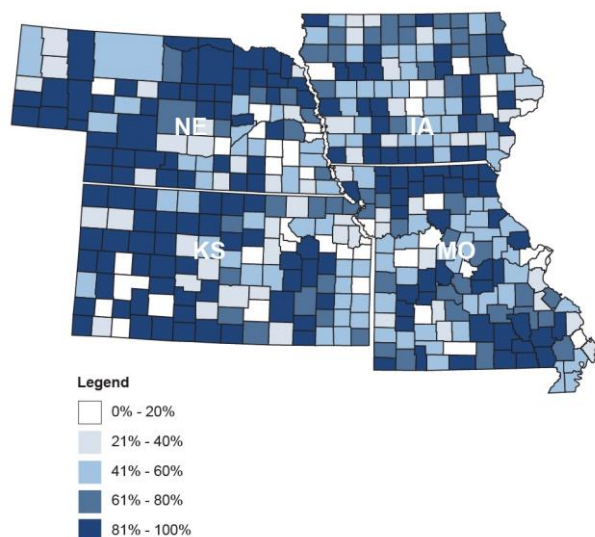
<sup>9</sup> US Census Bureau, 2010: Summary File 1

<sup>10</sup> US Census Bureau, 2010: Summary File 1

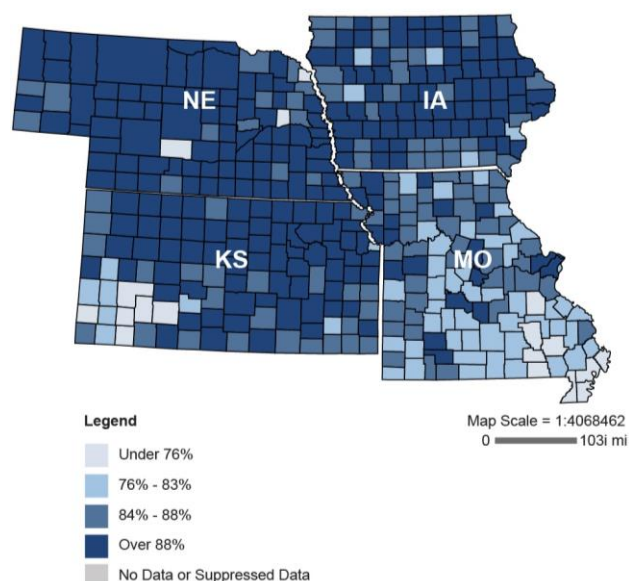
## Rural vs. Urban: Education

Visual comparison of the maps below suggests no obvious difference in education level between those living in rural and urban areas.<sup>11,12</sup>

Percentage of County Population Living in Rural Areas



Percentage of Population with High School Diploma or Higher Level of Education, by County



The most pronounced variation in educational attainment between urban and rural populations in the Heartland Region is that a higher percentage of people in urban areas that have a bachelor's degree or higher. The difference ranges from 27.5% in Iowa to 33.2% in Nebraska. Kansas has the highest percentage of residents 25 and over with Bachelor's degrees of higher, 31.4% of the urban population and 21.5% of the rural population.

Percent Educational Attainment for Population 25 Years and Over					
Educational Attainment & Region		Iowa	Kansas	Missouri	Nebraska
Less than High School Graduate	Rural/Small Town	11.0%	12.4%	18.3%	11.4%
	Suburban	8.0%	8.2%	10.4%	8.1%
	Urban	11.9%	13.0%	14.6%	9.6%
High School Graduate or Equivalent	Rural/Small Town	39.4%	33.3%	40.2%	35.5%
	Suburban	28.2%	25.0%	28.8%	23.6%
	Urban	29.7%	25.4%	27.8%	25.1%
Some College or AA Degree	Rural/Small Town	31.4%	32.8%	26.1%	33.4%
	Suburban	30.5%	29.5%	30.2%	32.1%
	Urban	30.9%	29.2%	28.7%	32.0%
BA Degree or More Education	Rural/Small Town	18.2%	21.5%	15.4%	19.7%
	Suburban	33.2%	37.3%	30.6%	36.2%
	Urban	27.5%	32.4%	28.9%	33.2%

Source: The Housing Assistance Council's Tabulations of the ACS 2006-10 Five Year Estimates  
<http://www.ruraldataportal.org/>

<sup>11</sup> US Census Bureau, 2010: Summary File 1

<sup>12</sup> American Community Survey 5-year Estimate 2007-2011



## Rural vs. Urban: Race

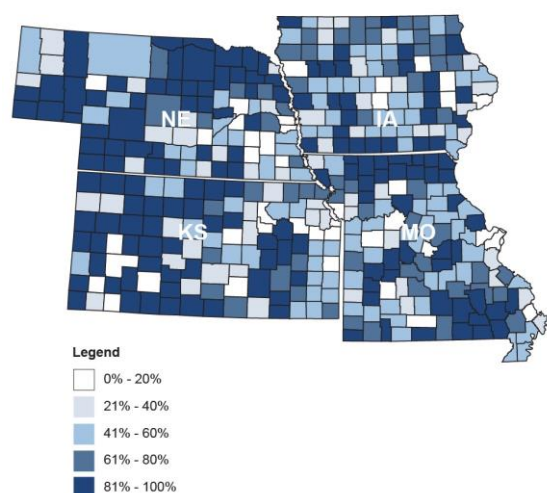
A significant proportion, more than 80%, of the Heartland rural population consists of Non-Hispanic Whites. The urban populations are more racially diverse, with larger percentages of Blacks and Hispanics in particular. For example, in Kansas Blacks and Hispanics respectively make up 12 and 17% of the urban population and only 3 and 10% of the rural population.

Percent of Population by Race and Hispanic or Latino Origin					
Race and Hispanic/Latino Origin		Iowa	Kansas	Missouri	Nebraska
White (Non-Hispanic)	Rural/Small Town	92.8%	83.3%	91.4%	87.9%
	Suburban	86.9%	77.7%	81.8%	79.7%
	Urban	76.2%	63.8%	57.8%	73.7%
Black (Non-Hispanic)	Rural/Small Town	1.0%	2.8%	3.1%	0.6%
	Suburban	3.9%	6.8%	10.4%	6.5%
	Urban	7.7%	11.7%	31.5%	9.3%
Hispanic	Rural/Small Town	4.3%	9.9%	8.8%	17.2%
	Suburban	4.6%	2.8%	3.5%	5.3%
	Urban	9.1%	8.8%	8.6%	10.6%
Asian (Non-Hispanic)	Rural/Small Town	0.7%	1.1%	0.6%	0.5%
	Suburban	2.5%	3.4%	2.0%	2.5%
	Urban	3.7%	3.5%	2.7%	3.1%

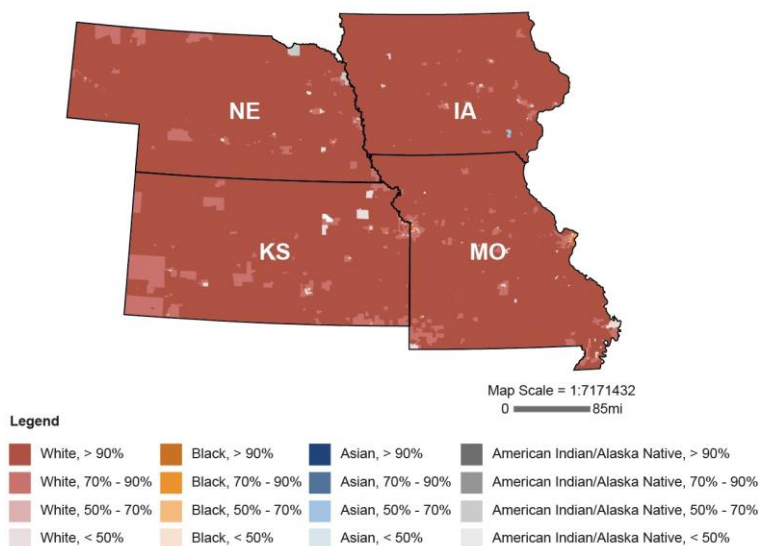
Source: The Housing Assistance Council's Tabulations of the Census 2010 SF1 Population Counts <http://www.ruraldataportal.org/>

There are concentrations of American Indians in northeast Nebraska near Sioux City, IA and Sioux Falls, SD (shown in grey). There is a concentration of Asians in southeast Iowa (shown in blue). Visual comparison between the two maps suggests these are urban areas.<sup>13,14</sup>

Percentage of County Population Living in Rural Areas



Predominant Race by Block Group



<sup>13</sup> Source: US Census Bureau, 2010: Summary File 1

<sup>14</sup> Source: US Census Bureau, 2010: Summary File 1



## Infant Mortality

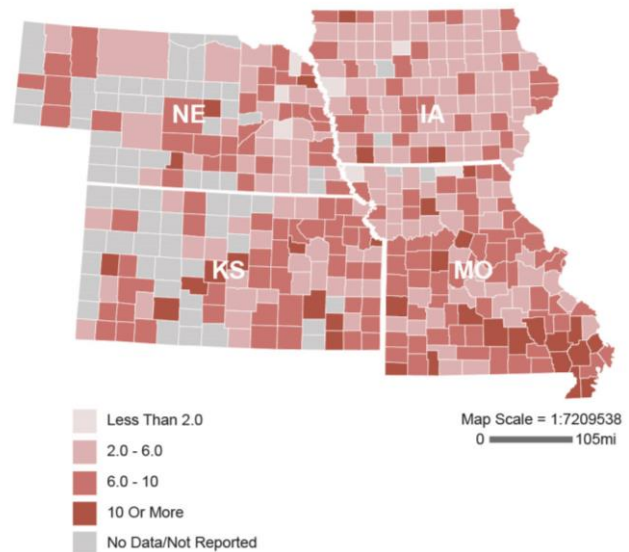
CHSI 2009: Infant Mortality Rate (Deaths per 1,000 Births)

### Overview

The Heartland Region has a similar infant mortality rate compared to the United States<sup>15</sup>. Missouri and Kansas have higher rates with more than six deaths per 1,000 live births. Iowa has the lowest infant mortality rate with Nebraska following closely.

### Infant Mortality by Race and Ethnicity

In the Heartland Region, notable disparity exists in infant mortality by race. Further variation exists by state. Across the region, non-Hispanic Blacks have a higher infant mortality rate than non-Hispanic Whites and Hispanics. Iowa has the lowest infant mortality rates for both all three race/ethnicity categories.



### Infant Mortality by Race and Ethnicity (2006-2008)

	Iowa <sup>16</sup>	Kansas	Missouri	Nebraska
Non-Hispanic White	4.9	6.9	6.1	5.2
Non-Hispanic Black	12.2	15.3	14.1	13.4
Hispanic	6.5	6.7	5.2	5.5

Source: [www.statehealthfacts.org](http://www.statehealthfacts.org)

### Infant Mortality by Income

Further analysis of the infant mortality rate by income is needed at the state level. This analysis is beyond the scope of readily available information and will require multiple databases in each state to be merged.

### Infant Mortality by Education Level

Individuals with lower education levels were especially prone to infant mortality. As education level increased, the rates of infant mortality declined.

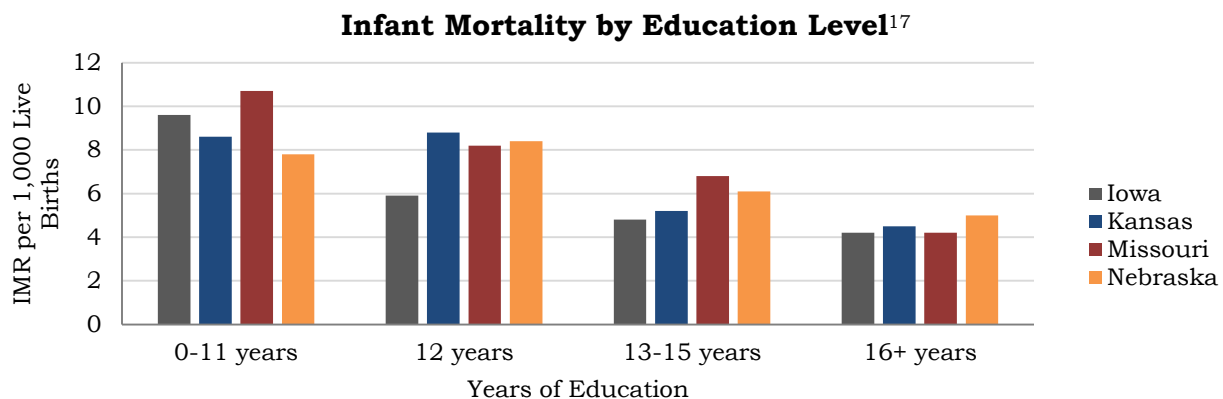
<sup>15</sup> Gaps in infant mortality rate by mother's education: How do states compare? (2008). Retrieved from [www.commissiononhealth.org/PDF/tab6\\_78.pdf](http://www.commissiononhealth.org/PDF/tab6_78.pdf)

<sup>16</sup> Infant Mortality Rate (Deaths per 1,000 Live Births) by Race/Ethnicity, Linked Files, 2007-2009. <http://kff.org/other/state-indicator/infant-death-rate-by-raceethnicity/>

Infant Mortality Rate (per 1,000 Live Births) by Education level					
State	Overall Rate	Rate by Education Level			
		0-11 yrs	12 yrs	13-15 yrs	16+ yrs
Iowa	5.5	9.6	5.9	4.8	4.2
Kansas	6.5	8.6	8.8	5.2	4.5
Missouri	7.1	10.7	8.2	6.8	4.2
Nebraska	6.5	7.8	8.4	6.1	5.0

Source: Robert Wood Johnson Foundation Commission to Build a Healthier America analysis of CDC-NCHS 2000-2002 Period Linked Birth/Infant Death Data Set  
[http://www.commissiononhealth.org/PDF/819a3435-8bbb-4549-94db-7758248075cf/ChildrensHealth\\_Chartbook.pdf](http://www.commissiononhealth.org/PDF/819a3435-8bbb-4549-94db-7758248075cf/ChildrensHealth_Chartbook.pdf)

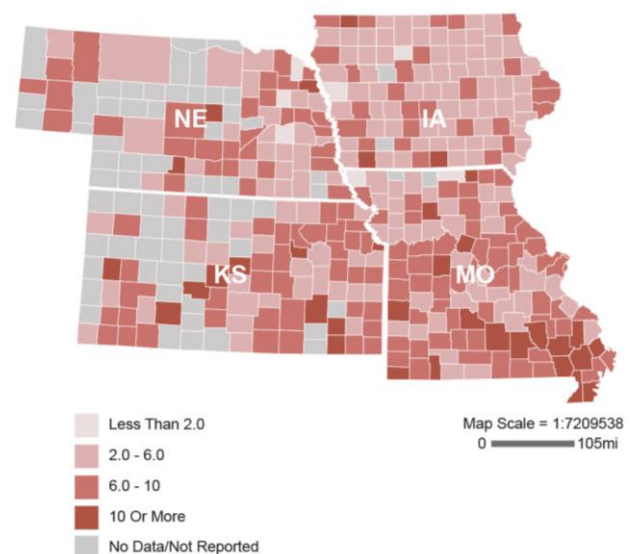
The graph below presents this data as a bar chart.



### Infant Mortality by County

Geographically, there are obvious disparities between counties in each state as the maps below illustrate. This map shows the most recent data across all four Heartland states that illustrate infant mortality by county. It shows that disparities between counties exist without an obvious pattern, highlighting the need for further investigation.

CHSI 2009: Infant Mortality Rate (Deaths per 1,000 Births)



<sup>17</sup> Robert Wood Johnson Foundation Commission to Build a Healthier America analysis of CDC-NCHS 2000-2002 Period Linked Birth/Infant Death Data Set,  
[http://www.commissiononhealth.org/PDF/819a3435-8bbb-4549-94db-7758248075cf/ChildrensHealth\\_Chartbook.pdf](http://www.commissiononhealth.org/PDF/819a3435-8bbb-4549-94db-7758248075cf/ChildrensHealth_Chartbook.pdf).

## Infant Mortality-Oriented Initiatives and Non-profit Organizations

### Kansas

*The Blue Ribbon Panel on Infant Mortality* was formed in 2009 and consists of 22 representatives from state, local, and private organizations that have a broad range of expertise in maternal child health. In February 2010, the panel made four broad recommendations to address infant mortality in Kansas. In April of that same year, the panel supported legislation that paved the way to improve infant mortality data collection. In February of 2011, the panel outlined infant mortality barriers, resources, risk factors and recommendations as an actionable framework the state could use moving forward.<sup>18</sup>

### Missouri

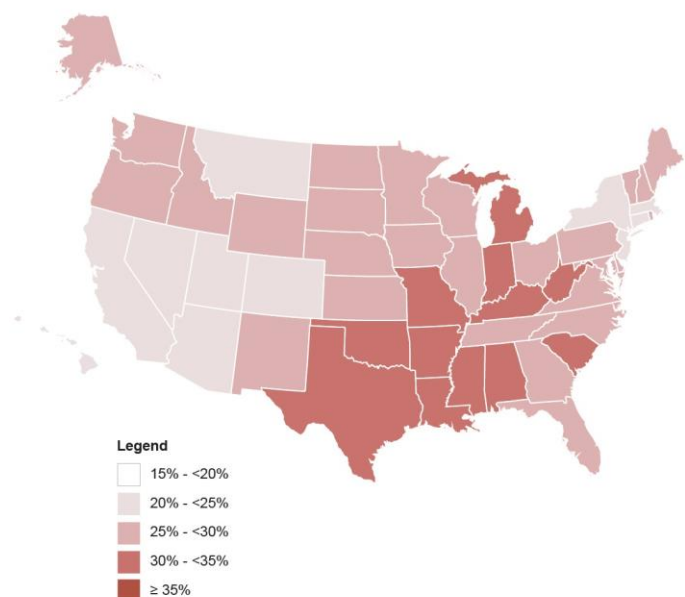
*The Missouri Task Force on Prematurity and Infant Mortality*, part of the Missouri Department of Health and Senior Services, is aimed at reducing the premature birth rate and the infant mortality rate. One of the goals is to reduce the premature birth rate by 8% by 2014. The task force initiates, maintains and accelerates programs and policies to reduce the premature birth rate. Also, the task force looks for evidence-based and cost effective programs that will decrease the Missouri infant mortality rate and preterm rate.<sup>19</sup>

*Nurses for Newborns* is a not-for-profit nursing agency founded in 1991 that visits at risk pregnant women and their families. Staff provide health care and teaches positive parenting skills. Currently, the agency serves twenty-two counties in Missouri and twenty four counties in Tennessee.<sup>20</sup>

### Iowa and Nebraska

*Keeping Infants Healthy in Indian County* is part of Indian Health Services within the U.S. Department of Human and Health Services. The program aims to reduce infant mortality throughout Iowa and Nebraska, as well as several other locations in the United States. Community outreach is a major aspect of this initiative.<sup>21</sup>

Self-Reported Obesity Among U.S. Adults



<sup>18</sup> Recommendations. (n.d.). Retrieved from <http://www.kansasinfantmortality.org/recommendations.htm>

<sup>19</sup> Missouri Department of Health & Senior Services, (2012). Missouri commits to reducing premature birth rates by 8 percent by 2014. Retrieved from website:

<http://health.mo.gov/information/news/2012/birthrates8292012>

<sup>20</sup> Wessling, S. (n.d.). Closing the infant mortality gap. Retrieved from <http://www.minoritynurse.com/article/closing-infant-mortality-gap>

<sup>21</sup> Wessling, S. (n.d.). Closing the infant mortality gap. Retrieved from <http://www.minoritynurse.com/article/closing-infant-mortality-gap>

## Obesity and Exercise Levels within the Heartland Region

### Overview

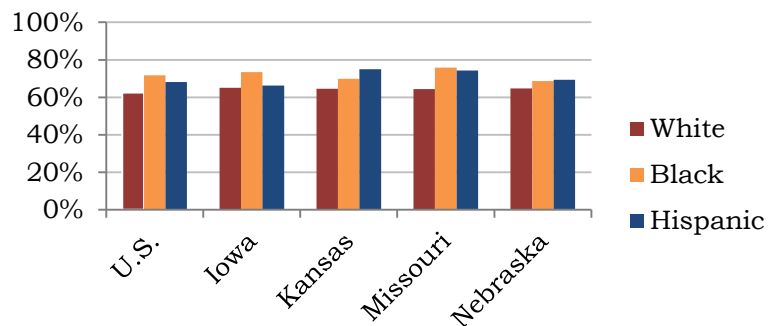
The terms *overweight* and *obesity* are defined by the World Health Organization as “abnormal or excessive fat accumulation that presents a risk to health”.<sup>22</sup> They are frequently assessed through the body mass index (BMI), calculated as weight (in kilograms) divided by the square of height (in meters). An individual with a BMI over 25 is considered overweight and an individual with a BMI over 30 is considered obese.<sup>23</sup>

The Heartland Region continues to suffer from higher-than-average rates of obesity. There was a dramatic increase in obesity in the United States from 1990 – 2010. In 2010 the Heartland Region

did not reach the nation’s Healthy People 2010 goal, which included lowering obesity prevalence by 15%. In fact, Missouri is one of nine states with  $\geq 30\%$  prevalence<sup>24</sup>. Obesity is a factor contributing to several leading causes of death, including heart disease, stroke, diabetes

and some types of cancer. Regular physical activity helps improve overall health and reduce risk for many chronic diseases. Nebraska and Missouri meet the recommended physical activity levels set by the Center for Disease Control and Prevention (CDC). However, Iowa and Kansas fall slightly below the recommendation. The map shows, estimated obesity rates for Kansas, Nebraska, and Iowa were between 25% and 30% in 2011. Estimated obesity rates for Missouri were between 30% and 35% in 2011.<sup>25</sup>

**Overweight and Obesity Rates for Adults  
by Race/Ethnicity**



### Obesity and Exercise by Race

In the Heartland Region, notable disparities exist in obesity by race. Consistent with national data, with Blacks have a greater burden of disease related to (or relevant to) obesity.<sup>26</sup>

<sup>22</sup> <http://www.who.int/topics/obesity/en/>

<sup>23</sup> <http://www.who.int/topics/obesity/en/>

<sup>24</sup> Vital Signs: State-Specific Obesity Prevalence Among Adults --- United States, 2009. (2010, August 6). Centers for Disease Control and Prevention. Retrieved February 17, 2013, from [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5930a4.htm?s\\_cid=mm5930a4\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5930a4.htm?s_cid=mm5930a4_w)

<sup>25</sup> Obesity Statistics in the United States. (2012, August). NCSL Home. Retrieved November 8, 2013, from <http://www.ncsl.org/issues-research/health/obesity-statistics-in-the-united-states.aspx>

<sup>26</sup> KCMU analysis of the Center for Disease Control and Prevention (CDC)'s Behavioral Risk Factor Surveillance System (BRFSS) 2012 Survey Results: <http://kff.org/other/state-indicator/adult-overweightobesity-rate-by-re/#>

## Obesity and Exercise by Income

When obesity statistics are categorized by income levels across the Heartland Region there is not much variation with the middle incomes where scores remain in the high 20% or low/mid 30% regardless of income. The highest incomes typically have the lowest prevalence of obesity.

Percent Obese by Income					
Income	Missouri	Iowa	Kansas	Nebraska	National Average
Less than \$15,000	31.9	28.5	35.8	29.2	32.2
\$15,000 - 24,999	34.2	33.8	31.8	30.4	30.7
\$25,000 - 34,999	31.5	32.1	30.9	30.4	29.5
\$35,000-49,000	30	32.7	32.7	32.6	28.5
\$50,000+	28.9	28.2	27.8	27.3	25.8
Source: Centers for Disease Control (2012) <sup>27</sup>					

## Combating Obesity and Reinforcing Exercise—Programs and Initiatives

### Missouri<sup>28</sup>

- *Farm to Institution* aims to increase access to healthy foods through activities designed to educate government officials, disseminating education material and promoting local harvest.
- *Missouri Livable Streets* is directed through the Department of Health and Senior Services to improve transportation infrastructure of communities.
- *Legislative change efforts* promoted through advocacy are ongoing.

### Iowa<sup>29</sup>

- *The Iowa Food System Council* examines the Iowa food system and report recommendations to the Governor's office.
- *Worksite Wellness Toolkit* is a resources for all Iowans designed to help create suitable worksite wellness programs.
- *Community Wellness Grants* will support local initiatives to encourage healthier lifestyles and promote wellness.
- *Healthy Iowa* promotes healthy life styles in Iowa through educational programs.

<sup>27</sup> BRFSS Prevalence Data - Income Grouping. (2012). Center for Disease Control. Retrieved February 16, 2013, from <http://apps.nccd.cdc.gov/brfss/income.asp?state=MO&cat=OB&yr=2011&qkey=8261&grp=0>

<sup>28</sup> Overweight and Obesity: Missouri. (2012, September). Centers for Disease Control and Prevention. Retrieved February 13, 2013, from <http://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/Missouri-State-Profile.pdf>

<sup>29</sup> Overweight and Obesity: Iowa. (2011, September). Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/Iowa-State-Profile.pdf>

## Kansas<sup>30</sup>

- The *Just Add Water Media Campaign* is intended to increase the knowledge of the sugar content of sugar sweetened beverages and provide healthier options, such as water.
- *Downtown Wellness Project* will create walking destinations in local downtown areas
- The *Safe Routes to School Program*, through the Kansas Department of Health and Environment, has been expanded to include more communities.

## Nebraska<sup>31</sup>

- *Foster Healthy Weight in Youth*, Nebraska's Clinical Childhood Obesity Model, collaborates with a number of partners to target youth who are at high risk or are currently obese.
- The "*Whatcha doin'?*" Campaign, utilizes promoters to carry out wacky and random attention-attracting acts to promote eating healthy and being physically active.
- *Nutrition, Physical Activity, and Obesity (NPAO) Advisory Group* is designed to formalize stakeholder involvement, communication and shared planning to focus on physical activity and proper nutrition.

# Healthcare Quality

## Overview

Quality health care systems help people stay healthy and recover from or manage illness and disability in safe, timely, patient centered, efficient, and equitable ways<sup>32</sup>. However, the U.S. health care system often distributes services inequitably, with minority communities and rural communities having less access to services. The graphic below summarizes over 150 state-level measures from the National Healthcare Quality Report (NHQR 2011) for the Heartland Region. As a whole, the region has performed on par with the rest of the nation, with Missouri increasing the quality of healthcare in its most recent year as compared to the baseline year, and Iowa consistently performing above the national average.

---

<sup>30</sup> Overweight and Obesity: Kansas. (2012, September). Centers for Disease Control and Prevention. Retrieved February 13, 2013, from

<http://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/Kansas-State-Profile.pdf>

<sup>31</sup> Overweight and Obesity: Nebraska. (2012, September). Centers for Disease Control and Prevention. Retrieved February 13, 2013, from

<http://www.cdc.gov/obesity/stateprograms/fundedstates/pdf/Nebraska-State-Profile.pdf>

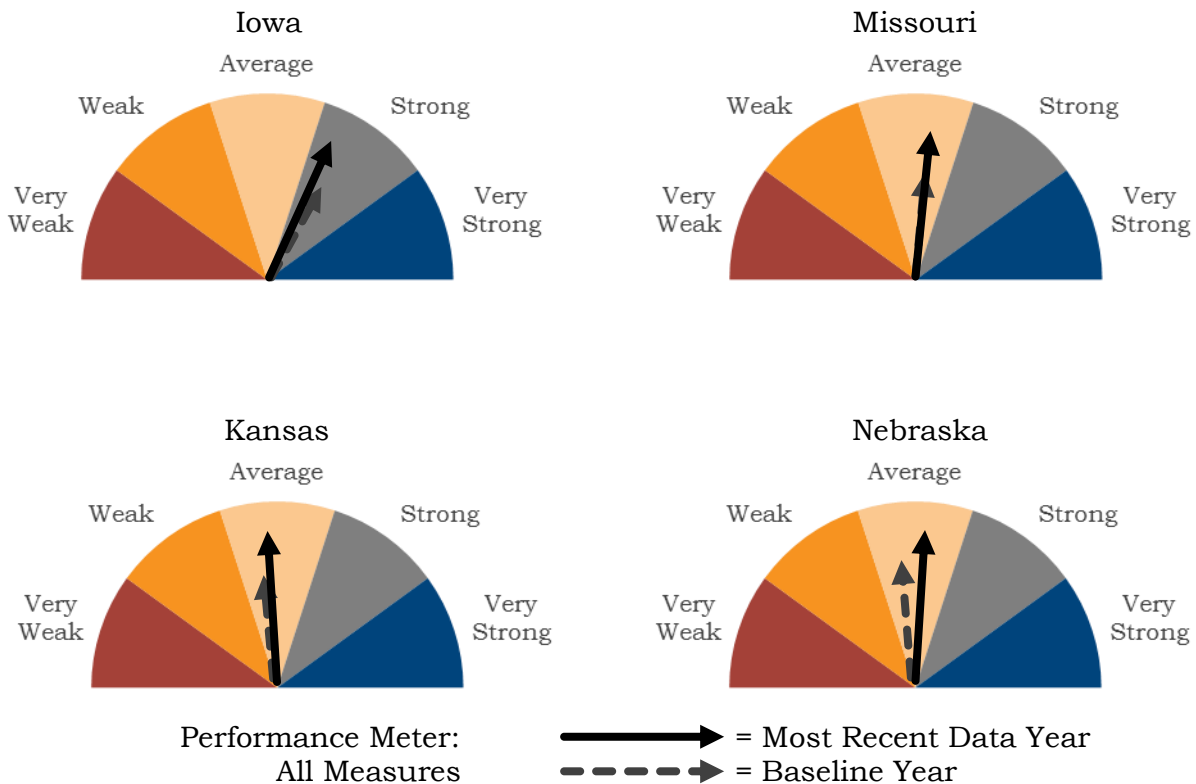
<sup>32</sup> Agency for Healthcare Research and Quality [AHRQ] (2013). *National Healthcare Quality Report 2012*.

AHRQ Publication No. 13-0002. Retrieved June 14, 2013 from

[http://www.ahrq.gov/research/findings/nhqrdr/nhqr12/nhqr12\\_prov.pdf](http://www.ahrq.gov/research/findings/nhqrdr/nhqr12/nhqr12_prov.pdf).



## Dashboard on Health Care Quality Compared to All States<sup>33</sup>

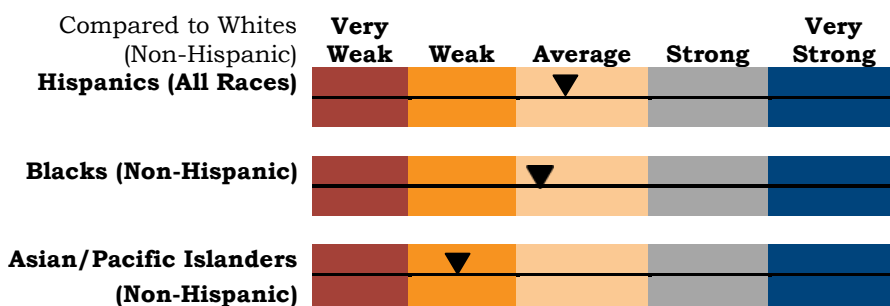


## Healthcare Quality by Race

Given the predominantly White population of the Heartland region, there is little evaluable data at the state or regional level about healthcare quality by race/ethnicity. However, sufficiently large populations of racial/ethnic minorities receive home health care to show differences across race in Missouri and Iowa. The graphics below each summarize ten measures of home health care quality. When compared to the services provided to Non-Hispanic Whites, Iowa provides weak home health care services to Asians/Pacific-Islanders, while Missouri provides strong home health care services to Hispanics.

### Focus on Disparities in Home Health Care by Race and Ethnicity

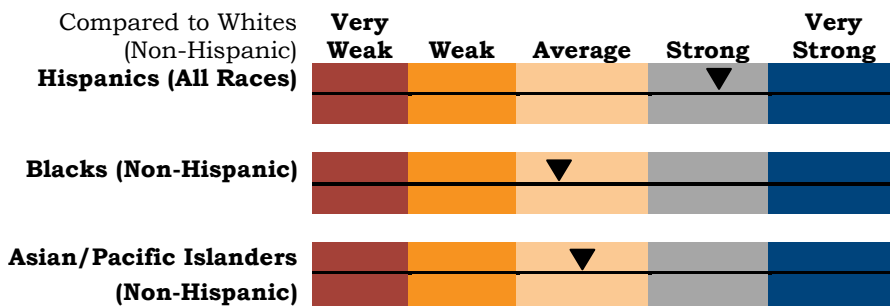
(a) Iowa<sup>34</sup>



<sup>33</sup> <http://statesnapshots.ahrq.gov/snapshots11/>

<sup>34</sup> <http://nhqrnet.ahrq.gov/snapshots11/SnapsController?menuId=68&state=IA&level=80&caretype=4&action=bycare>

(b) Missouri<sup>35</sup>



## Healthcare Quality by Education

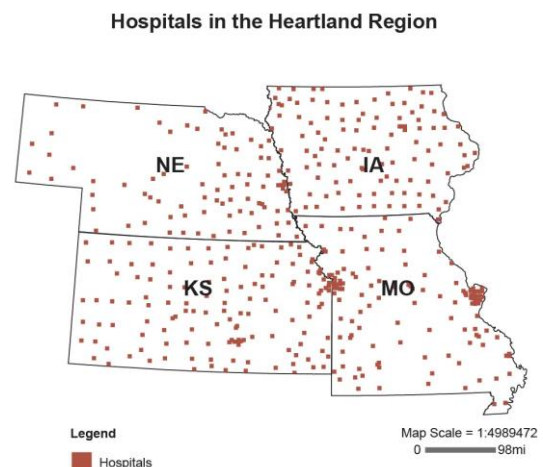
Data regarding health care quality by patient level of education was not available at the time of this environmental scan.

## Healthcare Quality by Zip Code

Zip code level data regarding health care quality was not available at the time of this environmental scan.

## Healthcare Provider Distribution<sup>36</sup>

In the Heartland Region, hospitals and federally qualified health centers (FQHCs<sup>37</sup>), which receive public funding and serve an underserved area or population, tend to be clustered around populated areas. Treatment facilities congregate around areas of denser population where such facilities would be used with greatest frequency.  
<sup>38</sup> Two major areas of limited facility density were seen in Northwestern Nebraska and Southeastern Missouri. In Northwestern Nebraska, many residents may live outside of a 100-mile radius of a health center.



<sup>35</sup><http://nhqrnet.ahrq.gov/snaps11/SnapsController?menuId=68&state=MO&level=80&caretype=4&action=bycare>

<sup>36</sup> Centers for Medicare and Medicaid Services Provider-Type Data – 2011.  
<http://www.cms.gov/Research-Statistics-Data-and-Systems/Research-Statistics-Data-and-Systems.html>, Accessed 4/9/2013

<sup>37</sup> <http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/qualified.html>

<sup>38</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of CMS Provider of Service (POS) Public Use File, 2011 Available from Community Commons:  
<http://initiatives.communitycommons.org/tool/maps/default.aspx>

As the map to the right shows, Missouri has almost 50% of the total number of FQHCs in the area. In contrast, Nebraska has only six FQHCs in the entire state. This could present a real challenge for those patients without insurance or otherwise unable to afford care, as FQHCs offer care to the impoverished.

According to the map, rural clinics are spread fairly evenly throughout Missouri and Kansas; the greatest distance between clinics appears to be approximately 30 miles in those states.<sup>39</sup> Northwestern Nebraska appears to suffer the most from the lack of rural clinics, with parts of the state with no health centers in a 100 mile radius.

### Healthcare Facilities by Education Level

This report did not investigate the relationship between the location of health care facilities and the education level of the local population.

### Healthcare Facilities by Race

Visual comparison of the racial distribution of residents (see page 11) and the distribution of health facilities reveals no clear relationship between the two factors. However, people of different races do not necessarily obtain the same levels of care. Access to transportation and health insurance are likely factors in the level of care received and these may vary by race.

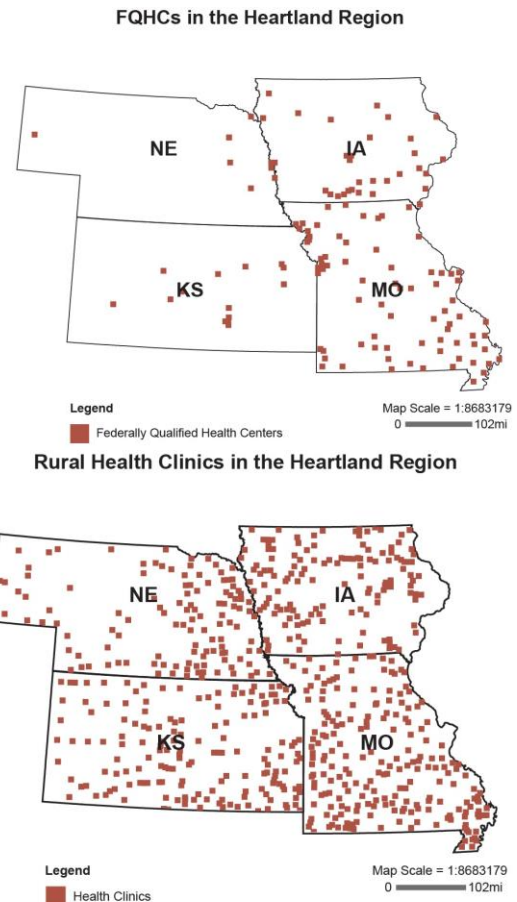
### Healthcare Facilities by Income

Visual comparison of the distribution of median household income (see page 9) and the distribution of health facilities suggests that areas with few healthcare facilities tend to be poorer and areas with many healthcare facilities tend to be wealthier.

### Resources in the Region to Address Healthcare Facility Distribution

#### Missouri

OATS, Inc. is a not-for-profit 501(c)3 corporation providing specialized transportation for senior citizens, people with disabilities, and the rural general public in 87 counties. The organization helps people get to work, doctor appointments, and essential shopping, and other destinations. There are more than 34,000 people in Missouri who utilize the services of OATS. <http://www.oatstransit.org/>



<sup>39</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of CMS Provider of Service (POS) Public Use File, 2011 Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

*The United Way* assists needy citizens with transportation needs in St. Louis, MO. This can be for trips to work or to physicians' offices.

<https://www.stl.unitedway.org/211.aspx>

## Nebraska

*Nebraska Medicaid Non-Emergency Transportation* helps Department of Health and Human Services clients to appointments if they live in Nebraska and receive services through Medicaid, Aged and Disabled Waiver, Social Services for Aged and Disabled, or the Disabled Children's Program.

[http://www.nebraskaaccess2care.com/documents/Large\\_Print\\_Brochure\\_NE\\_v4.1.pdf](http://www.nebraskaaccess2care.com/documents/Large_Print_Brochure_NE_v4.1.pdf)

## Iowa

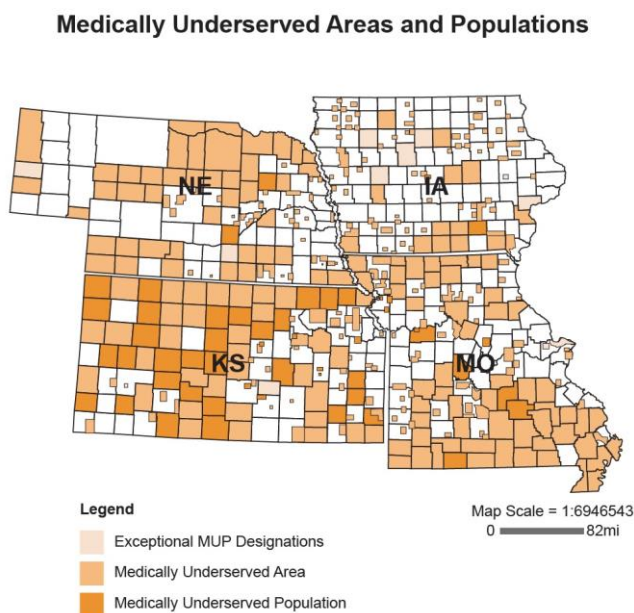
*Iowa Medicaid Non-Emergency Transportation:* Provides transportation to medical appointments to Medicaid recipients in Iowa.

<http://tmsmanagementgroup.com/index.php/iowa-medicaid-net-program>

## Medically Underserved Areas/Populations<sup>40,41</sup>

### Overview

Medically Underserved Areas/Populations are areas or populations designated by HRSA as having: too few primary care providers, high infant mortality, high poverty and/or high elderly population. As the map to the right shows, a significant proportion of the Heartland Region is designated as an MUA/P. Kansas has a larger geographic area designated as MUP than the other Heartland states.<sup>42</sup>



<sup>40</sup> Health Resources and Services Administration, October 2011 data. <http://bphc.hrsa.gov/>

<sup>41</sup> U.S. Census Bureau, State & County QuickFacts <http://quickfacts.census.gov/qfd/states/20000.html>

<sup>42</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of CMS Provider of Service (POS) Public Use File, 2011 Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

## MUAs by Income<sup>43</sup>

People in rural areas are more likely to have lower income and are less likely to have private health insurance as those in metropolitan areas. Urban areas had a higher median household income than rural areas, as noted on page 9. Rural areas are prone to higher poverty rates for a number of reasons. An area's remoteness can be associated with the quality and quantity of jobs available.<sup>44</sup>

## MUAs Oriented Initiatives and Organizations

### Multistate

*IFF* is a community development financial institution that provides loans to nonprofits in IL, IN, IA, MO, and WI that serve low-income or special-needs populations. Loans can be used for facility or equipment projects such as community health centers, including construction, acquisition, rehabilitation, purchase of equipment or furnishings, and facility improvements to leased or owned space. <http://www.iff.org/missouri>

### Missouri

*Health Literacy Missouri*, located in St. Louis, offers trainings in diagnosing health literacy weaknesses in clinical settings across the state. Organization trains doctors and other health professionals in better communication with patients.

<http://www.healthliteracymissouri.org/>

*Missouri Foundation for Health* serves 84 Missouri counties and the city of St. Louis. It provides information and grants to improve the health and safety of state residents and addresses health care needs in underserved populations of the region.

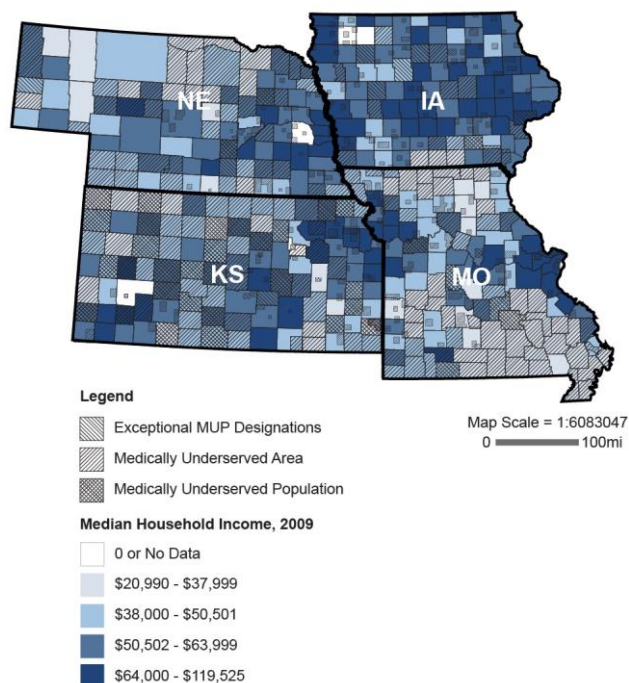
<http://www.mffh.org/>

### Iowa

The *Iowa Department of Public Health Center for Rural Health and Primary Care* partners with local public health, policymakers, health care providers, business and many others to fulfill our mission of promoting and protecting the health of Iowans.

<http://www.idph.state.ia.us/Default.aspx>

MUAs/MUPs and Median Household Income



<sup>43</sup> Maps from [www.communitycommons.org](http://www.communitycommons.org). Data from the 2010 Census – [www.census.gov](http://www.census.gov), retrieved on 3/6/2013

<sup>44</sup> Univ. of Missouri Center for Applied Research and Environmental Systems analysis of Census Small Area Income and Poverty Estimates, 2009 data and HRSA MUA/Ps Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>



## Kansas

The Division of Health of the Kansas Department of Health and Environment promotes and protects health and prevents disease and injury among the people of Kansas.

[http://www.kdheks.gov/olrh/SD\\_medically\\_underserved.htm](http://www.kdheks.gov/olrh/SD_medically_underserved.htm)

## Nebraska

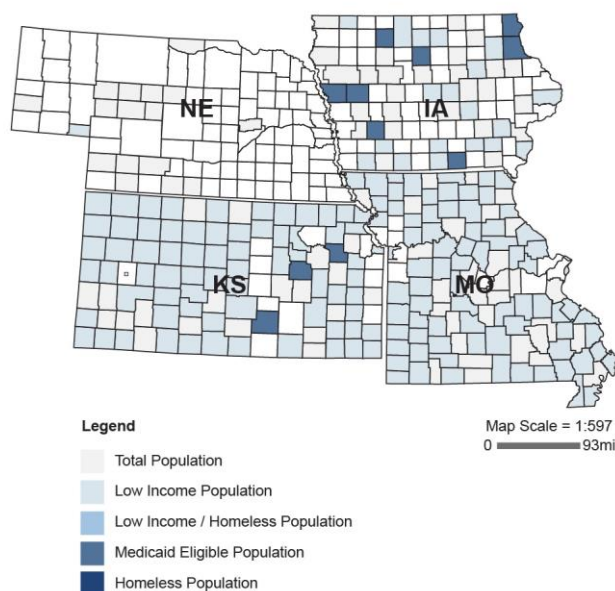
The Nebraska Rural Health Association is a nonprofit membership organization of nearly 400 individuals and organizations. The association's mission is to provide leadership on rural health issues. <http://nebraskaruralhealth.org/>

## Physician Attrition

### Overview

The United States has lacked sufficient physicians in rural areas for more than a century. However, physician recruitment and attrition has only been on the national political stage since the 1970s.<sup>45</sup> Health Professional Shortage Areas (HPSAs) are geographic locations identified by The Health Resources and Services Administration (HRSA) as having a shortage of primary medical care, dental or mental health providers. HPSAs occur primarily in rural areas, and HRSA has designated much of the Heartland Region a Health Professional Shortage Area (HPSA).<sup>46 47</sup>

Health Professional Shortage Areas by Population Group Type



This health workforce shortage makes physician attrition out of the region particularly problematic. While more detailed data regarding physician recruitment and retention by geographic location is not publicly available<sup>48</sup>, recent state data indicate that practicing physician rates have been steadily increasing for the last several decades in most of the region, although the rate of increase may be slowing in recent years.

<sup>45</sup> Health Resources and Services Administration [HRSA], Bureau of Health Professions (2008). *The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand*. Retrieved on June 12, 2013 from <http://bhpr.hrsa.gov/healthworkforce/reports/physwfiissues.pdf>.

<sup>46</sup> Rural Assistance Center (2013). *Center for Applied Research and Environmental Systems Customizable Maps*. Retrieved June 13, 2013 from <http://ims2.missouri.edu/website/racmaps/viewer.htm?JS=layerparam709085213&DATA=,ad1,hpsampt,,hy1,hy1b,hy1c,ad2,ad2b,ad3,ad3b,ad5,ad9,tr1a,tr1b,tr2,&LEVEL=&APP=RACmaps>.

<sup>47</sup> Univ. of Missouri Center for Applied Research and Environmental Systems analysis of HRSA HPSAs Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>48</sup> American Medical Association collects detailed physician education, employment, and demographic data annually, available for a fee.



Physician Workforce (per 10,000 Population) in Region VII												
Year	Active physicians						Physicians in patient care					
	1975	1985	1995	2000	2009	2010	1975	1985	1995	2000	2009	2010
Iowa	11.4	15.6	19.2	19.8	22.8	21.8	9.4	12.4	15.1	15.5	20.5	20.8
Kansas	12.8	17.3	20.8	21.8	24.0	24.0	11.2	15.1	18	18.8	23.0	23.1
Missouri	15.0	20.5	23.9	24.7	26.1	26.3	11.6	16.3	19.7	20.2	24.8	25.1
Nebraska	12.1	15.7	19.8	21.7	25.0	24.5	10.9	14.4	18.3	20.1	23.8	23.4
Source: Centers for Disease Control & Prevention, 2012												

## Disparities in Health Outcomes

While medical care in the United States is among the best in the world, access to quality, affordable health care, and preventive care is not consistent across the country. Individuals and families in Region VII may live in an area with a shortage of doctors; not have health insurance; or receive a lower quality of care because of stereotyping, language barriers, or poor health literacy. Disparities in health care further exacerbate disparities in health: it is hard to manage a chronic diseases like asthma or diabetes without affordable health care.

## Social Determinants of Health

Health care disparities are persistent, pervasive, and harmful not only to the individuals and communities that experience them but to the region and nation as a whole. Yet health is not just about health care; it is also about the social factors that contribute to achieving healthy outcomes. A person's health and likelihood of becoming sick and dying prematurely are greatly influenced by social factors (i.e., social determinants of health) such as education, income, and the quality of neighborhood environments. Some of the most critical factors affecting health outcomes and health disparities faced in Region VII include:

- Residential segregation
- Transportation
- Education
- Homelessness
- Crime
- Environmental hazards
- Food Deserts
- Unemployment

### Residential Segregation

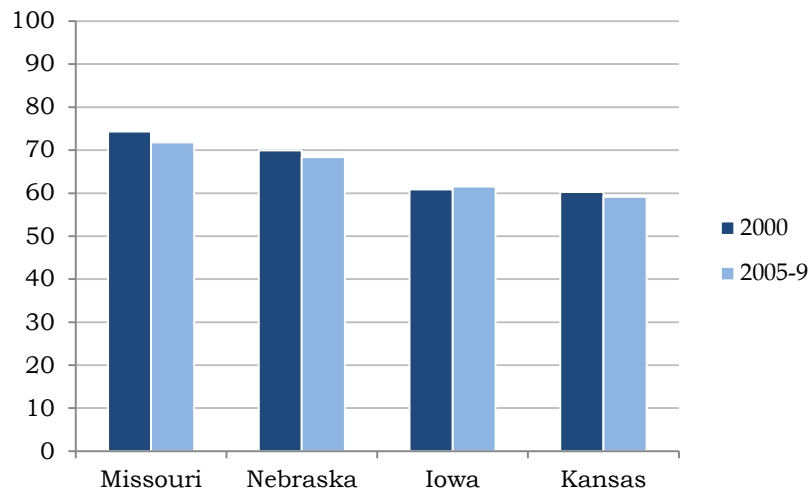
One of the most important ways in which neighborhoods differ is in their racial composition, as measured by segregation indices. Segregation Indices are Dissimilarity Indices that measure the degree to which the minority group is distributed differently than Whites across census tracts. They range from 0 (complete integration) to 100 (complete segregation, i.e., the two groups reside in completely separate

neighborhoods) where the value indicates the percentage of minority group that needs to move to be distributed exactly like Whites<sup>49</sup>.

<b>Black/White Segregation Indices for Heartland States</b>				
	<b>2000</b>	<b>2005-2009</b>	<b>Change</b>	<b>Black Share, 2009</b>
Missouri	74.3	71.8	-3	11.3
Kansas	60.3	59.2	-1	5.9
Nebraska	70.0	68.4	-2	4.4
Iowa	60.8	61.5	+1	2.6
Source: Institute for Social Research, University of Michigan				

As the table above and the graph below shows, the state of Missouri has the highest percentage of Blacks as well as the highest segregation index. Kansas represented the state with the lowest segregation index score. Iowa is the only one of the four states to be moving towards more segregation as opposed to moving towards integration.

**Black-White Segregation Indices for Heartland States<sup>50</sup>**



<sup>49</sup> Population Studies Center: Institute for Social Research. (2010). University of Michigan. Retrieved from <http://www.psc.isr.umich.edu/dis/census/segregation.html>

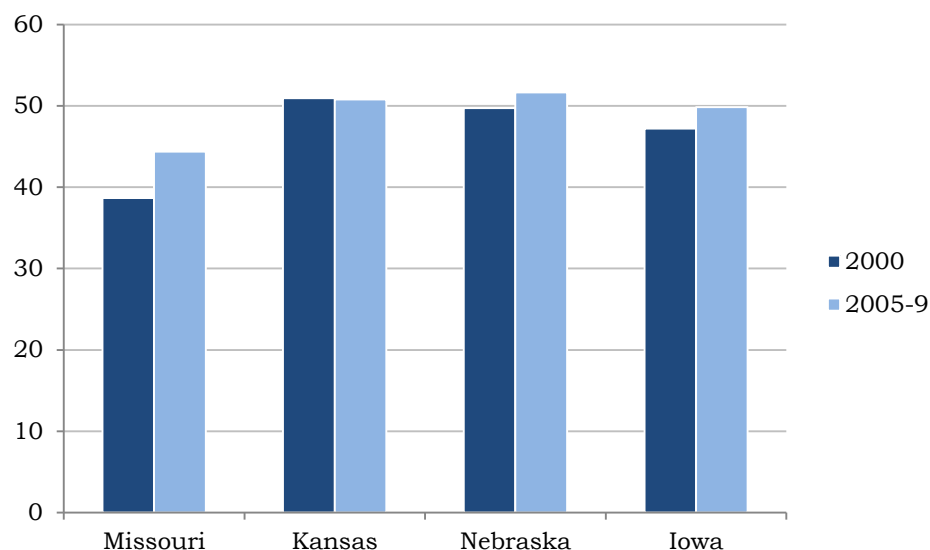
<sup>50</sup> William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data. <http://www.psc.isr.umich.edu/dis/census/segregation.html>

<b>Hispanic-White Segregation Indices for Heartland States</b>				
	<b>2000</b>	<b>2005-2009</b>	<b>Change</b>	<b>Hispanic Share</b>
Missouri	39	44	+6	3.4
Kansas	51	51	0	9.3
Nebraska	50	52	+2	8.4
Iowa	47	50	+3	4.5

Source: William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data. <http://www.psc.isr.umich.edu/dis/census/segregation.html>

In terms of Hispanic-White segregation, the table above and the graph below shows that the state of Missouri has the lowest segregation index score, which indicates that 44% of Hispanics or whites would have to move or relocate in order to have an even distribution of Hispanics and Whites in Missouri. Nebraska represented the highest segregation score of the four states. Over 50% of Hispanics or Whites living in Nebraska would have to move in order for the state to have an even distribution of Hispanics and Whites.

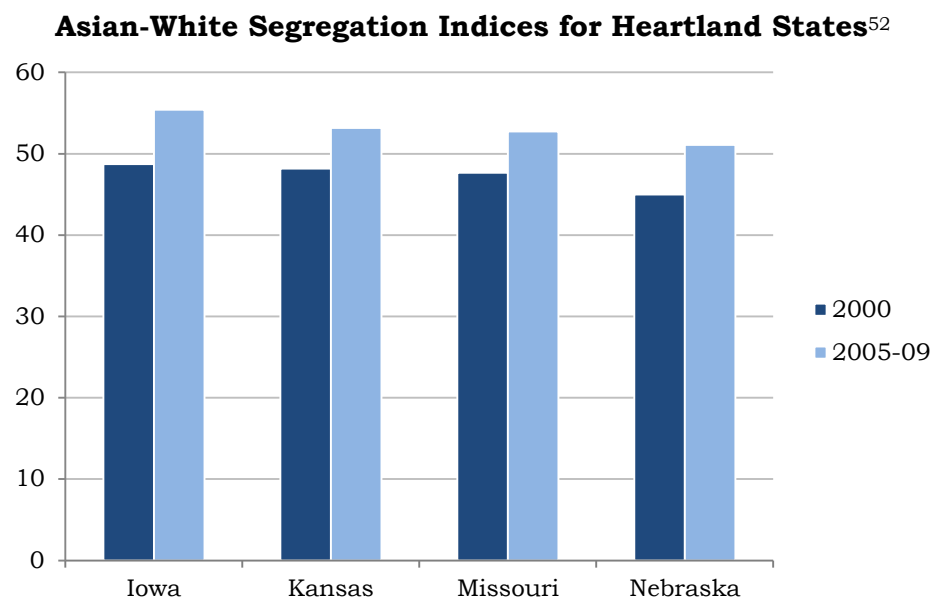
**Hispanic-White Segregation Indices for Heartland States<sup>51</sup>**



<sup>51</sup> William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data. <http://www.psc.isr.umich.edu/dis/census/segregation.html>

<b>Asian-White Segregation Indices for Heartland States</b>				
	<b>2000</b>	<b>2005-2009</b>	<b>Change</b>	<b>Asian Share</b>
Missouri	48	53	5	1.6
Kansas	48	53	5	2.3
Nebraska	45	51	6	1.7
Iowa	49	55	7	1.7
Source: William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data. <a href="http://www.psc.isr.umich.edu/dis/census/segregation.html">http://www.psc.isr.umich.edu/dis/census/segregation.html</a>				

In terms of Asian-White segregation in the Heartland states, Asian-White Segregation Indices for Heartland States, the table above and the graph below shows that Nebraska has the lowest index score of dissimilarity, while Iowa has the highest score. For all four states, both Asian and Hispanic segregation indices are lower than those of Blacks.



### **Neighborhood Racial Composition in RHEC Metropolitan Cities**

In addition to the segregation indices, The University of Michigan's Population Studies Center provides data estimating the racial make-up for the neighborhoods of an average person according to their demographic characteristics. These are exposure or interaction measures of segregation because they tell us how different racial groups are "exposed" to each other<sup>53</sup>. Five of the largest metropolitan cities within the four Heartland states were chosen for the purposes of this report on racial residential segregation. Those cities include; St. Louis, MO; Wichita, KS; Kansas City, MO/KS; Des Moines, IA; Omaha, NE.

<sup>52</sup> Institute for Social Research, University of Michigan

<sup>53</sup> William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data. <http://www.psc.isr.umich.edu/dis/census/segregation.html>

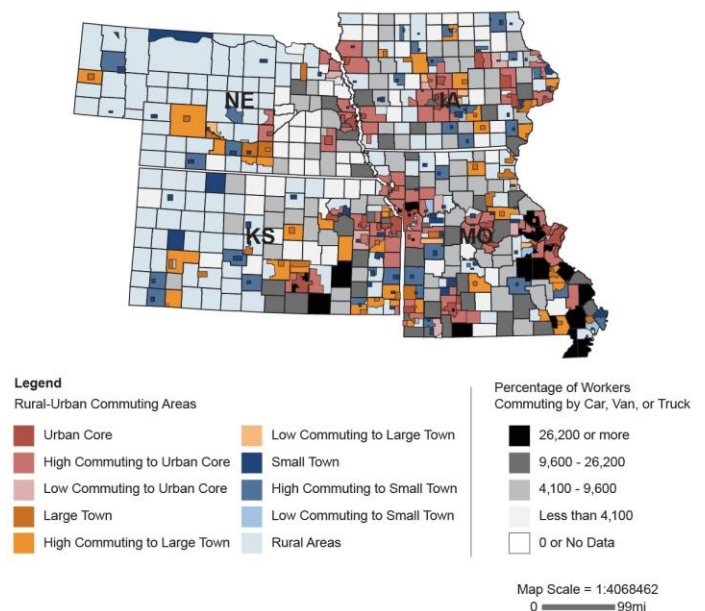
Neighborhood Racial Composition								
Name	White	Black	Am Indian/ Alaskan Native	Asian	Hawaiian / Pacific Islander	Other Race	2+ Races	Hispanic
<b>USA</b>	<b>79%</b>	<b>7%</b>	<b>1%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	<b>2%</b>	<b>9%</b>
Des Moines-West Des Moines, IA	88%	3%	0%	2%	0%	0%	1%	5%
Kansas City, MO- KS	84%	6%	0%	2%	0%	0%	2%	5%
Omaha-Council Bluffs, NE-IA	86%	4%	0%	2%	0%	0%	2%	6%
St. Louis, MO-IL	87%	8%	0%	2%	0%	0%	1%	2%
Wichita, KS	82%	4%	1%	3%	0%	0%	2%	8%

Source: William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2005-9 American Community Survey and 2000 Census Decennial Census tract data  
Available at: <http://www.psc.isr.umich.edu/dis/census/segregation.html>

## Transportation

The relative frequency of use and type of transportation varies dramatically by state and county as shown in the following maps. For example, major metropolitan areas were dominated by workers driving to work, in spite of the availability of public transportation.<sup>54, 55</sup> Those in rural areas drove to work the least frequently. Walking and biking seem to be more prominent in rural and western areas.<sup>56</sup>

Percentage of Workers Commuting by Car, Van, or Truck



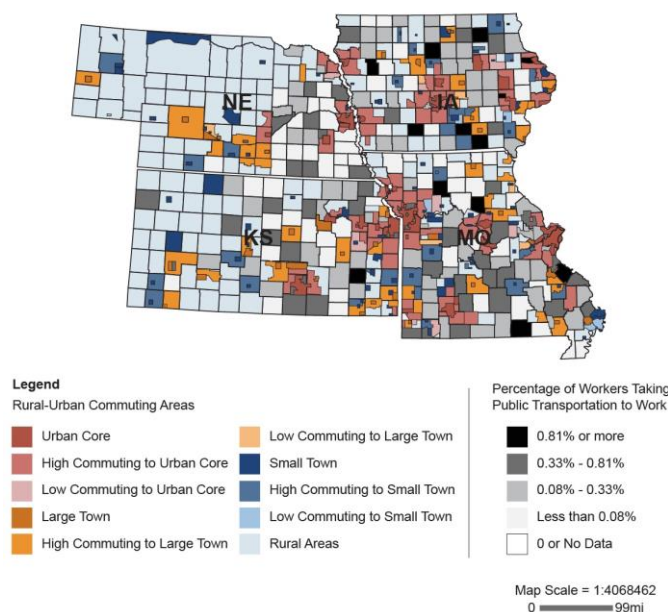
<sup>54</sup> William H. Frey, Brookings Institution and University of Michigan Social Science Data Analysis Network's analysis of 2006-10 American Community Survey Available at:

<http://www.psc.isr.umich.edu/dis/census/segregation.html>

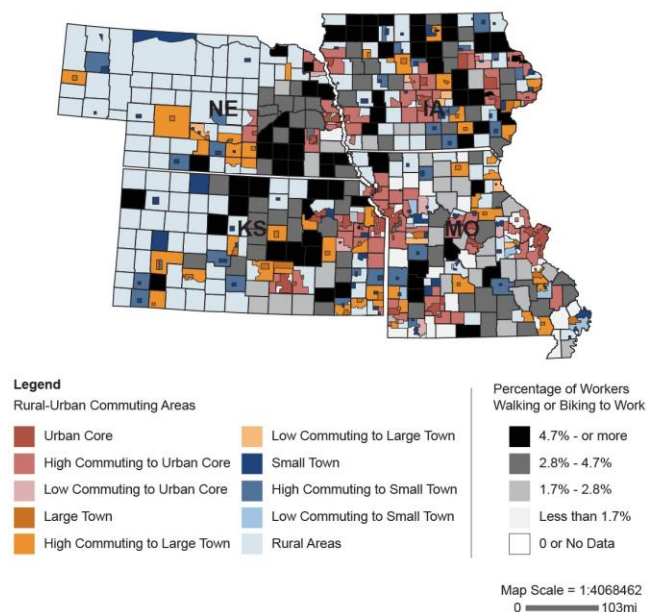
<sup>55</sup> ACS 5-year Estimates 2006-2010

<sup>56</sup> ACS 5-year Estimates 2006-2010

Percentage of Workers Taking Public Transportation to Work



Percentage of Workers Walking or Biking to Work



## Transportation by Education Level

This data was not found at the state or county level. It could, perhaps, be created by merging census data tables, and may be a subject of future exploration.

## Transportation by Race

Missouri is the only state where the proportion of public transportation users that are Black is the majority. Of those taking public transportation to work, between 10 and 20% are Black in Iowa, Kansas and Nebraska, while about 58% are Black in Missouri. In the other 3 states the majority of public transportation users, between 60 and 70%, are White.

Use of Public Transportation to Work by Race/Ethnicity				
Race/Ethnicity	Public transportation (excluding taxicab)			
	Iowa	Kansas	Missouri	Nebraska
White	74.0%	69.4%	35.1%	68.8%
Black or African American	9.7%	19.4%	57.6%	18.3%
American Indian and Alaska Native	0.5%	1.8%	0.5%	3.2%
Asian	10.8%	3.5%	2.4%	6.3%
Native Hawaiian and Other Pacific Islander	0.2%	0.0%	0.1%	0.2%
Some other race	2.3%	2.8%	1.4%	1.7%
Two or more races	2.5%	3.2%	3.0%	1.5%
Hispanic or Latino origin	6.2%	8.4%	4.3%	11.1%
Source: American Community Survey (ACS) 2008-2012 5-Year Estimates, Table S0802				



## Transportation by Income

When examining transportation by income, slight variation existed between states, though the generalized trend was the same: as income levels rise, public transportation use declines.

Use of Public Transportation to Work by Earnings				
Income	Public transportation (excluding taxicab)			
	Iowa	Kansas	Missouri	Nebraska
\$0 - \$9,999	37.1%	29.9%	28.5%	31.5%
\$10,000 - \$14,999	11.7%	12.4%	12.2%	17.9%
\$15,000 - \$24,999	21.3%	21.7%	22.6%	20.4%
\$25,000 - \$34,999	9.1%	11.3%	14.9%	11.2%
\$35,000 - \$49,999	10.0%	11.3%	10.5%	9.3%
\$50,000 - \$64,999	4.9%	2.8%	4.1%	3.8%
\$65,000 - \$74,999	1.9%	3.3%	1.9%	1.2%
\$75,000 or more	3.9%	7.3%	7.2%	4.8%
Source: American Community Survey (ACS) 2008-2012 5-Year Estimates, Table S0802				

## Resources in the Region to Address Transportation Needs

### Missouri

OATS, Inc. is a not-for-profit 501(c)3 corporation providing specialized transportation for senior citizens, people with disabilities, and the rural general public in 87 counties. The organization helps people get to work, doctor appointments, and essential shopping, and other destinations. There are more than 34,000 people in Missouri who utilize the services of OATS. <http://www.oatstransit.org/>

The United Way assists needy citizens with transportation needs in St. Louis, MO. This can be for trips to work or to physicians' offices.

<https://www.stl.unitedway.org/211.aspx>

### Nebraska

Nebraska Medicaid Non-Emergency Transportation helps Department of Health and Human Services clients to appointments if they live in Nebraska and receive services through Medicaid, Aged and Disabled Waiver, Social Services for Aged and Disabled, or the Disabled Children's Program.

[http://www.nebraskaaccess2care.com/documents/Large\\_Print\\_Brochure\\_NE\\_v4.1.pdf](http://www.nebraskaaccess2care.com/documents/Large_Print_Brochure_NE_v4.1.pdf)

### Iowa

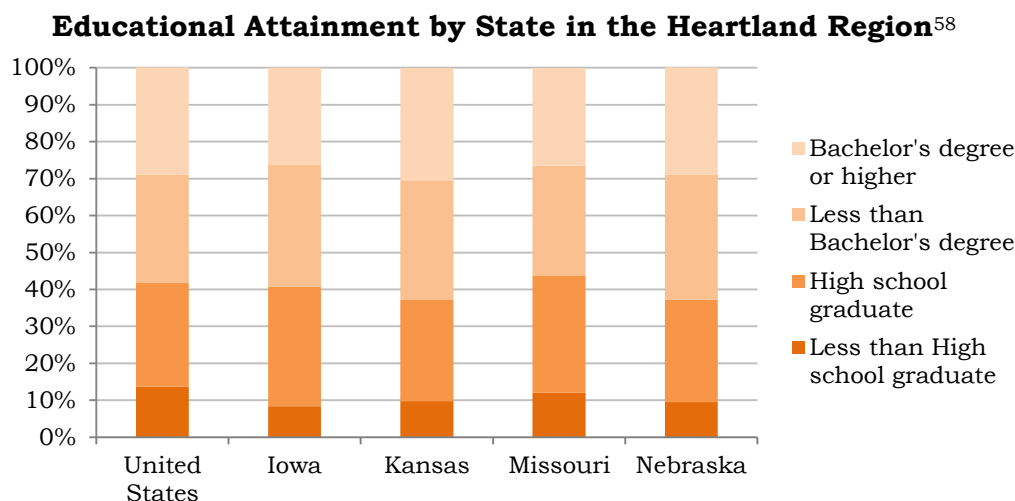
Iowa Medicaid Non-Emergency Transportation: Provides transportation to medical appointments to Medicaid recipients in Iowa.

<http://tmsmanagementgroup.com/index.php/iowa-medicaid-net-program>

## Education

### Overview

Research shows that education contributes to longevity and overall better health<sup>57</sup>. For the population within the Heartland Region compared to the U.S. average, there is a smaller proportion of people with less than a high school-level education. The same is true for high school graduates. However, there are a *higher* percentage of people who have attained some college and *lower* percentage of bachelor's degree earners or higher in comparison with the national average.



### Educational Attainment by Race

Though the educational attainment rates within the Heartland Region are comparable to the U.S. average, there are disparities between certain groups of people within the region. For all states in the region, the majority of the population, regardless of race/ethnicity, graduated from high school. However, Hispanics have lower rates of high school graduation, ranging from 52 to 66%, while the high school graduation rates range from 80 to 93% for all other race/ethnicity categories.

High School Graduation Rate by Race/Ethnicity and State								
Race/Ethnicity	Iowa		Kansas		Missouri		Nebraska	
	Total	% HS	Total	% HS	Total	% HS	Total	% HS
White, Non-Hispanic	1,833,361	91.5%	1,502,719	92.2%	3,294,292	87.5%	1,011,707	93.1%
Black, Non-Hispanic	74,546	80.7%	91,592	85.3%	393,032	80.6%	43,290	84.1%
Hispanic	62,242	55.5%	129,808	58.8%	96,945	66.3%	70,065	51.8%
Asian	29,121	81.4%	41,247	84.1%	58,218	86.3%	17,681	84.6%
Native American	4,624	83.7%	11,615	87.2%	14,269	82.9%	6,564	80.3%
Other	14,118	86.7%	25,923	89.9%	50,109	85.1%	11,577	87.5%
Data source: 2006-2010 American Community Survey Selected Population Tables								

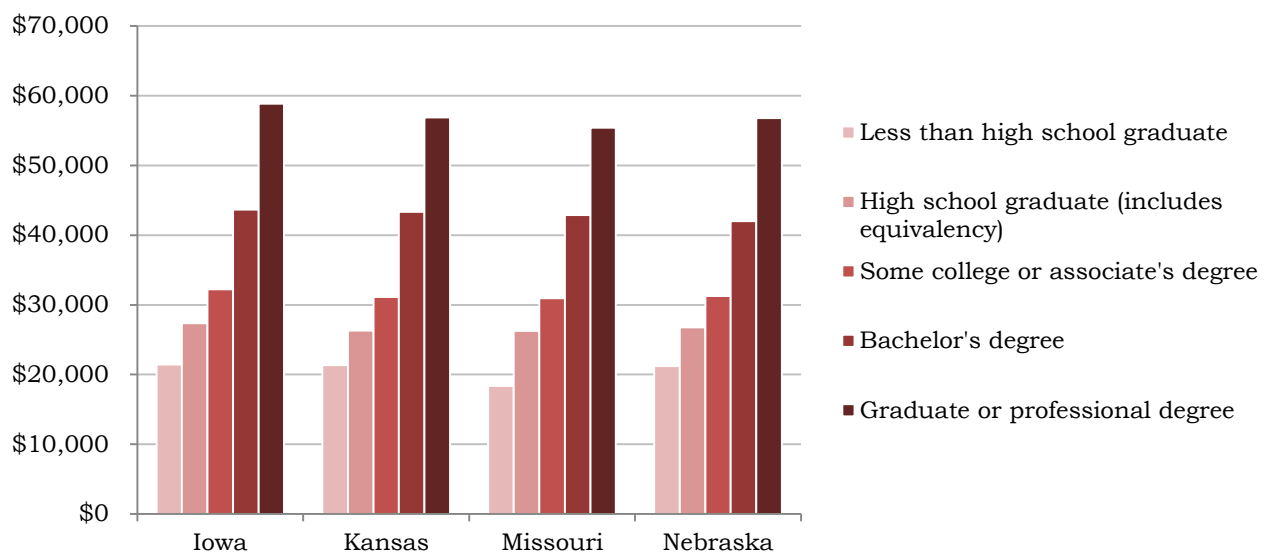
<sup>57</sup> Picker, Les. "The Effects of Education on Health". The National Bureau of Economic Research. Retrieved from, <http://www.nber.org/digest/mar07/w12352.html>.

<sup>58</sup> American Community Survey 1-Year Estimates, 2012 (<http://factfinder2.census.gov>)

## Educational Attainment by Income

The data for all states were relatively similar when comparing their median household earnings reports by education group. The non-high school graduate group earned approximately \$18-21,000 per year, high school graduates around \$26-27,000, those with some college completed earned approximately \$31-32,000, Bachelor's degree earners about \$42-44,000, and the average earnings of those with advanced degrees ranged from \$55,000-59. In addition, the differences grow at increasing rates as the level of education increases. For example, the difference between the median earnings of non-high school graduates and high school graduates is less than that between those with Bachelor's degree and Advanced degree.

**Income by Educational Attainment and State<sup>59</sup>**



## Educational Attainment by County

Among the Heartland Region, it is important to examine the differences in geographic dispersion of educational attainment. In Kansas, counties in the Southwest portion of the state have low high school graduation rates and counties in the Northeast have larger high school graduation rates.<sup>60</sup> In Missouri, the counties in the “Boot Heel” (southeast corner) have lower graduate rates and the counties containing or near

<sup>59</sup> American Community Survey 3-Year Estimates 2010-2012

<sup>60</sup> “Kansas educational attainment: persons 25 years and over – percent high school graduate or higher – 2005-2009 by County”. Index Mundi. Retrieved from, <http://www.indexmundi.com/facts/united-states/quickfacts/kansas/percent-of-people-25-years-and-over-with-high-school-degree-or-higher#map>.

major cities have higher graduation rates.<sup>61</sup> In Iowa and Nebraska, counties with high graduation rates and low graduate rates are more evenly distributed.<sup>62,63,64</sup>

## **Educational Attainment-Related Initiatives and Groups**

### Missouri

*Imperatives for Change Initiative* aims to increase educational attainment in the state<sup>65</sup>. This plan will serve for the next 3 to 5 years as a strategy for increasing funding and resources, allocating those resources, and implementing “dynamic strategies to provide Missouri residents with the educational opportunities” to be successful.

### Kansas

*Kansas Association of School Boards’ Action Plan for 2012* strives to collaborate with school boards to increase spending per pupil in order to increase their rankings in educational achievement<sup>66</sup>.

### Iowa

*The Iowa West Foundation* granted \$1.7 million to education initiatives, including leadership improvement for principals, technology improvements, and shuttle busses for students to increase access to schools<sup>67</sup>.

### Nebraska

*The P-16 Initiative* was created through partnerships with the University of Nebraska in order to reform the education system in the state. Resources to help students in more challenging high school courses will be distributed, relationships will be formed among the education systems, and collaborations will be formed with many other organizations in the state<sup>68</sup>.

---

<sup>61</sup> “Missouri educational attainment: persons 25 years and over – percent high school graduate or higher – 2005-2009 by County”. Index Mundi. Retrieved from <http://www.indexmundi.com/facts/united-states/quickfacts/missouri/percent-of-people-25-years-and-over-with-high-school-degree-or-higher#map>.

<sup>62</sup> “Iowa educational attainment: persons 25 years and over – percent high school graduate or higher – 2005-2009 by County”. Index Mundi. Retrieved from <http://www.indexmundi.com/facts/united-states/quickfacts/iowa/percent-of-people-25-years-and-over-with-high-school-degree-or-higher#map>.

<sup>63</sup> “Nebraska educational attainment: persons 25 years and over – percent high school graduate or higher – 2005-2009 by County”. Index Mundi. Retrieved from <http://www.indexmundi.com/facts/united-states/quick-facts/nebraska/percent-of-people-25-years-and-over-with-high-school-degree-or-higher#map>.

<sup>64</sup> Source: University of Missouri Center for Applied Research and Environmental Systems analysis of ACS 5-yr estimates 2005-09 Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>65</sup> “Imperatives for Change”. Missouri Department of Higher Education. Retrieved from <http://www.dhe.mo.gov/ifc>

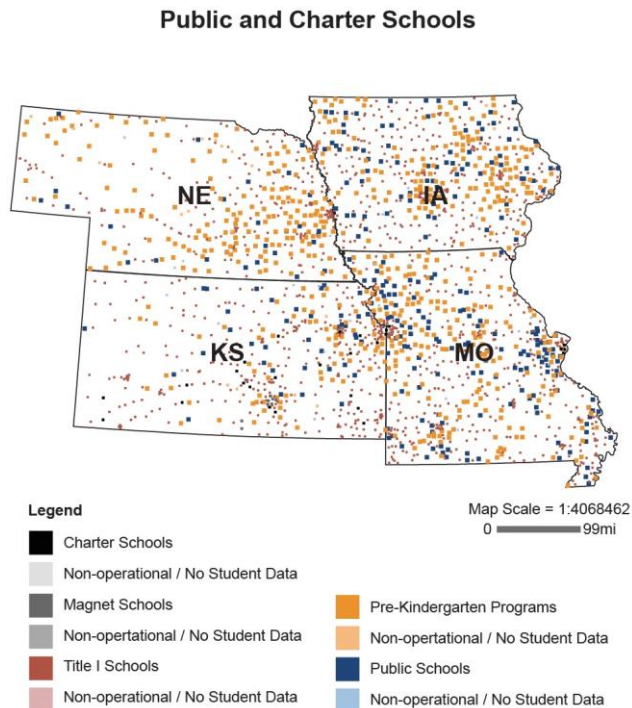
<sup>66</sup> “Status Report to the Governmental Relations Seminar 2012”. Kansas Association of School Boards Action Plan 2011-2012. Retrieved from [http://67.212.164.125/assets/Advocacy/First%20in%20Education.%20The%20Kansas%20Way%20update%20Feb%202012%20\(1\).pdf](http://67.212.164.125/assets/Advocacy/First%20in%20Education.%20The%20Kansas%20Way%20update%20Feb%202012%20(1).pdf)

<sup>67</sup> “Iowa West Foundation Grants \$1.7 Million for Local Education Initiatives”. Iowa West Foundation. Retrieved from <http://www.iowawestfoundation.org/downloads/IWFPRESSReleaseEducationInitiatives1.pdf>

<sup>68</sup> “Nebraska’s P-16 Initiative”. University of Nebraska. Retrieved from <http://p16.nebraska.edu/>.

## School Distribution

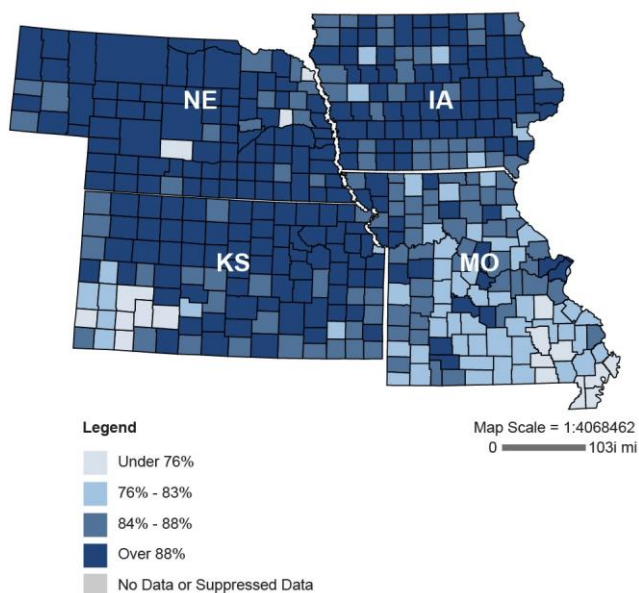
In the Heartland region, public schools are distributed primarily in populated urban areas where there exists higher demand. The map to the right demonstrates that there is a higher concentration of schools within major metropolitan areas: St. Louis, Kansas City, Des Moines, Ames, Omaha, and Topeka.<sup>69</sup> This situation presents challenges for those in rural areas, where children may have to travel a substantial distance to get to school. Based on visual inspection of the map below, Iowa appears to have the densest distribution of schools and Nebraska appears to have the least dense distribution, especially in the western portion of the state.



## School Distribution by Education Level

As the map shows, the least educated parts of the region appear to be Southeast Missouri and Southwest Kansas. The latter area in Kansas has a sparser distribution of schools. Northwest Nebraska appears to have the sparsest distribution of schools and yet over 88% of residents there have at least a high-school education.

**Percentage of Population with High School Diploma or Higher Level of Education, by County**



## School Distribution by Race

Visual comparison of the distribution of schools and the distribution of race/ethnicity in the region did not reveal any racial/ethnic group that clearly lacked geographic access to schools in comparison with other racial/ethnic groups.

## School Distribution by Income

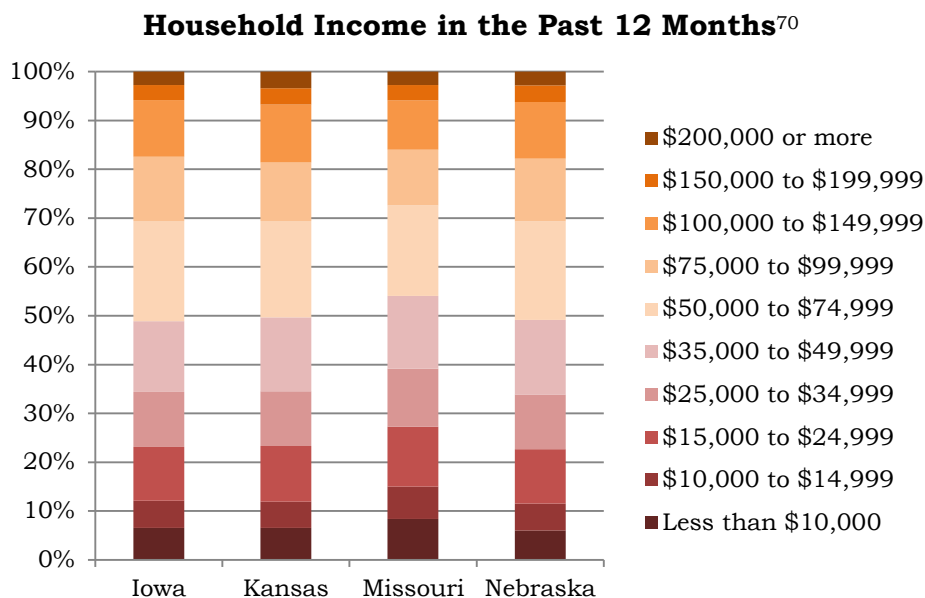
Visual comparison of the distribution of schools and the distribution of income suggests a possible correlation in Southeast Missouri (the Ozark Mountain region) between few schools and low income.

<sup>69</sup> National Center for Education Statistics (NCES) Location & State Education Data Profiles. Includes elementary, middle, and high schools, charters, and magnets. 2011, Accessed 4/23/2013. <http://nces.ed.gov/datatools/index.asp?DataToolSectionID=5>



## Income

In the Heartland Region, some evident similarities and differences exist between incomes earned. As a whole, Missouri earners brought in slightly less median income than those in Iowa, Kansas, and Nebraska. As a whole, Missouri under-earned its fellow Heartland states, with a greater percentage of its citizens making lower incomes and a lower percentage earning higher incomes. Kansas earners were the most highly-compensated in the area. This section explores income levels subdivided by race, education level, and geography.



### Income by Education Level

As noted in Figure 40, median household earnings increased as levels of education attainment increased, furthermore, the differences grow at increasing rates as the level of education increases. While there's only a \$5,000 difference in median earnings between high school graduates and those that did not graduate from high school, there's a \$10,000 difference in median earnings between high school graduates and those with a Bachelor's degree. Over a 45 year working career there is a \$225,000 difference in earnings, often determining if one lives in poverty or not.

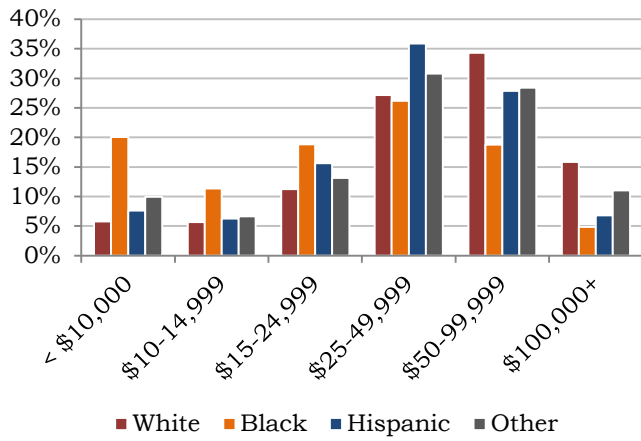
### Income by Race

Some elements of uniqueness have been identified in the income vs. race distribution across all four states. Whites have the highest earnings as a percentage of race, with usually around 50% of the population making over \$50,000 per annum. This positive-sloping distribution up to the point of \$50-\$100,000 is not the same for other races. Among Blacks, there is a distinct bi-modal distribution among earners – for example, in Iowa, 20% of earners make less than \$10,000 and 26% of Blacks make \$25-50,000 annually, yet lower percentages of Blacks earn at the intermediate levels between those two.

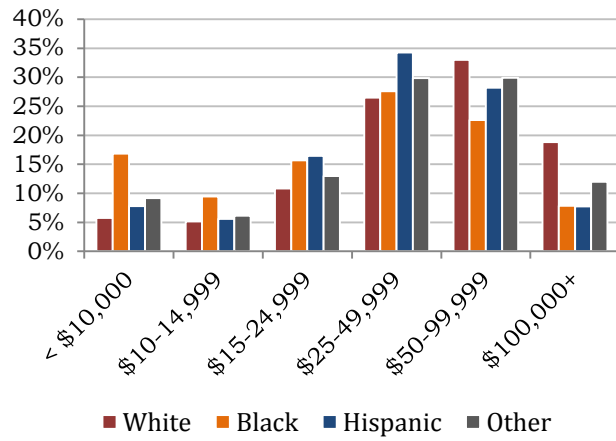
<sup>70</sup> 2012 American Community Survey 1-Year Estimates

## Income by Race and State<sup>71</sup>

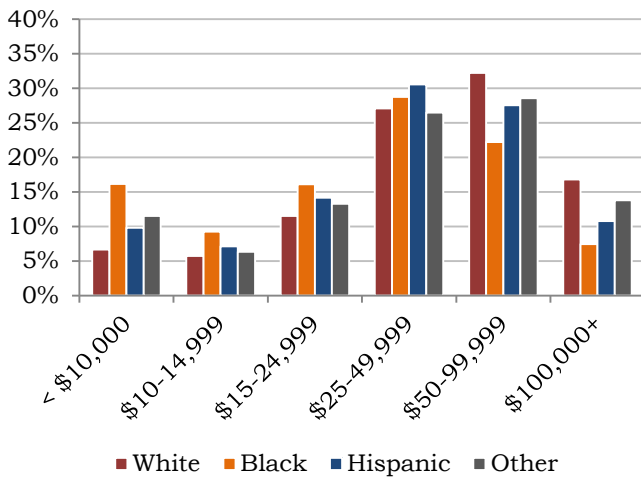
**Iowa**



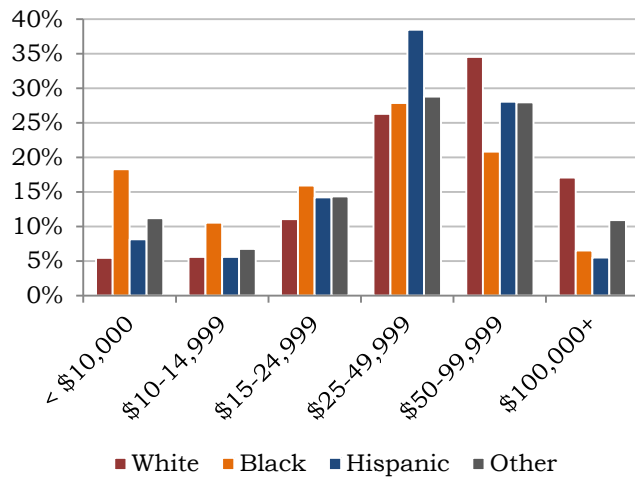
**Kansas**



**Missouri**



**Nebraska**



<sup>71</sup> American Community Survey (ACS) Summary File, 2006-2010

### Household Income by Race/Ethnicity<sup>72</sup>

Iowa	White		Black		Hispanic/Latino		Other		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under \$10,000	130,186	5.8%	11,408	20.0%	5,298	7.6%	8,436	10.0%	152,998	6.3%
\$10,000-14,999	127,810	5.7%	6,468	11.4%	4,350	6.2%	5,624	6.6%	142,372	5.9%
\$15,000-24,999	252,614	11.2%	10,720	18.8%	10,894	15.6%	11,142	13.2%	281,234	11.6%
\$25,000-49,999	611,058	27.2%	14,896	26.2%	24,992	35.9%	26,048	30.8%	665,252	27.4%
\$50,000-99,999	772,282	34.3%	10,672	18.7%	19,422	27.9%	24,056	28.4%	818,902	33.7%
\$100,000+	356,290	15.8%	2,762	4.9%	4,744	6.8%	9,350	11.0%	371,150	15.3%
<b>Total</b>	<b>2,250,240</b>		<b>56,926</b>		<b>69,700</b>		<b>84,656</b>		<b>2,431,908</b>	

Kansas	White		Black		Hispanic/Latino		Other		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under \$10,000	106,172	5.7%	20,466	16.8%	11,330	7.8%	13,068	9.2%	146,442	6.6%
\$10,000-14,999	94,926	5.1%	11,492	9.5%	8,162	5.6%	8,752	6.1%	119,684	5.4%
\$15,000-24,999	199,982	10.8%	19,052	15.7%	23,890	16.4%	18,524	13.0%	252,564	11.5%
\$25,000-49,999	489,518	26.5%	33,490	27.6%	49,796	34.2%	42,628	29.9%	594,764	27.0%
\$50,000-99,999	610,694	33.0%	27,464	22.6%	41,022	28.2%	42,660	29.9%	707,182	32.1%
\$100,000+	348,552	18.8%	9,538	7.9%	11,234	7.7%	17,104	12.0%	382,708	17.4%
<b>Total</b>	<b>1,849,844</b>		<b>121,502</b>		<b>145,434</b>		<b>142,736</b>		<b>2,203,344</b>	

Missouri	White		Black		Hispanic/Latino		Other		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under \$10,000	262,238	6.7%	82,930	16.2%	10,566	9.8%	20,684	11.5%	372,454	7.9%
\$10,000-14,999	225,750	5.7%	47,442	9.2%	7,680	7.1%	11,380	6.3%	289,296	6.2%
\$15,000-24,999	453,638	11.5%	82,748	16.1%	15,216	14.1%	23,832	13.3%	568,938	12.1%
\$25,000-49,999	1,067,526	27.1%	147,612	28.8%	32,868	30.6%	47,504	26.5%	1,281,944	27.3%
\$50,000-99,999	1,269,776	32.2%	114,064	22.2%	29,608	27.5%	51,312	28.6%	1,453,338	30.9%
\$100,000+	662,258	16.8%	38,230	7.5%	11,598	10.8%	24,788	13.8%	733,940	15.6%
<b>Total</b>	<b>3,941,186</b>		<b>513,026</b>		<b>107,536</b>		<b>179,500</b>		<b>4,699,910</b>	

Nebraska	White		Black		Hispanic/Latino		Other		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Under \$10,000	68,138	5.5%	10,672	18.3%	6,266	8.1%	7,964	11.2%	90,642	6.4%
\$10,000-14,999	69,656	5.6%	6,164	10.5%	4,326	5.6%	4,798	6.7%	83,234	5.8%

<sup>72</sup> American Community Survey (ACS) Summary File, 2006-2010. Information on Asian Americans, Native Hawaiians & Pacific Islanders, and Native Americans & Alaska Natives was not available.

\$15,000-24,999	137,628	11.0%	9,308	15.9%	10,968	14.2%	10,220	14.4%	163,600	11.5%
\$25,000-49,999	327,724	26.3%	16,286	27.9%	29,666	38.5%	20,506	28.8%	383,236	26.9%
\$50,000-99,999	430,378	34.5%	12,186	20.9%	21,614	28.0%	19,892	28.0%	475,146	33.4%
\$100,000+	213,050	17.1%	3,820	6.5%	4,248	5.5%	7,786	10.9%	227,684	16.0%
<b>Total</b>	<b>1,246,574</b>		<b>58,436</b>		<b>77,088</b>		<b>71,166</b>		<b>1,423,542</b>	

## Income by County

In the Heartland Region, most of the wealth is clustered around large metropolitan areas. While not surprising, this statistic likely suggests that those residents located in rural areas may have a greater challenge in affording the healthcare to which they already have limited access in terms of geographic distance.<sup>73</sup>

## Resources in the Region to Address Income Disparities

### All States and Multi-State

State departments of health and human services provide Medicaid, assistance for needy families, and more to citizens with low incomes. For example, the Iowa Department of Human Services provides cash assistance, food assistance, child care assistance, and Medicaid for its needy citizens.

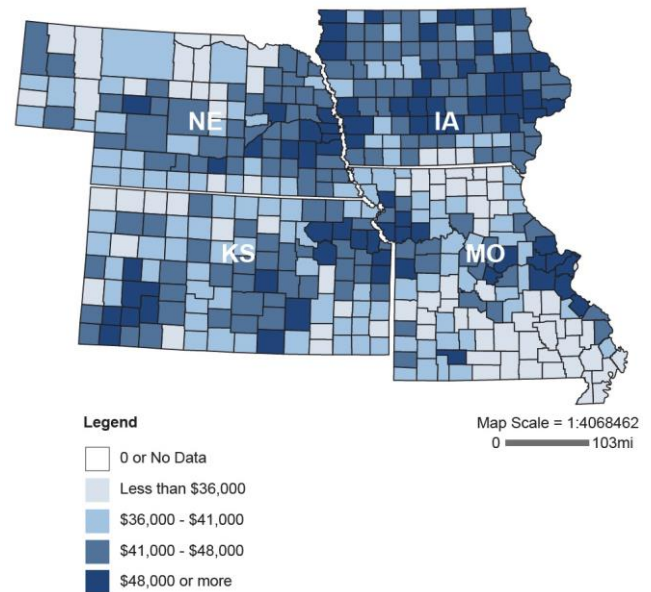
<http://www.dhs.iowa.gov/Consumers/Test/AssistancePrograms.html>

NeedyMeds pair clinics with needy families. <http://www.needymeds.org/>

### Missouri

The Missouri Budget Project is dedicated to addressing everything from state budget imbalances to the widening gap between the rich and poor in Missouri. They highlighted that over the last decade, Missouri income disparity has widened at the 7<sup>th</sup> fastest rate in the nation. <http://www.mobudget.org/home.html>

County Median Household Income



<sup>73</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of ACS 5-yr estimates 2005-09 Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

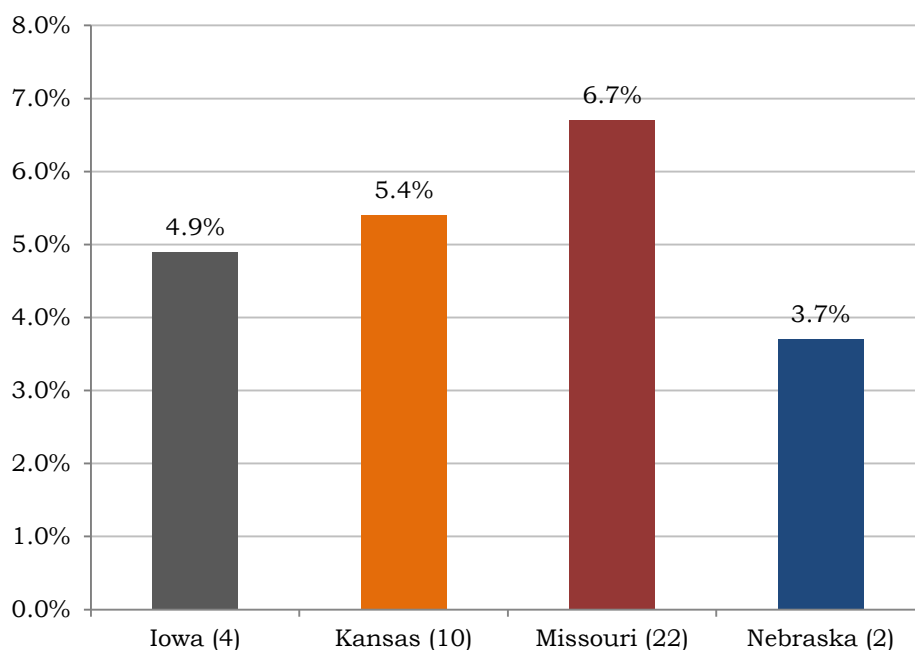
## Unemployment

### Overview

The United States Department of Labor defines unemployment as someone who “does not have a job, has actively looked for work in the prior 4 weeks, and is currently available for work”.<sup>74</sup> In December 2012, the national average seasonally adjusted unemployment rate in the U.S. was 7.8%.<sup>75</sup> As you can see in, the states in the Heartland Region have below average unemployment rates.

The Bureau of Labor Statistics ranks each state by unemployment rate with one being the lowest rate and fifty being the highest rate. The ranking are shown in parentheses after a state’s name in the table below. Within the region, Missouri has the highest unemployment rate at 6.7% and is ranked 22<sup>nd</sup> out of all 50 states. Kansas has the next highest unemployment rate at 5.4% and is ranked 10<sup>th</sup>. Nebraska and Iowa, ranked 2<sup>nd</sup> and 4<sup>th</sup> respectively, had some of the lowest unemployment rates in the country in December 2012.

**Unemployment Rate<sup>76</sup>**



### Unemployment by Race

While non-Latino Blacks have an unemployment rate of 13.8%, American Indian/Alaskan Natives have an unemployment rate of 12.3% and Hispanics have an unemployment rate of 10.3%, non-Latino Whites have an unemployment rate of only 7.2%.<sup>77</sup>

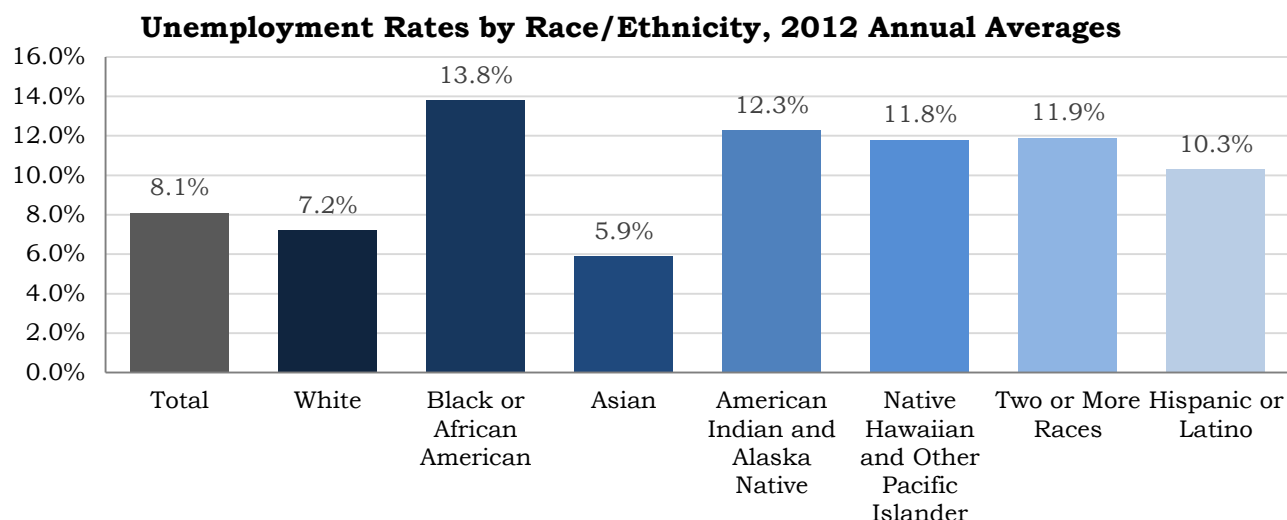
<sup>74</sup> US Department of Labor- Unemployment, 2009. [http://www.bls.gov/cps/cps\\_htgm.htm#unemployed](http://www.bls.gov/cps/cps_htgm.htm#unemployed)

<sup>75</sup> Bureau of Labor Statistics- Local Area Unemployment Statistics, 2012. <http://www.bls.gov/web/laus/mstrcr1.gif>

<sup>76</sup> Bureau of Labor Statistics, December 2012

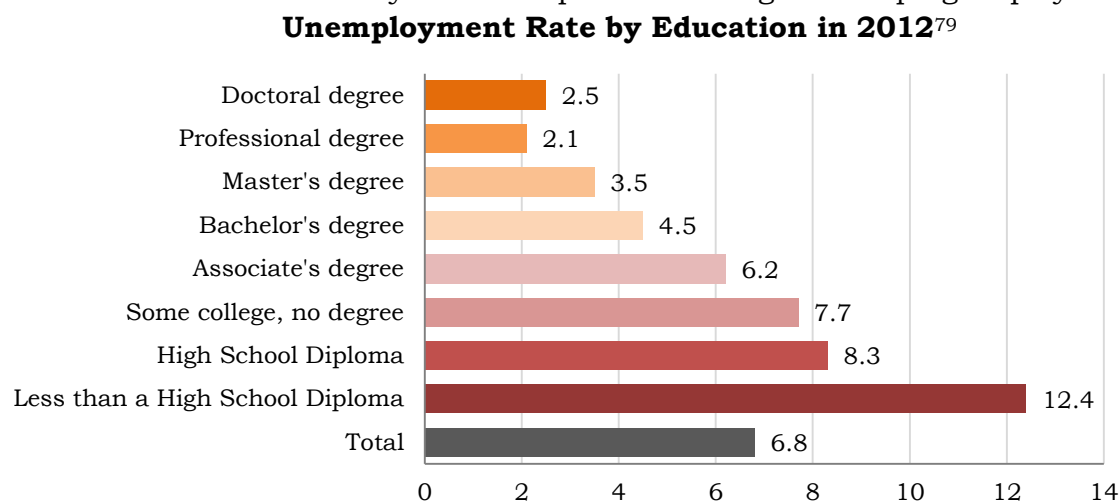
<sup>77</sup> U.S. Bureau of Labor Statistics. Labor Force Characteristics by Race and Ethnicity, 2012. <http://www.bls.gov/cps/cpsrace2012.pdf>





### Unemployment by Educational Attainment

The overall unemployment rate for all educational attainment levels in 2012 was 6.8%. Those with less than a high school diploma have the highest unemployment rate at 12.4% and the unemployment rate for those with a Professional degree is the lowest at 2.1%<sup>78</sup>. Essentially, as a person becomes more educated the unemployment rate decreases. Education clearly has an impact on finding and keeping employment.



<sup>78</sup> Education pays. (2013, January 28). U.S. Bureau of Labor Statistics. Retrieved March 4, 2013, from [http://www.bls.gov/emp/ep\\_chart\\_001.htm](http://www.bls.gov/emp/ep_chart_001.htm)

<sup>79</sup> U.S. Bureau of Labor Statistics 2013

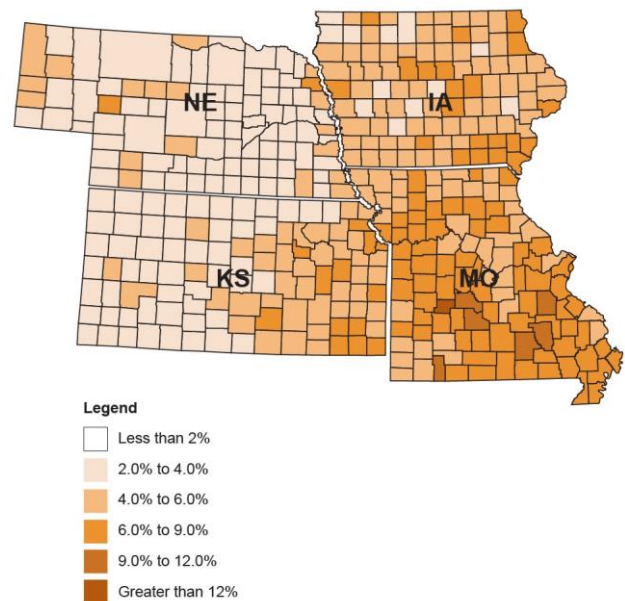
## Unemployment by County

In Iowa, Missouri, and Nebraska, higher rates of unemployment are not confined to any particular area. Kansas, however, has the highest rates of unemployment in the eastern half of the state. The types of jobs available in a specific county may help determine unemployment rate.<sup>80</sup>

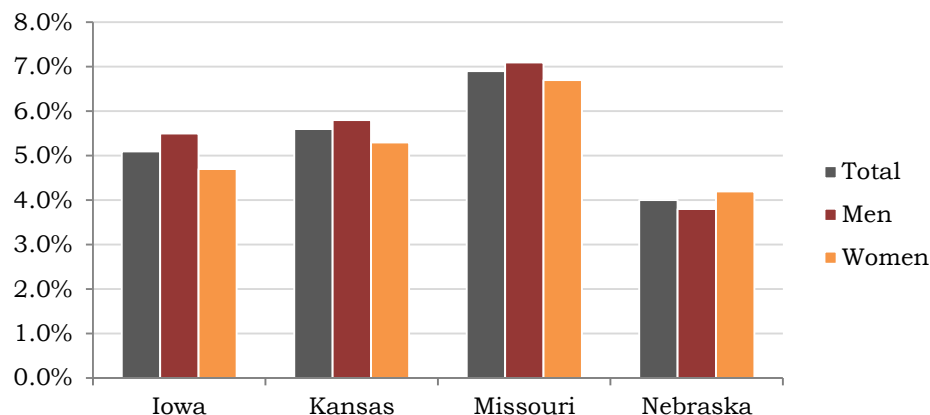
## Unemployment by Gender

This map shows that, of the four of the states in the Heartland Region, Missouri has the highest unemployment rate at 6.9% as of 2012. The unemployment rate for men is higher than the unemployment rate for women for all Heartland states except Nebraska.

Unemployment Rate in the Heartland States



Unemployment by Gender and State<sup>81</sup>



## Poverty

### Overview

Poverty status is determined by comparing annual pretax income to a set of dollar values called poverty thresholds. The Census Bureau recalculates these thresholds each year, and they are mainly used for statistical purposes to estimate the number of Americans in poverty. Thresholds vary by family size and composition, age, and the number of children. The poverty rate refers to the percentage of people who are below the poverty threshold.<sup>82</sup> Nationally, the poverty rate in 2012 was 15.9%. The Heartland

<sup>80</sup> Source: University of Missouri Center for Applied Research and Environmental Systems analysis of Bureau of Labor Statistics Local Area Unemployment Statistics Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

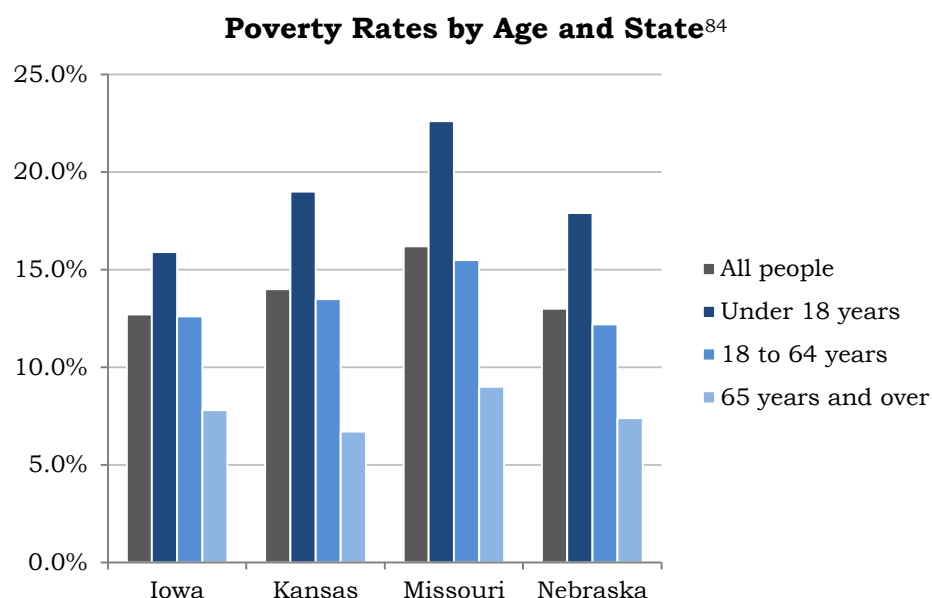
<sup>81</sup> Bureau of Labor Statistics 2012 annual averages, [http://www.bls.gov/opub/gp/pdf/gp12\\_14.pdf](http://www.bls.gov/opub/gp/pdf/gp12_14.pdf)

<sup>82</sup> Retrieved from the University of Wisconsin-Madison's Institute for Research on Poverty. <http://www.irp.wisc.edu/faqs/faq1.htm>

region follows the national trend closely, with Missouri and Iowa topping the region with a poverty rate of 14.0%.<sup>83</sup>

### Poverty by Age

In the Heartland Region, people of all ages are affected by poverty, but the majority of those affected appear to be children in the 18 and under group. Missouri has the highest percentage of children in poverty, with 23% of children under 18 years old below the poverty level. The other Heartland states have smaller percentages in each age category.



### Poverty by Race

The incidence of poverty varies with race and ethnicity in the Heartland region. Whites have the lowest overall poverty rates in each state. Hispanics have the highest rates of poverty in Missouri (41%) and Kansas (42%). The poverty rate in Nebraska for the category “Other” (33%) is higher than the rate for Hispanics (28%). The only state in which the “Other” race/ethnicity category has a poverty rate higher than Blacks or Hispanics is in Nebraska, where their poverty rate is 35%.<sup>85</sup> The high poverty rate for this category in Nebraska specifically may be due to the presence of low-income American Indian communities.

### Poverty by Gender

The distribution of poverty by gender shows that adult women have a slightly higher poverty rate than adult men. Missouri remains the state with the highest percentage of

<sup>83</sup> Retrieved from the American Community Survey  
<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>

<sup>84</sup> US Census Bureau, 2012 American Community Survey (ACS) 1-Year Estimates

<sup>85</sup> Data and tables retrieved from the Kaiser Family Foundation’s State Health Facts  
<http://kff.org/other/state-indicator/poverty-rate-by-raceethnicity/>

the population in poverty and has the largest gap between genders. The other three Heartland states have a difference of 2% between males and females; while in Missouri adult females have a 20% poverty rate while adult males have a 16% poverty rate.<sup>86</sup>

## Poverty by County

The highest concentrations of poverty occur in mostly urban, metropolitan areas in the Heartland region—with the exception of Nebraska. In Nebraska, the highest concentrations of poverty fall outside metropolitan areas.<sup>87</sup>

The counties with the highest poverty rates were:

- Pemiscot 31.8% (MO)
- Thurston 29.1% (NE)
- Mississippi 27.6% (MO)

## Homelessness

### Overview

While many consider homelessness a public health issue exclusive to urban regions, approximately 10% of the total U.S. homeless population can be found in rural regions<sup>88</sup>. Estimates are based on point-in-time measurements as part of U.S. Department of Housing and Urban Development (HUD) Continuum of Care (CoC) program requirements. In the Heartland Region, Nebraska reports the highest rate of homelessness at 19 per 100,000<sup>89</sup> while Missouri contains the largest homeless population, 8,989 individuals<sup>90</sup>.

Homelessness in Heartland Region States					
	Iowa	Kansas	Missouri	Nebraska	Total
Total Homeless Population	3,134	2,511	8,989	3,548	18,182
Prevalence (per 100,000)	10	9	15	19	13.25
Sources: Kansas Statewide Homeless Coalition (2012). 2012 Point-In-Time Report, Iowa Council for The Homeless (2011). 2011 Annual Report., Governors Committee to End Homelessness, 2012 Winter Point-In-Time Count					

<sup>86</sup> Data and tables retrieved from the Kaiser Family Foundation's State Health Facts <http://kff.org/other/state-indicator/adult-poverty-rate-by-gender/>

<sup>87</sup> Data retrieved from indexmundi.com. Data represents people of all ages in poverty from 2006-2010 <http://www.indexmundi.com/facts/united-states/quick-facts/all-counties/percent-of-people-of-all-ages-in-poverty>

<sup>88</sup> National Alliance to End Homelessness (2010). *Geography of Homelessness*. Retrieved June 11, 2013 from [http://b3cdn.net/naeh/3953e7051f30801dc6\\_iim6banq3.pdf](http://b3cdn.net/naeh/3953e7051f30801dc6_iim6banq3.pdf).

<sup>89</sup> Iowa Council for The Homeless (2011). *2011 Annual Report*. Retrieved June 11, 2013 from <https://iowafinanceauthority.iowa.gov/secure/HML/Details.aspx?c=0&cn=Statewide&y=2011>

<sup>90</sup> Governors Committee to End Homelessness, 2012 Winter Point-In-Time Count <http://www.masw.org/HMIS/documents/CombinedPITReport-Final.pdf>

## Homelessness by Race

The vast majority of Heartland residents (85%) identify as white<sup>91</sup>. Not surprisingly, the majority of homeless persons in the Region are white. However, racial/ethnic minorities carry a disproportionate burden of homelessness relative to the general population, representing 35% of the homeless population in the Region. In particular, Black/African American residents of the Heartland Region represent only 8% of the general population, but 24% of the homeless population.

Homeless Persons by Race/Ethnicity and State					
Race/ Ethnicity	Iowa	Kansas	Missouri	Nebraska	Entire Region VII
White	64%	56%	78%	61%	65%
African American	30%	26%	15%	24%	24%
Asian	0%	0%	1%		0%
American Indian and Alaska Native	0%	4%	1%	4%	2%
Other/Unknown	0%	0%	9%		3%
Hispanic/Latino (all races)	8%	11%	DNR	7%	9%

## Crime

There are some large metropolitan areas in the region, most notably, St. Louis, MO, and Kansas City, MO, which contribute to a higher-than-average rate of crime in the Heartland Region. This is evidenced by Missouri's above-the-national-average crime rate. This issue is further compounded by economic depression among those groups at highest risk for committing crimes.

Physical Violence and Other Crimes per 100,000 Citizens	
Geography	Count in 2010
<b>US</b>	<b>8,847</b>
IA	10,487
KS	9,635
MO	15,538
NE	9,590 <sup>92</sup>

Source: FBI Uniform Crime Reports, Table 4, 2011 Data, "Offenses Reported to Law Enforcement." <http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/preliminary-annual-ucr-jan-dec-2011>. Crimes include murder, forcible rape, robbery, aggravated assault, property crime, burglary, larceny-theft, motor vehicle theft, and arson.

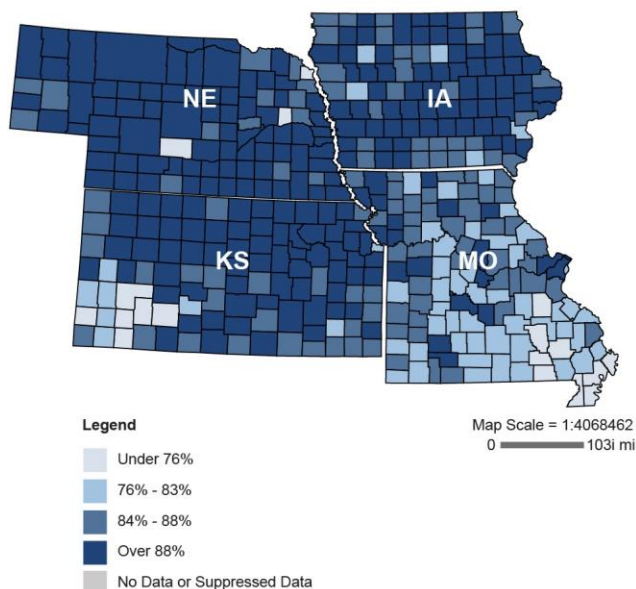
<sup>91</sup> US Department of Commerce (2010). *2010 Census Population Finder*. Retrieved June 11, 2013 from <http://www.census.gov/popfinder/>.

<sup>92</sup> FBI Uniform Crime Reports, Table 4, 2011 Data, "Offenses Reported to Law Enforcement." <http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/preliminary-annual-ucr-jan-dec-2011>

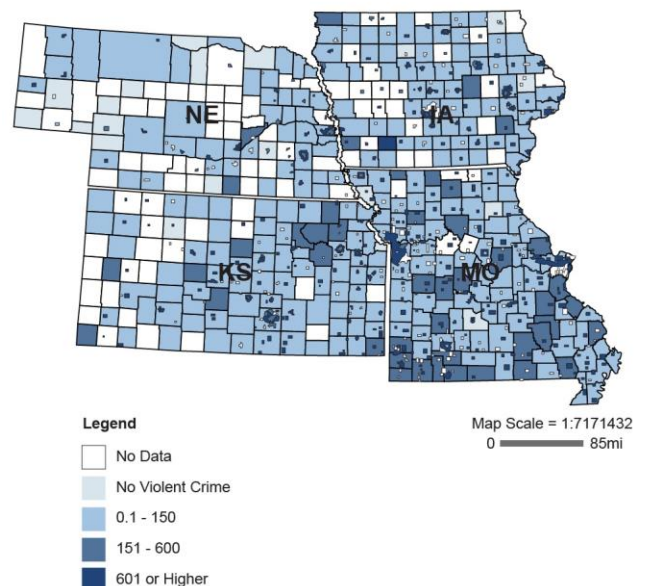
## Crime by Education Level

Numerous studies demonstrate that as education attainment increases the likelihood of committing crimes decreases.<sup>93</sup> Visual comparison of the two maps below support this relationship.<sup>94,95</sup> Darker colors in the map on the left indicate a lower rate of individuals with at least high school education. Darker colors in the map on the right indicate a higher rate of violent crime. Southeast Missouri has both a higher rate of individuals with less education and a higher rate of violent crime. In Nebraska, a state where the majority of the population has greater than a high-school education, the county-by-county crime rates appear much lower than the county-by-county crime rates in Missouri. In spite of limited education, the crime rates in Southwest Kansas are lower than those in educationally comparable regions of Missouri. This may be a topic for further exploration.

Percentage of Population with High School Diploma or Higher Level of Education, by County



Violent Crime Rate per 100,000 Persons



## Crime by Race

An initial visual comparison of violent crime rates by county and predominant race by block group (as seen on page 11) did not reveal a clear relationship. However, more robust analysis is recommended. If crime is determined to be a key health disparity driver, the Heartland RHEC may wish to study local challenges. Since crime rates are low in the majority of the region, concentrating effort on problem areas seems plausible and efficient.

<sup>93</sup> See for instance Lochner and Moretti (2003). <http://emlab.berkeley.edu/~moretti/lm46.pdf>

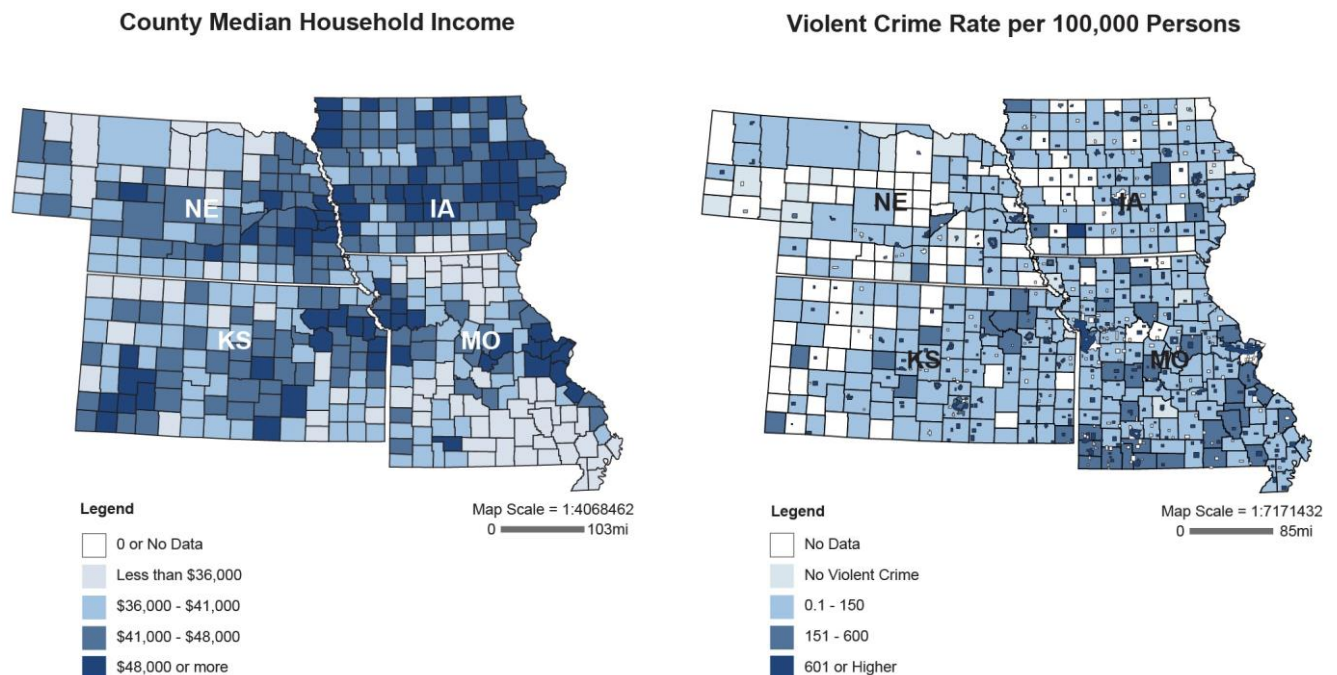
<sup>94</sup> ACS 5-Year Estimates 2007-2011

<sup>95</sup> FBI Uniform Crime Reports (Published 2011)



## Crime by Income

Visual inspection of the two maps below suggests that as population income rises, crime rates fall. This relationship has been demonstrated in numerous studies. Income *disparity* can also lead to greater degrees of crimes committed<sup>96</sup>. Interestingly, while the poorest areas did frequently report higher crime rates (such as in Southeastern Missouri), this was not always the case (see numerous counties throughout the region). Clearly there are many factors at work in explaining violent crime. Given that lower income levels are associated with poorer health outcomes—the relationship between income and crime leads to even greater difficulty in maintaining health for the poorest among us.<sup>97 98</sup>



## Resources in the Region to Address Crime

### All States and Multi-state

The *Office for Justice Programs* maintains an Office for Victims of Crime, a national hub where victims can obtain resources and support to deal with the crime of which they were a victim. Services range from support group networking to rape counseling to financial assistance during recovery.

<http://ovc.ncjrs.gov/ResourceByState.aspx?state=mo>

<sup>96</sup> Lee, Yoonseok and Shin, Donggyun, Income Polarization and Crime: A Generalized Index and Evidence from Panel Data (April 11, 2011). Available at SSRN: <http://ssrn.com/abstract=1845772> or <http://dx.doi.org/10.2139/ssrn.1845772>

<sup>97</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of ACS 5-yr estimates 2005-09 Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>98</sup> FBI Uniform Crime Reports (Published 2011)

## Nebraska

*Nebraska Crime Commission* maintains a Crime Victim Reparation Service (CVRS) that helps victims obtain support while recovering from a crime.

[http://www.ncc.state.ne.us/services\\_programs/crime\\_victim\\_reparations.htm](http://www.ncc.state.ne.us/services_programs/crime_victim_reparations.htm)

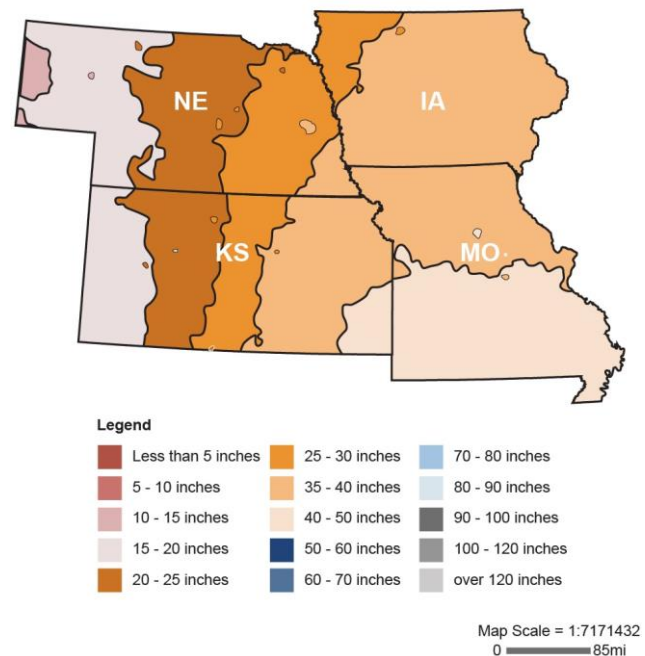
## Natural Environment

The natural environment is a determinant of health in addition to genetic, social, and physical determinants. In this section, we explore everything from air quality to annual rainfall to man-made pollutant sites within the Heartland Region.

### Annual Rainfall

Rainfall is a substantial predictor of both allergies (due to its influence on pollen and plant growth) and food availability (likelihood of farmlands). In the Heartland region, rainfall is very concentrated around Missouri and Iowa, trailing off toward the west. Visual comparison of maps did not show a clear relationship between income, race, or education level and the amount of rainfall present in the chosen living area. <sup>99</sup>

Average Rainfall From 1971-2000

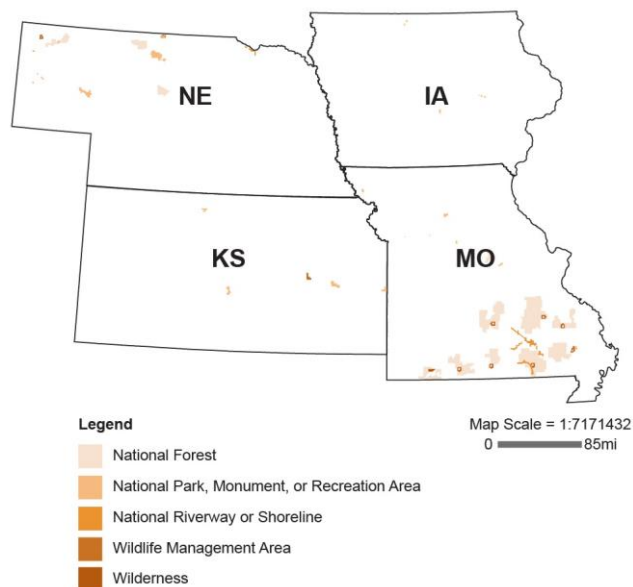


<sup>99</sup> National Oceanic and Atmospheric Administration (NOAA) records: 1971-2000 averages. Accessed 4/1/2013

## Parks Within the Region

The Heartland Region generally has fewer parks, public lands, national forests, monuments, riverways, and wilderness areas compared with the rest of the country. In the Western USA, these types of natural features occupy nearly as much land surface area as do cities. The Ozark National Forest in Southeast Missouri is the only notable natural conservation area, forest or park in this area. The dearth of official natural areas may limit the ability of residents to partake in healthy outdoor activities. Visual comparisons of a map of natural areas with maps for income, race, and education level did not reveal any clear patterns.<sup>100</sup>

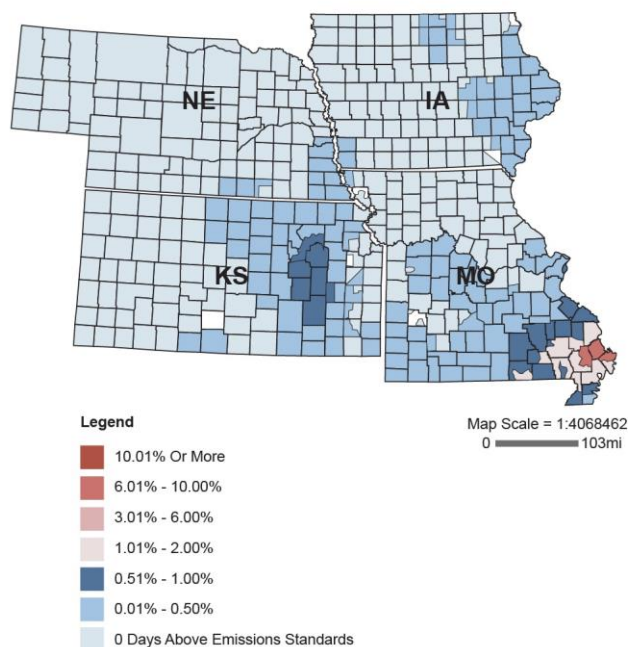
Natural Forest Areas and Other Public Lands



## Air Quality

The quality of air can have a major impact on the health of residents – the likelihood of everything from asthma to allergies to cancer can be affected by impure air quality. The map shows the distribution of “fine” particles, which are less than 2.5 micrometers in diameter and can only be seen with an electron microscope. They are produced by motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes<sup>101</sup>. The yellow and red areas in Eastern Kansas and Southeast Missouri have higher concentrations of these particles some days out of the

Percentage of Days of Above Average Fine Particle Levels, by Census Tract



<sup>100</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of data from the Bureau of Land Management (BLM) National Operations Center Resource Services Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>101</sup> The Environmental Protection Agency's Air Quality Index (AQI) information resource AirNow <http://www.airnow.gov/index.cfm?action=aqibasics.particle>

year—and therefore have lower quality air during on these days. More research is necessary to understand the content, source, and impact of these emissions.<sup>102</sup>

## Land Pollution & Chemical Contamination

In the Heartland region, numerous EPA-designated “Superfund” sites exist. These are geographic areas that have become contaminated with known pollutants. These sites must be cleaned up to prevent carcinogenic or poisonous chemicals from entering the food supply, water supply, or extended environment.<sup>103</sup> Many of these regions are clustered around St. Louis and Kansas City, but there are sites throughout the four-state region.

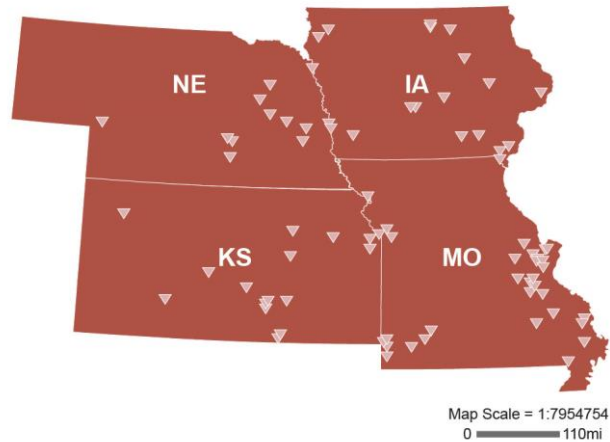
A visual comparison of the location of superfund sites and maps showing the population distribution according to race, education, income at the county level found no clear pattern.

## Organic Food

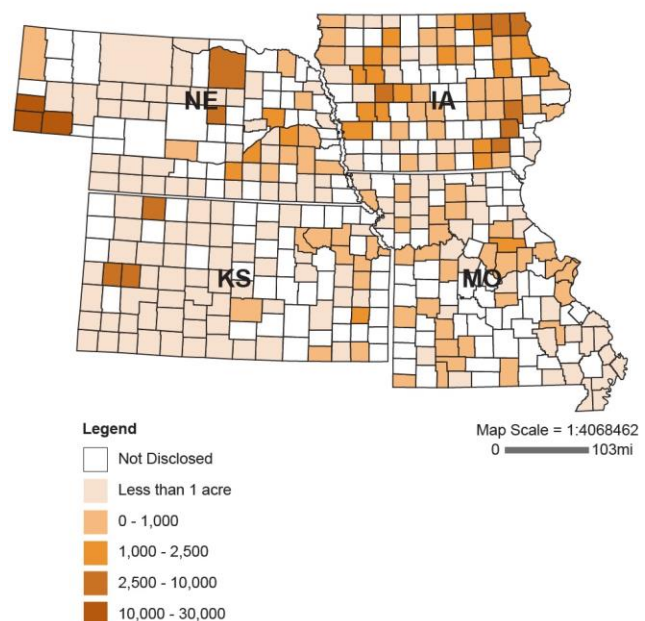
Information about the production of organic foods provides insight as to the amount of chemical pesticides and fertilizers in the environment, and about the potential of contaminants in the surface or ground water.<sup>104</sup> Organic methods of farming that use non-chemical pesticides or no pesticides/fertilizers can substantially reduce this risk.

Furthermore, consumers purchasing organic items have higher levels of health literacy and health risk awareness<sup>105</sup>. It is reasonable to postulate that regions

EPA - Designated Superfund Sites



Organic Crop Production in Acres per County



<sup>102</sup> University of Missouri Center for Applied Research and Environmental Systems analysis of data from the National Environmental Public Health Tracking Network (NEPHTN) Air Quality Data web page

<sup>103</sup> The Environmental Protection Agency’s information resources about Superfunds

<http://www.epa.gov/superfund/about.htm>

<sup>104</sup> National Cancer Institute, Cancer Trends Progress Report.

[http://progressreport.cancer.gov/doc\\_detail.asp?pid=1&did=2007&chid=71&coid=713&mid](http://progressreport.cancer.gov/doc_detail.asp?pid=1&did=2007&chid=71&coid=713&mid)

<sup>105</sup> Who are organic food consumers? A compilation and review of why people purchase organic food, Renee Shaw Hughner, Pierre McDonagh, Andrea Prothero, Clifford J. Shultz II and Julie Stanton, Morrison School of Agribusiness and Resource Management, Arizona State University, 7001 E. Williams Field Rd., Wanner Hall, Mesa, AZ 85212, USA, Journal of Consumer Behaviour, 6: 1–17 (2007), Published online in Wiley InterScience, ([www.interscience.wiley.com](http://www.interscience.wiley.com)) DOI: 10.1002/cb.210

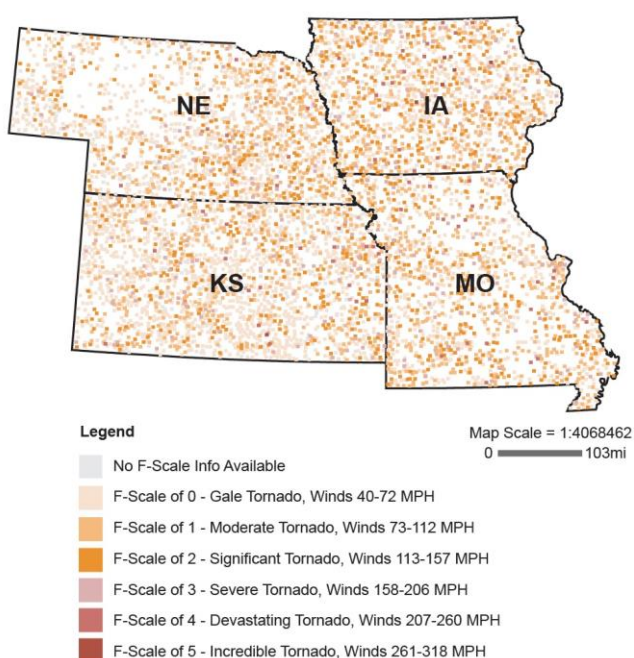


producing and selling more organic food will have populations following healthier lifestyles. When visually examining the distribution of organic farms in the Heartland region, there was no apparent relationship with race, income, or educational level of residents. Many counties in the region did not report their farming practices, rendering the analysis incomplete. Furthermore, the presence of organic farms in a climate of national agricultural distribution does not necessarily indicate that the residents of the Heartland region are the primary consumers of the farmed products.<sup>106</sup>

## Tornadoes

The Heartland Region experiences a large degree of tornado activity and is therefore known as “Tornado Alley”. This natural risk to life and health is present every spring, summer, and autumn. The residents of the region can expect to encounter numerous tornado warnings each year. These adverse weather events disproportionately affect residents living in remote flat rural areas such as those used for farming.<sup>107</sup>

**Tornado Touchdowns by Intensity (F-Scale), 1950-2010**



## Resources in the Region to Address Environmental Concerns

### Missouri

The *Missouri Department of Natural Resources Brownfields/Voluntary Cleanup Program* handles brownfields cleanup and redevelopment. It provides state oversight for voluntary cleanups of properties contaminated with hazardous substances. Many of the sites entering the BVCP are not heavily contaminated and are contaminated by sources not addressed by any of the Department of Natural Resources' regulatory programs such as Emergency Response, Superfund, Resource Conservation and Recovery Act or Petroleum Storage Tanks.

<http://www.dnr.mo.gov/env/hwp/bvcp/hwpvcp.htm>

### Kansas

The *Kansas Department of Health and Environment Bureau of Environmental Rehabilitation* responds to environmental emergencies and manages environmental

<sup>106</sup> Univ. of Missouri Center for Applied Research and Environmental Systems analysis of 2007 Census of Agriculture data Available from Community Commons:

<http://initiatives.communitycommons.org/tool/maps/default.aspx>

<sup>107</sup> Univ. of Missouri Center for Applied Research and Environmental Systems analysis of tornado touchdown points data from the National Oceanic and Atmospheric Administration Available from Community Commons: <http://initiatives.communitycommons.org/tool/maps/default.aspx>

contamination through pollution source control, containment, and remedial action. The program's responsibilities include investigation of pollution occurrences and sources from spills, illegal dumping, abandoned facilities, and landfills; storage tank regulations; surface mining site regulation and designing and overseeing remedial activities at contaminated sites. <http://www.kdheks.gov/ber/index.html>

#### Iowa

The *Iowa DNR Land Recycling Program* allows owners or other stakeholders of a property to voluntarily assess and implement remedial actions at a site that is contaminated or is perceived to be contaminated. The assessment of the property must address the severity of the contamination problems and the risks associated with the contamination. The Department will provide a No Further Action Certificate for the site following assessment and implementation of appropriate cleanup activities and/or other remedies to assure the protection of public health and the environment. This certificate shall provide limited liability protection from further regulatory action relative to the problem(s) addressed.

<http://www.iowadnr.gov/InsideDNR/RegulatoryLand/ContaminatedSites/LandRecyclingProgramLRP.aspx>

#### Nebraska

The *Nebraska Department of Environmental Quality Voluntary Cleanup Program* allows the Nebraska Department of Environmental Quality (NDEQ) to review and oversee efforts by property owners, prospective buyers, developers, lending institutions, or others wishing to initiate voluntary environmental cleanup activities.

<http://www.deq.state.ne.us/Superfun.nsf/pages/VCP>



# Regional Challenges, Opportunities, and Next Steps

The environmental scan highlighted key regional challenges and opportunities. The opportunities arise from existing strengths within Region VII that can drive public policies and actions that promote health equity and the elimination of health disparities.

## Challenges and Disparities

This environmental scan has outlined the issues and health disparities that make this region unique. Those challenges may be summarized as follows:

- Healthcare providers and other organizations in the region will need to understand the multiple cultures and languages of a growing foreign-born population. Staff members should be able to provide the most urgent and far-reaching information in the native language of patients and clients.
- There are income disparities in the region that likely translate into disparities in the ability of individuals to attain quality healthcare. This effect is further exacerbated by the shortage of health facilities in rural areas and the shortage of health professionals, especially those serving low income individuals in Kansas and Missouri.
- Many people in the Heartland Region are overweight or obese and this will negatively affect health outcomes and increase health expenditures. Poor diet may have regional economic impacts over the long term due to days lost from work from health issues.
- While the poverty rate in the region remains slightly below the national average, several counties have far higher rates including one in Missouri over twice the national average. This level of poverty can have significant health consequences including malnutrition.
- The region generally—and rural population more specifically—face the constant threat of tornados which take both lives and livelihoods.

## Assets and Opportunities

While the overall intent of this scan was to identify areas of challenge and health disparities, it has also revealed assets and opportunities for addressing disparities:

- Despite the healthcare facility shortages noted above, the region's health care systems rank nationally as average to above average—providing a very solid foundation for growth and innovation in the future.
- The region enjoys relatively low unemployment, reducing the impact unemployment can have on the physical and mental well-being residents.
- The foreign born population in Missouri is—on average—better educated than the foreign born population in the other Heartland states and may—through employment in public and nonprofit organizations—help generate relevant cultural

and language materials useful in guiding health providers in that state and the region more generally.

## **General Guidelines**

People interested in leveraging assets and opportunities to address the challenges and disparities discussed in this report may wish to pursue the following activities:

- Increasing awareness (data and outreach)
- Leveraging funding (foundations and businesses)
- Establishing evidence-based and research-informed practices that are feasible and beneficial for the RHEC to support
- Seeking opportunities to influence policy

## Appendix A: Opportunities Matrix

Areas of Change		Initiatives and Partnerships	Opportunities for RHEC Involvement
Policy	Health Activities		
	Social Determinants of Health		
Outreach and Capacity Building	Health Activities		
	Social Determinants of Health		
Education and Professional Development	Health Activities		
	Social Determinants of Health		
Leadership Development	Health Activities		
	Social Determinants of Health		
Standards (e.g., implementation of language standards)	Health Activities		
	Social Determinants of Health		
Data, Monitoring, and Accountability	Health Activities		
	Social Determinants of Health		