KANSAS RURAL HEALTH WORKS

The Importance of the Health Care Sector to the Economy of Haskell County

Kansas Rural Health Options Project
December 2010

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RURAL HEALTH OPTIONS PROJECT KRHOP KANSAS

Funding for this report provided by: Health Resources and Services Administration

In cooperation with:
office of Local Government
K-State Research and Extension
and K-STATE Kansas State University Research and Extension

The Economics of Rural Health Care

The organization and delivery of health care services have undergone rapid evolution in recent years. For many Americans, the cost of services and access to care are important issues. This certainly is true in many rural areas where communities have struggled to maintain affordable, quality health care systems. As economic forces and technical advances continue to change health care, it is more important than ever for rural community leaders and health care providers to work together to ensure affordable, sustainable health care systems.

In an effort to provide useful information resources to rural community and health care leaders, the Kansas Rural Health Options Project (KRHOP) has teamed with the Office of Local Government, a unit of the Department of Agricultural Economics and K-State Research and Extension, to develop this report as a component of the *Kansas Rural Health Works* program. KRHOP is a partnership of the Office of Local and Rural Health at the Kansas Department of Health and Environment, the Kansas Hospital Association, the Kansas Board of Emergency Medical Services and the Kansas Medical Society. KRHOP is dedicated to assuring quality health care delivery in rural Kansas through the promotion of collaborative systems of care. *Kansas Rural Health Works* is supported by a federal grant to KRHOP (No. 5 H54 RH 00009-03) from the Health Resources and Services Administration, Office of Rural Health Policy.

The purpose of this report is to provide information resources that may be used to communicate to community leaders and concerned citizens the relative importance of health care to the local economy.

Much of this information draws on the national Rural Health Works program sponsored by the Office of Rural Health Policy, an initiative led by Cooperative Extension Service specialists at Oklahoma State University. Many persons knowledgeable about the Kansas health care system also contributed to this report, including specialists at the Kansas Hospital Association, the Office of Local and Rural Health, and hospital administrators from across the state who cooperated in the development of these resources.

The Office of Local Government welcomes any questions, comments or suggestions about this report or any of their other services. Contact your county Extension office or:

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The Economic Contribution of the Health Care Sector In Haskell County, Kansas

Introduction

The rapidly changing delivery of health services in rural counties has the potential to greatly impact the availability of health care services in the future. These changes include:

- Insufficient Medicare and Medicaid payments to hospitals and providers may force a reduction in the provision of health care services.
- Although Kansas rural health networks are already fairly strong, creation of provider networks may substantially change the delivery of, and access to, local health care services.
- Use of telemedicine could increase access to primary, consultative and specialty health care services at the county level.
- Development of critical access hospitals could help health care services remain in rural counties. Kansas currently has over 80 critical access hospitals.

As a result, the health care sector can have a large impact on the local economy. All of these changes make it imperative that decision makers in Haskell County become proactive in maintaining high quality local health care services.

Health care facilities such as hospitals and nursing homes provide jobs and income to people in the community. As these employees spend their income in the community, a ripple spreads throughout the economy, creating additional jobs and income in other economic sectors. To help understand this important connection between the health sector and the local economy, this report will:

- Discuss the role of the health sector in rural development.
- Measure the employment, income, and retail sales impact of the health sector on the Haskell County economy.

This report will not make any recommendations.

Health Care Changes and Their Effects on Rural Communities

The changes occurring in the health care sector have had a substantial impact on many rural communities. Many people have found it more difficult to get health care coverage, insurance premiums have increased, and rural health care providers have been reimbursed at rates less than their urban counterparts for doing the same work. Concurrently, changes in urban health systems have had impact on rural health care delivery with the result that some rural communities have lost their ability to make decisions about their local health care.

Rapid increases in health care costs have driven these changes. In 1990, a person spent an average of $2,239 (2008$) on health care expenditures. By 2008, health care expenditures rose to $3,486 per person. Additionally, the average person spent $1,415 (2008$) for insurance premiums and $824 on out-of-pocket expenses such as deductibles and co-payments in 1990. In 2008, those figures rose to $2,573 for insurance premiums and $913 for out-of-pocket expenses. Table 1 shows the trend of increasing health care expenses from 1970 through 2008. Because of the increases in the demand for and cost of health care, the major purchasers of health care services – employers and government (through Medicare, Medicaid and other programs) – must search for ways to slow the rapid growth in health care expenditures.

Table 1. United States Per Capita Health Expenditures

Year	Per Capita Consumer Spending (2008$)	Per Capita Insurance Premiums (2008$)	Per Capita Out-of-Pocket Costs (2008$)
1970	$913	$350	$563
1980	$1,307	$708	$598
1990	$2,239	$1,415	$824
2000	$2,786	$1,957	$829
2001	$2,915	$2,081	$834
2002	$3,114	$2,251	$863
2003	$3,291	$2,400	$892
2004	$3,376	$2,476	$900
2005	$3,460	$2,547	$912
2006	$3,492	$2,586	$906
2007	$3,530	$2,603	$926
2008	$3,486	$2,573	$913

Centers for Medicare & Medicaid Services; data are inflation adjusted to 2008 dollars

Typically, rural community residents pay little attention to their local health care system until it is needed. Consequently, many rural people have little idea of the overall importance of the health care sector to their community's economy, such as the number of jobs it currently provides and its potential to provide more jobs. To ensure that health care services remain available locally, rural communities need to understand these economic relationships. First, rural communities need to learn about their own local health care needs and take stock of their local health care system. While the emphasis at the national level is on controlling costs and eliminating duplication and overcapacity in the system (de-licensing unused hospital beds, for example), the issues are very different in rural communities.

One of the issues that underlies differences between health care systems in rural and urban areas is demographics. In rural areas, there are proportionately more elderly, more children living in poverty, higher unemployment and lower incomes. Rural people report poorer health and have more chronic health conditions. Rural people are more likely to be uninsured and have fewer health services available in the town where they live. Finally, people in rural communities are more likely to derive part of their income from the health care industry (either directly or indirectly).

Another issue that underlies the differences between urban and rural health care is the structure of the systems. In general, there are fewer providers and hospitals in rural areas, and they operate on very thin profit margins. In fact, many rural hospitals operate at a loss, with too few patients to cover daily costs. Also, until recently, most rural health care systems had been locally operated and controlled.

Pressures outside of the health care system also come into play in rural communities, creating stresses not applicable to urban systems. Cyclical commodity prices cause a periodic farm financial crisis, undermining the financial viability of family farms and business, such as farm implement manufacturers and dealers. Businesses located in rural areas tend to be small, often do not provide health insurance, and are highly vulnerable to changing economic conditions. Although these stresses can lead to mental and physical health problems, many people do not seek help for their health problems. Some will say they have too little time to seek out health care services, especially if they are working two jobs to make ends meet. For others, the strong sense of pride and self-reliance inherent among rural people may preclude many from seeking care, especially if they cannot afford it.

What is the ultimate impact of these changes and stresses on rural communities? Will it be a net gain or net loss, or will it all balance out in the end?

On the positive side, urban-based specialists may set up periodic office hours in rural clinics, health centers and hospitals; an urgent care center may open; and air medivac helicopters and other emergency medical services may be strategically located in a rural community. These services, while provided by many urban health systems, are convenient for rural residents, and otherwise would not be available to rural communities.

On the negative side, ties with financially strong urban health care providers can be detrimental to rural providers if the rural providers lose decision-making ability. Rural providers may also find themselves aligned with an organization that does not share their mission and values, or the rural provider may be unable to meet the expectations of the larger provider.

Anecdotal evidence suggests that the downsides can be significant and potentially devastating for a rural community. In some instances, urban or other outside interests have purchased rural clinics and hospitals and then closed them because they did not provide sufficient profit. Employers have signed contracts with insurance plans that push patients to the city for their health care, bypassing local, more convenient services. Emergency medical service providers have changed their service areas or closed their doors. When urban health organizations encourage insured rural residents to spend their health care dollars in the city rather than to purchase equivalent services locally, it can have a significant negative economic impact and result in a loss of health dollars within the local community. In addition, out of town trips to obtain health care naturally offer opportunities to spend dollars out of town that may have been spent locally. These out-migrated dollars are missed opportunities and can significantly impact the local economic base.

Rural communities need to overcome inertia and take stock of local health care. Rural providers should be challenged to organize, whether through formal or informal mechanisms, so that they can compete with urban systems. In general, regional strategies will probably work better than local ones. Providers must be willing to take risks and coordinate services.

Well-positioned rural health systems can meet these challenges. Fragmentation is a big problem in health systems, but smaller, independent rural systems have more opportunity to create linkages. The scarce resources available to rural health services have engendered innovation and efficiencies as a matter of survival. Strong local leadership helps sustain these systems. Many rural health organizations are committed to fiscal accountability, expressed as quality health care at low cost. It should not be too difficult to remind rural residents of the long-term commitment these rural providers have made in the communities they serve. In time, rural providers need to offer sustainable health care services that best meet community need.

Success in meeting these challenges can be measured in terms of increased local services, more spending on locally-available health care, local control of health resources, negotiation of good reimbursement rates for providers, and high levels of community satisfaction with local health care.

If rural health providers do not act, they will face the prospect of losing jobs; rural communities could lose health care services; and everybody may lose local control of their health care.

Health Services and Rural Development

Though the connections between health care services and rural development are often overlooked, at least three primary areas of commonality exist. A strong health care system can help attract and maintain business and industry growth, attract and retain retirees, and also create jobs in the local area.

Health Services and Community Industry

Studies have found that quality of life factors play a dramatic role in business and industry location decisions. Health care services represent some of the most significant quality of life factors for at least three reasons. First, good health and education services are imperative to industrial and business leaders as they select a community for location. Employees and participating management may offer strong resistance if they are asked to move into a community with substandard or inconvenient health services. Secondly, when a business or industry makes a location decision, it wants to ensure that the local labor force will be productive, and a key productivity factor is good health. Thus, investments in health care services can be expected to yield dividends in the form of increased labor productivity. The third factor that business and industry consider in location decisions is cost of health care services. A 1990 site selection survey concluded that corporations looked carefully at health care costs, and sites that provided health care services at a low cost sometimes received priority. In fact, 17 percent of the respondents indicated that their companies used health care costs as a tie-breaking factor between comparable sites (Lyne, 1990).

Health Services and Retirees

A strong and convenient health care system is important to retirees, a special group of residents whose spending and purchasing can provide a significant source of income for the local economy. Many rural areas have environments (for example, moderate climate and outdoor activities) that enable them to attract and retain retirees. Retirees represent a substantial amount of spending, including the purchasing power associated with pensions, investments, Social Security, Medicare and other transfer payments. Additionally, middle and upper income retirees often have substantial net worth. Although the data are limited, several studies suggest health services may be a critical variable that influences the location decision of retirees. For example, one study found that four items were the best predictors of retirement locations: safety, recreational facilities, dwelling units, and health care. Another study found that nearly 60 percent of potential retirees said health services were in the “must have” category when considering a retirement community. Only protective services were mentioned more often than health services as a “must have” service.

Health Services and Job Growth

Job creation represents an important goal for most rural economic development programs. National employment in health care services increased 70 percent from 1990 to 2008. In rural areas, employment in health-related services often accounts for 10 to 15 percent of total employment. This reflects the fact that the hospital is often the second largest employer in a rural community (local government including schools typically being the largest employer).

Another important factor is the growth of the health sector. Health services, as a share of gross domestic product (GDP), has increased over time. In 1990, Americans spent $1.1 trillion on health care (2008$), which accounted for 12.3 percent of the GDP. In 2005, health care costs increased to $2.0 trillion, or 15.7 percent of the GDP. If current trends continue, projections indicate that Americans will spend 19.3 percent of GDP on health care by 2019. Capturing a share of this economic growth can only help a rural community.

Understanding Today's Health Care Impacts and Tomorrow's Health Care Needs

A strong health care system represents an important part of a community's vitality and sustainability. Thus, a good understanding of the community's health care system can help leaders and citizens fully appreciate the role and contributions of the health care system in maintaining community economic viability. In addition, a community should also examine the future health care needs of its residents in order to position itself so that it can respond to those needs. This report is designed to provide the kind of information that a community can use to understand its health care system and some possible indicators of current and future health care needs of its residents. The report begins with an examination of demographic, economic and health indicators and culminates with an illustration of the full economic impact of the health care sector in the county's economy.

Haskell County Demographic Data

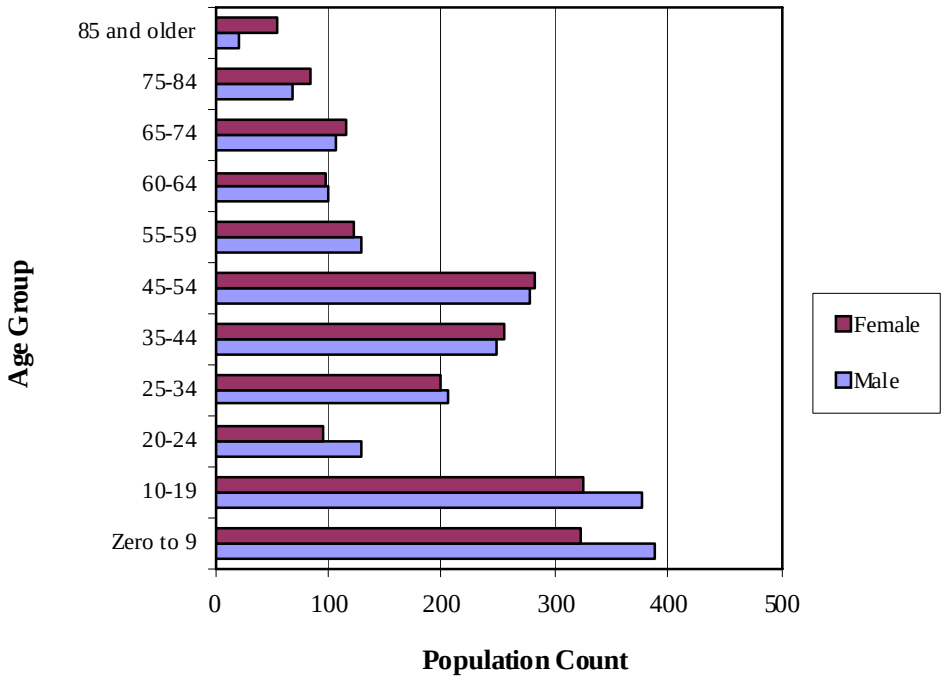
Table 2 presents population trends for Haskell County. In 2010, an estimated 3,922 people live in the county. Between 1990 and 2010, the population increased 1.1 percent and also decreased 8.9 percent between 2000 and 2010. Population projections indicate that 3,934 people will live in the county by 2015. The state of Kansas population increased 8.5 percent between 1990 and 2000 and an additional 5.5 percent through 2010.

Table 2. Current Population, Population Change and Projections

Current Population		Percent Change in Population			Population Projections	
Year	Count	Years	County	State	Year	Count
1990	3,880	1990-2000	11.0	8.5	2015	3,934
2000	4,305	2000-2010	-8.9	5.5	2020	3,953
2010	3,922	1990-2010	1.1	14.5	2025	3,977

U.S. Census Bureau; population projections from Woods and Poole Economics, Inc.

Figure 1. Population by Age and Gender

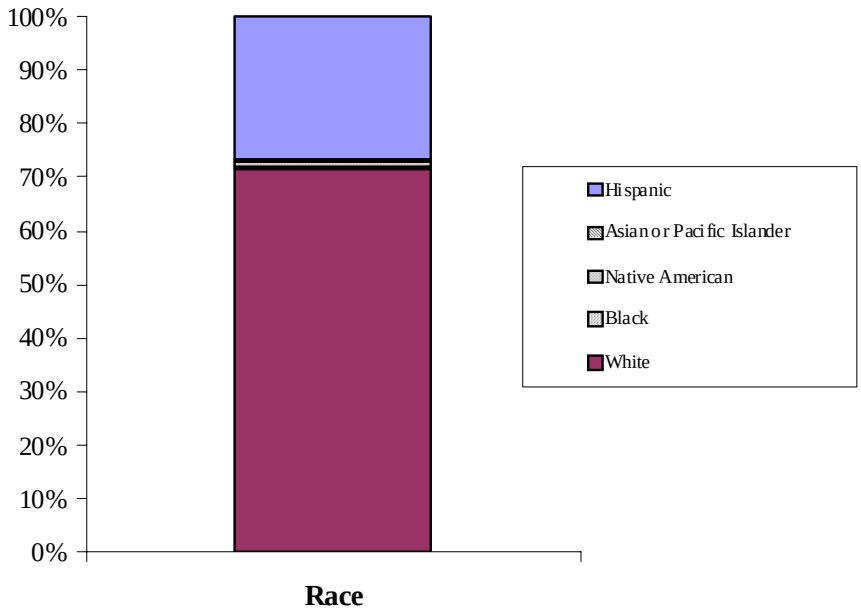


U.S. Census Bureau

Figure 1 shows a breakdown of the population by age and by gender. Here, people aged 19 and younger made up the largest portion of the population, with 35.3 percent. People aged 65 and older represented 11.2 percent of the population. Of those 65 and older, 43.7 percent were male and 56.3 percent were female. Age range can indicate the future health care needs of a county's population. A growing population of older adults has a different set of health care needs than a population with more young people.

Race can also play a role in assessing the health needs of the community. In the case of Hispanic immigrants, lack of English speaking skills may prevent them from using health care services within the county or from using health care services at all. Figure 2 shows the racial and ethnic composition of the county. Whites made up 71.7 percent of the county's population, while Native Americans represented 0.9 percent, African Americans made up 0.2 percent, Asians were 0.6 percent and Hispanics were 26.6 percent of the population. In Kansas, whites make up 80.5 percent of the population, Native Americans represent one percent, African Americans 6.3 percent, Asians 2.5 percent and Hispanics 9.6 percent.

Figure 2. Population by Race (2010)

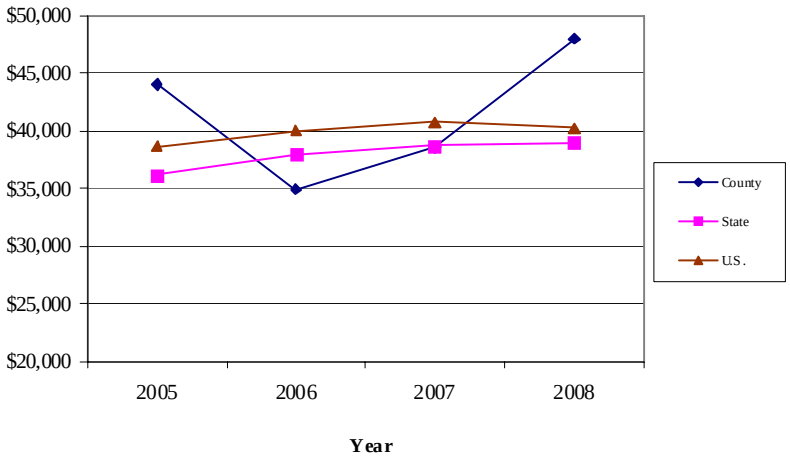


Woods and Poole Economics, Inc. Native American includes American Indians and Alaska Natives; Asian or Pacific Islander includes Asian Americans, Native Hawaiians, Pacific Islanders; Hispanic population is persons of Hispanic origin regardless of race.

Economic Indicators

An important question for health care providers is how people will pay for services. In rural areas, the likelihood of poverty, lack of insurance and chronic health conditions increases. Additionally, rural areas tend to have higher numbers of elderly, for whom supplemental income becomes a proportionally larger source of income. Such supplemental income comes in the form of transfer payments such as Social Security and other retirement benefits, disability, medical payments like Medicare and Medicaid, unemployment insurance, and veterans' benefits. The elderly, major consumers of health care services, receive much of this income, and a large portion of this assistance is available only to those who make the effort to apply. In order to maximize the income resources available in the county, one strategy is to ensure that every person receives all of the financial assistance from broader levels of government for which they are eligible.

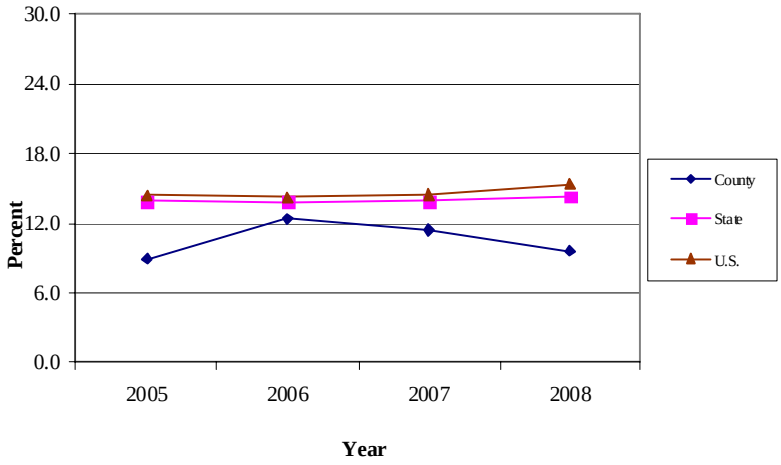
Figure 3. Total Per Capita Personal Income (2008$)



Bureau of Economic Analysis; data are inflation adjusted to 2008 dollars.

Figure 3 shows the change in total per capita personal income, adjusted for inflation from 2005 through 2008. Per capita personal income has increased in Kansas and the United States. In Haskell County, personal income has increased from $44,035 in 2005 to $47,970 in 2008.

Figure 4. Transfer Income as a Percent of Total Income (2008$)



Bureau of Economic Analysis; data are inflation adjusted to 2008.

Figure 4 shows how the relative proportion of transfer income to total income has changed during the same four years. In the U.S., transfer payments have increased as a percentage of total income by 6.6 percent, while transfer payments in Kansas have increased by 2.5 percent. In the county, the proportion of income stemming from transfer payments has increased from 8.9 percent in 2005 to 9.6 in 2008.

Table 3 shows personal income data by source for Haskell County, Kansas and the nation. Within the county, 42.2 percent of all earnings come from wages and salaries, compared to 69.4 percent in Kansas and 71.6 percent for the entire United States. Retirement and disability make up 39.7 percent of transfer payments in the county, with another 42.3 percent coming from medical payments. In Kansas, 39.0 percent of all transfers come from retirement and disability, while medical payments represent 42.2 percent. For the U.S., medical payments make up the largest portion of transfers at 44.0 percent.

Table 3. 2008 Personal Income Data

Source	County Total	County Per Capita	County Percent	State Percent	U.S. Percent
Earnings					
Wages and Salaries	$63,910,000	$16,308	42.2	69.4	71.6
Other Labor Income	$14,355,000	$3,663	9.5	17.0	16.3
Proprietor's Income	$73,342,000	$18,714	48.4	13.6	12.1
Total Earnings	$151,607,000	$38,685	100.0	100.0	100.0
Transfer Payments					
Retirement and Disability	$7,173,000	$1,830	39.7	39.0	34.2
Medical Payments	$7,651,000	$1,952	42.3	42.2	44.0
Other	$3,245,000	$828	18.0	18.7	21.9
Total Transfer Payments	$18,069,000	$4,611	100.0	100.0	100.0
Personal Income					
Earnings by Place of Residence	$147,252,000	$37,574	77.1	68.8	66.6
Dividends, Interest, and Rent	$25,648,000	$6,545	13.4	17.0	18.0
Transfer Payments	$18,069,000	$4,611	9.5	14.3	15.3
Total Personal Income	$190,969,000	$48,729	100.0	100.0	100.0

Bureau of Economic Analysis
Per capita estimates based on 2009 Woods and Poole Economics, Inc. estimates.
Due to rounding error, numbers may not sum to match total.

Health Indicators and Health Sector Statistics

The following health indicators and statistics provide information from which communities may infer several things about local health care needs. While some items provide an indication of need by type of service, other items suggest the amount and source of resources available to pay for health services. Health care planners can use this information to arrange for necessary services and anticipate the administrative requirements needed to support such services.

Table 4. Health Services, Medicare, and Medicaid Funded Programs

	County Number	County Percent/Rate	State Percent/Rate
Hospitals (2009)			
Number[1]	1	0.2	0.1
Number of beds[1]	13	3.2	4.1
Admissions per bed[1]	13	3.2	0.01
Adult Care Homes (2009)			
Number[2]	0	0.0	0.8
Number of beds[2]	0	0.0	56.2
Assisted Living Facilities (2009)			
Number[2]	0	0.0	0.7
Number of beds[2]	0	0.0	29.6
Medicare (2007)			
Elligibles[3,4]	500	12.6	14.8
Medicaid Funded Programs			
Food Stamp Beneficiaries (2009)[4]	160	4.0	7.4
Temporary Assistance for Families (FY 2009)[4]	24	0.6	1.1

Kansas Hospital Association; Kansas Department on Aging; Kansas Department of Social and Rehabilitative Services; Center for Medicare and Medicaid Services

[1]Rate per 1,000 population.

[2]Number of beds per 1,000 people 65 years and older.

[3]Annual average number of original Medicare eligibles---individuals who are either currently or formerly entitled or enrolled in either part A or part B original Medicare.

[4] Percent of total 2007 estimated population.

Table 4 shows the availability of certain types of health services in Haskell County as well as usage of some health care-related government programs. The county has 13 available hospital beds, with a rate of 3.2 admissions per bed per 1,000 people. Additionally, the county has 0 adult care home beds and 0 assisted living beds. Medicare users make up 12.6 percent of the county's total population and 4.0 percent of the county's population receive food stamp benefits.

Table 5. Maternity and Children's Health Statistics

	County Number	County Percent/Rate	State Percent/Rate
Poverty (2008)			
Total Persons in Poverty[1]	386	10.0	11.3
Children in Poverty[2]	175	16.1	14.6
Total Births[3] (2008)	77	19.6	14.9
Births to Mothers without High-School Diploma[4] (2007)	N/A	40.4	18.2
Births with Adequate Prenatal Care[3] (2008)	38	52.8	77.6
Low Weight Births[5] (2007)	N/A	1.8	7.1
Immunization[6] (2007)	N/A	57.0	58.0
Infant Mortality[7] (2008)	1	16.9	7.4
Child Deaths[8] (2008)	1	3.1	1.7
Child Care Subsidies[9] (2008)	9	N/A	N/A

U.S. Census Bureau; 2008 Kansas Kids Count Data Book, Kansas Department of Health and Environment

[1] Percent of total population.

[2] Percent of children younger than 18 years in families below poverty level.

[3] Percent of live births to all mothers who received adequate or better prenatal care.

[4] Rate of live births per thousand females.

[5] Percent of live births in a calendar year.

[6] Percent of total kindergarteners who received all immunizations by age two.

[7] Number of infant deaths younger than one year per thousand live births.

[8] Number of deaths from all causes per 100,000 children ages 1-14.

[9] Average monthly number of children participating in the Kansas Child Care Assistance program.

Table 5 gives information which can indicate the situation for young children and mothers. Within the county, 16.1 percent of children live in poverty, while 14.6 percent of children statewide live in poverty. Births to school age mothers occurred at a rate of 40.4 births per thousand teenage females, while school age mothers gave birth at a rate of 18.2 births per thousand teens statewide. Low weight births occurred in 1.8 percent of all live births in the county, while statewide low weight births occurred in 7.1 percent of all live births.

The Economic Impact of the Health Care Sector
An Overview of the Haskell County Economy, Highlighting Health Care

Table 6 presents employment, income and sales data for Haskell County for 2008. Health care income and sales data were estimated using state average data. Data for all other economic sectors come from various government statistics and published data sources.

The table aggregates the economic sectors into broad categories, and the employment numbers indicate "average" jobs in each sector, including full- and part-time employment. Labor income represents local wages and proprietary income. Total income is the broadest measure of income generated within the local economy, and includes labor income plus dividend, interest, rents, corporate profits, etc.

Table 6. Direct Employment, Income and Sales by Economic Sector and Health Services Relative Shares Compared to the State and U.S., 2008 ($thousands)

Sector	Employment	Labor Income	Total Income	Total Sales
Agriculture	1,041	$26,235	$153,484	$610,480
Mining	116	$8,837	$18,885	$38,898
Construction	77	$2,620	$2,863	$8,704
Manufacturing	70	$78,927	$134,899	$267,443
Transportation, Information, Public Utilities	132	$6,314	$8,970	$17,591
Trade	206	$7,495	$12,991	$20,036
Services	1,344	$37,913	$75,649	$142,329
Health Services[1]	213	$11,913	$18,224	$28,614
Health and Personal Care Stores	1	$31	$46	$64
Veterinary Services	15	$326	$357	$922
Home Health Care Services	0	$0	$0	$0
Doctors and Dentists	49	$3,943	$4,483	$6,450
Other Ambulatory Health Care	8	$419	$691	$1,102
Hospitals	140	$7,193	$12,646	$20,077
Nursing/Residential Care Facilities	0	$0	$0	$0
Government	600	$23,887	$27,488	$30,872
Total	3,585	$192,230	$435,229	$1,136,353
Health Services as a Percent of Total				
County	5.9	6.2	4.2	2.5
State	8.7	8.1	6.0	4.4
Nation	8.1	8.4	6.4	5.3

Minnesota IMPLAN Group; Due to rounding error, numbers may not sum to match total.

[1]In some Kansas counties, various health services are consolidated within a single entity in the classification system shown here. In such cases, it may not be possible to break apart employment, income or sales information. If you have questions regarding the organization of health care services in your county, contact your local hospital administrator.

Health services are separated from the service and retail trade sectors but not double counted in the totals. The numbers for each sector include not only the professionals in the sector (the doctors, dentists, etc.) but also support staff (assistants, clerks, receptionists, etc.) employed by the business. In the health sector, the Health and Personal Care stores category includes pharmacies, while the Doctors and Dentists category includes chiropractors, optometrists, and other health care practitioners. Other Ambulatory Health Care Services includes services such as medical and diagnostic labs and outpatient care centers.

Health Services employs 213 people, 5.9 percent of all job holders in the county. Health Services for the state of Kansas employs 8.7 percent of all job holders, while 8.1 percent of all job holders in the United States work in Health Services. Health Services in the county has a number 4 ranking in terms of employment (Figure 5). Health Services is number 5 among payers of wages to employees (Figure 6) and number 6 in terms of total income (Figure 7). As with most rural areas, the health sector plays an important role in the economy.

Figure 5. Employment by Sector (2008)

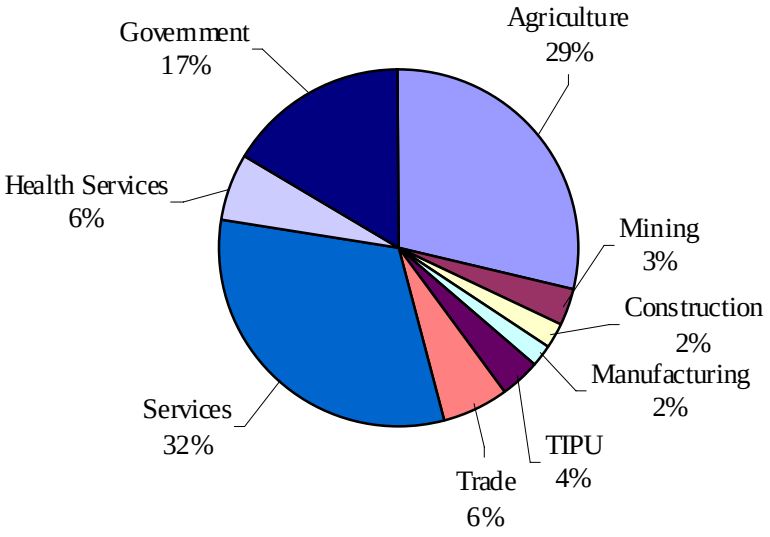


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Figure 6. Labor Income by Sector (2008)

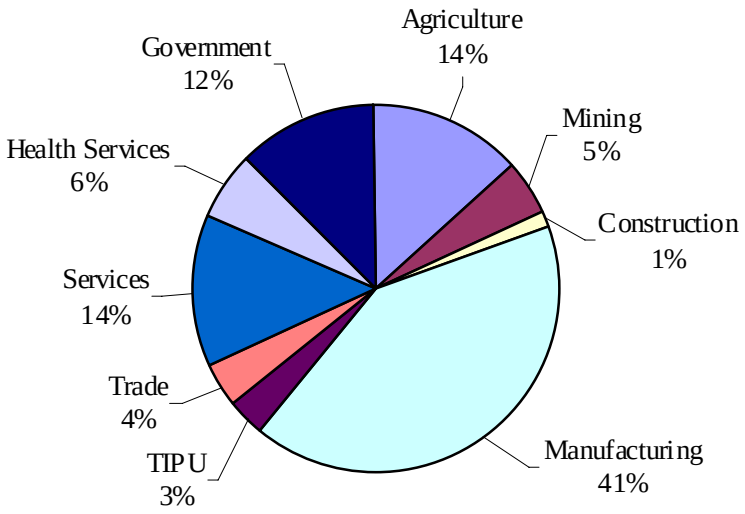

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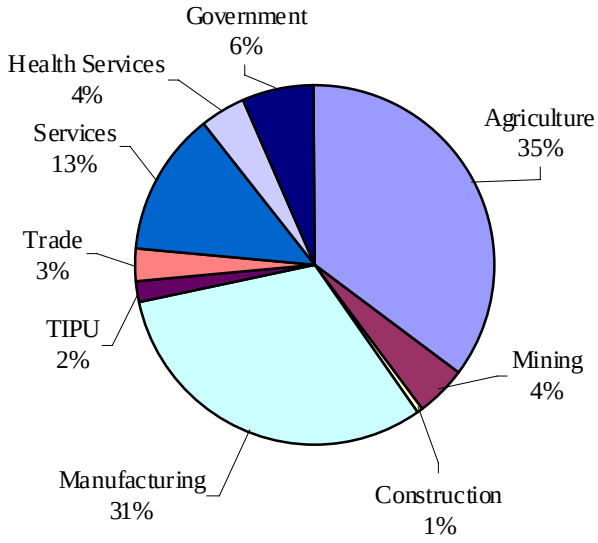
Figure 7. Total Income by Sector (2008)



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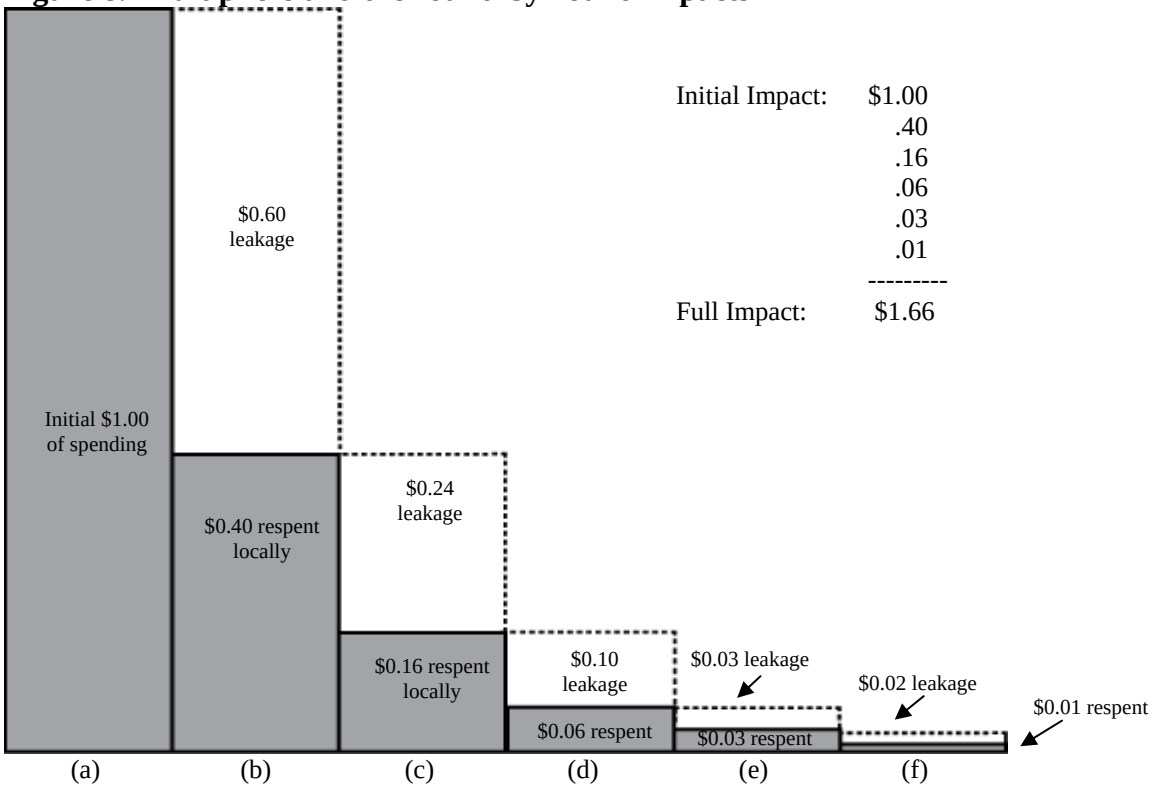
Health Sector Impact and Economic Multipliers

The previous section detailed the direct contributions of the Health Services sector within the Haskell County economy, but the full impact of the sector goes beyond the number of people employed and the wages they receive. The employment and income levels in the health sector have a significant impact on employment and income throughout other industries in the market area. This secondary impact or "ripple effect" comes from local businesses buying and selling to each other and from area workers spending their income for household goods and services; the ripple effect spreads the economic impact of the health sector throughout the community economy.

As dollars are spent locally, they are, in turn, re-spent for other goods and services. Some of these goods are produced locally while others are imports (the portion of the dollar spent on imports leaves the community as leakage). This spending and re-spending occurs over multiple rounds until it is finally exhausted.

Graphically, we can illustrate the round-by-round relationships modeled as shown in Figure 8. The direct effect of spending is shown in the far left-hand side of the figure (the first bar (a)). For simplification, the direct effects of a $1.00 change in the level of spending plus the indirect effects spillover into other sectors and create an additional 66 cents of activity. In this example, the multiplier is 1.66. A variety of multipliers can be calculated using these analysis techniques.

Figure 8. Multipliers and the round-by-round impacts



Tables 7 and 8 illustrate the ripple effect in the county. As an example, Table 7 shows that the hospital sector employs 140 people and has an employment multiplier of 1.16. This means that for each job created in the hospital sector, another 0.16 jobs are created in other businesses and industries in the county's economy. The direct impact of the 140 hospital employees results in an indirect impact of 23 jobs (140 x 0.16 = 23) throughout all businesses and industries in the market area. Thus, the hospital sector employment had a total impact on area employment of 163 jobs (140 x 1.16 = 163).

Table 7. Health Sector Impact on Employment, 2008

Health Sectors	Direct Employment	Economic Multiplier	Total Impact
Health and Personal Care Stores	1	1.06	1
Veterinary Services	15	1.08	16
Home Health Care Services	0	0.00	0
Doctors and Dentists	49	1.18	57
Other Ambulatory Health Care	8	1.15	10
Hospitals	140	1.16	163
Nursing and Residential Care Facilities	0	0.00	0
Total	213		247

Note: Most data obtained from secondary sources; some data unavailable or extrapolated
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Similarly, multiplier analysis can estimate the total impact of the estimated $12,646,000 direct income for hospital employees shown in Table 8. The hospital sector had an income multiplier of 1.09, which indicates that for every one dollar of income generated in the hospital sector, another $0.09 is generated in other businesses and industries in the county's economy. Thus, the hospital sector had an estimated total impact on income throughout all businesses and industries of $13,790,000 ($12,646,000 x 1.09 = $13,790,000).

Table 8. Health Sector Impact on Income and Retail Sales, 2008 ($thousands)

Health Sectors	Direct Income	Economic Multiplier	Total Impact	Retail Sales
Health and Personal Care Stores	$46	1.07	$50	$14
Veterinary Services	$357	1.10	$394	$108
Home Health Care Services	$0	0.00	$0	$0
Doctors and Dentists	$4,483	1.07	$4,777	$1,314
Other Ambulatory Health Care	$691	1.09	$756	$208
Hospitals	$12,646	1.09	$13,790	$3,794
Nursing/Residential Care Facilities	$0	0.00	$0	$0
Total	$18,224		$19,767	$5,439

Note: Most data obtained from secondary sources; some data unavailable or extrapolated.
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In this manner, the total employment and income impacts of all the health services sectors can be estimated. In Table 7, the total employment impact of the health services sector results in an estimated 247 jobs in the local economy. In Table 8, the total income impact of health services results in an estimated $19,767,000 for the economy.

The last column in Table 8 shows the retail sales that the health sector helps to generate. To estimate this, this study incorporates a retail sales capture ratio (retail sales to total personal income). Haskell County had retail sales of $52,540,727 and $190,969,000 in total personal income. Thus, the estimated retail sales capture ratio equals 27.5 percent. Using this as the retail sales capture ratio for the county, this says that people spent 27.5 percent of their income on retail goods and services within the market. By taking all the household income associated with health sector activities and multiplying by the retail sales capture ratio, we can estimate the impacts of the health sector on area retail sales. Thus, the total retail sales generated by the retail sector equals $5,439,000 ($19,767,000 x 27.5% = $5,439,000). This is a conservative estimate, as this method does not consider the impact of any local purchases made by the health services businesses.

Summary and Conclusions

The Health Services sector of Haskell County, Kansas, plays a large role in the area's economy. Health Services represents one of the largest employers in the area and also serves as one of the largest contributors to income. Additionally, the health sector has indirect impacts on the local economy, creating additional jobs and income in other sectors. The health sector also contributes substantially to retail sales in the region. All of this demonstrates the importance of the health care sector to the local economy.

While the estimates of economic impact are themselves substantial, they are only a partial accounting of the benefits to the county. Health care industries in rural counties help to preserve the population base, invigorating the communities and school systems. Similarly, many hospitals and nursing care facilities have active community outreach programs that enhance community services and the quality of life for community residents.

A vigorous and sustainable health care system is essential not only for the health and welfare of community residents, but to enhance economic opportunity as well. Health-related sectors are among the fastest growing in economy. Given demographic trends, this growth is likely to continue. The attraction and retention of new business and retirees also depends on access to adequate health care services.

While industry trends related to health care are positive overall, many rural communities have significant challenges. The economics of health care are rapidly changing. As health care costs escalate and government funding becomes tighter, rural markets may become less attractive to many providers. This will lead to the continued restructuring of rural health care services in many areas.

If a community wants to maintain the benefits associated with accessible and affordable health care, it must actively work to meet these challenges. The challenges cannot be met by those directly responsible for health care administration alone. They require a community-wide response involving government, business and civic leaders, and they frequently incorporate outside assistance from professional resources providers, such as the Kansas Hospital Association, the Office of Local and Rural Health, the Kansas Department of Health and Environment, and others.

In meeting current and future challenges, health care and community leaders can engage in an ongoing process of strategic health planning. This is continuous effort to maintain and enhance the community's health care situation. The strategic health planning process helps local communities identify their health care needs; examine the social, economic, and political realities affecting the local delivery of health care; determine what is wanted and what realistically can be achieved to meet their identified health care needs; and develop and mobilize an action plan based on their analysis and planning.

Strategic health planning involves cooperation among people and organizations to pursue common goals. The process is designed to answer three questions:

(1) Where is the community now?
(2) Where does the community want to go?
(3) How will the community get there?

For the strategic health planning process to be most effective, it must be based in the community and driven by the community. Local residents and their leaders must participate; a current knowledge of the health care industry is not necessary. This process is about local people solving local problems. The local hospital and health care providers should have input into the decision-making and should support and trust the outcomes, but, the community must provide the energy and commitment.

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Glossary of Terms

Doctors and Dentists Sector: includes physicians, dentists, chiropractors, optometrists, other health care professionals, and all support staff employed by these professionals.

Employment: annual average number of full and part-time jobs, including self-employed for a given economic sector.

Employment Economic Multiplier: indicates the total jobs in the economy closely tied, in this case, to one job in the health sector.

Employee Compensation: total payroll (wages, salaries and certain benefits) paid by local employers.

Government Sector: includes all federal, state and local government enterprises; federal, state and local electric utilities; state and local government passenger transit; state and local government education and non-education; and federal military and non-military.

Gross Domestic Product (GDP): the total value of output of goods and services produced by labor and capital investment in the United States.

Health and Personal Care Stores: pharmacies.

Income Economic Multiplier: indicates total income generated in the economy due to one dollar of income, in this case, in the health sector.

Indirect Business Taxes: sales, excise fees, licenses and other taxes paid during normal operation. All payments to the government except for income taxes.

Multipliers: Its calculation is based on the structure of the local economy. All of the buying and selling relationships between businesses and consumers are charted in an economic transactions table. When a dollar is spent in one area of the economy, all of the economic interconnections are stimulated as the effect "ripples" to other areas of the economy. The effect is caused by businesses buying and selling goods or services to each other and by local labor who use their income to purchase household goods and services. Over successive rounds of spending and re-spending, the effect of the original dollar is multiplied to some new, larger level of activity. Eventually, the economic "leakages" associated with the purchase of imported goods and non-local taxes and investments causes the ripple effect to finally run out. Multipliers are derived through algebraic calculations of the economic transactions table of the local economy.

Other Ambulatory Health Care Services: medical and diagnostic labs and other outpatient care services and all of their employees.

Other Property Income: corporate income, rental income, interest and corporate transfer payments.

Proprietor Income: income from self-employment (farmers and business proprietors, for example).

Personal Income: income received by individuals from all sources (employment, Social Security, et cetera).

Total Income: employee compensation plus proprietor income plus other property income plus indirect business taxes.

Total Sales: total industry production for a given year (industry output).

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Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Cuncils, Extension Districts, and United States Department of Agriculture Cooperating, Gary Pierzynski, Interim Dean, College of Agriculture.