

The Economic Impact of the Health Care Sector in Stafford County, Kansas

Kansas Rural Health Options Project
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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.

We also thank Glenn Newdigger and Amy Collins, Stafford County Extension, for help in verifying local employment data and serving as community facilitators for this initiative.

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 Impact of the Health Care Sector In Stafford 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 almost 70 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 Stafford 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 Stafford 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 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 health care. In 1980, a person spent an average of \$2,253 (2002\$) on health care expenditures. By 2003, health care expenditures rose to \$5,491 per person. Additionally, the average person spent \$624 (2002\$) for insurance premiums and \$123 on out-of-pocket expenses such as deductibles and co-payments in 1980. In 2003, those figures rose to \$1,966 for insurance premiums and \$223 for out-of-pocket expenses. Health care's share of the gross domestic product (GDP) increased from 8.8 percent in 1980 to 15.3 percent in 2003. 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.

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 the 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 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 underlie 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 systems 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 health care 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 will not seek help for their health problems. Some will say they have 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. 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.

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.

Studies have found that quality of life (QOL) factors play a dramatic role in business and industry location decisions. Health care services represent some of the most significant QOL 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

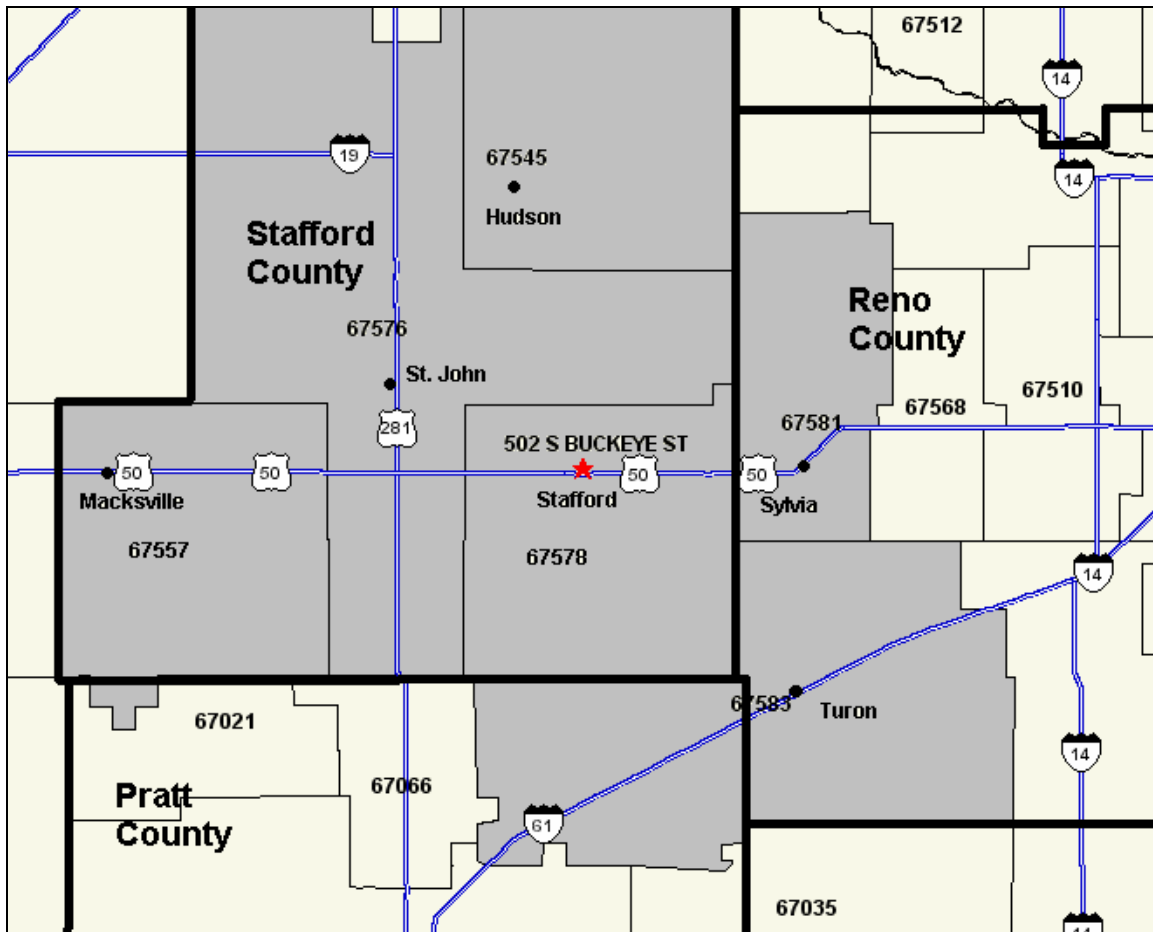
Job creation represents an important goal for most rural economic development programs. National employment in health care services increased by 47 percent from 1990 to 2004 and by approximately 128 percent since 1980. In rural areas, employment in health-related services often accounts for 10 to 15 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 1980, Americans spent \$519 billion on health care (2002\$), which accounted for 8.8 percent of the GDP. In 2003, health care costs increased to \$1,626 billion, or 15.3 percent of the GDP. If current trends continue, projections indicate that Americans will spend 18.4 percent of GDP on health care by 2013. Capturing a share of this economic growth can only help a rural community.

The Market for Health Care Services

This study used discharges by major service (KHA) from Stafford District Hospital by zip code from 2003 through early 2004 to determine the health care sector's market area. Figure 1 shows the makeup of the Stafford County health care services market area. It includes Stafford County, the southwest portion of Reno County and the northeast portion of Pratt County.

Figure 1. Stafford County Market



Shaded areas indicate zip codes within the Stafford County.

Source: Claritas, Inc. 2005.

Stafford County Demographic Data

Table 1 presents demographic data for the Stafford County market. Currently, an estimated 6,167 people live in the market area. Between 1990 and 2000, the population decreased 8 percent and also decreased almost 5 percent between 2000 and 2005. Population projections indicate that 5,839 people will live in the Stafford County market by 2010, a nine percent decrease in population from 2000. In contrast, the state of Kansas population increased more than eight percent between 1990 and 2000 and is projected to grow another two percent through 2010.

Table 1. Population, Percent Change and Projections for the Stafford County Market

Year¹	Count	Percent Change	County Percent	State Percent
1990	7,018	Growth 1990-2000	-7.7%	8.5%
2000	6,476	Growth 2000-2005	-4.8%	2.0%
2005	6,167	Growth 2005-2010	-5.3%	2.1%
2010	5,839	Growth 2000-2010	-9.1%	4.1%

¹1990 and 2000 counts are from respective Census years, while 2005 count is an estimate and 2010 count is a projection.

Source: Claritas, Inc. 2005

An Overview of the Stafford County Economy, Highlighting Health Care, 2002

Table 2 presents employment, income and sales data for Stafford County for 2002. Employment in health care sectors was verified in a local survey and is current to 2005. Health care income and sales data were then estimated using state average data. Data for all other economic sectors comes from 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.

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 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.

Table 2. Employment, Income, and Sales for Stafford County (2002, \$thousands)

Sector	Employment	Labor Income	Total Income	Total Sales
Agriculture, Forestry, Fishing and Hunting	1,186	\$4,963	\$36,944	\$113,794
Mining	82	\$696	\$12,445	\$21,782
Construction	54	\$1,444	\$2,501	\$6,333
Manufacturing	47	\$2,191	\$4,176	\$14,623
Transportation, Communication, Public Utilities	69	\$2,441	\$3,544	\$8,433
Trade	316	\$7,004	\$13,624	\$18,654
Finance, Insurance, and Real Estate	82	\$3,152	\$14,349	\$18,836
Services	287	\$4,690	\$6,232	\$12,043
Health Services ¹	164	\$4,730	\$5,609	\$9,520
Health and Personal Care Stores	0	\$0	\$0	\$0
Veterinary Services	2	\$32	\$43	\$108
Home Health Care Services	4	\$70	\$80	\$147
Doctors and Dentists	22	\$1,071	\$1,539	\$1,892
Other Ambulatory Health Care Services	3	\$109	\$109	\$109
Hospital	39	\$1,455	\$1,520	\$3,491
Nursing and Residential Care Facilities	94	\$1,993	\$2,318	\$3,773
Arts and Entertainment	7	\$87	\$158	\$347
Government	478	\$15,941	\$29,678	\$33,841
Total	2,772	\$47,339	\$129,261	\$258,205
Health Services as Percent of Total				
Region	5.9	10.0	4.3	3.7
Kansas	8.1	6.5	8.3	6.5
United States	8.9	5.7	8.7	6.1

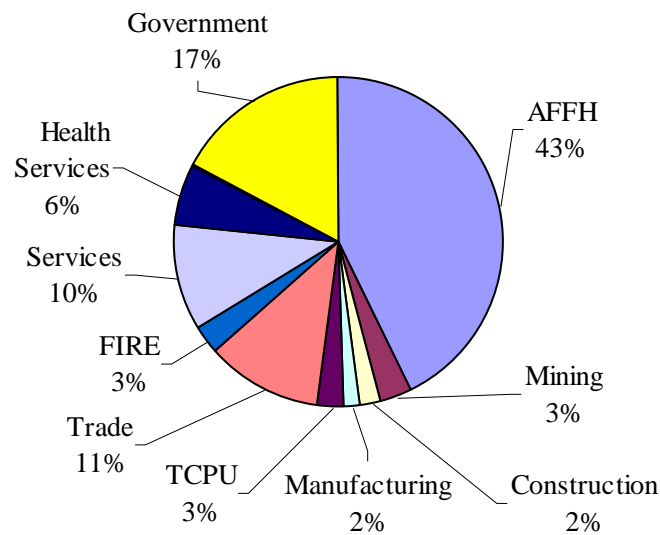
Source: Minnesota IMPLAN Group, 2001 and local survey.

Due to rounding error, numbers may not sum to match total.

¹ In a number of 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.

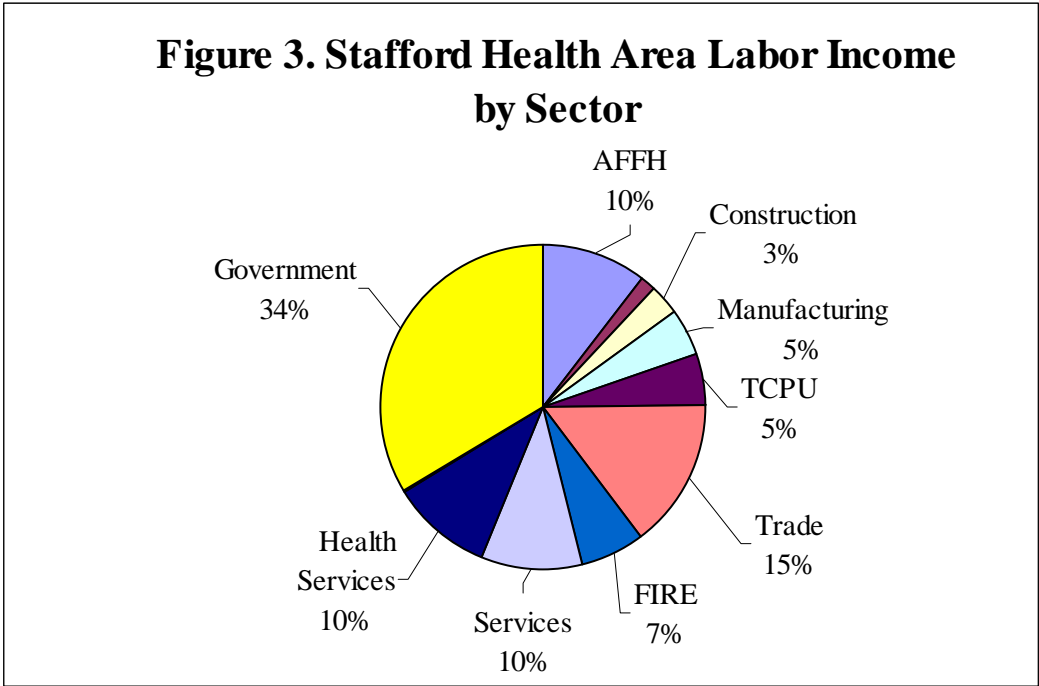
In the Stafford County market, Health Services employs 164 people, 5.9 percent of all job holders in the county. Health Services for the state of Kansas employs more than eight percent of all job holders, while almost nine percent of all job holders in the United States work in Health Services. As with most rural areas, Health Services represents a major source of employment (Figure 2).

Figure 2. Stafford Health Area Employment by Sector

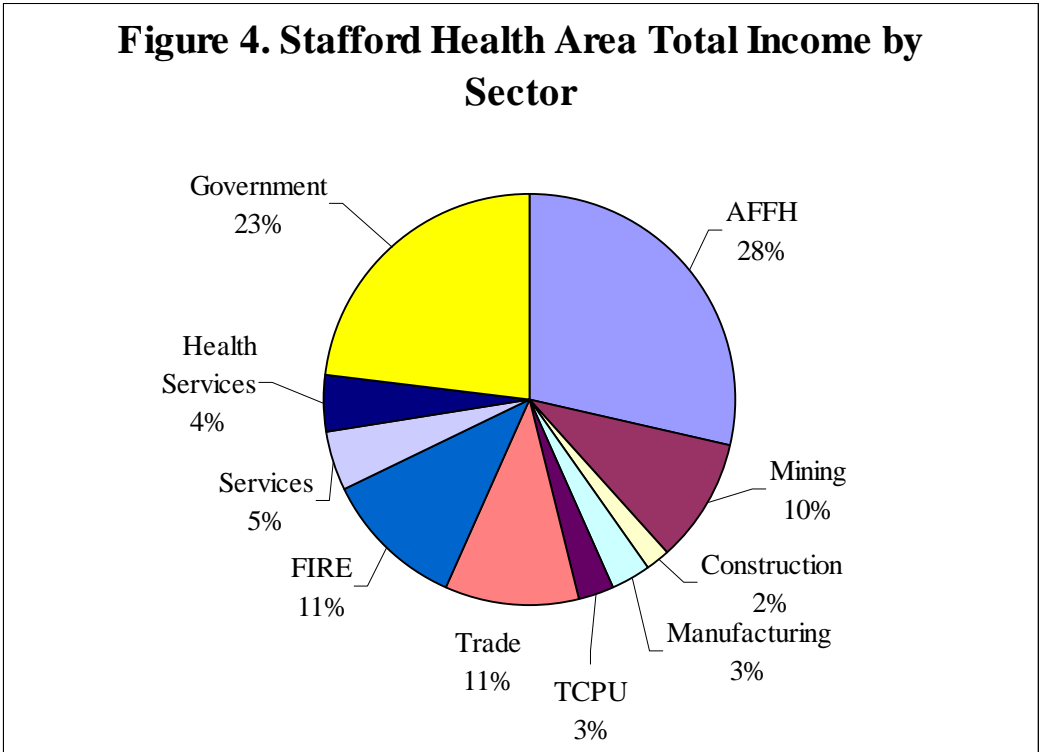


AFFH is agriculture, forestry, fishing and hunting; TCPU is transportation, communications and public utilities; FIRE is finance, insurance and real estate.

Figure 3 and Figure 4 show that Health Services also represents one of the largest contributors to labor income and total income.



AFFH is agriculture, forestry, fishing and hunting; TCPU is transportation, communications and public utilities; FIRE is finance, insurance and real estate.



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Impact of the Health Services Sector

The previous section detailed the direct contributions of the Health Services sector within the Stafford 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.

One way to measure the size of the ripple effect is through multiplier analysis, which measures the ripple effect based on the structure of the local economy. Tables 3 and 4 illustrate the ripple effect in the Stafford County market. As an example, Table 3 shows that the hospital employs 39 people and has an employment multiplier of 1.39. This means that for each job created in the hospital sector, another 0.39 jobs are created in other businesses and industries in the Stafford County economy. The direct impact of the 39 hospital employees results in an indirect impact of 15 jobs ($39 \times 0.39 = 15$) throughout all businesses and industries in the market area. Thus, the hospital sector employment had a total impact on area employment of 54 jobs ($39 \times 1.39 = 54$).

Table 3. Stafford Area Health Sector Impact on Employment (2002)

Health Sectors	Direct Employment	Economic Multiplier	Total Impact
Health and Personal Care Stores	0	0.00	0
Veterinary Services	2	1.34	3
Home Health Care Services	4	1.29	5
Doctors and Dentists	22	1.30	29
Other Ambulatory Health Care Services	3	1.25	4
Hospitals	39	1.39	54
Nursing and Residential Care Facilities	94	1.30	122
Total	164		216
Note: Most data obtained from secondary sources; some data unavailable or extrapolated. Source: 2002 IMPLAN database, Minnesota IMPLAN Group, Inc.			

Similarly, multiplier analysis can estimate the total impact of the \$1,455,000 payroll for hospital employees given in Table 4. The hospital sector had an income multiplier of 1.28, which indicates that for every one dollar of income generated in the hospital sector, another \$0.28 is generated in other businesses and industries in the Stafford County economy. Thus, the hospital sector had an estimated total impact on income throughout all businesses and industries of \$1,861,000 ($\$1,455,000 \times 1.28 = \$1,861,000$).

Table 4. Stafford Area Health Sector Impact on Income, Retail Sales (2002, \$thousands)

Health Sectors	Direct Income	Economic Impact	Total Impact	Retail Sales
Health and Personal Care Stores	\$0	0.00	\$0	\$0
Veterinary Services	\$32	1.43	\$46	\$7
Home Health Care Services	\$70	1.36	\$95	\$14
Doctors and Dentists	\$1,071	1.13	\$1,213	\$177
Other Ambulatory Health Care Services	\$109	1.17	\$128	\$19
Hospitals	\$1,455	1.28	\$1,861	\$271
Nursing and Residential Care Facilities	\$1,993	1.34	\$2,674	\$390
Total	\$4,730		\$6,017	\$877
Note: Most data obtained from secondary sources; some data unavailable or extrapolated.				
Source: 2002 IMPLAN database, Minnesota IMPLAN Group, Inc.				

In this manner, the total employment and income impacts of all the health services sectors can be estimated. In Table 3, the total employment impact of the Stafford County health services sector results in an estimated 216 jobs in the local economy. In Table 4, the total income impact of health services results in an estimated \$6,017,000 for the economy.

The last column in Table 4 shows the potential retail sales the health sector helps to generate. To estimate this, this study incorporates a retail sales capture ratio (retail sales to total personal income). The Trade sector in Table 2 represents retail sectors in the Stafford County. In 2002, Stafford County had retail sales of \$18,654,000 and total personal income of \$128,026,500. Thus, the estimated retail sales capture ratio equals 14.6 percent. Using this as the retail sales capture ratio for the Stafford County, this says that people in Stafford County spent 14.6 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 877,000 ($\$6,017,000 \times 14.6\% = \$877,000$). 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 Stafford 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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Manhattan, Kansas.**

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