



Rural **RESEARCH REPORT**

Summer 2005
Volume 16, Issue 5

Published by the Illinois Institute for Rural Affairs

Stipes Hall 518
Western Illinois University
1 University Circle
Macomb, IL 61455-1390
309/298-2237

www.IIRA.org

Making Health Care an Important Economic Development Tool

by Gerald A. Doeksen¹

Everyone knows that hospitals provide access to vital healthcare services 24 hours a day, 7 days a week, and 365 days a year. Other healthcare providers, such as physicians, are also available to ensure timely provision of quality healthcare services throughout the year. Despite this, the role that hospitals and other healthcare providers play as a major contributor to economic development is often overlooked. This report demonstrates how important healthcare services are to the economy of a rural community. More specifically, the report will cover the following:

- Briefly review trends in the healthcare industry
- Measure the impact the healthcare sector has on a rural economy
- Measure the impact a new hospital will have on a rural economy
- Discuss why a viable healthcare sector is vital to economic development

Trends in the Healthcare Industry

The healthcare sector is an extremely fast growing sector and, based on current demographics, there is every reason to expect this trend to continue. Some important facts to support the healthcare sector growth in rural and urban areas are as follows:

- The number of elderly individuals is projected to increase dramatically during the next 15 years.
- “Baby Boomers” (ages 45-64) can be expected to, and will, demand more services.

Healthcare services are extremely important to the economy in rural areas for the following reasons:

- The hospital is often the second largest employer in a community, accounting for 10 to 15 percent of all jobs.
- Healthcare jobs generally pay above average wages with benefits.

Impact of the Healthcare Sector on the Local Economy

To illustrate the economic impact of the healthcare sector on a rural community's economy, the application of an impact model is presented for Blaine County, Oklahoma. The county is located in central Oklahoma and has approximately 12,000 residents. A model to estimate

the economic impact of the healthcare sector has been developed by Doeksen, Johnson, and Willoughby (1996). It utilizes regional tools and data that are available at the county level, so this model can be used elsewhere. The model has five healthcare sectors:

¹ The author is a Regents Professor in the Department of Agricultural Economics at Oklahoma State University, Stillwater, OK.

1. Hospitals
2. Doctors and Dentists (including other medical professionals)
3. Nursing and Protective Care
4. Pharmacies
5. Other Medical and Healthcare Services (including home health care and county health departments)

Employment and payroll information associated with each sector must be collected locally. For Blaine County, the data are presented in Table 1. For example, the hospitals employ 125 employees with a payroll of \$3,420,000, while the total healthcare sector in Blaine County employs 527 employees with a payroll of \$12,094,643 or 12 percent of the county's total employment. These numbers do not demonstrate the complete impact, as healthcare service providers and employees purchase goods and services from businesses in Blaine County, creating additional jobs, wages, and salaries. This impact on other business is secondary and is measured by multipliers.

Table 1. Direct Economic Activities of the Healthcare Sector in Blaine County, Oklahoma

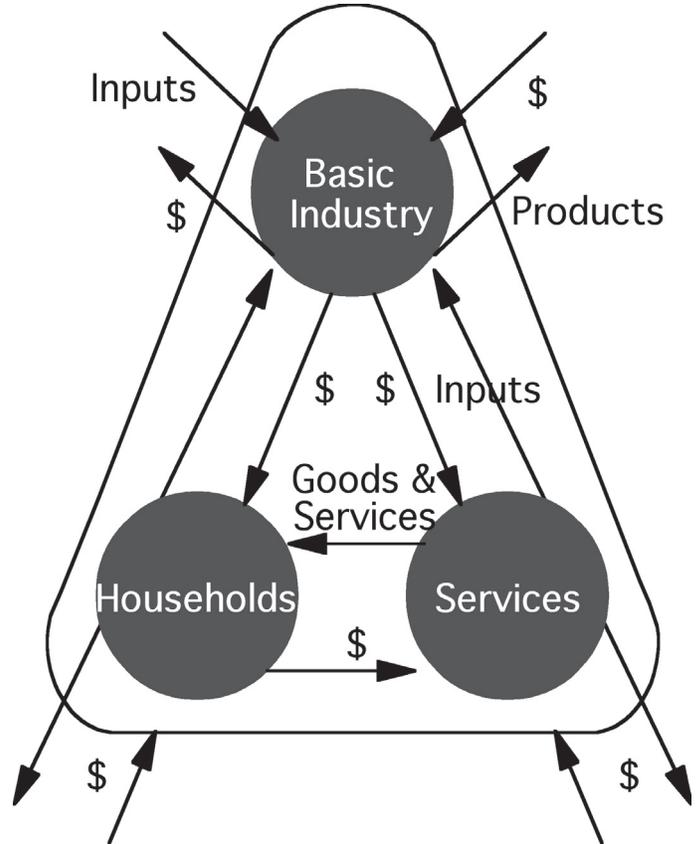
Component	Employed	Income
Hospitals	125	\$3,420,000
Doctors and Dentists	51	\$2,318,000
Nursing and Protective Care	209	\$2,351,783
Pharmacies	24	\$963,000
Other Medical and Healthcare Services	118	\$3,041,860
Total	527	\$12,094,643

Sources: Local survey and research estimates

Basic Concepts of Community Economics and Multipliers. The concept of community economics and multipliers is illustrated in Figure 1. The triangle depicts a community's economy with its basic industry, services, and households. Basic industry buys labor from households and inputs from service providers. The arrows show the flow of dollars in exchange for labor and services. Households must purchase services (e.g., groceries, clothes, and so on), and again, dollars flow for the purchase of these services. As soon as businesses and households purchase labor or services outside the community, the impact on the community's economy will decrease. A model is available which can measure the secondary effect of healthcare expenditures on other businesses. The model generates employment and income multipliers, which measure all secondary impacts that occur in a local economy. For example, a hospital employment multiplier of 1.5 would indicate that for each job in the hospital, another 0.5 job is

created in other businesses due to the hospital presence and the purchase of goods and services by hospital employees within the community.

Figure 1. Concept of Community Economics and Economic Multipliers



Multipliers project the total impact of the healthcare sector, but they can also measure the impact of an increase or decrease in business activity. Consider, for instance, the closing of a hospital. The hospital will no longer pay employees, and dollars going to households will stop. Likewise, the hospital will not purchase goods from other businesses, and dollars flowing to other businesses, will stop. This decreases income in the household segment of the economy. Since earnings will decrease, households, too, will decrease their purchase of goods and services from businesses within the services segment of the economy. This, in turn, decreases these businesses' purchases of labor and inputs. Thus, both positive and negative changes in the economic base will work their way throughout the entire local economy as is reflected by the multipliers.

Total Impact of Healthcare Services. The total impact of the healthcare services in Blaine County is presented in Table 2. The first column under employment indicates the employment in the five healthcare sectors. The second

Table 2. Blaine County Healthcare Sector Impact of Employment and Income

Healthcare Sectors	Employment			Wages and Salaries			1 Cent Sales Tax Collection	
	Employed	Multiplier	Impact	Income	Multiplier	Impact	Retail Sales	
Hospitals	125	1.59	199	\$3,420,000	1.38	\$4,719,600	\$1,047,413	\$10,474
Physicians, Dentists, and Other Professionals	51	1.57	80	\$2,318,000	1.31	\$3,036,580	\$673,903	\$6,739
Nursing and Protective Care	209	1.41	295	\$2,351,783	1.41	\$3,316,014	\$735,917	\$7,359
Pharmacies	24	1.40	34	\$963,000	1.67	\$1,608,210	\$356,907	\$3,5694
Other Medical and Health Services	118	1.46	172	\$3,041,860	1.52	\$4,623,627	\$1,026,114	\$10,261
Total	527		780	\$12,094,643		\$17,304,031	\$3,840,253	\$38,403

Note: Most data were obtained from secondary sources. In a few instances, data were unavailable, extrapolated, and/or estimated.

Source: Oklahoma Rural Health Works (2005).

column indicates the employment multipliers. For example, the hospital employment multiplier of 1.59 indicates that for each job in the hospital, another 0.59 job is created in other businesses in Blaine County. Thus, the total impact of the hospital sector in Blaine County is 199 jobs (1.59 x 125). After estimating the secondary employment impact for all healthcare sectors, the total impact of the healthcare services on Blaine County is 780 jobs.

A similar methodology is used to measure the impact on wages and salaries. For instance, the hospital income multiplier is 1.38, which means that for each dollar paid in wages and salaries by the hospital, another 38 cents of wages and salaries are generated in other businesses in Blaine County. The \$3,420,000 payroll of the hospital sector generates a total wage and salary impact in Blaine County of \$4,719,000. The total wage and salary impact of the healthcare services in Blaine County is \$17,304,031.

The model can also estimate how much of the wage and salary income is spent in retail stores in Blaine County. It is estimated that retail merchants receive \$3,840,253 in retail sales due to the economic activities generated by Blaine County’s healthcare services. A one cent sales tax on these retail sales would generate \$38,403 annually.

Impact of New Construction. One of the hospitals in Blaine County is planning to undertake a major construction project. The hospital plans on spending \$4,000,000 on

this project in the next year. The impact on the county’s employment and income can be estimated using the model (see Table 3). The \$4,000,000 hospital construction job is estimated to create 46 hospital construction jobs. With a hospital employment multiplier of 1.39, it is estimated that there will be 18 secondary jobs, for a total of 64 jobs resulting from the construction.

Wages and salaries paid to hospital construction workers are projected to be \$1,400,000. The hospital construction income multiplier of 1.41 estimates a secondary income of \$574,000, for a total payroll impact of \$1,974,000. The impact on retail sales is projected to be \$438,030 and a one cent sales tax will generate \$4,380. Although the construction impact only occurs during the construction phase, it will be a boost to the Blaine County economy.

Table 3. Impact of Hospital Construction Project on Blaine County, Oklahoma

Hospital construction jobs		46
Hospital construction employment multiplier	1.39	
Secondary jobs		18
Total jobs		64
Hospital construction payroll		\$1,400,000
Hospital construction income multiplier	1.41	
Secondary income		\$574,000
Total payroll impact		\$1,974,000
Retail sales impact		\$438,030
One cent sales tax impact		\$4,380

Healthcare Services and Economic Development

The above sections have demonstrated the economic contributions that the healthcare sector can make on a rural county from operational activities and construction projects. It has also shown that a quality healthcare sector is needed to attract businesses, industry, and retirees.

The Importance of the Healthcare Sector for Business and Industrial Growth. Studies have found that quality-of-life (QOL) factors play a dramatic role in business and industry location decisions. Among the most significant of those QOL variables are health care and educational

services (Table 4). Healthcare services are important for at least three reasons.

Table 4. Services that Impact Rural Development

Type of Growth	Services Important to Attract Growth
Industry and Business	Health and Education
Retirees	Health and Safety

Source: Doeksen et al. (1996).

First, as noted by a member of the Board of Directors of a community economic development corporation, good healthcare and education services are imperative to industrial and business leaders as they select a location (Doeksen, Cordes, and Schaffer 1992). Employees and participating management may offer strong resistance if asked to move into a community with substandard or inconveniently located healthcare services.

Second, when a business or industry makes a location decision, it wants to ensure that the local labor force will be productive, and a key factor in productivity is good health. Thus, investments in healthcare services can be expected to yield dividends in the form of increased labor productivity.

The cost of healthcare services is the third factor considered by business and industry in development decisions. A 1990 site selection survey by Lyne (1998) concluded that

corporations seriously consider healthcare costs. Sites that provide healthcare services at a low cost are sometimes given priority. In fact, 17 percent of the respondents said that their companies used healthcare costs as a tie-breaking factor between comparable sites.

The Importance of the Healthcare Sector for Retirement Growth.

A strong and convenient healthcare system is important to retirees, a special group of residents whose spending and purchasing can be a significant source of income for the local economy. Many rural areas have environments (e.g., good climate and outdoor activities) that enable them to be in a good position to attract and retain retirees. The amount of spending embodied in this population, including the purchasing power associated with Social Security, Medicare, and other transfer payments, is substantial. In addition, middle and upper income retirees often have substantial net worth. Although the data are limited, several studies suggest healthcare services may be a critical variable that influences the location decision of retirees. For example, one study (Reginer and Gelwicks 1981) found that four items were the best predictors of retirement locations: (1) safety, (2) recreational facilities, (3) dwelling units, and (4) health care. Another study (Pomeranz 1988) found that nearly 60 percent of potential retirees noted that healthcare services were a “must have” attribute when considering a retirement community. Only protective services were mentioned more often than healthcare services.

Summary and Conclusions

The evidence provided above is clearly compelling that the healthcare sector is an important development tool. A summary of the evidence is as follows:

- The healthcare sector is a growing sector proven by demographics and more demands for services.
- The healthcare sector pays higher than average wages.
- The healthcare sector employs a large number of people (e.g., the Blaine County healthcare sector referenced in this paper makes up 12% of the total employment base).
- The healthcare impact from healthcare sector employees and secondary employees is huge (e.g., Blaine County healthcare sector accounts for 18% of total employment base).

- The healthcare sector is extremely important for attracting businesses and industry.
- The healthcare sector is extremely important for attracting retirees to a given location.

Rural leaders may wish to use this type of data to achieve the following:

- Gain community support for tax issues to support certain health issues
- Demonstrate to local residents the importance of using local healthcare services
- Plan and promote their local healthcare system to help attract physicians or expand services
- Demonstrate the benefits of having quality healthcare services

In many states, technical assistance is available to help train leaders. The National Center for Rural Health Works (RHW) is a technical center that has trained professionals in most states to conduct the impact calculations discussed above and other community health models. For assistance in Illinois, contact the Office of Rural Health (IDPH), the UI-Extension Service, or the Illinois Institute for Rural Affairs. The RHW trains and provides technical assistance to those state professionals. The RHW's website (www.ruralhealthworks.org) provides information about the rural health tools that are available for use in your community. The three main categories of tools are as follows:

1. *Impact Model* – Measures the importance of the healthcare sector on the local economy

2. *Community Health Engagement Process* – A planning process by which community leaders access, evaluate, and develop a plan of action for their healthcare sector
3. *Community Health Feasibility Studies* – Used to determine if a healthcare service is economically viable (based on services identified by the community)

Clearly, rural health contributes significantly to the local economy. By employing these tools, community leaders will promote and enhance economic development in their communities.

References

- Doeksen, G. A., S. Cordes, and R. Schaffer. 1992. *Health care's contribution to rural economic development*. Paper prepared for the Federal Office of Rural Health.
- Doeksen, G. A., T. Johnson, and C. Willoughby. 1996. *Measurement of the economic importance of the health sector on a local economy: A brief review and procedures to measure local impacts*. Starkville, MS: Southern Rural Development Center Publication.
- Lyne, J. 1998. Quality-of-life factors dominate many facility location decisions. *Site Selector Handbook 33*: 868-870.
- Oklahoma Rural Health Works. 2005. HomePage. Available online: www.okruralhealthworks.org. Accessed: July 21, 2005.
- Pomeranz, W. 1988. A rural long-term care system model. In *Health issues in rural America*, Chapter 3. Washington, DC: National Governor's Association.
- Reginer, V., and L. E. Gelwicks. 1981. Preferred supportive services for middle to higher income retirement housing. *The Gerontologist 21*(1): 54-58.

The Rural Research Report is a series published by the Illinois Institute for Rural Affairs to provide brief updates on research projects conducted by the Institute. Rural Research Reports are peer-reviewed and distributed to public officials, libraries, and professional associations involved with specific policy issues.

 Printed on recycled paper

Illinois Institute for Rural Affairs
Stipes Hall 518
Western Illinois University
1 University Circle
Macomb, IL 61455-1390

NONPROFIT
U.S. Postage
PAID
Macomb, IL 61455
PERMIT No. 489