

Kentucky Rural Health Works: Connecting Health Care and Economic Development

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Introduction

Kentucky Rural Health Works (KRHW) is a program designed to highlight the economic importance of health care in your local community. KRHW is a joint program of the University of Kentucky College of Agriculture and UK College of Medicine. Too often, the economic role of the healthcare system has been neglected. Health care plays a vital role in the economy of rural communities and is an essential component of rural development. There are four major roles, including financial and non-financial linkages, for health care in rural economic development: 1) keeping local healthcare dollars at home and addressing supply-demand gaps, 2) attracting external patients as an export-based industry, 3) helping recruit businesses and workers, and 4) promoting a healthy and productive workforce. Kentucky Rural Health Works Program (KRHW) expands public awareness of the economic importance of the healthcare sector in rural communities (see the textbox on this page). KRHW will show rural communities and their leaders the direct and indirect impact of health care on rural development and business growth. For example, the healthcare sector is often second only to the school system as the largest employer in rural counties, and it often accounts for 15 to 20 percent of all jobs within a community.

However, identifying the economic role of health care is not enough; this information must be turned into concrete actions. The Kentucky Rural Health Works program is also designed to highlight actions that a community can take to improve its healthcare system and the local economy. Public information tools are available for communities to engage residents and leaders in a debate about actions they can take for improving the economic role of health care.

Health Care and Local Economic Trends

Over the last two decades, healthcare services have become a critical engine of growth in rural Kentucky. In 1980, healthcare industry earnings represented 6.7 percent of all industry earnings in rural Kentucky. By the late 1990s, health care's share of industry earnings had risen to 12.3 percent in rural Kentucky. These statistics indicate that health care is the second largest industry category in rural Kentucky trailing only local government. Furthermore, medical transfer payments, in the form of Medicare and Medicaid, now represent more than 9 percent of

Objectives of Kentucky Rural Health Works

The major goal of the Kentucky Rural Health Works Program (KRHW) is to promote and support rural economic development and local healthcare networks. To complete these two goals, KRHW will focus on three main objectives. The first objective will examine the importance of health care in rural economies and rural economic development. The IMPLAN model is used to establish the existing importance of the healthcare sector in the rural economy. This model is also used to examine the types and quality of jobs created in the rural economic development both as a job-creating and input-purchasing industry and as a factor in other types of business location decisions.

The second emphasis will be placed on policy and decision-making information. Information regarding economic dependence on Medicaid, Medicare, and other state and federal programs will be provided to state and federal policymakers.

The third objective will concentrate on training. Through continuing education, capacity at the county and local level can be built to sustain the progress made by the local communities. Training forums will be conducted to apprise local policymakers of the importance of the rural health sector and future demands on local government and acquaint healthcare providers on market demand studies since changes in the local communities will affect healthcare services.

rural Kentucky's personal income. This is in contrast to 1980 when these payments only represented 2.9 percent of personal income.

Health services include nursing homes and adult daycare, hospitals, physician and dentist offices, pharmacies, and emergency medical services. An important question is why are healthcare services growing so quickly? These industries are in part responding to the growing levels of both retirement and medical-transfer payments (e.g., Social Security and Medicare) which are occurring in rural Kentucky. The economic impact of these services is becoming increasingly important in rural communities.

Retirement-based personal income is the fastest growing source of income in rural areas. In 1990, retirement-based income represented 4.1 percent of personal income, while in 1999 that share had risen to 6.2 percent. Non-wage income is growing at twice the rate of job- and wage-based income. Personal income, particularly income associated with pensions and retirement, is more likely to be spent on healthcare services. Combined with the income from an aging population, these sources of income are likely to provide an important source of revenue for rural healthcare providers.

The growth in retirement and medical transfer payments, new medical technology, and an older population imply a growing role for health care in the rural economy. This industry will be a major source of jobs and income in rural communities. At the same time, when many residents bypass their local facilities, rural hospitals can face difficult financial challenges. Medicare and Medicaid face an uncertain future. Rural communities need to begin to recognize the growing economic role of health care and prepare to seek out new opportunities for growth while minimizing the potential implications of changes in the national healthcare system.

The Role of Rural Health Care in Economic Development

The role of health care in economic development is based on financial and non-financial linkages with the rest of the local economy. Financial linkages are based on the connection between healthcare provider expenditures and other local firms' expenditures and revenue. Health care and other industries often mutually support one another through purchases and sales. These financial linkages create a larger local economy.

Non-financial linkages are based on the healthcare sector's role in keeping local physicians, promoting a more productive workforce, and attracting and retaining industry. Although these may be measured through financial outcomes, generally the link is more indirect. Nevertheless, a strong healthcare system can promote economic development in a variety of non-financial ways.

Financial Linkages

Keeping Local Healthcare Dollars at Home

The most important financial role for a local healthcare system is to "keep local healthcare dollars at home." Local healthcare dollars come from private insurance, consumer out-of-pocket payments, and public insurance. If these expenditures leave the community, they represent a real loss of potential jobs and income to local residents. Out-shopping remains an important issue for many rural healthcare providers and rural communities.

It is not only healthcare jobs that are at stake when out-shopping occurs. Healthcare employers and employees are important purchasers of goods and services supporting many local business establishments. Their purchases support local industries, such as housing and construction, retail establishments, restaurants, and other local services. Hospitals and other healthcare institutions are also important purchasers of local inputs, such as laundry services, waste management, and other resources. Both healthcare jobs and other local jobs depend on capturing private and public sources of local medical expenditures.

"Exporting" Services

If community healthcare providers can attract outside patients, the healthcare industry can also act as an "export" industry. In essence, the industry exports its reputation and services while attracting outside patients and outside dollars into the local community. This "exporting" may be based on a state-of-the-art facility or a physician's reputation. Regardless, export dollars represent infusions of new dollars into the community's economy. These export or external dollars then allow a community to purchase a wider variety of goods and services from other communities. The spending linkages discussed above are also put into effect by these export or external dollars creating new jobs and sources of income in the community.

Supply-Demand Gaps: Keeping Healthcare Dollars at Home

Reducing consumer outshopping can be actively pursued by identifying gaps in local service provision. These gaps will assist a community in helping to "keep healthcare dollars at home." A supply-demand gap occurs when a local economy does not provide the supply of a good or service demanded in a local community. Residents are then forced to search elsewhere to make purchases. As discussed previously, these non-local purchases represent leakages from the local economy and reduce the number of potential employment and income opportunities in a community. In some cases, a community cannot provide these goods or services because of market or financial limitations; however, there may be cases where the circumstances will support such businesses locally. The potential should be explored by a community to determine if opportunities are being missed. This may be especially true when key demographic or economic changes occur. These changes can generate new opportunities that did not exist in the community previously.

Non-Financial Linkages

Attracting and Recruiting Industry

An often-overlooked aspect of the healthcare system in economic development is the ability to attract and recruit firms based on community services. Company surveys reveal that managers often look at healthcare as an important issue in locating facilities. The existence of a strong healthcare network can lower healthcare costs for firms and their employees and provide value-added services for firms, such as occupational health. Also, retirees and workers will be more likely to choose a location that has access to quality health care.

Promoting a Healthy and Productive Workforce

In today's economy, a productive workforce is critical to attracting new firms and retaining existing firms. The health status of local workers can be an important ingredient in productivity. If a community's workforce is substantially less healthy than other communities, this may be considered a cost burden by some industries. Local healthcare providers can improve the local workforce health and productivity, leading to long-term economic benefits by promoting preventive care.

The combination of changing demographics, growth in healthcare service employment, and increased medical transfer payments implies that the healthcare system will be a major player in the future of rural Kentucky. This fact was recognized in the Kentucky Appalachian Commission's strategic plan, "State Goal 5.2: Kentucky will recognize health care as a substantial economic sector and pursue strategies to grow the sector" (Kentucky Appalachian Commission, 2000). Economic development agencies, business groups and local governments should play a more active role in promoting the healthcare sector as a key partner and primary sector in generating new economic opportunities.

Economic Impact of Local Hospitals and Healthcare Systems

Rural healthcare providers are an important source of economic growth and stability in their local economy. This growth and stability comes first and foremost from the jobs and earnings they provide directly. An examination of earnings data highlights the importance of health care in Kentucky's economy.

Table 1 represents the percentage of total earnings derived from the healthcare sector. The healthcare sector includes hospitals, doctor and dentist offices, health clinics and other healthcare providers. This is one measure of the economic importance of an industry. As the table depicts, the dependence on health care as an economic engine varies by area development district.

An important question is how to measure the contribution of a company, institution, or industry to the local economy. At first, this seems like a straightforward problem, by simply measuring the number of employees or the amount of income generated by that company or industry and comparing it to the total number of employees or income for the city or county. While straightforward, this simple calculation misses the interrelationship between companies, institutions and industries in the local economy. Imagine for a moment the relationship between different companies in a given community. Who buys from whom? Who sells to whom? To some extent, local companies buy and sell from each other. These market relationships mean that simply adding up industry jobs or earnings does not completely measure an industry's or institution's contribution to an economy.

The rural healthcare sector's total impact on the economy is measured through economic multipliers. A multiplier represents the total economic impact of an industry or an individual firm on the economy. There are three types of multipliers based on the type of economic impact analysis. The direct multiplier is based on the industry's or company's initial economic impact

Table 1. Healthcare earnings as a percentage of total earnings.

Area Development District	Healthcare Earnings as a % of Total Earnings
Barren River	10.00%
Big Sandy	13.20%
Bluegrass	9.10%
Buffalo Trace	7.30%
Cumberland Valley	12.10%
Fivco	15.60%
Gateway	12.10%
Green River	8.10%
Kentucky River	13.90%
KIPDA	12.70%
Lake Cumberland	11.10%
Lincoln Trail	5.90%
Northern Kentucky	6.90%
Pennyrile	10.10%
Purchase	11.80%
State of Kentucky	10.40%

Table 2. Healthcare related economic impact multipliers.

	Direct	Indirect	Induced
Employment Multiplier	Healthcare jobs	Healthcare supplier jobs	Local retail and service jobs related to healthcare employee spending
Income Multiplier	Healthcare employee income	Healthcare supplier employee income	Local retail and service income related to healthcare employee spending
Sales or Output Multiplier	Healthcare revenue	Healthcare supplier revenue	Local retail and service revenue related to healthcare employee spending

on the community. For example, if a hospital has revenue of \$5 million, then this figure becomes the direct economic impact on the community. The indirect multiplier is based on the economic impact of businesses that the hospital helps to support. Hospitals and other healthcare providers purchase local laundry services, food, landscaping, and floral arrangements. Each of these establishments has an economic impact on the community via jobs and income. The induced multiplier includes the local hospital employee spending on goods and services at local establishments. These could include video store transactions, visits to the local grocery store, or purchasing a home. The total economic impact is defined as the direct plus indirect plus induced economic effects.

The total economic impact of the rural healthcare sector, measured via multipliers, depends on a number of factors. In determining the economic impact of a large institution, there are two major purchasing categories to consider: local purchases and non-local purchases. In effect, non-local purchases represent a leakage or loss to a local economy. For hospitals, many purchases by necessity must be made at distant locations. The complex technology and equipment of modern medicine is subject to large economies of scale and are only produced in a few places in the nation. This equipment might include X-ray machines, MRI equipment, and other medical equipment. Pharmaceutical supplies and drugs are also subject to these same forces. Further, some types of audit, legal, and accounting services must be purchased from urban regions due to the complexity of services.

Healthcare employee spending may also leak out of the local economy. Employees and their families may decide, for example, to see a movie in another town or purchase a vehicle in a nearby metropolitan area. Some employees may live in another community and leave the region on a daily basis. Leakage of dollars and income out of the community, via non-local spending, reduces the size of the multiplier and the economic impact of the healthcare system.

Future extension and applied research activity is being directed at measuring the full economic impact of individual rural hospitals and other healthcare providers on their local economy. This information can be used to rally support for local hospitals and healthcare providers and ensure a strong local economy. As people see the economic impact of a local hospital or other healthcare providers, they may be more willing to engage in supporting local services. The loss of a hospital or healthcare provider can be a blow to economic growth.

Economic Impact Study

As an example, an economic impact study was recently completed for the Knox County Hospital. Based on an economic multiplier, Knox County Hospital has a secondary economic impact of nearly \$16 million, with \$12 million dollars representing the hospital's direct purchases. Another \$4 million is due to business spending by local hospital suppliers and employee purchases in the local economy. This information has been used by the hospital to support grant writing, inform local leaders of the importance of healthcare, and support local health services.

Public Information Tools

Recognizing the impact of healthcare in the local economy on paper is not enough. This information must be turned into useful public information. Public action can then be stimulated, leading to greater use of local healthcare facilities, support from economic development officials, better recruitment of physicians and healthcare professionals, and a stronger and more diverse local economy.

The county economic impact report is the key tool provided by Kentucky Rural Health Works. This report identifies three key aspects of the economic role of the local healthcare system: 1) the current economic role of health care in the local economy, 2) the initial information about the potential existence of medical service gaps in the local economy, and 3) an estimate of the economic impact of closing gaps in local health care or expanding the healthcare system. These reports can serve as the starting point for a broader discussion of the economic role of health care in a community.

Kentucky Rural Health Works can also assist with patient retention and expansion in local communities. The county economic impact report is designed to begin the process of highlighting gaps in the provision of local health services. Supply-demand gaps may be caused by residents leaving the area for medical services or due to changes in the local economy or community. These changes might include an influx of retirees or new residents or the opening of a new manufacturing or business facility. By identifying these gaps, KRHW can pinpoint opportunities may be present to create new local medical services and new employment opportunities for residents. However, financial and market feasibility analysis will be required to fully determine if real opportunities exist. Training in how to analyze feasibility and market demand is available to assess specific opportunities in your community.

Besides feasibility training, Kentucky Rural Health Works also provides direct connections to services and programs offered by the University of Kentucky Center for Rural Health. This center is under the auspices of the University of Kentucky College of Medicine and is located in Hazard, Kentucky, with satellite locations in Madisonville and Morehead, Kentucky. The main goal for the Center for Rural Health is to improve the health of rural Kentuckians and strengthen rural communities by providing professional health education and training programs to a rural area and its people, by encouraging the development of rural health networks, and by providing decision-making information regarding health care to rural communities, leaders, and providers. The Kentucky State Office of Rural Health (KSORH) is housed within the UK Center for Rural Health in Hazard. In Kentucky, KSORH is the resource for information regarding rural health care for clinicians, students, community leaders, state agencies, and legislators.

The Center for Rural Health provides technical assistance and community services to rural communities, healthcare providers, and leaders. Programs sponsored by the UK Center for Rural Health include: 1) the Kentucky Rural Hospital Flexibility Program, 2) the Southeast Kentucky Community Access Program, 3) the Student Repayment Loan Program, and 4) the Kentucky Homeplace Program.

The Kentucky Rural Hospital Flexibility Program (Flex Program) is a technical assistance program funded by the Health Resources and Services Administration's Office of Rural Health Policy that helps rural hospitals and providers with community health assessments, feasibility and economic studies, and health network development. The goal of the Flex Program is to ensure financial sustainability of rural hospitals and to coordinate the delivery of integrated health services in rural communities.

Southeastern Kentucky Community Access Program (SKYCAP) works with the uninsured or underinsured populations in Harlan and Perry counties. SKYCAP particularly serves

people who have diseases such as diabetes, heart disease, hypertension, asthma, and mental illness. SKYCAP assists the uninsured and underinsured population with basic needs such as housing and other environmental issues. One of the main goals of the program is to reduce the overutilization of emergency room services.

The Student Loan Repayment Program (SLRP) works with rural providers in recruiting healthcare professional students to rural areas. SLRP is a matching program that enables healthcare professional students who are committed to work in rural areas to pay off their loans.

Kentucky Homeplace Program is a lay health worker program that provides community-based education, advocacy, and referral services in 33 counties. The Kentucky Homeplace links underserved individuals to needed health services. These services are designed to increase access to preventive and primary health care, improve access to prescribed pharmaceuticals, and reduce inappropriate use of tertiary care.

Local economic development officials and local leadership can be made aware of the economic importance of the healthcare system. This may provide the impetus for support of new local programs to support healthcare providers. Innovative programs might include workforce development, such as providing training and educational support for young people who wish to stay in their home community and earn a decent living. Government officials may provide support to the industry in the form commonly provided to manufacturing or other business entities.

A variety of tools can be used to raise awareness among the public and local officials about the economic role of health care. Press releases, radio spots, commercial boards, and flyers are among those services available. Kentucky Rural Health Works will provide template forms of these media and a list of publication outlets for use in local communities. These public information tools can be customized to each county's situation.

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