

Health Care Services and the Rural Economy

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None of us would likely quibble with the assertion that the main purpose of health care services—broadly defined—is to meet very real and very important human needs. Among the specific items that might appear on our lists would be the following:

- To enhance physical, mental, and emotional health
- To reduce the incidence of disease and social pathology
- To increase life expectancy and the associated quality of life
- To reduce infant mortality
- To alleviate pain and suffering.

The primacy of this role for health care services cannot be seriously questioned. However, there is also the need to recognize the very important secondary relationship between health, health care services, and the economy. It is this latter relationship that is the purpose of this paper, with most of the paper focusing on how this relationship plays out within a rural context. The paper is divided into three sections, with emphasis on the third section. Part one provides a brief conceptual framework for establishing, *at the macro level*, the link between health and the economy. The second part of the paper delineates the linkages between *the local health care sector* and local rural economies. Part three is oriented toward the future and identifies major external forces with the potential for having a significant impact on the linkages between the local health care sector and local rural economies. How these impacts and linkages may play out in the rural Midwest is considered in the third section.

Macro-Level Linkages

Figure 1 is a schematic that represents one approach to conceptualizing the relationship between health and the economy. It is easy to quibble over whether all of the relevant linkages have been captured, including whether it is appropriate to represent some of the linkages with unidirectional arrows. Nevertheless, this schematic identifies two important macro-level linkages that are of particular interest. Arrow #1 captures the human capital dimension of health care. This concept—as pioneered by Nobel Laureate economist Theodore Schultz—views spending on human resources as an investment, not a cost. These investments are expected to pay dividends in the form of increased labor productivity and are to be viewed as an important engine for economic growth. Although Schultz directed most of his attention to the role of human capital in lesser-developed countries, the principle is universal.

While increasing the stock of human capital leads to economic growth, its depletion can be a drag on the economy—for both the private sector and the public sector. By way of example, Columbia University recently released a 230-page report on the cost of substance abuse in New York City (*USA Today*, February 29, 1996). The estimated \$20 billion in annual costs—an amount equivalent to 9% of New York’s gross city product — were apportioned as follows:

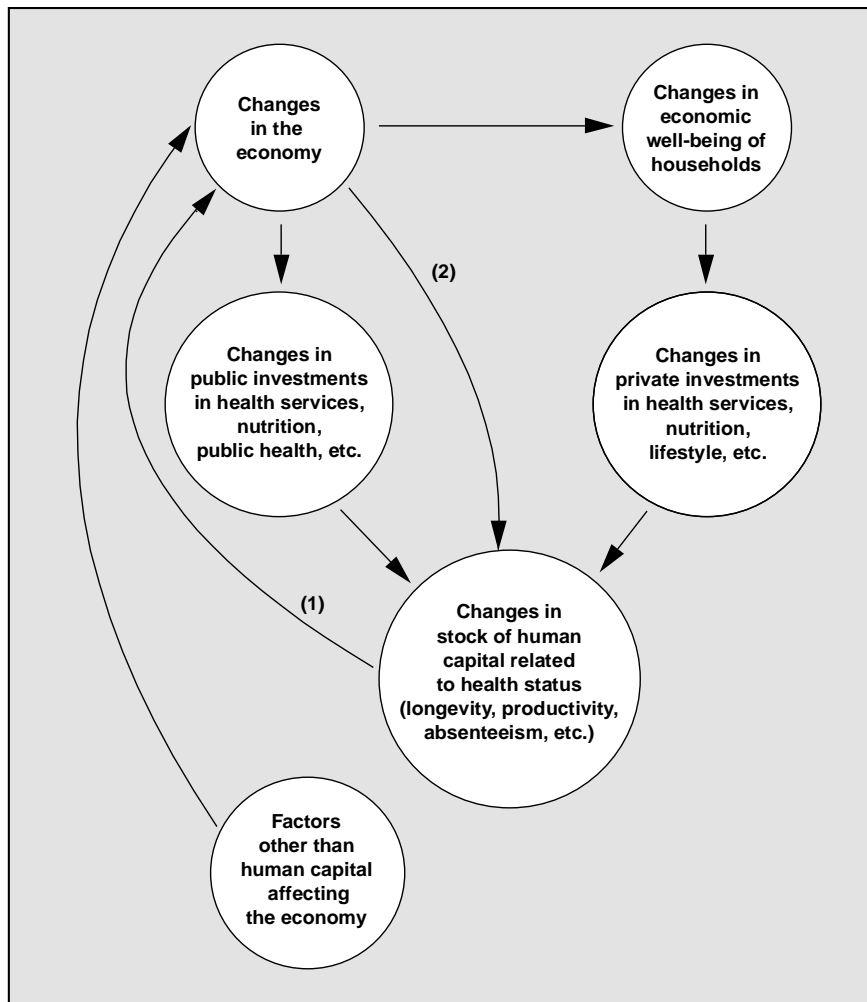
- \$4.9 billion in lost productivity
- \$4.4 billion to treat diseases linked to tobacco, alcohol, or drug abuse
- \$4.1 billion in alcohol and drug-related costs to the criminal justice system

- \$3.5 billion for social service programs such as welfare, food stamps, and foster care
- \$2.3 billion in business costs for workers' compensation and security.

The other side of the macro-level linkage is depicted by arrow #2 and is often overlooked or not fully appreciated. For example, Brenner's (1992) longitudinal study concludes that recession "... has a fundamentally damaging relation to all investigated measures of physical and mental health and criminal aggression" (p. 3). Merva and Fowle's (1992) study concluded that a one percentage point rise in the unemployment rate results in a

- 5.6% increase in deaths due to heart disease
- 3.1% increase in deaths due to stroke
- 6.7% increase in homicides
- 3.4% increase in violent crimes; and a
- 2.4% increase in property crimes.

Figure 1



At the farm level, several studies have demonstrated and documented that economic hardship is associated with increases in psychological stress (Armstrong and Schulman, 1990; Belyea and Lobao, 1990; Bultena et al., 1985; Geller et al., 1988). In addition, Hoyt et al. (1995), investigated the relationship between size of place and psychological distress and concluded that

“... regional economic and social trends have important mental health consequences for residents of rural communities. Moreover, the effects appear to have manifestations that go beyond direct economic stress and diminished personal resources. Perhaps economic and social events of the magnitude of the rural transformation are too great a match for the psychological palliatives or rural community spirit. It is under these conditions that community-level malaise may become rooted in rural communities and affect psychological distress of residents. These potential explanations await further testing.” (p. 718)

The Local Health Care Sector and Rural Economies

Apart from the broader relationship between human capital and economic growth and the impact of economic change on health status, the rural health care sector has more immediate and direct links to local rural economies. At least five such linkages have been delineated and described in detail elsewhere (Cordes et al., 1994). A brief summary of each follows:

1. Employment Impacts

The local health service sector—especially the hospital—is often a major employer in a rural community. And many of the jobs in the health sector are relatively high paying, at least by rural standards. In addition to employment opportunities created in the health care sector, additional opportunities are created as (a) the health service sector purchases goods and services from other sectors of the local economy, and (b) employees of the health care sector and of local businesses supplying goods and services to this sector engage in subsequent rounds of spending within the local economy.

While the health care sector in most rural locales is designed for the population in the immediate service area, there are also many cases in which the sector takes on the characteristics of an “export activity.” The Marshfield Clinic in rural Wisconsin would be a notable case of the health care industry as the primary economic base for that community. However, there are many other situations on a much smaller scale in which a “regional referral center” may attract clientele from a 50- to 100-mile radius. In addition, there are some specialized services and facilities in selected rural areas that attract clientele from a very broad geographic area. For example, the Hazelden Foundation in Center City, Minnesota, draws “the rich and famous” from throughout the United States to participate in its substance abuse programs. Finally, it is important to recognize that even when a clientele base is localized, the peculiarities of health care financing create an export-activity effect. Specifically, health insurance (including Medicare and Medicaid) plays a special role in health care. Hence, if local services do not exist, the spending power made available to the local citizenry via insurance cannot be rechanneled and spent elsewhere in the local economy. Instead, this spending power either will go unrealized or will be spent in another community as services are sought elsewhere.

2. Attracting/Retaining Local Residents

In the same way that jobs attract people, people attract jobs. Retirees form a special group of residents whose spending and purchases can be an important source of local jobs. Many retirees also have a substantial net worth. Retaining and/or attracting retirees is an important local economic-development strategy, and its success may hinge in part on the local availability of adequate health care services.

3. Attracting/Retaining Businesses

Several studies have provided empirical evidence that public and community infrastructure, including health and medical services, plays a role in attracting and retaining businesses and jobs. To the extent health services are a factor, the specific reasons may be diverse and complex, including the following:

- Their role in human capital formation
- Their role in providing services to businesses, e.g., workplace screening and occupational health programs
- Their role in contributing to a community's quality of life and helping to make the community a satisfactory place of residence for the local work force.

4. Generating Investment Funds

Health care provision is quite labor intensive, and a considerable amount of the health care sector's expenditures are for wages and salaries. Partly because of the need to meet payroll demands, health care providers—especially hospitals and nursing homes—must have available a considerable amount of cash and short-term investments. These holdings, at least if held in local financial institutions, become available as loanable funds to local businesses and individuals that wish to invest in the local economy. For example, a Pennsylvania study (Erickson et al., 1984) determined that the hospitals in an eight-county nonmetropolitan area held over \$6 million in cash and short-term investments. Moreover, approximately 90% of those assets were held in local financial institutions.

5. Enhancing Local Leadership Capacity

Leadership development and capacity are critical elements in determining why some rural communities fare much better than others (John, Batie, and Norris, 1988). Often, health care providers and workers represent an important part of the community's leadership structure and capacity. For example, in the Pennsylvania study noted earlier, almost one-half of the hospital administrators were involved in local development efforts, with the most common type of involvement tied to the work of the local chamber of commerce.

The Relationship between the Health Care Sector and Local Rural Economies—A View of the Future

There are at least five major trends or forces that will likely have major impacts on the relationship between the health care sector and local rural economies in future years. These five trends or forces are:

1. Demographic Trends
2. Telecommunications Trends

3. Restructuring of the Health Care Industry
4. Changes in Federal Policies and Programs
5. Changes in State-Level Policies and Programs.

For the most part, these five forces are beyond the control of the local community. However, how communities choose to position themselves relative to this changing external environment *is* within the control of the local citizenry and/or local leaders.

Table 1 provides a framework for speculating about how each of these five forces may affect the linkage between the local health care sector and local rural economies. Many of the 28 “cells” in the table may be inconsequential or of limited interest, and it is certainly beyond the scope of this paper to speculate about each cell. Instead, the remainder of this section will focus on selected cells.

1. Demographic Trends [and their relationship to employment (cell 2) and service availability (cell 1)]: The total amount of employment generated by the health sector is obviously influenced greatly by (a) the number of people served by that sector and (b) the age of the population served. Recent evidence suggests that total nonmetropolitan population growth may be on the upswing, both nationally and in the five-state Midwest region serviced by the Federal Reserve Bank of Chicago (Illinois, Indiana, Iowa, Michigan, and Wisconsin). In this region, 74% of the nonmetropolitan counties experienced population growth between 1990 and 1994, compared to only 30% during the decade of the 1980s (Johnson, 1996). While some types of nonmetro counties grew more rapidly than others, the overall pattern was surprisingly widespread across all types of nonmetropolitan counties. Should the widespread growth in nonmetropolitan counties continue, the health care sector has the potential for being a “growth industry” in rural areas. To the extent this population growth is also accompanied by an increase in the proportion of the population

Table 1 Local Economic Linkages to the Health Sector
Vis-à-Vis Future External Forces

External Forces	Potential Linkages between Local Health Sector and Local Economy			
	Availability of Services*	Employment	Investment Funds	Leadership Capacity
Demographic Trends	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Telecommunication Trends	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
Restructuring of Health Care industry	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
Changes in Federal Policies/Programs				
Medicare	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
Medicaid	<u>17</u>	<u>18</u>	<u>18</u>	<u>20</u>
Other	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>
Changes in State-Level Policies/Programs	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>

* Vis-à-Vis their role in attracting/retaining residents and businesses

that is age 65 and over, the growth potential will be accelerated. There are two reasons to expect an increase in the proportion of the nonmetropolitan population that is in this age category. First, the nation's population as a whole is aging and will continue to do so until the "baby boom bubble" has passed. Second, those nonmetropolitan counties that grew the fastest between 1990 and 1994 were often what Johnson termed "destination-retirement" counties. To the extent nonmetropolitan areas continue to attract retirees, the demand for health services will grow. And to the extent these demands are met locally, local employment will grow. The corollary to this is that those nonmetropolitan communities that have superior local health services will be more likely to attract retirees, other things being equal.

2. Telecommunication Trends [and their relationship to health service availability (cell 5) and employment (cell 6)]: At least three different types of telecommunication trends are impacting the health service sector. The first is the management and sharing of patient information. The second is the use of new telecommunications technology to provide continuing educational opportunities and informal networking for health care professionals. This may be an important factor in helping to overcome and/or reduce the professional isolation often felt by health professionals practicing in rural areas. To the extent this is true, this use of telecommunications will be helpful in attracting/retaining health care professionals—especially to remote rural areas. The third telecommunications trend, and the one of most relevance for this paper, is the increasing role of telemedicine in patient care. A number of exciting experiments are underway around the country (Allen et al., 1992; Puskin, 1992; Zetman, 1995). Most of these experiments focus on enhancing rural service delivery by making more specialized services available—especially diagnostic services. The cost-effectiveness of this general approach appears to be more and more promising as the cost of telecommunications technology continues to decline. The economic implications for rural areas are twofold.

- a. This technology enhances the range of health care services available in rural areas. Again, this may be an important factor in attracting and/or retaining both residents and businesses.
- b. This technology has the potential for reducing the amount of economic leakage that occurs when patients leave their local area to receive services elsewhere.

However, telecommunications technology also raises some interesting organizational and institutional issues. For example, how should reimbursement revenue be shared between the local rural provider and the specialized expertise being made available outside the community? And when this approach occurs across state lines, what are the licensure and regulatory implications? Suppose the Marshfield Clinic has a telemedicine linkage to the Upper Peninsula of Michigan. In that configuration, is the Wisconsin physician practicing in Michigan or is the Michigan patient being treated in Wisconsin? Basically, our legal, institutional, and reimbursement systems are quickly becoming obsolete and out of sync relative to technological realities and potential. In some cases this may pose severe and unnecessary barriers to those in rural areas who wish to benefit from new technological developments. A modernization of our legal, institutional, and reimbursement systems is badly needed as we look to the future and try to bring the benefits of telecommunications to rural areas.

3. Restructuring of the Health Care Industry [and its relationship to service availability, employment, investment funds, and leadership capacity (cells 9, 10, 11, and 12)]: Of the five forces identified, this one is likely to be the most important and most powerful. Historically, the nation's health care industry has been analogous to agriculture in that both industries were characterized by a large number of independent "producers." In the case of the health care industry, these producers, or providers, included thousands of physicians who owned their own practices, either individually or with several other colleagues in some type of partnership. Similarly, the "production" of hospital services took place in several thousand U.S. hospitals, most of which were independent of each other. Almost all communities of any size had their "own hospital"—typically, a facility that was operated as a local nonprofit institution. In the heyday of this type of setup, payment to the provider was by a method called "fee-for-service." Each time a patient went to the doctor, the doctor would be paid a certain amount of money. Likewise, the longer a patient stayed in the hospital, or the more procedures or tests that were done, the more the revenue generated for the facility. Conventional insurance plans shifted any immediate financial risk away from both the provider and the patient.

While there were many virtues to the system just described, it was also devoid of incentives to control costs. In response to the rising costs of employee health benefits, the nation's business community became concerned and involved. Very large employers, as well as coalitions of small employers, began to put economic pressure on health care providers. This caused the nation's health care industry to undergo unprecedented reorganization, and what we have seen is probably just the tip of the iceberg. This reorganization is characterized by a wholesale integration and/or consolidation of "independent producers" and significant changes in the underlying incentive structure. These changes are often termed "market-driven reform" or, more commonly, "the managed care movement." The managed care movement has spawned many new organizations and corporations—some local, some national, and some international. For example, Columbia/HCA Healthcare Corporation, based in Nashville, is the nation's largest health care company but is only eight years old. Its annual revenues exceed \$10 billion, and it owns several hundred hospitals and outpatient surgery centers across the U.S., and in England and Switzerland. Some visionaries predict that virtually all of the nation's health care in the not-so-distant future will be provided by a handful of giant health care companies.

Exactly what is managed care? It is an umbrella concept that encompasses a multitude of specific models of health care organization and financing. Boland (1994) defines managed care as "... a broad prescription for American health care in the 1990s. It entails different financial incentives and management controls intended to direct patients to efficient providers who are responsible for giving appropriate medical care in cost-effective treatment settings."

Health maintenance organizations (HMOs) represent "pure" managed care. HMOs use a "capitated" financing system in which enrollees make an annual payment to the HMO in exchange for access to a set of services. The total amount of advanced payments received by the HMO becomes its annual total revenues. And because the HMO, unlike insurance company, is also responsible for providing care, the financial risk remains with the HMO. The more efficient the HMO, the more funds that remain in the original revenue pool for profits, for reinvestment, and for bonuses to the physician-employees of the HMO. In addition, the incentive is to keep people well

so they do not require costly “sick care.” The administrator of a hospital who is functioning within the traditional fee-for-service framework would be inclined to exclaim, “Good news, the hospital is full!” In contrast, the administrator of a hospital that is part of an HMO would be inclined to exclaim, “Good news, the hospital is empty!” While the HMO is but one specific model of managed care, all managed care approaches have a similar objective: achieving cost savings by controlling or “managing” the use of services and service inputs.

In response to competitive pressures and changing incentives, health care providers in rural areas are beginning to reposition themselves (Sparling, 1995). While this repositioning is not occurring as fast in rural areas as in urban areas, it is beginning as rural providers explore a range of options. These options range from selling local hospitals to for-profit national chains, such as Columbia/HCA, to developing formal and informal arrangements and agreements among local providers as well as between local providers and larger urban-based health centers. The array of organizational forms and acronyms has nearly reached pandemic proportions: Preferred Provider Organizations (PPOs); Point of Service Options (PSOs); Integrated Service Networks (ISNs); Physician Hospital Organizations (PHOs); and Physician, Hospital, Community Organizations (PHCOs). While some of the repositioning involves horizontal integration (e.g., merging or linking several nearby hospitals), the trend with more significant implications is vertical integration. For example, Moscovice et al. (1995) note:

“In recent years, providers and policymakers have increasingly chosen vertical integration of health services as a strategy for responding to environmental forces that threaten institutional stability and survival. The following examples are representative of the acceptance of integration strategies by both private providers and public policymakers.

- In June 1993, the American Hospital Association changed the name of its biweekly journal, after 67 years, from *Hospitals* to *Hospitals & Health Networks* and began to prominently feature articles promoting cooperation and collaboration among different types of providers and insurers.
- Vertically integrated networks form the cornerstone of various state health care reform efforts. For example, health care reform in Minnesota features integrated service networks of providers and health plans, and West Virginia’s reform initiative proposed the development of primary-care-centered community care networks.” (p. 3)

The managed care movement and the restructuring of the health care industry has profound implications for rural areas and rural economies. Very different scenarios are being formulated as knowledgeable people speculate about the future. The most pessimistic view is that large, urban-based, for-profit managed care organizations will purchase rural hospitals and physician practices to gain access to those markets. However, once having captured the local clientele base, they will let the local system deteriorate and/or stop providing local services in unprofitable markets.

My own view is much less pessimistic. Primary care, not specialty care, is at the core of an efficient managed care system, and there are few rural areas—especially in the Midwest—where primary care services, ancillary services, and “limited service hospitals” cannot be provided in an efficient and profitable fashion. My crystal ball

suggests a more optimistic scenario in which the rural health care sector will generally be strengthened under a managed care system—especially if adequate reimbursement is made available through a capitated approach. If this scenario were to come to pass, we could expect the following relative to the four columns in table 1.

- Service Availability. The availability of services and the general strengthening of the rural health care system will be helpful vis-à-vis its role in attracting and/or retaining residents and businesses.
- Employment. As the availability of services is enhanced and strengthened, one would expect greater economic activity associated with the rural health care sector. The basic presumption here is that there would be greater utilization of local services and less economic leakage associated with the local population seeking care elsewhere. It is important to note, however, that there are at least two important mediating considerations. First, managed care and capitated systems tend to reduce overall expenditures per person in comparison with the traditional fee-for-service system. Hence, it is conceivable that the proportion of the local population using local services would increase, but the absolute amount of services provided would decrease. In other words, rural providers would gain a larger share of a shrinking pie—at least when measured on a per capita basis. Second, to the extent the local service mix changes and incentives to become even more efficient come into play, the type and amount of inputs used in producing health services will likely change. It is the purchase of local inputs, including local “labor,” that helps determine the strength of the health care sector as an engine for local economic activity. In addition to unforeseen changes in the type and amount of inputs purchased, the issue of ownership and control also becomes important. For example, if the local system is owned by a national or international corporation, it may be that health care supplies, tax and accounting services, and so on will be provided at corporate headquarters rather than purchased locally.
- Investment Funds. Again, the ownership and control issue is likely to become tantamount as decisions are made as to whether cash and short-term investments should be held in local financial institutions or elsewhere.
- Leadership Capacity. This, too, may be influenced by ownership and control considerations. For example, does the CEO of a local hospital who is ultimately responsible to “corporate headquarters” and physician-employees who may be “stationed” in a particular community invest fully in community life and its leadership needs?

4. *Changes in Federal Policies/Programs* [and their relationship to employment (cells 14 and 18)]: The previous section argued that the restructuring of the health care industry need not bode poorly for rural areas and their economies. This argument presumed some reasonable level of reimbursement. The reimbursement or payment issue is the “other shoe” in looking at the total picture. And, the federal government is the big player—especially in rural areas. The role of the federal government also extends beyond direct financing, encompassing regulatory measures, including antitrust measures that come into play when forming integrated service networks and other innovative types of organizational arrangements. It also

comes into play vis-à-vis support to medical schools and the number and types of physicians produced. Finally, the federal government has in place a number of programs that are targeted specifically to rural areas.

Despite these multiple tentacles of the federal government, the role of Medicare and Medicaid is of special importance. Medicare focuses primarily on the elderly and is typically the largest single source of revenue for rural hospitals. Rural areas have a much higher proportion of elderly than do urban areas. This is especially true in the five-state region served by the Federal Reserve Bank of Chicago (table 2).

Table 2 Percent of Population Over 65 Years of Age, 1990

	Metro	Nonmetro
Illinois	11.7	16.7
Indiana	11.9	14.0
Iowa	12.2	17.8
Michigan	11.4	14.2
Wisconsin	12.1	15.9

Medicaid is a joint federal-state partnership that targets the low-income population. While most of the people covered by the program are not the elderly, the largest share of total expenditures—approximately one-half—goes to long-term care facilities. In sum, Medicare payments are the lifeblood of rural hospitals and Medicaid payments are the lifeblood of rural nursing homes and long-term care facilities.

As we think about these two major funding sources, and as one looks to the future, several points need to be made. First, both revenue sources have historically paid rural providers much less than their urban counterparts. Second, the current political environment and the perceived need to balance the federal budget are putting pressure on the Medicare and Medicaid programs—specifically, to reduce the rate of expenditure growth in both programs.

From the standpoint of rural economic impacts, however, there is a potential silver lining in this chaotic environment. First, the *real rate* of federal funding will almost certainly continue to grow, largely because of the continued growth in the elderly population. While some individual rural providers (physicians, hospitals, etc.) and locales may be put at risk, from the standpoint of the total rural economy the infusion of additional dollars (in real terms) will almost certainly grow. The second piece of good news is that the wholesale opening of the Medicare debate—and, to a lesser extent, the Medicaid debate—has already created some special opportunities for rural advocates. For example, last year the Republican Congress championed a proposal called “Medicare Plus.” The intent of this program was to move a much larger proportion of the Medicare population to a capitated managed care approach.

The debate over this proposal created an opportunity for rural advocates to focus on the rural-urban differential in what is officially called the average adjusted per capita cost (AAPCC). The AAPCC ranges from about \$2500 per year in rural counties in South Dakota and Nebraska to more than \$9000 in New York City. The revelation of this disparity caused an outcry from a coalition of congressional members—Republicans and Democrats alike. If Medicare Plus or something like it is eventually enacted, it will almost surely have a floor or minimum under the AAPCC. This will be a major victory for rural health and would have the potential for a significant infusion of additional dollars into the rural health sector and the rural economy.

5. Changes in State-Level Policies/Programs [and their relationship to service availability (cell 25) and employment (cell 26)]: Historically, state governments have not been heavily involved in rural health issues. However, in recent years that has begun to change. For example, many states now have state offices of rural health, albeit much of the impetus came from federal funds that were made available. In addition, state legislatures and the public have begun to more carefully scrutinize state-supported medical schools. A common question is: What proportion of graduates are staying within the state—especially in rural areas and inner cities where they are most needed? However, as we look to the future, the biggest change for state governments will be how they handle the expected “devolution” of responsibility and authority from the federal government to state governments. For example, there is a possibility that Medicaid may end as an entitlement program and be provided to the states in the form of a block grant.

Exactly how all of this plays out among 50 state capitols is anyone’s guess. To a large extent it will be influenced by the strength and effectiveness of rural constituencies within each state. In short, the fundamental question is a political one: Are rural interests and needs represented and served better by the federal government or by individual state governments? The rural or nonmetropolitan population is only about 25% of the nation’s total. However, this does not mean rural stakeholders have no influence. In fact, it has been argued that rural interests—especially the agricultural component of rural America—have influence far beyond the size of the rural population. And in the case of health care, there is no question that certain rural-oriented organizations, such as the National Rural Health Association, have had considerable impact. However, rural activists also exist in every state, and many state governments have been innovative and responsive to rural needs. For example, the National Governors Association recently published an impressive volume titled *Rural Health: An Evolving System of Accessible Services*. In the introduction, it is asserted:

“States recognize that in developing a statewide health care delivery system, the rural health infrastructure must be strengthened. Although states are at various stages of developing and implementing approaches to systemic change, rural areas pose a unique and formidable challenge to this goal. Some states are using two primary approaches to address rural health needs within the context of system health care restructuring. They are launching gubernatorial and/or legislative initiatives that commit financial resources to tackling primary care and rural health care delivery problems. Alternatively, they are establishing councils or task forces that are charged with addressing statewide rural health issues.” (p. viii)

Regardless of how one feels about the relative merits of federal and state levels of government in relation to rural needs, it is likely that state governments will play a more prominent role than they have in the past. To the extent state-level initiatives can strengthen the rural health sector, the larger rural economy will also benefit. My guess is that some states will do very well and others not so well—either because of the relative political strengths of rural interests, or for other reasons.

Conclusion

In conclusion, there is an important linkage between health and the economy, and between the health care sector and local economies. As we look to the future, the health care sector has the potential to be a growth industry for rural economies. This will be due, in part, to existing demographic forces and the potential offered by the telecommunications revolution. The acceleration of the health sector as a growth sector would surely be enhanced by meaningful payment and reimbursement reform at the federal level, and by state-level initiatives to strengthen the rural health sector and delivery system. It is also possible that the managed care movement, with its emphasis on primary care and cost-effectiveness rather than specialty care, could further strengthen the rural delivery system.

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