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RURAL HOSPITALS, REIMBURSEMENT POLICY, AND HEALTH CARE REFORM

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"Distribution of medical services to rural people is more expensive, and their means of payment are less, than in urban areas. Rural people thus have an interest in the solution of the national problem of the distribution of medical care; few groups have more to gain."

-Calvin W. Stillman, Journal of Farm Economics, 1949

The health and welfare of rural people has been a central concern of agricultural economists for many years as the quote from Calvin Stillman illustrates. It remains the case that rural people have much at stake in the current debate over health care reform. As the workshops for rural physicians and the basic medical institution that coordinates and delivers care in small rural communities in the United States, rural hospitals provide an important vantage from which to examine the current health care reform proposals.

Rural hospitals provide a key link in the delivery of health care services to rural people. Access to health care depends upon a number of factors including insurance, income, education and knowledge, as well as time costs and out-of-pocket costs. Locally available health care services, especially primary care and first level emergency services, allow residents in areas with low population densities to obtain basic health care services conveniently. Despite the attention to and improvement in rural hospital finances over the past decade, the health care reform legislation now being considered at the federal level poses both opportunities and challenges for rural hospitals and their communities. This paper reviews the situation of rural hospitals and outlines areas where the health care reform may impact rural hospitals.

Rural Hospitals Background

While health care markets continue to change at a rapid pace due to technological advances, pressures arising from higher costs, organizational changes and the emergence of a variety of networks and new health care institutions, and demographic and economic conditions, rural hospitals remain the hub of most rural health care services in the United States. In many rural communities the hospital remains the central organizing institution for locally delivered primary care and emergency services. Hospitals retain their importance through their role as a workshop for physicians and from their institutional role as a business form that often owns other health care services, such as clinics or emergency medical services. Rural hospitals also provide an organizational means of contracting in services provided by outside health care systems and practices.

To appreciate the situation of rural hospitals today it helps to understand the dilemma rural hospitals faced in the 1980s and 1990s. Over the period 1980–1998 the overall number of community general hospitals nationally decreased by 11.8% due to mergers, closures, and conversions into another form of health care organization (Ricketts, 2000, p.645). While some new facilities opened, over 1000 hospitals closed during this period, and 438 of them were located in nonmetropolitan areas. The year with the most rural hospital closures was 1989 when 50 closed (Ricketts, 2000, p. 645).

Rural health researchers and hospital leaders agree the primary factor that generated the decline of the viability of small rural hospitals in the 1980s and 1990s was Medicare reimbursement policy. Medicare

systematically adjusted its payments to rural hospitals downwards due to the lower costs of labor inputs in rural areas. Medicare, through its prospective payment system, paid rural hospitals less than hospitals located in metropolitan areas for the same services. Overtime this combined with declining or stagnant population bases, increased competition within health care markets regionally, and greater mobility of residents, led to significant financial pressures on rural hospitals.

Beginning in the late 1980s and early 1990s a change occurred in federal rural health policy that recognized the justification for a limited service model of a hospital that received enhanced payment from Medicare, in recognition of the facility's special role as a sole and limited-scope source of care. Beginning with an experiment in Montana in 1987 and in seven states in 1989, the federal Health Care Finance Administration implemented a demonstration program of limited-service hospitals with a very small number of beds, a limited length of stay of under 72 hours, and a fixed transfer agreement with a larger community hospital that would accept all transfers from the limited service hospital. While some eligible rural facilities choose not to participate, these demonstrations helped set the stage for a broader rural health policy effort that has impacted rural hospitals dramatically, namely the Rural Hospital Flexibility Program (Flex Program) that inaugurated the category of hospitals called Critical Access Hospitals (CAHs).

Rural Hospital Financing: the Critical Access Hospital Program

The Flex Program was approved in the Balanced Budget Act of 1997 and the program has two main dimensions. First, a program that awards grants to each state to improve rural health care was implemented. Second, the Critical Access Hospital program, administered by the Centers for Medicare and Medicaid Services (CMS) was launched. The CAH program allowed hospitals to receive cost-based reimbursement for services provided to Medicare beneficiaries providing they meet the following criteria: 25 or fewer beds; average length of stay for acute patients of 96 hours or less; and a distance criteria of more than 35 miles by primary road and 15 miles by secondary road or certified as a "necessary provider" by their state government with CMS approval. CAHs also needed to be located in a part of the state that is not in a Metropolitan Statistical Area and be part of a rural health network that addresses issues such as patient referral and transfer, improved communication systems, provision of emergency and nonemergency transportation between the CAH and the referral hospital, and credentialing and quality assurance procedures.

Beginning with its launch in 1999, the CAH program has seen strong participation by small rural hospitals. The years 2001 and 2005 were the years with the highest enrollments, with the large number joining in 2005 because the federal government had signaled its intention to stop allowing states to waive the distance criteria with "necessary provider" criteria. As of July 2009, 1305 hospitals had joined the CAH program since 1994.

In terms of CAHs by state, Kansas leads the country with the most CAHs (83), followed by Iowa (82), Minnesota (79), and Texas (76). Most of the states with high numbers of CAHs are located in the middle of the country and they feature large areas with relatively low population density and a large number of small towns. Five states—Connecticut, Rhode Island, Maryland, New Jersey, and Delaware—have no CAHs.

The participants in the CAH program have generally experienced a favorable contribution to the overall hospital finances due to the cost-based reimbursement. Stensland, Davidson, and Moscovice (2004) report that the hospitals converting to CAH status in Fiscal Year 1999 received an additional \$500,000 in FY00 inflation adjusted dollars from their Medicare inpatient and outpatient reimbursements. They report that for these hospitals Medicare payments increased 36% on average while Medicare patient days dropped by 8%.

Another analysis of the impact of CAH conversion on participating hospitals also found a positive financial impact (Schoenman and Sutton, 2008). They found that hospitals converting to CAH status reduced their number of beds—by roughly one-third—at the time of entry into the program. They also found that converting hospitals generally reduced staffing levels, mostly in the second year following conversion. While staffing levels dropped in these converting hospitals, average salary levels increased by about one-third over the first three years post-conversion (Schoenman and Sutton, 2008, p.8). A striking financial impact on the CAH finances that Schoenman and Sutton report is the increase in average revenue per bed for CAH converters, measured at 69% increase in revenue per bed for hospitals converting in 1999 and 48% for hospitals converting in 2000. Schoenman and Sutton also found that "CAH converters experienced large declines in their number of Medicare inpatient discharges in the year following conversion (p. 9)."

With the new found financial breathing room, many CAHs have reinvested into their facilities and technological base. Another dimension of the Flex Program is to improve the quality of care delivered at CAHs. Casey and Moscovice (2004) studied quality improvement programs at CAHs and they found “cost-based Medicare reimbursement has been a key factor in the ability of CAHs to fund additional staff, staff training, and equipment to improve patient care (p. 327).” The network requirements of the CAH program and the state-level Flex grant and program activities have promoted information sharing regarding quality improvement activities. The new financial resources through the CAH program allowed the purchase of needed equipment, especially expensive items such as CT scanners, radiology equipment, and laboratory equipment. Some hospitals have utilized the finances to invest in entirely new physical plants or to undertake major rehabilitation projects for their facilities.

Figure 1. New CAHs per Year

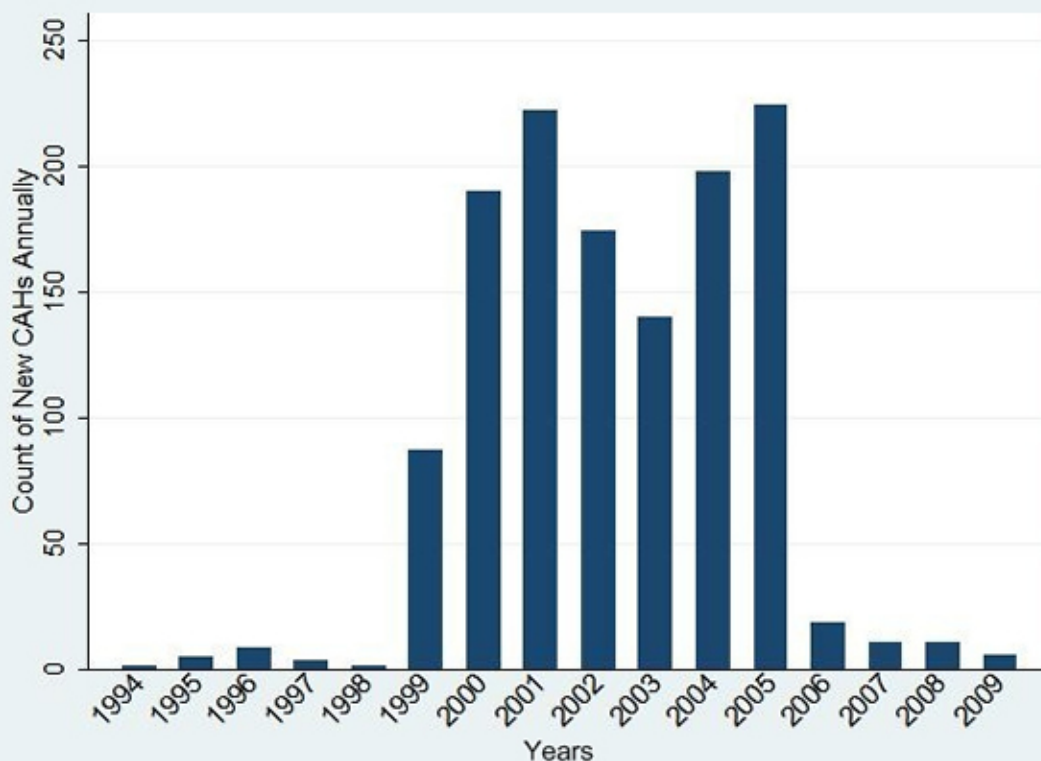
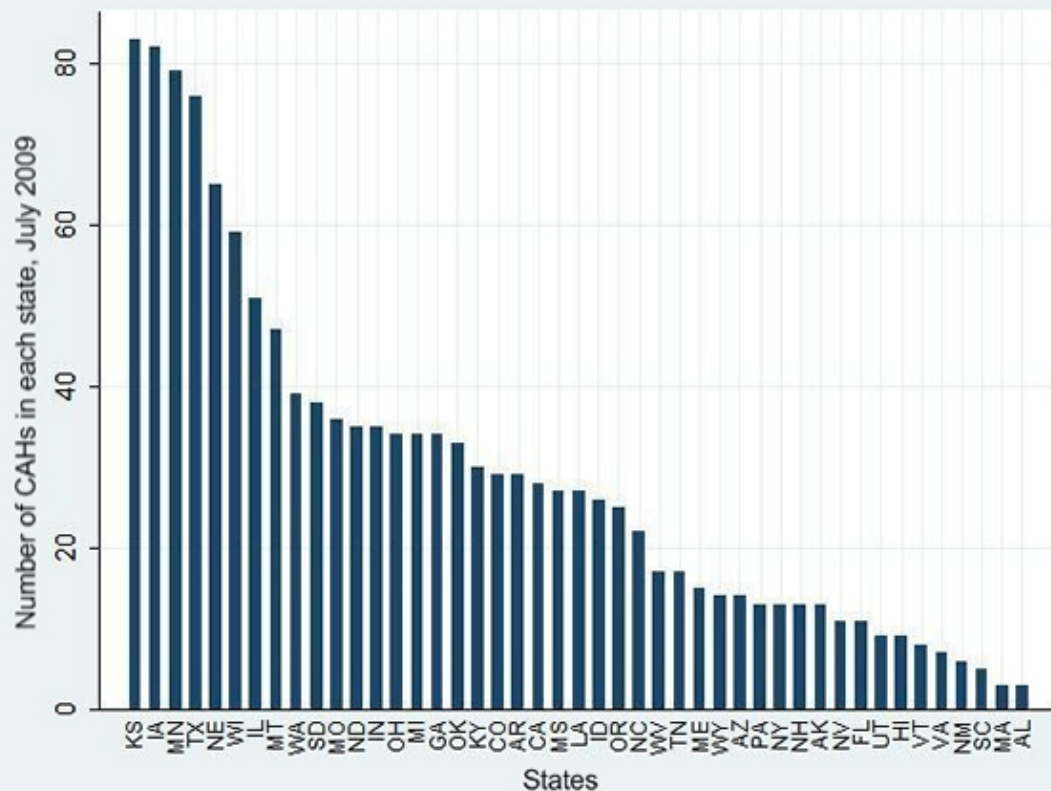


Figure 2. CAHs by State, July 2009



Local Provision of Health Care: Why Rural Health Services?

When economists who are unfamiliar with the somewhat arcane Medicare payment policy formula rules hear about a special Medicare program that offers cost-based reimbursement to small rural hospitals, they often voice concern about the differential treatment provided to the CAHs. What is the economic rationale for the CAH program? Is the Flex Program sound health care policy for rural areas?

One strand of economic thinking about rural hospitals concerns the impact and benefit from rural health care on the community's economic health. Economists and health care analysts have estimated Input/Output (I/O) models of the economic contribution of hospitals on local economies. An early study by Christianson and Faulkner estimated the impact of a rural hospital closure on the local economy in 1978 and found it would be in the range of \$686,405 to \$1,083,282. Doeksen and coauthors(1998) estimated an I/O model for a hospital in Stigler, Okla. and predicted a hospital closure would lead to the loss of 43 hospital jobs and an additional eight jobs in other sectors of the economy in the first year after closure. Over time the loss of jobs increased to a total of 78 direct and indirect jobs lost. Statisticians and econometricians have also examined the impact of a hospital closure on the economic fabric of rural communities. A recent study by Holmes and coauthors examined hospital closures in the time period of 1990-2000 and their impact on per-capita income and unemployment. They found that the closure of the sole hospital in a rural county led to a decrease in the per capita income by 4% or \$703 in 1990 dollars. Additionally, they found that the hospital closure led to an increase in the rate of unemployment by 1.6 %. If a hospital closed in a county with another easily accessed source of care, they found no long term impact on income or unemployment.

While the economic contribution of a small rural hospital is undoubtedly important, economic impact is not a primary outcome of concern in health care policy and debates. Thus, researchers and analysts have also studied the impact of hospital closures on access to care and health care utilization. For example, Bindman, Keane, and Lurie (1990) followed over time a set of California patients from a rural hospital that closed. They found that one year after the closure, a higher ratio of the patients from the closed hospital had no regular health care provider and were denied care, relative to a comparison group of patients from a nearby control

hospital. Similarly, Hadley and Nair (1991) studied Medicare participants who used rural hospitals prior to their closure. They constructed control groups of patients from similar nearby hospitals, yet the comparison showed no significant differences in hospital utilization between the former patients from the closed hospitals versus the control group. These studies can be criticized as not necessarily able to be generalized to the situation which would have occurred if rural hospital closures continued at the pace of the mid-1980s and early 1990s and geographic access in rural areas declined to never before observed levels. More recent research (Hadley and Cunningham, 2004) on the availability of community hospitals and safety net clinics shows that while shorter distance to a safety net provider improves access to care for uninsured people, the magnitude of the effect is small compared to the effect of having health insurance coverage.

The access to health care literature frames the question of the role of small hospitals in terms of health outcomes, but it does not derive from a framework that allows a cost-benefit or welfare theoretic evaluation of rural health policy. To obtain estimates of the location value of medical facilities, economists have implemented travel cost estimates to infer the welfare benefits that arise from the location-specific delivery of health care services. This literature builds upon the work of Acton (1975) who sought to explain the role of non-monetary factors in the health care decisions of New York City residents. He found that when out of pocket costs decline, the role of distance and other factors related to time-costs serve to ration health care demand. Christianson developed several early applications of the time-cost approach to the evaluation of rural health policy questions. Christianson (1976) reports estimates of the willingness to pay for different medical clinic sites in Central Wisconsin. A further analysis (Christianson and Bender, 1982) applies the cost-benefit approach to analyzing the closure of a rural hospital in a hypothetical case.

The time-cost approach has continued to be applied to health policy analysis, especially in rural health applications. Clarke (1998) estimated the welfare benefits of a mobile mammography unit in rural areas of Australia using discrete choice models and found the benefits of the mobile screening outweighed the costs if the rural town was at least 29 km from the fixed mammography unit. Capalbo and Heggem (1999) provide a framework for rural health policy evaluation of the Critical Access Hospitals. They argue random utility models with information on hospital alternatives and their characteristics can be used to estimate the benefits of rural health policy changes. McNamara (1999) provides an example of a discrete-choice travel-cost model to measure the location specific delivery of hospital services in a rural area of the United States. He finds that relative to a hospital closure in a rural area, maintaining a small-scale limited service facility reduces the welfare losses. Additionally, McNamara (1999) presents estimates of the locational value of a rural hospital that is well above one million dollars per year (1988 dollars). Using the travel cost approach to analyze the welfare impacts of a telemedicine program in Alaska, Berman and Fenaughty (2005) find telemedicine increases patient welfare at \$40 per visit.

To sum up, the economic literature on rural hospitals has shown they provide a measurable economic contribution to the local economy. In addition, some evidence exists concerning the importance of sources of care within a reasonable distance for access to care measures for uninsured people. Lastly, the literature on the value of rural health services provide a framework, though only a very limited set of estimates exist, that points to a significant value deriving from the local provision of community hospital services in a rural community. This is an area where economists interested in applying some of their valuation estimation methods may be able to make a useful contribution to rural health policy through additional research.

Health Care Reform and Going Forward

From the perspective of rural hospitals what impact would health care reform, as it is currently being discussed, generate? The proposed health care reform, if passed, is likely to lead to significant improvements in the coverage of health insurance and in the quality of health insurance for people currently purchasing insurance in the individual or small-employer market. Additionally, Medicaid may see an expansion.

Rural health research demonstrates that rural residents who have lower incomes are more likely than higher income residents to use the local rural hospital (McNamara, 1999). Further, rural residents with Medicare or Medicaid insurance and who are uninsured are more likely to use a rural hospital relative to similar residents with private health insurance coverage (Escarce and Kapur, 2009). By serving a disproportionate share of patients with poor quality health insurance, no insurance coverage or with Medicaid compared to many large urban and suburban hospitals, small rural hospitals find themselves at a disadvantage in the health care marketplace. Health care reform that expands health insurance coverage and that has the prospect of increasing the quality of health care coverage in the small-employer and individual insurance market

segments, has the potential to improve the net revenues at small rural hospitals. Such an improvement could occur from the reduction in uncompensated care from the present situation. The reduction would result from previously uninsured people becoming insured and either using the small rural hospital with health insurance coverage or bypassing the hospital to seek services elsewhere. As hospital choice research illustrates, people with different types of health insurance choose the local small rural hospital with varying frequencies. Thus, some newly insured rural people may not choose to receive services at their local rural hospital. Nonetheless, from the perspective of rural hospitals, health care reform along these lines holds some promise of lowered levels of uncompensated care and unpaid bills.

That said, small rural hospitals can also see some unfinished or untouched business in the current health care reform. For many rural health care providers—both clinics and hospitals—a major headache in recent years has been the difficulty faced in obtaining payments from the state government for services delivered to the Medicaid program. As the prospect for state government finances is weak in many states, these reimbursement difficulties with Medicaid may worsen. Since rural providers see a disproportionate share of Medicaid patients, Medicaid reimbursement policy requires continued attention by rural providers (McNamara 2007).

Going forward, a dimension of health care policy which will be interesting for analysts to follow will be the extent to which the Medicare Flex program retains its highly targeted criteria. Already, politicians are seeking to change the program criteria so that any veteran in the CAH would not count against its limit of 25 beds. As hospitals that are currently in rural areas and are CAHs find themselves in more densely populated areas because of economic growth and metropolitan expansion, how will the hospitals or the program respond?

In conclusion, rural hospitals find themselves in a better position today than they were in the 1980s and 1990s, largely because of changes implemented in the Medicare program. In the future, the issue of the public funding is likely to be a more important determinant of the financial and operational health of small, rural hospitals. If the current health care reform delivers on broader health care coverage for rural people and improved quality of insurance for rural people who presently purchase in the individual insurance market, rural hospitals should be strengthened. This would improve the economic fabric of rural communities and the quality of life for rural people.

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