Chapter 3A

The Organizational Relationships and Scope of Services of Critical Access Hospitals

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Introduction

Rural hospitals have occupied an important role in the social and economic fabric of rural communities for decades. They are often a community's major human service organization and a primary referral source facilitating access to needed social and health care services. Rural hospitals have also been critical for communities in ways extending beyond their traditional role as a health care provider. They are usually a community's only source of health education, prevention and promotion, a major if not the only large employer, and often a repository of community history, pride and philanthropy.

As the demands and requirements of rural health care markets have evolved, the value and role of rural hospitals in their local communities have placed them at the center of policy discussions concerned with access to rural health care services. A number of programs have been launched over the years that have included key roles for small rural hospitals and have encouraged the development of a variety of networking relationships (e.g., the Essential Access Community Hospital – Rural Primary Care Hospital EACH/RPCH Program, the California Alternative Rural Hospital Model ARM Program, and others such as the New York and Florida State Network Development Programs).

Experience with these programs has demonstrated to rural providers that it is becoming increasingly difficult to attempt to meet their financial needs alone. Some providers have been able to take significant advantage of a variety of state and federal efforts while others have begun to work together independently of formal programs. Changes in delivery system organization are taking place, some through organized incentives and others from the actions of creative and innovative leaders.

Program flexibility, long the bane of rural health policy makers, is a major accomplishment for any system reform strategy attempting to create a lasting framework for adapting to the on-going changes in rural markets. Flexibility is a key provision of the Rural Hospital Flexibility Program (Flex Program) and provides latitude for state as well as local participants to tailor efforts in ways that maximize their potential for improving access to care. Program flexibility has been a point of contention; some argue that there is not enough flexibility to allow providers and states to do what must be done, while others argue that there is too much flexibility, and this does not foster the kinds of re-engineering and strategizing that must take place to ensure success. In

effect, a blend of health care planning and laissez faire philosophies may be the vehicle that can maximize the benefits of taking a practical, business-oriented approach without compromising the moral and more altruistic motivation behind provider missions—a winning combination both for providers and the populations they serve.

Background and Context for the Year 3 Network Project

This chapter focuses on two key Flex Program objectives: one targets the conversion of small rural hospitals to critical access hospitals (CAHs) and the other promotes the linkage of those facilities to other providers through network arrangements. The accomplishment of each objective, on its own, has the potential to help stabilize local health care delivery and improve access to care for rural populations. Together, they have tremendous potential for achieving current Flex Program goals, and for providing the policy frame for expanding efforts and identifying new and complimentary strategies to address delivery system needs as markets evolve. The following discussion pulls together information obtained during numerous state and hospital site visits (two dozen states and twice as many CAHs), analyses of federal and state program documentation, and two national surveys of CAH administrators conducted in 2000 (representing 217 hospitals) and 2001 (representing 388 hospitals).

The track record of the first few years of the Flex Program did not bode well for the full realization of delivery system stabilization or improvements in access to care. Only half of the glass was filled. During that time the majority of hospitals seemed to focus primarily on conversion activities. While some hospitals used the conversion process to initiate significant re-engineering efforts to adapt to local market changes, most seemed to take the speediest route to conversion and kept a narrow focus on what needed to be done to convert. State efforts fostering rural health network development, with the notable exception of those states having a network development program that predated the Flex Program, took a path similar to that of the participating hospitals.

The pace of activity and the highly-focused approach often taken to accomplish the designation of CAHs was at once understandable and troubling. Given the operating environments and market pressures that had been facing many of the program participants for years, it is not surprising that hospitals motivated by cost-based reimbursement would move with all deliberate speed to avoid closure and the potential of additional loss of services for rural communities. Indeed, it would not be realistic to assume that the states would have been able to undertake major structural changes within the first year of their program participation.

By the end of 2000, it was evident that some hospitals and states were engaging in activities that attempted more ambitious structural changes than contained in the program's guidelines. Broader system-oriented goals were beginning to supplant the more local rescue efforts of the first few years, and focused on strategies and activities that could help maintain the success of CAH operations into the future. This shift in focus made sense, it was expected, and indeed it had been hoped for by many policy makers – but would it be sufficient to effectively influence rural delivery system stability and viability?

Our approach is guided by three assumptions that link the organizational behavior of participating rural hospitals with their local and regional markets, the providers and stakeholders in those markets and the provision of health care services that unfolds through those relationships. The assumptions include:

1. As the fear of hospital closure, loss of medical personnel and the attendant negative impacts on the local economy recede (through greater financial stability from conversion and cost-based reimbursement), hospital and state program administrators will become less reactive and more proactive in forging paths that can maintain viable operations into the future.

2. The degree to which providers are able to act on a more proactive and strategic planning basis depends upon the accessibility of the resources needed to support them (e.g., capital resources, personnel resources, infrastructure support and operational expertise).

3. A CAH's level of success in obtaining the resources to act proactively and secure a more viable operating future will vary significantly depending upon the structure and security of the organizational relationships it forms with other providers and organizations.

State Network Development Strategies

State authority to designate hospitals as CAHs and to participate in the Flex Program is granted by the Centers for Medicare and Medicaid Services (CMS) following the approval of a "State Rural Health Plan." This plan summarizes the rural health context of the state, parallel efforts that may have implications for implementing a state Flex Program, and the implementation plan the state proposes to use to launch and monitor that effort. It describes hospital eligibility criteria for conversion, the process used to achieve conversion, and the strategies the state will use to foster rural health network development and the regionalization of health care services. A key program oversight role is provided by the state's office of rural health (SORH) and other state agencies as necessary (e.g., provider licensing and certification) to ensure that appropriate network service and activity agreements have been developed and are in place. States have taken a number of approaches in this regard, with some waiting until the certification survey to review agreements, and others conducting mock surveys and providing model agreements to prepare the hospital for the certification survey. In some cases states have tapped into Flex Program grant funds to provide assistance and prepare future CAHs for survey and certification.

Rural health network development strategies not only serve as key components to a state's rural health plan (e.g., network links with CAHs and the regionalization of services) but, for many states, have become significant components of their Flex Program grant application submitted annually to the Federal Office of Rural Health Policy (FORHP). Grant funds are used to support one or more of the five program objectives: developing and maintaining a state rural health plan, designating CAHs, supporting rural health networks, improving rural emergency medical services (EMS), and supporting the quality activities of CAHs.

Data Sources

Data were collected from a variety of sources to conduct our analyses of state network development policies and projects. A document review was conducted by the University of Washington and University of Minnesota Tracking Team staff to identify accomplishments and trends in network development strategies. These data were combined with grant application reviews conducted last year by the staff at the University of Washington to provide the time and depth necessary for conducting a policy trend analysis. Information available through these analyses provided descriptions of accomplishments, current efforts and plans relative to network development provided, and a policy context for 1999 through 2001. Additional data were drawn from site visits conducted over the past two years and survey data collected this year and last year from SORH staff in each of the participating states by the University of North Carolina at Chapel Hill.

State Data on Network Development Priorities

A principal finding from the review of state grant applications was that the longer a state was involved in the Flex Program, the more likely it was to encourage the development of rural health networks with formalized structures and memberships that comprise more than providers of acute care services. States with a relatively brief history with the program (less than one year), unless they operated a network development program prior to participation in the Flex Program, are more likely to have networks defined by the minimum guidelines for networks than are states with longer program histories. The number of states promoting additional organizational connections doubled over a two-year period and represented over half of the state applications for the 2001 grant award cycle.

Although rural health networks are defined in the federal program guidelines, the definition provides states with considerable latitude in defining network criteria for their state. Almost one-third of the forty-seven eligible states deem CAHs to be in compliance with state networking standards when they satisfy the minimum federal guidelines (i.e., at least one CAH and another acute care provider). With the exception of a few states that are yet undecided, the remaining eligible states either require or strongly encourage program participants to engage in activities beyond those outlined in the federal guidelines. An explicit interpretation of federal guidelines implies that states need only establish one CAH network, composed of a CAH and one other acute care provider, to comply with federal program criteria. However, the vast majority of states are requiring the creation of affiliation agreements between CAHs and other providers of rural acute care services (e.g., to become a member of a rural health network) as a condition of designation. Over one-half of all states encourage CAHs to become involved in network relationships that also involve non-acute care providers (e.g., community health centers, rural health clinics, federally qualified health care centers and local public health departments). Most of the states that are not encouraging broader network memberships are relative newcomers to the program, and do not have CAHs that have been certified prior to 2001.

Organizational Links

CAHs and their Support Hospitals

By definition, Flex Program guidelines describe the most basic network linkage possible under program-approved written agreements. The linkage consists of one or more agreements covering a narrow range of services/activities that are established with at least one acute care provider. The incentives for CAHs to engage in these linkages are evident from both a programmatic and an operational point of view. First and foremost, most state programs will not designate a hospital as a CAH without the agreement. More strategically, these linkages with larger acute care facilities can facilitate a CAH's access to expertise, resources and market strengths that might otherwise not be possible, thus playing a critical role in a CAH's operational success. The incentives for the larger support hospital to engage in these linkages are less apparent.

Although the EACH/RPCH program provided enhanced reimbursement for the larger hospitals (the EACHs) to which RPCHs were linked, the Flex Program did not make provisions for such incentives. This may have happened because the EACH/RPCH initiative caused policy makers to question the value of providing EACHs a special reimbursement incentive. EACHs were reimbursed at the "Sole Community Hospital" rate until regulatory amendments introduced in the early 1990s ended the practice. Concerns had been raised that many EACHs were receiving enhanced reimbursement but were not collaborating with their networked RPCH(s) in ways envisioned at the program's inception. While it is possible that these experiences may have contributed to decisions ***not*** to provide CAH support hospitals with explicit financial incentives and the potential benefits of external network incentives, they underscore the difficulties in encouraging effective support relationships between such providers. EACH/RPCH network requirements were very proscriptive about the network affiliations of RPCHs (i.e., all had to be networked with an EACH).

In the absence of overt financial incentives and explicit federal program requirements, why do support hospitals elect to work with CAHs and participate in the Flex Program? Many enter into the relationship because of potential gains in patient referrals. Although one of the most obvious reasons for networking, increased referrals can be problematic, because relative proximity and historic market relationships between the CAH and its support hospital have usually already provided the support hospital with the lion's share of referrals.

Specific efforts were undertaken during site visits and in the CAH survey to uncover the reasons that CAH support hospital linkages develop. Information gathered at site visits pointed to two major reasons for the partnership. Support hospital participation in the Flex Program was grounded in either objective/pragmatic business-focused criteria or in more altruistic and egalitarian mission-based reasons. For business purposes, the support hospital hopes for an increase in specialty service referrals through provision of clinics in the CAH, or to better secure its catchment area borders against intrusion by regional competitors. A mission-oriented approach is more likely to involve the belief that access to care is a right and that investments do not always have to generate financial returns to be worthwhile. This moral imperative can also

influence a larger facility to help a smaller, less financially sound provider if that provider is actively pursuing such goals. Numerous examples were identified in which a support hospital provided significant operational and capital support to a CAH, with little or no expectation of repayment in kind. In one situation the support hospital had provided monetary support to cover CAH shortfalls of up to $200,000 per year, for several years, because the services were critical for the area served by the CAH. The two categories however are not mutually exclusive.

Information on the decision making process used by support hospitals to network with a CAH has only been available from site visits and anecdotal information provided by state program staff. However, information made available through our recent survey of CAH administrators has provided criteria for selecting a support hospital (Table 1).

Table 1. Reason for Selection of Affiliated/Support Hospital, 2001 (N=356)

Reason	Percent
Proximity or Existing Referral Patterns	26%
Good Prior Working Relationship	23%
Possessed Specific Services or Reputation	19%
Provided a Safe Working Relationship	10%
Demonstrated a Willingness to Work with CAH	9%
Member of Same Health Care System	7%
Contract Managing Hospital	2%
Prior EACH/RPCH Relationship	2%
Other	2%

A little over ten percent of all CAHs selected a support hospital partner because of pre-existing formal linkages (i.e., the support hospital either shared membership in the same health care system—7%, through a management contract—2%, or prior EACH/RPCH network arrangement—2%). For some contract-managed facilities, the decision to convert was primarily in response to a directive from their management contract firm—a precondition of establishing or continuing the management contract. Another 26 percent selected their support hospital because it was the closest facility or because of pre-existing referral patterns (i.e., proximity-related factors). The remaining hospitals selected their network partner based on the potential gains that could be realized through such a partnership (e.g., resources to operate or potential to better adapt to local market demands/opportunities, operational expertise, improved community reputation, or security). Two out of every five CAHs selected their affiliate hospital because of the type and/or range of services and resources that could be made available to the CAH. For most CAHs these resources included equipment, financial support, staff and operational expertise. However, other CAHs selected their affiliate/support hospital based on opportunities to share less tangible benefits, such as the support hospital's prestige as a quality provider in local communities, its reputation among other providers, or a sense of safety in terms of the CAH's autonomy.

Categorization of Organizational Arrangements

At the core of our investigation is the idea that the nature of organizational relationships between CAHs and other providers of health care services influences how a CAH will configure its operations following conversion, and will affect future chances of stability and viability. An awareness of the vagaries in network conceptualization led us to include specific measures in our administrator survey to differentiate between program-defined network linkages, formally-organized network linkages, and system linkages.

Hospital administrators were asked if their CAH was a member of a health care system,[1] a participant in a formal rural health network[2] or managed under contract. CAHs that had system linkages (owned/leased or contract managed) were assumed to have significant and regular opportunities to access information, operational expertise and material resources to successfully transition to CAH operations. Those that were members of a formal network were assumed to have more modest opportunities to obtain a more limited set of resources; CAHs without system or formal network links were assumed to have irregular or no access to such information and resources. A comparison of pre-conversion and post-conversion linkage experiences revealed a fifteen percent increase in network membership following conversion and a three percent increase in health care system membership. To our surprise, almost one out of every seven CAHs reported having no specific linkages, and half of all CAHs reporting membership in a formal rural health network were also in a health care system (Table 2).

Table 2. Organizational Linkages of CAHs, 2001
(n=388)

Formal Rural Health Network Linkage	61%
Contract Management Linkage	36%
Health Care System Linkage	33%
Flex Program Network Linkage	15%

Having one out of every three CAHs involved in a dual system linkage (Table 3) suggests that there must be a compelling reason for broadly-linked facilities. Among the more likely causes for multiple linkage arrangement is proximity. A CAH could be located at a greater distance from its health care system partners than from a non-system partner. In this case, historical referral patterns and practical delivery system logistics dictate a non-system linked relationship.

[1] Health Care System – a corporate body that may lease or own two or more health providers, facilities or subsidiaries.
[2] Rural Health Network – a formal organizational arrangement among rural health care providers (and possibly social service providers) that uses the resources of more than one existing organization and specifies the objectives and methods by which various collaborative functions are achieved.

During one of our more recent site visits, a CAH administrator described a situation where historical market conditions had made it more logical for the CAH to link with a non-system rather than a system member as its network partner. The health care system headquarters tolerated the arrangement because of the historic partnership that existed before the CAH had become a member of the system, and because there were no system member facilities within a reasonable distance of the CAH. Following the incorporation of a closer hospital into the same health care system, the CAH was still reluctant to switch partners. In such situations, a CAH could be receiving key administrative and infrastructure assistance from its system partners but still desire to maintain important linkages with non-system partners.

Table 3. Complexity of Organizational Relationships of CAHs, 2001 (n=388)

Network Linked CAHs *(only formal network arrangement)*	31%
Broadly Linked CAHs *(formal network and system or contract management)*	30%
System Linked CAHs *(only system or contract management)*	24%
Free-Standing CAHs *(program defined network arrangement)*	15%

Rural Health Networks

Rural health networks form naturally when there is a clear and compelling need, the self-interests of potential members are obvious, options for addressing those needs are clear, and strong leadership is present. In short, potential network partners become interested in cooperating with each other because it is evident that the services and/or activities they intend to share will help them realize a desired return on investment, and they have some reason to trust that the expectations and responsibilities agreed to by the membership will be met. These returns may take the form of increased opportunities to accrue organizational and market strength, or decreased chances that other entities will be able to take advantage of the organization joining the network (i.e., motivation can result from expected gains or fear and concern). These factors are also at play when external support is available or incentives are provided through a network development program like the Flex Program.

The negotiation and decision-making involved in prioritizing what needs should be met with what available resources, and which network memberships are to be responsible for addressing those needs, is at the heart of network operations. While there are a host of factors that influence this process, the basic organizational similarities and differences of the participants are key to the success or failure of the effort. The problems encountered while pursuing network goals increase as the membership and its organizational interests diverge. Most naturally forming

networks—those organized without incentives from externally supported network initiatives—form horizontal arrangements that involve only the same types of provider organizations (e.g., all hospitals, all nursing homes, or all community health centers).

Over the last several years, there has been a growing trend toward diversification of network membership. Such a trend could be due to a variety of responses to the changing environmental conditions of rural markets. While a discussion of the factors contributing to network member diversification is beyond the focus of this project, one factor influencing this trend is an increase in federal and state network grant programs promoting diverse memberships. It is not surprising that states with a history of network development activities prior to their participation in the Flex Program are more likely to have networks involving non-hospital participants as well as hospitals. Those states that have participated in the Flex Program the longest exhibit the trend of broader-based network memberships. It is possible that prior networking experiences and provider familiarity with the network process have contributed to broader-based engagement strategies for rural providers.

Our CAH administrator survey revealed that almost two-thirds of all "formal network" arrangements, while horizontally controlled, involved the participation of non-hospital partners. Membership size for Flex Program networks mirrors what we see in other networking relationships; networks with more diverse memberships are more likely to have larger numbers of participants than exclusive networks (i.e., hospital only). The types of network partners that were represented in these diverse member networks included community health centers, nursing homes, social service agencies, local mental health agencies and local public health agencies (see Table 4).

Table 4. Formal Network Membership, 2001
(n=236)

Provider Type	Percent Networks with at Least One Member		Average # Providers per Network with this Type of Provider
Rural Hospital	100%	(236)	12.0
Urban Hospital	47%	(111)	1.9
Nursing Home	15%	(38)	4.4
Local Public Health Agency	14%	(33)	2.2
Mental Health Agency	15%	(31)	1.7
Community Health Center	8%	(19)	5.7
Social Service Agency	8%	(19)	2.4

CAHs reported receiving a range of benefits from their association with formal network arrangements. On a scale of one to five with one representing "no benefits at all" and five representing "extremely beneficial," over half of all CAHs identified at least one of the following

three areas of benefit: development of existing services, obtaining technical assistance (T/A) and improving QA/QI processes and outcomes (Table 5). CAHs in hospital-only networks were more likely to report benefits in five out of seven areas identified than were CAHs in more diverse networks. Expected benefits from improving financial performance and diversifying into new service areas were not related to membership diversity.

Hospital-only networks generally benefited more in terms of acquiring new technologies than did more diverse networks, possibly reflecting the similarities in the technological needs of same-type providers. The remaining four areas exhibited smaller differences in relative benefits by network membership category.

Table 5. CAHs Benefiting from Formal Rural Health Network Membership by Area of Benefit, 2001 (n=236)

Area of Benefit	% Very or Extremely Beneficial
Strengthen Existing Services	58%
Obtain Technical Assistance	53%
QA/QI Processes and Outcomes	49%
Financial Performance	37%
Diversity into New Services	35%
Obtain New Technologies	32%
Obtain Capital Resources	19%

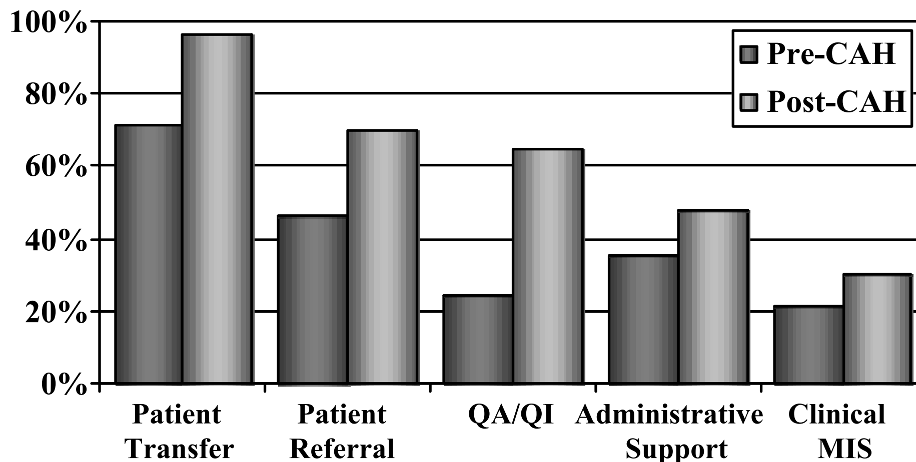
CAH Service and Activity Agreements

Although participation in a rural health network is not a program requirement, all states are encouraging their CAHs to establish some type of linkage with providers of health care services in their area. Encouragement has ranged from informal suggestions and recommendations to State Rural Health Plan requirements and state regulations. A growing number of state program representatives as well as other stakeholders consider non-hospital linkages important for CAHs.

An analysis of how agreements could differ in focus and relative value for CAH operational success found that historical facility relationships continue to influence hospital operations, even after conversion to CAH. Administrators were asked to identify the network agreements that were in effect before and after conversion to CAH and the organizations participating in the

agreements.[3] The number of categories of agreement increased following conversion to CAH, and almost two-thirds of all CAHs reported agreements in the areas of patient transfer, specialty care services, patient referral, quality management, and clinical and ancillary services support. The largest increase in agreements occurred in the five areas of quality management, patient referral, clinical information systems, administrative support and patient transfer (Figure 1).

Figure 1. Most Frequent Service and Activity Agreement Areas (n=388)



A majority of CAHs that had a pre-conversion agreement in place had that agreement with the facility that would become its support/affiliate hospital following conversion. This was particularly the case for agreements that targeted hospital infrastructure (e.g., financial services, administrative support, clinical information systems, quality management and social support services). Exceptions to these activities are more susceptible to proximity-related concerns and included patient referral, transfer and the provision of specialty clinics. While infrastructure services and activities were usually with only one provider, the proximity-related areas often included more than one provider (i.e., an affiliate plus a non-affiliate provider). When asked which of the areas of agreement had proven to be the most valuable for their facility since converting to CAH, the administrators rated quality management as the most important, followed by financial services, specialty clinics, patient transfer and administrative support (Table 6).

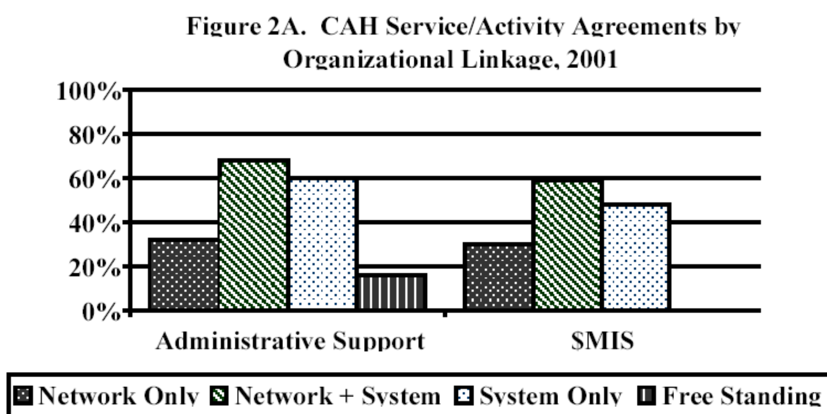
[3] The CAH's affiliated acute care hospital, other affiliated provider (i.e., in the same network or system arrangement), non-affiliated provider or some combination of the above.

Table 6. Most Valuable Area of Agreement for CAHs, 2001 (n=297)

Quality Management (QA/QI)	27%
Financial Services and MIS	16%
Specialty Care Services (clinics)	14%
Patient Transfer (medical)	14%
Administrative Support	13%

Affiliation Agreements and Organizational Arrangements

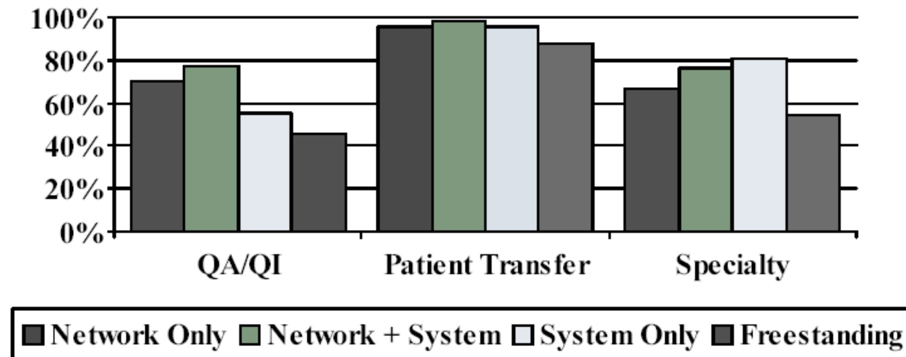
The five popular affiliation agreement areas were used to explore relationships between pre-conversion partners and conversion-related agreements. We found that the least formally linked CAHs (i.e., freestanding hospitals) have the fewest agreements and the lowest adoption rate for agreements. This finding was expected in terms of administrative and financial information system support, where affiliated CAHs demonstrated the greatest increase in agreements while freestanding CAHs exhibited none (Figure 2A).



However, it was surprising that freestanding CAHs did not exhibit a greater propensity to establish or maintain agreements in the area of specialty services support (Figure 2B). System-linked CAHs were much more likely than either freestanding or formally networked CAHs to engage in administrative and financially-related agreements, but less likely to engage in agreements related to patient transfer and QA/QI activities. The differences in transfer agreement rates are slight, but fit expectations in that system-linked CAHs and broadly-linked CAHs probably had more opportunities to establish such agreements prior to conversion. Differences in post-conversion adoption rates for QA/QI may suggest that formal network arrangements may be a fruitful strategy for enhancing quality of care activities. It is also

possible that the lower rates of adoption and use of QA/QI agreements for system CAHs could be due to a greater integration of quality activities within member hospitals, rather than through external arrangements between system hospitals.

Figure 2B. CAH Service/Activity Agreements by Organizational Linkage, 2001



Comparisons of affiliation agreement focus and adoption rates by CAHs confirm our earlier observations using only the five 'most valuable' affiliation agreements. Findings in terms of the establishment of service/activity agreements among CAHs and other rural health care providers suggest that:

- CAHs involved in formally-structured rural health networks are more likely to participate in service development activities such as specialty clinics, quality assurance and quality improvement, and patient referral activities than are freestanding CAHs or those in systems.
- CAHs involved in health care systems are more likely to participate in infrastructure support activities such as financial and clinical information systems, administrative supports, and clinical supports than are freestanding or formally-networked CAHs.
- CAHs involved in formally-structured rural health networks that also share a linkage with a health care system participate in the same types of activities as CAHs linked only with a formal network and those CAHs having a linkage only with a system.
- CAHs that are not involved in either formally-structured rural health networks or health care systems are less likely than all other CAHs to engage in any service/activity agreement other than those expressly required by the Flex Program.

CAH Scope of Services

Observations of the first two years of the Flex Program revealed several unexpected findings related to hospital scope of services. First, contrary to expectations, participation in the Flex Program did not result in a general decrease in available services, but rather in an increase that was quite marked for some services. Second, the largest apparent contributor to the increase in services was the existence of network agreements. Finally, evidence suggested that later CAH converters were more likely to offer inpatient surgery, obstetrics and intensive care than early converters or those with prior network/system linkages. The relationship between later and earlier converters could be a function of prior market adaptations (i.e., earlier converters tending to be hospitals in more difficult financial shape and ones that have trimmed services, compared to more robust and later converters); however, the relationship between later converters and those with prior linkages remains unclear.

The changes in availability of services were not very substantial. The observed trend is consistent with the general service delivery shift from inpatient to outpatient centers of care that has been ongoing since the late 1980s. As the Flex Program has continued to unfold and administrators, board members and physicians have become more familiar with its operations and expectations, fewer CAHs appear to be concerned about the potential for limiting scope of practice for practitioners, or tarnishing the reputation of the hospital with a "limited service hospital" moniker. The only services that experienced a decline in availability following conversion were inpatient surgery, obstetrics, skilled nursing facility services and home health care services – all consistent with general health care sector trends (Table 7).

Table 7. Changes in CAH Scope of Services Following Conversion, 2001 (n=388)

Services	Have Service Now	Post-CAH Service Change			
		Added	Significantly Expanded	Significantly Limited	Dropped
Inpatient Surgery	66%	1%	10%	14%	7%
Obstetrics	31%	2%	2%	1%	11%
Inpatient Rehabilitation	70%	3%	17%	0%	1%
Outpatient Surgery	76%	2%	18%	2%	4%
Outpatient Psychiatric	16%	3%	1%	0%	10%
Outpatient Rehabilitation	88%	4%	24%	1%	1%
Specialty Clinics	87%	4%	28%	1%	1%
Rural Health Clinic	50%	10%	6%	1%	3%
Radiology	100%	1%	33%	2%	0%
Laboratory	100%	1%	23%	0%	0%
Pharmacy	95%	1%	11%	2%	1%
Skilled Nursing Facility	48%	1%	4%	1%	4%
Swing Beds	94%	5%	22%	1%	1%
Home Health	41%	1%	5%	6%	13%
Assisted Living	16%	4%	2%	0%	0%

Administrators were asked to identify those services that are provided by the CAH and any changes in services that may have occurred following conversion to a CAH. In an effort to obtain a finer grade of distinction in terms of expansion or contraction of services, we asked administrators to only identify services that had experienced 'significant' expansion or limitation. While the availability of specialty clinics has increased by only four percent following conversion, three out of every ten CAHs offering such services have undergone a significant expansion following conversion. Radiological services increased by only one percent, but one out of every three CAHs (128 hospitals) underwent a significant expansion of these services.

Three services are most likely to be reduced or eliminated following conversion: home health, obstetrics and inpatient general surgery. Inpatient surgery and obstetrics have been in decline in small rural hospitals for a number of years. These were among those services made most vulnerable under the earlier "limited service" hospital demonstration programs preceding the Flex Program because of length-of-stay and reimbursement limitations (i.e., only those surgical services listed on the Medicare ambulatory surgery schedule). The decline in home health services, the largest of any service decrease for CAHs, has been more recent but also more precipitous with the recent changes in federal reimbursement policy. It is possible that a portion of these changes could be explained by the fact that system or network hospitals were also providing these services, and their reduction at the CAH simply represents a rationalization of interorganizational resources.

Five services are the most likely to expand after CAH conversion: specialty clinics, swing beds, outpatient rehabilitation, radiological services, and rural health clinics. Specialty clinics represent a specific benefit from network relationships. They become more feasible as specialists from larger tertiary facilities become more available. While the number of referrals realized from such efforts may not actually increase, they are not a loss leader for the support hospital (i.e., potential growth in referrals and protection from the incursion of other area providers into the support hospital's catchment area). An increase in swing-bed services is a natural outgrowth of program participation given CAH bed size provisions and swing bed flexibility. The expansion of outpatient rehabilitation services is a growing trend for many rural hospitals. For a modest investment in space and equipment, the hospital can obtain another marketing tool and necessary service for the community, as well as a potential referral point for patients initially transferred to the support hospital for specialty services (e.g., orthopedic and cardiac surgery, stroke care).

The expansion in radiological services is one of the more unique aspects of the conversion process. An extensive investment of capital and expertise may be the result of better network relationships coupled with the advantages permitted through cost-based reimbursement. The final area of expansion involves the operation of rural health clinics. In this case, service expansion is attributed largely to new designations rather than expansion of existing clinic services.

Earlier observations of first and second year program participants indicated that prior system or network affiliation agreements mediated the degree of change in hospital scope of services following conversion to CAH. Subsequent analyses of the current CAH survey data on pre-conversion linkages used a more rigorous set of measures based on specific definitions to help respondents differentiate between system and network linkages. These analyses indicate that prior system linkage influences the post-conversion provision of inpatient surgery, obstetrics and outpatient surgery, while network linkages influence the provision of outpatient surgery only. These findings are somewhat tenuous because of the small number of service provision changes following conversion, and the small cell sizes resulting from the use of four organizational linkage categories. Further investigation is warranted and will occur in the future using hospital cost report data in order to achieve a greater degree of specificity in regard to changes in service provision and usage.

Scope of Service Changes Over Time for Early CAH Converters

Two hundred ten CAHs in the 2000 survey also participated in the 2001 survey, providing an opportunity to explore the operational evolution of CAHs. The findings point to interesting trends concerning the ongoing adaptation of small rural hospitals to their local markets. While the three service areas that were reduced following conversion to CAH (i.e., inpatient surgery, obstetrics and home health) did not exhibit further reductions one year later, two-thirds of the services that expanded with conversion exhibited a second wave of growth one year later (Table 8).

Table 8. Second Wave Changes in Scope of Services, 2001 (N=210)

Service Provided	Percent Change In Service 2000	2001	Chi-Square
	(N=210)	(N=210)	
Inpatient Rehabilitation	13.0%	12.9%	11.24***
Outpatient Rehabilitation	18.9%	18.1%	18.96****
Rural Health Clinic	12.5%	8.0%	5.64*
Radiology	24.4%	13.8%	11.27****
Laboratory	19.8%	9.5%	5.06*
Swing Beds	17.0%	11.9%	9.36***

* .10 > P > .05
** .05 > P > .01
*** .01 > P > .005
**** .005 > P > .000

At least one out of every five CAHs surveyed in 2000 and again in 2001 experienced a significant degree of expansion for each of the six services. The largest expansion was in the area of radiological services; 51 CAHs reported expansion in 2000 followed by another 29 in 2001, for an overall expansion of 38 percent. Outpatient rehabilitation was the second largest expanding service, with 40 CAHs expanding in 2000 and another 37 in 2001, for an overall expansion of 37 percent. Overall expansion for the remaining areas was: laboratory services (30%), swing-bed services (29%), inpatient rehabilitation (26%) and rural health clinics (20%). Analyses were conducted to determine if the change in services experienced by the CAHs participating in the 2000 survey was different from those 178 new CAHs surveyed in 2001. The two groups of surveyed CAHs shared similar experiences in terms of service changes in all areas except swing beds, where later converters were more likely to increase services than the earlier converters surveyed in 2000 ($.05 < p > .025$). Almost one-quarter of the CAHs surveyed in 2001 had expanded their swing-bed services, while only 17 percent had expanded in 2000, and another 5 percent had limited their services. There are a number of factors that could have influenced the adoption and expansion of swing-bed services by these two groups of CAHs, including differences in initial bed size, financial condition, and organizational linkages. Further analyses will be conducted to determine the nature of the relationships and their potential influence on other areas of operation.

Two out of three services that declined following conversion also experienced a second wave reduction one year later. Inpatient surgical services decreased for most CAHs, but did not demonstrate a second wave effect. However, earlier converters experienced almost three times the rate of service decline than did later converters ($p = .05$). Both home health services and obstetrical services exhibited small declines initially as well as one year later. Although these declines were not statistically significant, they most likely reflect a secular trend in service reduction.

Summary

Key findings from the discussion above include:

- Rural health networks form because providers can no longer rely upon the resources of their organization alone to cope with the many demands of modern health care markets.
- States that are more likely to encourage formalized networks and diverse memberships are those with longer participation in the Flex Program and those that had a pre-existing network development program prior to participating in the program.
- The number of states encouraging organizational connections beyond the support/affiliate hospital has doubled over the last two years of the program.
- Over one-half of the CAHs selected their support/affiliate hospitals based on a solid prior working relationship, the availability of needed resources, and assurances that the relationship would be positive and non-threatening.
- The size of Flex Program formal networks mirrors the relative sizes found in other network studies that compared horizontal network memberships with diverse network memberships.
- Half of the CAHs reported network benefits related to the development of existing services, obtaining key T/A, or improving QA/QI processes and outcomes.
- The majority of CAHs had a pre-existing affiliation agreement in place with the hospital they eventually selected as their support/affiliate hospital.
- The most valuable area of service/action agreement for CAHs was QA/QI management and support.
- Network and system linkages influenced the type of affiliation agreement areas established by CAHs (i.e., formal network CAHs targeted service development activities, systems-linked CAHs targeted infrastructure support activities, and CAHs without system or formal network links engaged in only those areas covered by program minimum guidelines).
- The observed expansion and decline in service provision for CAHs mirrored existing sector trends, suggesting that participation in the Flex Program may help rural hospitals reconfigure to match market trends.

Conclusions

For most rural hospitals, the challenges that they face clearly outweigh the resources that are available within their organization. This can create a state of panic and scarcity where it is difficult to maintain focus. Trust can become a scarce commodity, and morale can become a serious problem at all levels of an organization, as well as in the community it serves. Reaction becomes the norm as opportunities for innovation, creativity and risk taking become virtually nonexistent. After cost-based reimbursement helped stabilize some aspects of CAH operations, we found evidence of growing innovation and creativity among program participants.

Most CAHs are involved in formal rural health networks. Although system linkages are usually considered stable but not very flexible, many CAHs that are owned or leased by a health care system, or are under a management contract, elect to be part of a formal rural health network at the same time. There are advantages to formal network membership that go beyond exclusive linkages to a system. Available data are not sufficient to determine the nature of these advantages (e.g., a by-product of geographic proximity, historic market relationships or other factors).

Our observations and analyses suggest that CAHs that form interdependent relationships with other providers of rural health care services are taking a very important step toward stabilizing operations. The degree to which CAH scope of services may change following conversion is influenced more by relationships with health care systems and managed contract arrangement than by formal rural health network structures. However, one-third of all CAHs experiencing significant changes in their scope of services credited the assistance from their support or affiliate hospital for this accomplishment. Networking remains an important and viable strategic tool for CAHs.

The continued survival of CAHs will largely depend on their ability to successfully adapt to market changes on an ongoing basis. Conversion only brings them to the first step in the process (i.e., the reimbursement and regulatory flexibility provided through conversion are necessary but not sufficient to ensure continued survival). Some have commented that the next key trend following managed care will involve increased efforts in disease management. As greater emphasis is given to disease management activities, and the responsibilities to maintain continuity of care increase, we may see an even more pronounced growth in broad and diverse network memberships.

Rural health networks represent a vehicle for mobilizing and focusing resources to address emerging issues affecting the health and welfare of rural populations. Network models are not an end in themselves but rather a means to an end. Their shape, structure and level of importance will shift as needs and circumstances dictate. It will become more important for providers and states to support the future development of effective interorganizational relationships. This will not be accomplished by Flex Program incentives alone, but needs to be supported through the provision of operational and management expertise, best practices, and training of individuals responsible for organizing and maintaining the flow of work. A clear vision is needed for future

efforts to build upon the accomplishments of the Flex Program, to move reform efforts forward and generate a local capacity to flexibly adapt to changes as they arise.