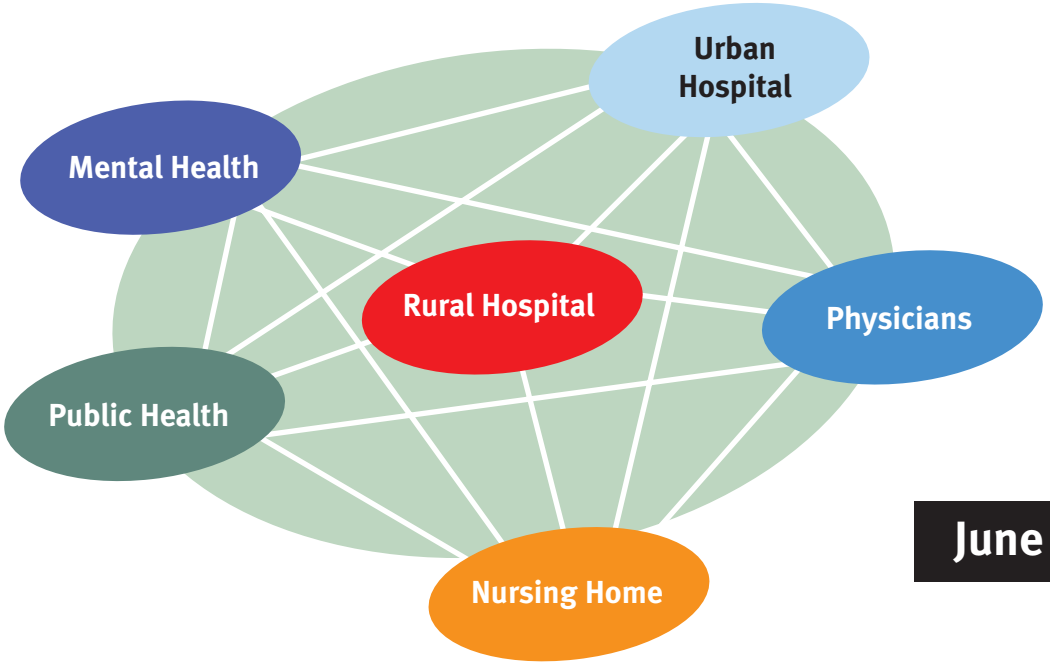
# Rural Health Networks: Evolving Organizational Forms & Functions




**June 2003**

*Prepared by:*
Rural Health Research Center
Division of Health Services Research and Policy
School of Public Health
University of Minnesota
Minneapolis, Minnesota

*Supported by:*
Grant No. 032659 from
the Robert Wood Johnson Foundation
Princeton, New Jersey

# Rural Health Networks: Evolving Organizational Forms and Functions

Rural Health Research Center
Division of Health Services Research and Policy
School of Public Health
University of Minnesota

Minneapolis, MN 55455-0392

Single copies are available from:
Jane Raasch
Phone: 612.625.0955
Fax: 612.624.2196
or at:
http://www.hsr.umn.edu/rhrc

Principal Investigator:
Ira Moscovice, PhD

Research Staff:
Walt Gregg, MA, MPH
Eric Lewerenz

Design:
Aldrich Design

# Table of Contents


**Chapter 1** | Introduction . . . . . 3

**Chapter 2** | Location, Membership and Relationships: Network Demographics . . . . . 7

**Chapter 3** | Governance and Management: Network Organization and Operation . . . . . 15

**Chapter 4** | Functions and Services: The Process and Products of Networking . . . . . 25

**Chapter 5** | Conclusions . . . . . 39

**Appendix** . . . . . 43

# Introduction

Chapter One

Efforts to address rural health care issues (e.g. lost opportunities for economies of action, increased barriers to access quality health care services) have grown dramatically over the past decade. Rural health networks have emerged as a popular policy construct for mobilizing the necessary resources and focusing efforts to address these and other issues. Rural hospitals, largely because of the central role they have played in rural health care since the time of Hill-Burton funding, have figured prominently in the emergence of these networks both as members and anchor institutions.[1]

## The Current Environment for Rural Health Networks

The findings of the first comprehensive study of rural health networks were released in 1997 under the title *Rural Health Networks: Forms & Functions.* That report, based on a telephone survey of rural health network administrators conducted in the fall and winter of 1996, provided information on key organizational, governance and activities of 180 formally organized rural health networks.

The present report, *Rural Health Networks: Evolving Organizational Forms and Functions,* provides a fresh look at the existing population of formally organized rural health networks. Networks were identified using a variety of sources including the 1996 survey contact list, the 1997 Annual Survey of the American Hospital Association, networks included in Federal Office of Rural Health Policy initiatives, and those identified by the State Offices of Rural Health. Following an initial screening process, 223 rural health networks were included in a survey conducted by the Survey Research Center of the Division of Health Services Research and Policy at the University of Minnesota, during April to June, 2000 with a response rate of 85 percent. Approximately two thirds of these respondents represented rural hospitals that had been included in the 1996 survey with the remainder representing networks formed since our previous survey, providing an opportunity to assess network development over time.

The program and policy context surrounding rural health network development has undergone notable changes since the release of *Forms and Functions.* A variety of private and public efforts have taken shape to provide capital for start-up costs and technical assistance for development and on-going operations (e.g., programs sponsored by the Federal Office of Rural Health Policy, State Offices of Rural Health, The Robert Wood Johnson Foundation, W. K. Kellogg Foundation, the Claude Worthington Benedum Foundation among others).

1 We define a hospital as rural when it meets the Medicare criteria for reimbursement as a rural hospital under the provisions of Section 1886 of the Social Security Act (i.e. located outside of a Metropolitan Statistical Area).

Some of the initiatives targeted specific delivery system reform issues such as the expansion of rural managed care in Florida, Maine and New York, or targeted the needs of special populations in North Carolina, Kansas and Wisconsin. Some states have created a legislative and regulatory infrastructure to encourage network development (e.g., protection from state antitrust law, regulatory relief from state reporting and licensure requirements).

## Rural Health Networks—Concepts and Definitions

The rural health networks included in our surveys have also been known by other names including affiliations, alliances, consortia, cooperatives and physician-hospital organizations. However, each respondent shares a common set of organizational characteristics. Each network includes at least one rural hospital as a member and links two or more autonomous organizations by a formal written agreement to pursue mutually agreed upon goals and objectives (see page six for the formal definition of the rural health networks included in this study). Participation in these networks is a voluntary decision and is often motivated by the belief that membership will generate benefits for the organization that might not otherwise accrue by individual effort.

Network structure and actions take shape as stakeholders balance organizational self-interest with collective (network and community) interests, market allocation with public allocation, and strong leadership with collaborative models of decision-making. Achieving a balance is largely determined by member abilities to envision and accept a set of rules and expectations that can be counter to what members have been familiar with in the past as autonomous institutions. Collaborate, cooperate, negotiate and compromise become replacements for out maneuver, market leverage, compete, force and threaten.

Written agreements provide an effective means for achieving and maintaining this balance. They can also be useful in developing and executing necessary action plans. They create a safe medium for reconciling community and provider needs/self-interests (i.e., clearly articulating the purpose and intent of the network and the responsibilities of its members to fulfill them). In addition, they can be particularly valuable addressing organizational autonomy issues by creating a means for discussing which aspects of organizational boundaries are negotiable and which are not.

Networks can differ by their:

- Degree of autonomy (interorganizational interdependence)
- Type and level of network activity and service integration
- Level of complexity (number and diversity of network members)
- Level of commitment to financial investment and the acceptance of risk
- Range and scope of shared network activities

The results of the survey related to these attributes as well as their implications for the future of rural health network development are discussed in the following chapters.

**Chapter 2**—Location, Membership and Relationships: Network Demographics – describes the number, size, age and membership of rural health networks.

**Chapter 3**—Governance and Management: Network Organization and Operation—describes how rural health networks are organized to carry out their goals and objectives.

**Chapter 4**—Functions and Services: The Process and Products of Networking—reviews key trends in the involvement of network members in activities as well as their experiences in providing clinical and insurance services and establishing managed care linkages.

**Chapter 5**—presents Conclusions on the evolving development of rural health networks.

The Appendix contains tables and figures that provide additional detailed information on the rural health networks included in this study.

This chartbook is provided as a status report on rural health network development and has been crafted to be of use to a variety of audiences:

- Providers who do not currently belong to a rural health network may learn more about the structure and functions of networks, which may help them decide if network membership will work for them.
- Providers who participate in rural health networks may gain insights into their own experiences compared to others and better plan for their future.
- Policymakers may better understand how to provide incentives and reduce barriers to achieving various rural delivery system goals and reforms via networking initiatives.

### Definitions and Data Notes

***Rural Health Network:*** a formal organizational arrangement among rural health care providers (and possibly insurers and social service providers) that use the resources of more than one existing organization and specifies the objectives and methods by which various collaborative functions are achieved.

### Formal Rural Health Network Attributes

***Written Agreement:*** an agreement that specifies the purpose of the network, identifies who is a member of the network, and outlines the duties and responsibilities of membership.

***Individual Autonomy:*** members of the network retain their individual autonomy, but may choose to delegate an explicitly limited portion of their autonomy to the network to foster greater coordination and/or integration.

***Joint Action:*** members of a network perform collaborative activities according to an explicit plan of action. Activities include the provision or coordination of management functions and clinical services.

# Location, Membership and Relationships: Network Demographics

Chapter Two

Rural health networks are developing all across the country and are distributed throughout forty-five states representing every region of the United States. This chapter reviews changes in the size, distribution and membership of rural health networks since 1996.

## Key Trends

**The Midwest region continues to have the largest number of networks in the country and the Northeast region has the most new networks. Network formation is heavily influenced by issues of proximity with the memberships of nine out of every ten rural health networks located in the same state as the administrative offices of the network.**

- The largest number of rural health networks are located in the Midwest region accounting for almost forty percent of all networks (*Figures 2-1 and 2-2*).
- The Northeast region continues to have the largest proportion of new networks (27% of all networks in the region) (*Figure 2-2*).

**The number and average size of rural health networks has increased significantly.**

- Forty-one percent of all rural health networks have more than 20 members compared to 14 percent in 1996 (*Figure 2-3*).
- The number of rural health networks with only hospitals as members remained relatively stable; however, the size of these networks was not as large as in 1996 (*Figures 2-4 and 2-5*).

**The diversity of rural health network membership has increased considerably since 1996.**

- Rural health networks with a diverse membership have increased from almost one-third of all networks to over one-half of all networks since 1996 (*Figure 2-4 and Table 2-1*).
- Participation of local public health agencies, mental health providers, nursing homes and social service agencies in rural health networks has tripled since 1996 (*Table 2-1*).
- Rural health networks are more likely to have a diverse membership if they are less than two years of age and have a large number of members (*Figures 2-5 and 2-6*).
- The decrease in the proportion of

rural health networks with only hospitals as members has occurred primarily through the loss of rural hospital only networks; however, they remain the dominant network type among the smallest and oldest networks (*Figures 2-4, 2-5 and 2-6*).

**Rural health network membership increased for over half of all networks and decreased for almost a third of all networks during the two years prior to the survey with interests and priorities accounting for the largest amount of change in either direction.**

- One half of the rural health networks added new members to expand their service area and/or to broaden the provider types that were members of the network (*Table A-1*).

# Overview and Potential Implications

Rural health networks have become an increasingly popular strategy for addressing community health care issues. They grew in number, size and diversity over the four-year period, 1996 to 2000. Although the rural health networks identified in 1996 experienced an attrition rate (22%) common to small and medium business sector ventures that are usually under capitalized, almost one quarter of the current population have been in operation for at least ten years. They continue to be widely distributed across the United States operating in 45 states. The impact of state-based rural health network development efforts is particularly evident in the six states that account for 40 percent of all existing networks (i.e. Iowa, Kansas, Michigan, Minnesota, Nebraska and New York).

Why do rural health networks form? The availability of grant funding, payment incentives and favorable state and federal policies can be strong inducements; but, policy and funding incentives aside, what else has made the difference between isolation and cooperation? Life in rural America has long been associated with a strong collective awareness of community values, needs and roles. In many ways rural health networks are a natural outgrowth of this tradition. Much of their success depends upon balancing a number of potentially conflicting needs and interests (e.g., organizational self-interest with network interests and visionary leadership with collaborative models of decision-making and organizational advocacy). The recent growth in network size and member diversity will

mean an increase in the challenge for many administrators to maintain the needed balance for success.

Who decides to participate in rural health networks? The initial formation of a rural health network is heavily influenced by how much providers know, or think they know, about the leadership, mission and market history of their potential partners. According to the survey findings, knowledge about potential partners, in the initial developmental phase, draws heavily upon proximity-based information (e.g., past collaborative/ competitive relationships, image and character of the organization's leadership, understanding the mission, vision and goals that focus an organization's efforts).

Growth within the member ranks appears to take a different path once a network has been formed. Instead of expectations and assumptions based on proximity and past history, new members are more likely to be added when they provide a defined market advantage for the network or through the network (e.g., half of new members were added to expand the existing service area or the scope of services provided by the network membership, and another quarter of new members joined through their own initiative suggesting that the potential benefits of membership are definable).

Looking at the reasons for member loss provides us with a glimpse of the potential volatility of rural markets. In an environment of scarce resources and tightened regulatory and reimbursement policies, rural health providers are finding that it is tougher to survive alone. Whether it is an initial desire on the part of network conveners to be as open and welcoming as possible and/or a need on the part of potential members to seek a degree of safety in numbers is not clear. The result is the same, network members later finding themselves in an arrangement that has either always been or has become incompatible with their organizational purpose and mission (i.e., the most common reason for member loss was disagreement over network goals and purposes).

Communication is one approach to avoid either circumstance. This means keeping current members up to date on pressing network business and operational performance issues. For potential members, it means clearly communicating the goals and purposes of the network and having a process in place when developing member agreements. Failing to do so can create problems far more damaging for the network than member loss (e.g., the subtle undermining of network efforts resulting in delayed implementation, wasted resources and making counterproductive compromises).

It can be easy for network administrators and other key participants to invest far more importance in the network

rather than the strategy behind it. Deals are important but not sufficient to accomplish the broader goals and purposes that usually bring providers together. The key to success is the strategy behind the deal and not the deal itself. Adding any willing member to the network does not constitute a sound strategy or business plan and on the contrary can risk sapping important strength and momentum from the larger enterprise. Providers are important as network members to the degree that they contribute to achieving existing network goals and objectives. These goals and objectives may change over time as environmental circumstances change and therefore can be expected to generate changes in membership to meet the current needs and demands of the strategy behind the network. In this sense, bigger is not always better.

As networks continue to form it will be important for state and federal stakeholders to identify ways to assist these new businesses in making appropriate decisions. This means providing support for the development and maintenance of effective planning, decision-making and communication among network members and the network leadership.

**Table 2-1**

## *Rural Health Network Membership[1], 1996-2000*

| | Percent of Networks with This Member Type | | Average Number of Member Type in Networks with This Type of Member | |
|---|---|---|---|---|
| Member Type | 1996 | 2000 | 1996 | 2000 |
| Rural Hospitals | 100% | 100% | 7.5 | 8.2 |
| Urban Hospitals | 39% | 42% | 2.6 | 3.1 |
| Local Public Health Agencies | 10% | 30% | 1.7 | 2.6 |
| Mental Health Providers | 10% | 29% | 2.8 | 3.0 |
| Nursing Homes | 9% | 25% | 2.3 | 4.0 |
| Home Health Agencies | 10% | 23% | 2.8 | 3.4 |
| Social Service Agencies | 6% | 22% | 3.2 | 4.9 |
| Ambulance Services | 6% | 16% | 2.2 | 3.9 |
| HMO/Insurers | 5% | 6% | 1.2 | 1.2 |

[1] While we are not aware of the number of physicians in networks, 42% of rural health networks had at least one physician as a member in 1996 and 40% in 2000.

**Figure 2-1**

*Distribution of Rural Health Networks by State, 2000*

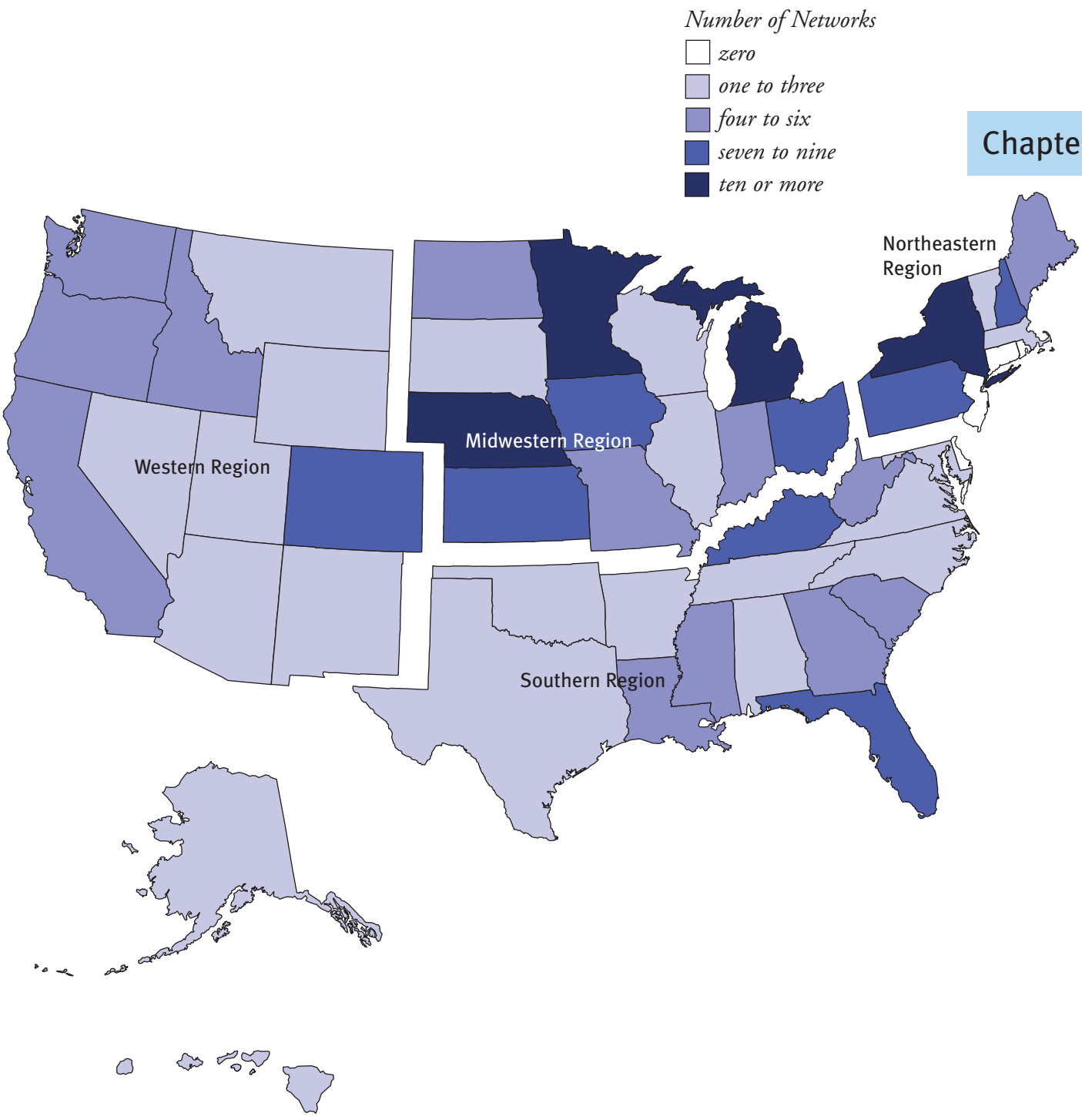
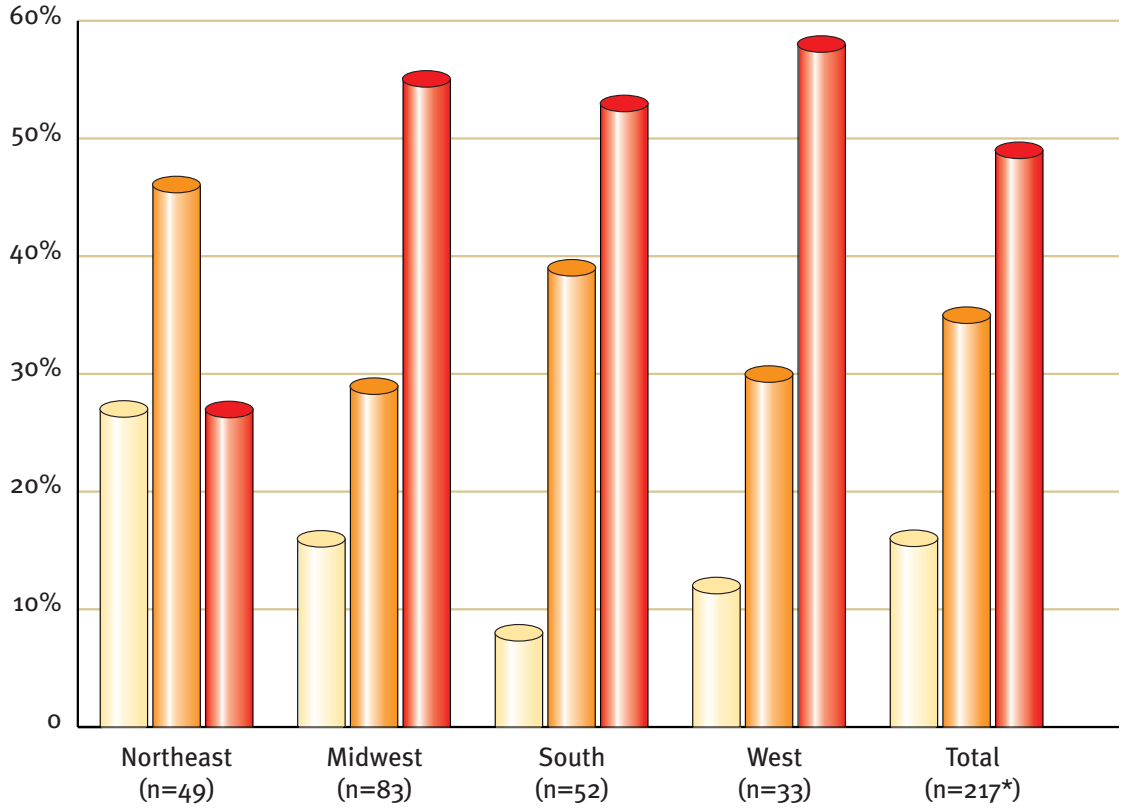


**Figure 2-2**

## *Rural Health Networks by Region and Age, 2000*




*Some networks are excluded because of missing values.

**Figure 2-3**

*Growth in Network Size, 1996-2000*

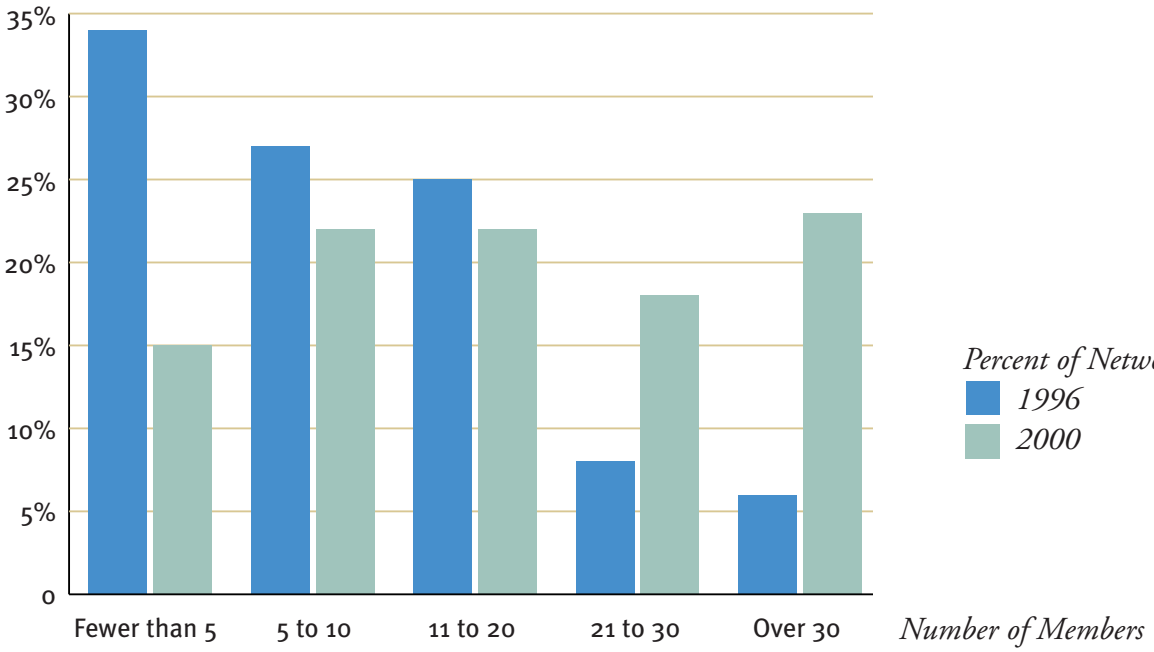



**Figure 2-4**

*Growth in Network Type, 1996-2000*

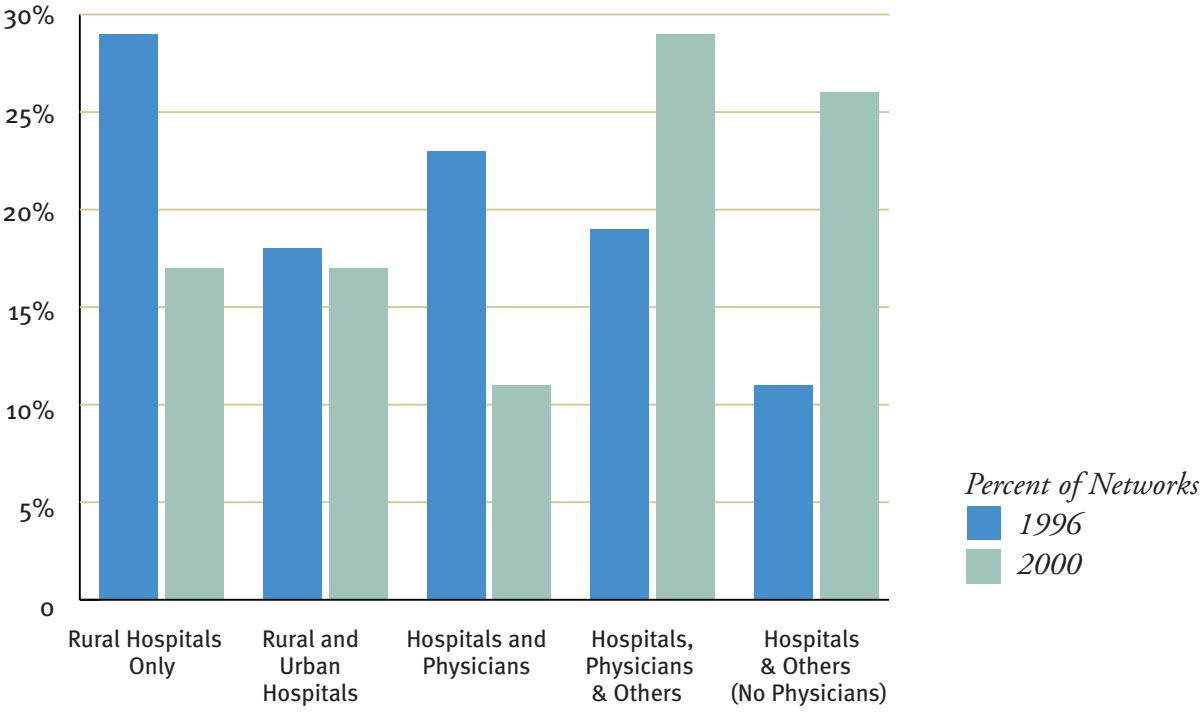


**Figure 2-5**

## *Types of Rural Health Networks By Size, 2000 (n=223)*

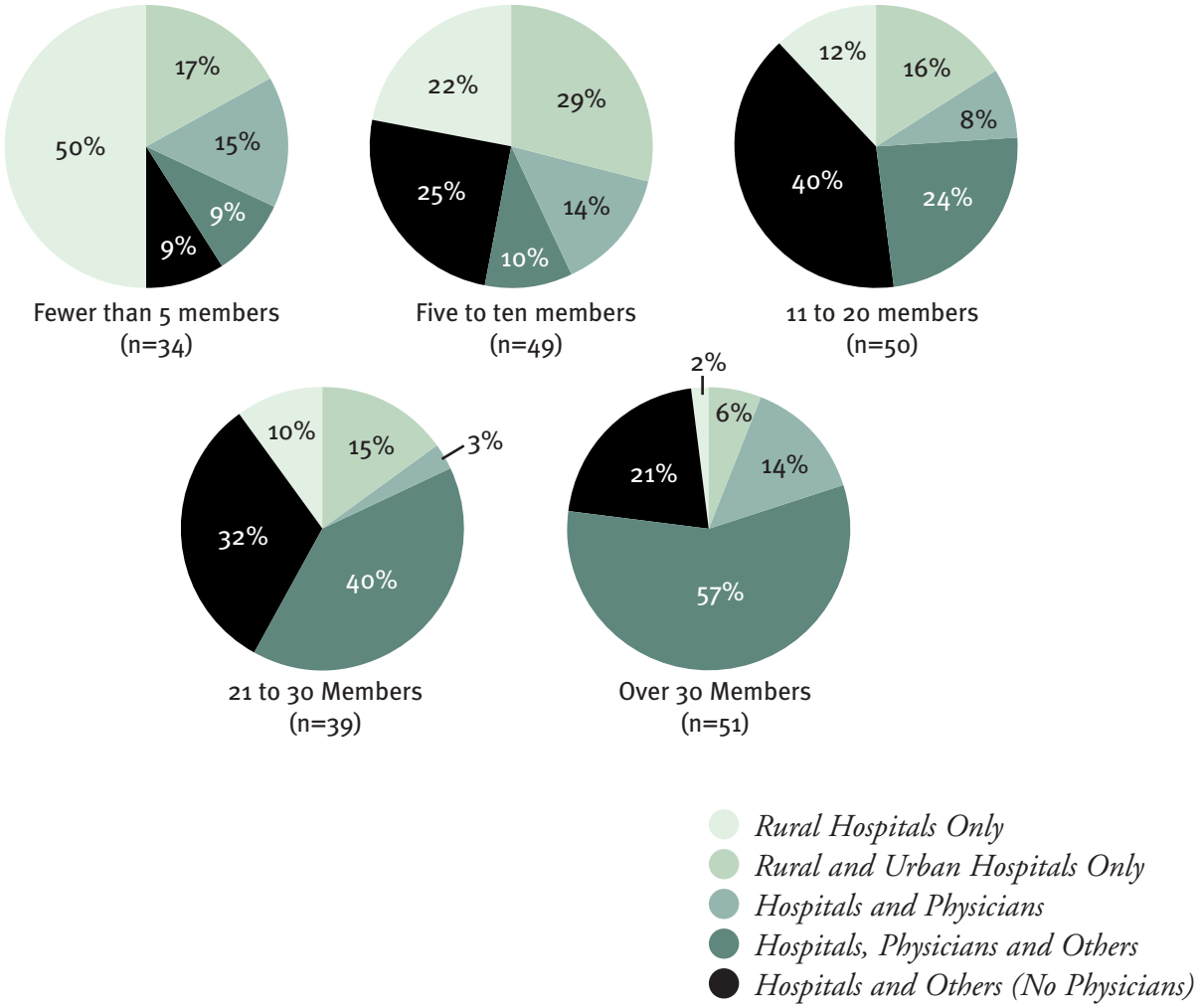
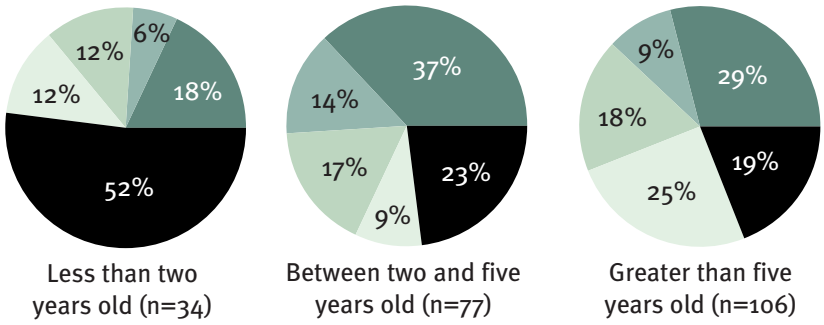



**Figure 2-6**

## *Types of Rural Health Networks By Age, 2000*



# Governance and Management: Network Organization and Operation

This chapter describes how rural health networks are organized to carry out their goals and objectives. It highlights trends in the governance and management of networks.

Chapter Three

## Key Trends

**Corporate law remains the dominant form of rural health network organization.**

- Although seventy percent of all rural health networks are organized as legal corporations, the proportion of unincorporated networks has doubled since 1996 (*Table 3-1*).

- The substantial use of governing boards, steering committees and bylaws for network governance has remained unchanged since 1996 (*Table 3-2*).

**A large majority of rural health networks have an operating budget but few have a capital expenditure plan.**

- There has been an increase in the number of networks with an operating budget as well as budget levels since 1996; while ninety-four percent of networks have an operating budget only seventy-five percent use a budget reporting system (*Figures 3-1 and 3-2*).

- Network operating budgets vary according to the nature and mix of providers participating in the network. Rural hospital only networks have the lowest average budget and hospitals and other member networks have the highest and most variable budgets (*Table 3-3*).

**Rural health networks differ widely in the resources they use to support operations; however, a high proportion rely on only a single source of support.**

- Although reliance on single source funding decreased from 1996, more than one in every three rural health networks continue to depend on only one funding source to meet their financial needs (*Figure 3-3*).

- Reliance on state or federal grant funds to support network development and operations increased significantly since 1996 with 13 percent of networks relying only on state or federal support (*Figure 3-3*).

- Almost half of all rural health networks cover part of their operational costs with the sale of network services and more than ten percent completely support operations through sales of services (*Figure 3-3*).

- Half of all rural health networks operate within a state that provides some support for network development; however, the availability of state-backed loans dropped three fold since 1996.

**Networks have increased their use of paid staff and management information strategies to facilitate network operations since 1996.**

- The use of paid network directors has doubled since 1996 but almost one-third are part-time directors. Rural hospital only networks are the least likely to employ a paid director (*Table 3-4*).

- Most rural health networks share performance related information with their members; two-thirds do so on at least a quarterly basis (*Figures 3-4, 3-5 and 3-6*).

**The majority of rural health networks give all participating members a voice in network decision-making; for some of these networks, member votes become channeled by the efforts of a dominant member or member clique.**

- Less than two-thirds of all rural health networks involve their entire membership in network decision-making (*Table 3-5*).

- While the proportion of rural health networks dominated by one or more members has remained relatively unchanged since 1996 (approximately one third of all networks), the source of that dominant influence has shifted from individual members to cliques of members (*Figure 3-7*).

# Overview and Potential Implications

Chapter Three

For many networks, the compelling needs and clarity of purpose that brought the member organizations together generates considerable enthusiasm and promise. Until a thorough analysis of the issues and options is completed, it is difficult to grasp the cost and magnitude of the tasks needed to achieve their vision. In some ways, the ready availability of external funding can delay the process by providing a safe zone between the investments needed to make a plan work and the amount of required organizational commitment for ongoing success.

When organizations become a network member they may bring competing agenda and priorities, strong leaders accustomed to exercising autonomy when making decisions about their organization and a history of past competition. The ability to turn this around and generate a level of commitment and investment where members provide a portion of the needed resources to achieve network goals is at the very core of networking. Without joint action and investment, economies of scale are not possible and member participation will wane. Rural health networks require strong leaders with significant competencies in group process, conflict resolution, problem solving, strategic planning and a variety of other skills necessary to coalesce interested parties into a collaborative and effective unit.

A network's organizational structure can play a significant role in facilitating and guiding network operations and decision-making by rationalizing and legitimizing the collective mission, vision and purpose for the network. The most formal structure involves incorporation with its attendant bylaws and specification of the purposes and goals of the entity being incorporated. The continued popularity of corporate structure for the organization of rural health networks may be due to a strong need for a more structured framework to guide member interaction and network operation. It also could be the expression of a general belief on the part of the members in the permanence of the venture. Incorporation may help provide legitimacy for the organization not only in the legal sense but also in how the organization is viewed by other regional providers, state officials (e.g. related to tax issues, eligibility for public funding and regulatory relief) and officials responsible for federal agencies and programs (e.g. related to anti-trust issues, funding opportunities).

It is likely that concerns over autonomy and control can, at times, overshadow some of the legal advantages of incorporation. With the proportion of unincorporated rural health networks doubling since 1996, the importance of some of the legal advantages of incorporation may have lost relevance for some networks. However, this does not mean that the need for a guiding framework for network decision-making and operations has diminished. The proportion of networks using governing boards, steering committees and bylaws remained virtually unchanged between 1996 and 2000.

The dramatic growth in network budgets and the growing dependence upon public funding sources suggest a marked overall influence of state and federal network programs. The availability of public dollars for network development could be partially responsible for the decrease in the proportion of networks that rely on a single source of operational support. However, at least one-third of all networks depend upon public support to sustain at least half of their operation costs. With the recent economic downturn, this dependence may place many networks at fiscal risk.

Coupled with the fact that one third of all networks are relying on just one source of operational support, this fiscal vulnerability becomes even more pronounced. Networks need to remain active at all times to diversify their funding sources. A number of networks are doing this through the sale of network products and services to support a portion of network operations.

The greater availability of funding for network development and operations likely is responsible for the increase in the use of paid network directors since 1996. A majority of paid directors are part-time administrators mostly employed by networks with highly variable budgets (e.g., rural and urban hospital only networks). The tripling of the use of part-time directors over this period may suggest a satisficing strategy to accommodate variable budgets and the need to provide network oversight.

Figure 3-1

## *Size of Rural Health Network Budgets, 1996–2000*

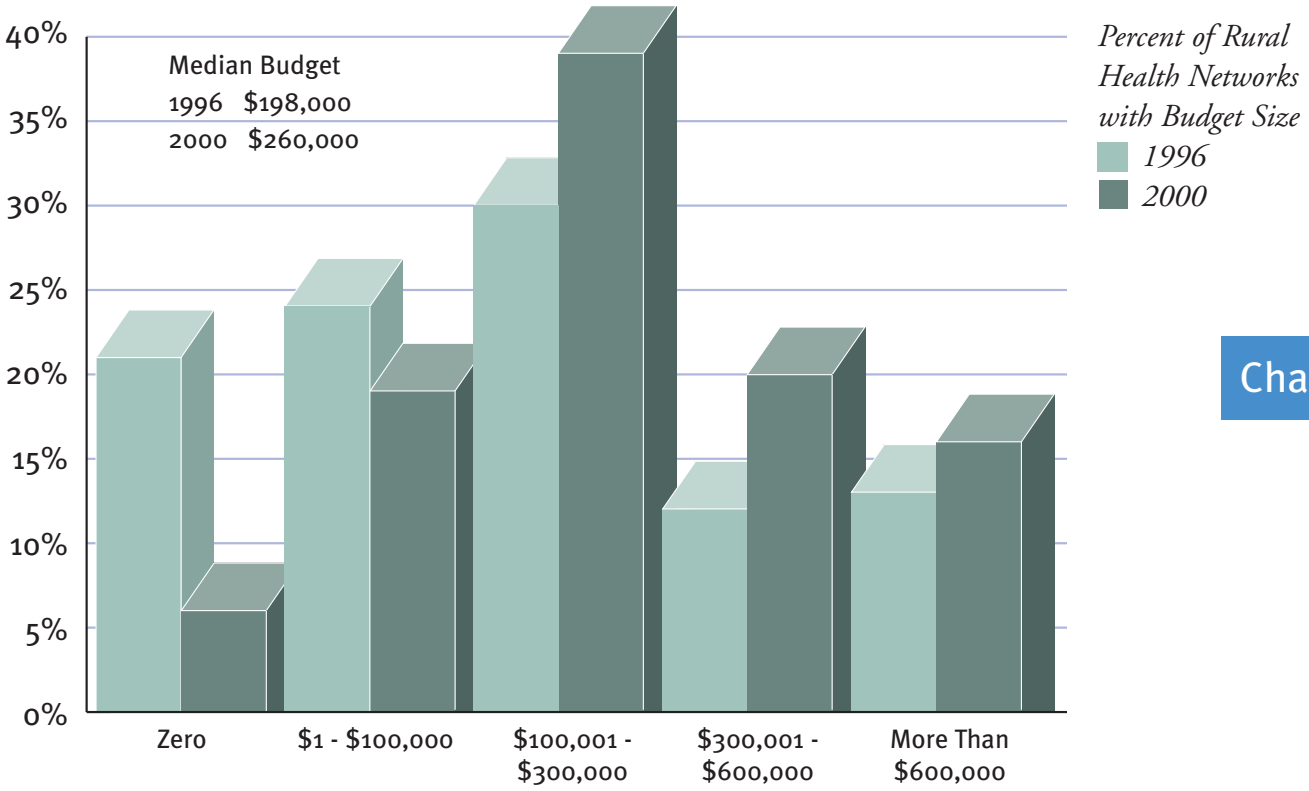





Table 3-1

## *Legal Status of Rural Heath Networks, 1996–2000*

| Legal Structure | 1996 (n=180) | 2000 (n=223) |
|---|---|---|
| Not-for-Profit Corporation | 70% | 62% |
| Unincorporated Entity | 11% | 21% |
| For-Profit Corporation | 9% | 9% |
| Cooperative | 6% | 6% |
| Government Entity | 2% | 1% |
| Other | 2% | 1% |

**Figure 3-2**

## *Rural Health Network Management Tools, 1996–2000*

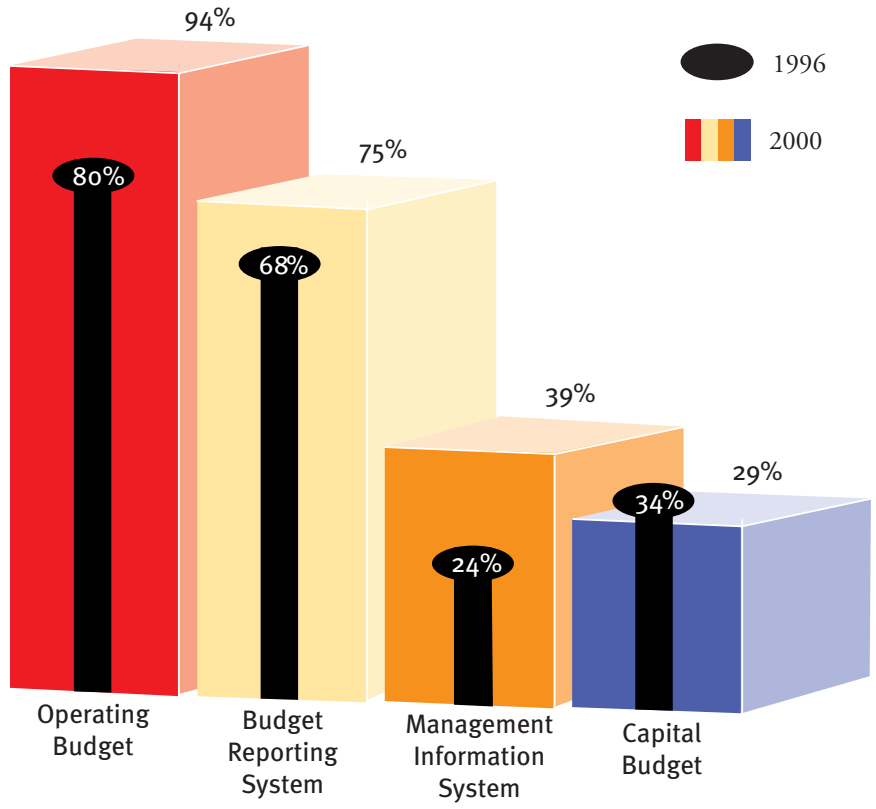



**Table 3-2**

## *Rural Heath Network Governing Board Attributes, 1996–2000*

| | 1996 | 2000 |
|---|---|---|
| Percent of Networks With a Governing Board | 91% | 93% |
| Average Size of Governing Board | 12% | 13% |
| Percent of Networks With Community Board Members | 36% | 33% |
| Average Number of Community Board Members | 6% | 4% |
| Percent of Networks With Written Bylaws | 81% | 80% |

**Figure 3-3**

## *Sources of Network Funding and Reliance on Those Sources, 2000*

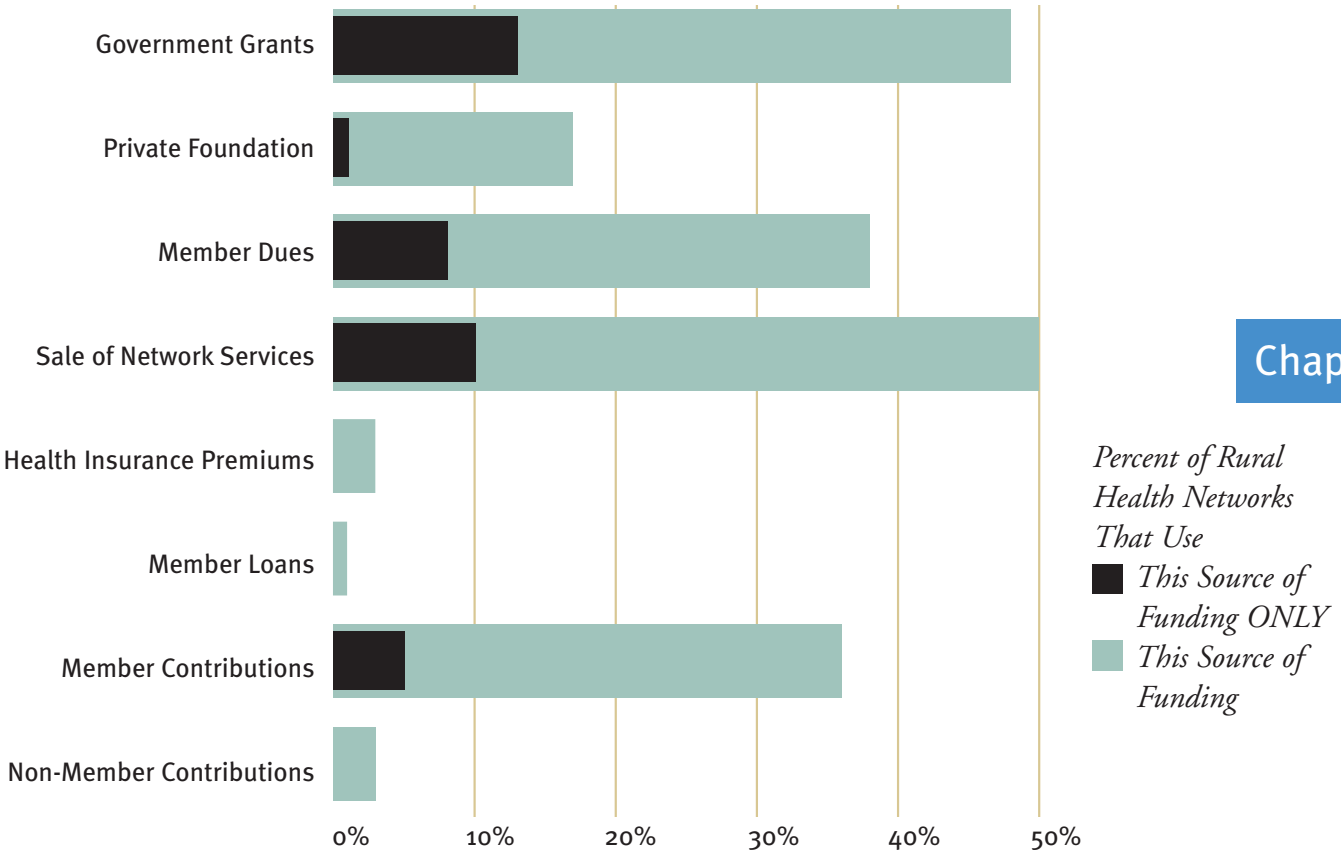



**Table 3-3**

## *Rural Heath Network Operating Budgets by Network Type, 2000 (n=223)*

| Network Type | Median | Mean |
|---|---|---|
| Rural Hospitals Only | $200,000 | $201,911 |
| Rural and Urban Hospitals Only | $205,448 | $420,562 |
| Hospitals and Physicians | $250,000 | $487,187 |
| Hospitals, Physicians and Others | $250,000 | $322,126 |
| Hospitals and Others (No Physicians) | $272,000 | $745,841 |

**Figure 3-4**

*Network Communication Strategies with Members, 2000 (n=223)*

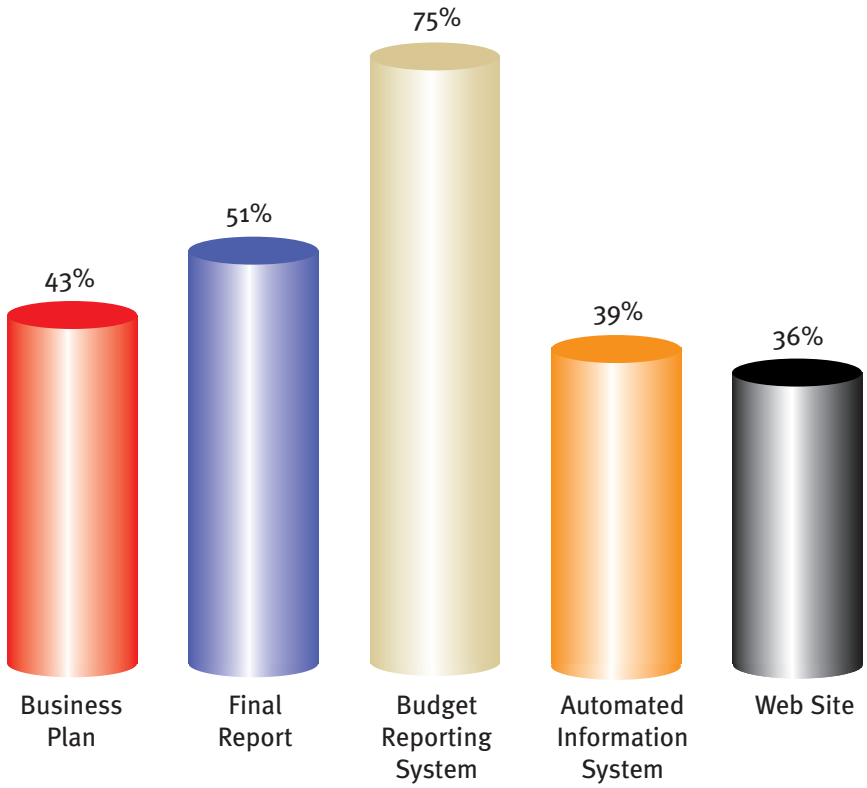



**Table 3-4**

*Rural Heath Network Staffing by Network Type, 1996–2000*

| Network Type | With Full-Time Director | | With Part-Time Director | | Average Number FTE Employees | |
|---|---|---|---|---|---|---|
| | 1996 | 2000 | 1996 | 2000 | 1996 | 2000 |
| Rural Hospitals Only | 22% | 43% | 8% | 15% | 1.1 | 3.8 |
| Rural and Urban Hospitals Only | 59% | 49% | 0% | 19% | 7.9 | 6.8 |
| Hospitals and Physicians | 40% | 71% | 12% | 21% | 1.8 | 20.9 |
| Hospitals, Physicians and Others | 50% | 62% | 9% | 13% | 6.9 | 4.5 |
| Hospitals and Others (No Physicians) | 40% | 44% | 10% | 47% | 2.3 | 5.9 |
| TOTAL | 40% | 54% | 9% | 22% | 2.8 | 6.7 |

**Figure 3-5**

*Frequency of Network Reports to Members, 2000 (n=182)*

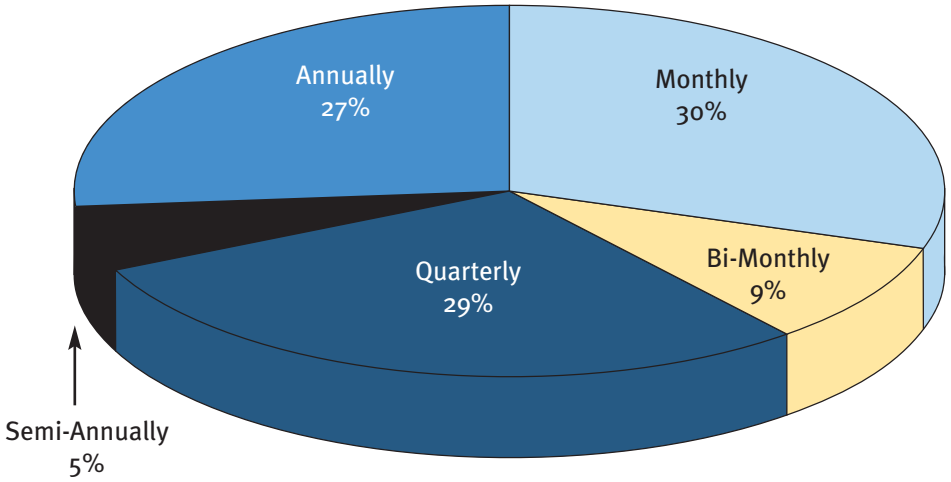



**Table 3-5**

*Network Member Involvement in Decision-Making, 2000 (n=212)*

| Involvement in Decision-Making | |
|---|---|
| All Members | 64% |
| More than Half of Members | 14% |
| Less than Half of Members | 22% |

**Figure 3-6**

*Content of Network Reports to Members, 2000 (n=151)*

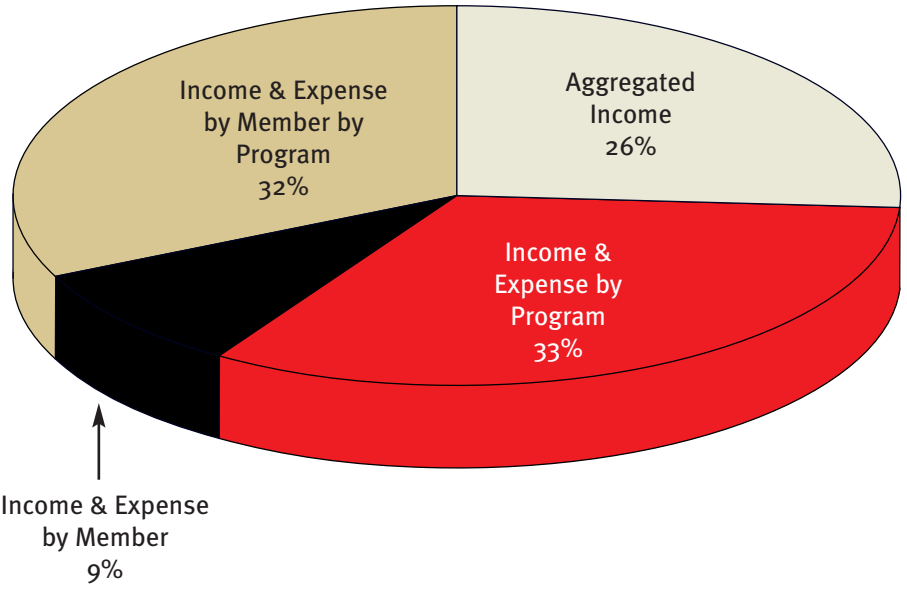
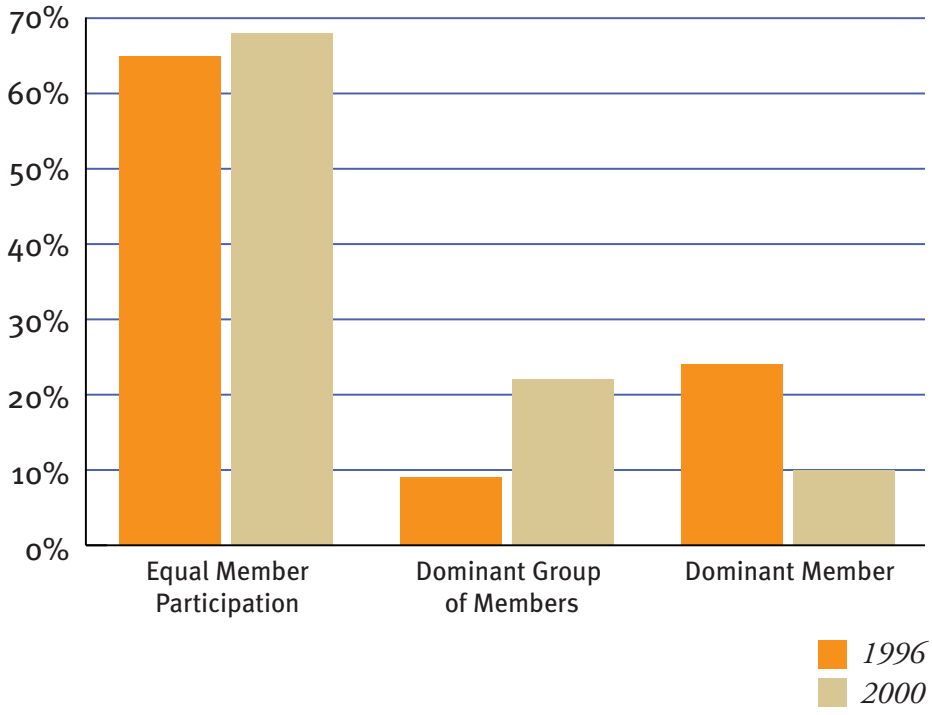



**Figure 3-7**

*Member Participation in Network Decision-Making, 1996–2000*



# Functions and Services: The Process and Products of Networking

Chapter Four

Rural health networks form when providers of health care services recognize the advantages collaboration and cooperation can create for their individual organizations. The shared activities that become the focal point of network member participation can vary depending upon several factors. The number and type of providers involved in a network and the nature of their organizational needs and concerns influence the strategy used by members of a network to collaborate. The level of success achieved through shared network activities depends upon how accurately a network's leadership has determined the right activity mix for the membership (i.e. tackle too many activities and risk overwhelming the membership, tackle too few and risk losing critical momentum and the motivation to collaborate).

Some networks form to address many shared areas of activity while others have formed to address only a minimum of issues only to gradually expand their efforts over time to encompass greater degrees of functional and service integration. An integration scale based on 21 potential shared activities was developed to assess the scope and intensity of network member efforts to realize goals and objectives that are important for their organization's mission. These 21 areas of potential shared activity are sorted into three key domains of integration—clinical integration, functional integration and financial integration. In this chapter we review key trends in the involvement of network members in these domains of activity as well as their experiences in providing clinical and insurance services and establishing managed care linkages.

### Definitions and Data Notes

***Integration*** means the bringing together of previously separate and independent functions, resources, and organizations into a new unified structure.

***Clinical Integration*** denotes the coordination or combination of patient care services across members of the network.

***Functional Integration*** describes the coordination or combination of key support or administrative functions and activities across members of the network.

***Finacial Integration*** indicates the sharing of capital, risks, and profits across members of the network.

# Network Integration Scale

## Calculation of Scale

For all networks with 20 or fewer members, we collected data on the number of members who participated in each of the 21 functions listed below. For each function, we calculated the percentage of network members who participate in the function. For each subgroup identified below, we calculated the average of the percentage participation scores. The functional integration scale is the average of the overall scores for human resources, accounting, planning and marketing, and management information systems. Integration scores range from 0 to 100. A score represents the percent of members who use, participate in, or contribute to a network function.

## Components of Integration

**Clinical Integration**
- Use the same, or substantially the same, physician credentialing system
- Use the same, or substantially the same, quality measurement and improvement program
- Use the same, or substantially the same, clinical protocols developed or approved by the network
- Use a system for sharing medical records among network members

**Functional Integration**

Human Resources:
- Use the same, or substantially the same, personnel policy manual
- Use the same, or substantially the same, salary and wage system
- Use the same, or substantially the same, health professional recruitment program
- Use the same, or substantially the same, continuing education programs
- Use shared staff (e.g., nurses, physical therapists)

Accounting:
- Use the same, or substantially the same, chart of accounts
- Use a consolidated network office for payroll and/or accounts payable
- Use a consolidated network office for patient billing and collections
- Use the same network-wide material management program

Planning & Marketing:
- Use a consolidated network office for marketing and community relations
- Use a consolidated network office for planning
- Use a consolidated network office or service for grant writing
- Participate in common legislative and regulatory advocacy efforts

Management Information Systems:
- Use the same, or substantially the same, network management information system

**Financial Integration**
- Accept a portion of the risk of operating loss on network ventures
- Accept a portion of the risk of business failure on network ventures (i.e., responsible for paying creditors after business fails)
- Contribute capital to network ventures

# Key Trends

**Rural health networks are pursuing a wide range of objectives that they consider of major importance.**

- Major objective areas included responding to member needs, developing local service capacity, expanding health improvement and risk reduction services, strengthening member communication and coordination, and developing marketable products to generate additional revenue (*Table A-2*).

- Almost two thirds of all rural health networks engaged in activities to meet the organizational and operational needs of their members while over a third launched programs to improve, expand and develop local health care capacity (*Table 4-1*).

**Hospital only networks are more likely to pursue objectives involving improvements in member operational efficiencies than developing additional community services.**

- Rural health networks with diverse memberships are more than three times as likely to pursue objectives targeting health improvement and risk reduction services than hospital only networks (*Table A-3*).

- Networks that include physicians are more likely to develop market oriented products and services (*Table A-3*).

**Self-assessment of the network achievement considered most significant to date suggests that most rural health networks are still in the early stages of organizational development.**

- Almost 60 percent of all networks (similar to 1996) considered the development of network infrastructure (organizational and administrative development) as their most significant achievement (*Figure 4-1*).

- There has been a substantial increase in emphasis on activities to improve community health (*Figure 4-1*).

**Three of the four most popular functions shared by network members in 1996 remained the most popular in 2000 including contributing capital to support network ventures, participating in common legislative and regulatory advocacy activities, and using the same continuing education programs.**

- More than half of all networks are receiving capital contributions from all of their members to support network ventures. Over two-thirds have at least two or more members contributing capital. Similar proportions of rural health network members are engaged in common legislative and regulatory advocacy efforts (*Table 4-2*).

- Thirty percent of all rural networks have complete involvement of their members in continuing education programs for health professionals (*Table 4-2*).

**Network member involvement in shared functions and activities increased between 1996 and 2000.**

- Although network member involvement increased across the broad range of network functions, the most popular area remained financial functions (*Figure 4-2*).

- The use of shared clinical protocols developed or approved by network practitioners increased substantially since 1996 (*Table 4-2*).

**Network member participation in shared functions is strongly influenced by network age and membership size.**

- Older networks are more likely to have members that are participating in the full range of network functions, reversing the relationship observed in 1996 (*Table A-4*).

- The members of smaller rural health networks exhibit a greater degree of integration than larger networks and are more likely to engage in shared clinical functions as well as share in the financial risks of network ventures (*Table A-5*).

**Few rural health networks provide or arrange for the provision of clinical or insurance services.**

- Only 22 percent of all networks provide or arrange for clinical or insurance services (*Figure 4-3*).

- Smaller rural health networks are more likely to provide or arrange for clinical services while larger networks are more likely to offer insurance products (*Figure 4-4*).

**Most rural health networks are not likely to contract with health maintenance organizations (HMOs) or directly with self-insured employers.**

- The proportion of networks that contract with HMOs increased slightly since 1996 (from 20% to 26%) while the proportion contracting with self-insured employers remained stable (20% versus 19%) (*Table 4-3*).

- Networks with physician members were more likely to contract with HMOs and employers (*Table 4-3*).

- Rural health networks located in the South were most likely to contract with HMOs (*Figure 4-5*).

**Almost half of the rural health networks contracting with HMOs receive a capitated payment and most pay their primary care physicians, specialists and hospital members on a fee-for-service basis.**

- Forty-eight percent of rural health networks contracting with HMOs receive a per person, per month payment from the HMO for each HMO member served (Table 4-4).

# Overview and Potential Implications

Rural health networks are voluntary organizations. Analyses of major network objectives, significant achievements to date and the manner in which network members integrate their support and core functions provide a framework for understanding how member interests may shape network development and operations.

Virtually all of the major objectives identified by the networks provide a direct or indirect benefit for their members. Two thirds of the objectives focused on activities that could result in direct and timely support for meeting member operational needs (e.g., education and training, improvement of utilization review programs, developing distance learning and consulting capacities, expanding staffing pools, and joint recruiting efforts). As with the previous survey, the most common theme of the objectives is improving member operational performance.

The capacity to provide direct or indirect support for member operations is linked to the capacity of a network's infrastructure for coordinating efforts, focusing resources and allocating responsibilities to meet such needs. The development of this infrastructure is an incremental and time limited process (i.e. the more time that has elapsed since network formation, the fewer structure conflicts and issues that should remain). Network maturation can be characterized as a process in which efforts to establish and maintain this infrastructure gradually gives way to focused efforts that address external health system related issues.

Surprisingly, almost six of every ten significant network achievements identified by respondents involved efforts to establish or maintain network infrastructure. These networks, like their predecessors in 1996, have continued

to function in the early stages of network development. In our earlier report, we speculated that if networks were concentrating on these activities in an effort to build for the future, a later survey should be able to identify accomplishments more consonant with the overall purposes of the network such as improving member effectiveness and community health. It appears that networks have not moved as rapidly in this direction as expected.

Even if these milestones of network development have not emerged, it is important to underscore the fact that the number of network members sharing in core functions (e.g. use of clinical protocols or management information systems) has increased since 1996. The participation of rural health network members in shared functions increased in 16 of the 21 functional areas resulting in an increase in overall integration. However, consistent with the conclusion that many networks remain in the earlier stages of organizational development, the majority of members have yet to significantly integrate core network functions, mirroring the 1996 findings.

Contributing capital toward network joint ventures and engaging in legislative and regulatory advocacy remain the most popular areas of integration for rural health networks. Two thirds of the rural health networks had at least two or more members engaged in these efforts and half of all networks reported all members involved in them.

Rural health networks continue to participate in joint ventures as indicated by the degree of capital investment by members in such efforts. This suggests that many network members continue to take a significant stand in positioning their organization for future opportunities (especially given the often scarce and fragile nature of rural resources). However, investment in network joint ventures does not involve the same type of commitment required in integrating other network functions. Joint ventures often create a new entity rather than reconfigure existing member relationships and obligations. This entity usually provides services and products that are not currently available through the collaboration of network members. This may be an important strategic step on the part of network members but our findings suggest that network members share limited risks related to operating losses or business failures.

The level of overall network integration has been modest at best. This is likely due to similar issues identified in our earlier chartbook: a low level of trust in the intentions and efforts of other network members, ambiguity in terms of

the balance of short-term costs with long-term benefits from core function integration, and the inability to control the decisions and activities of partner organizations. Engaging in non-core, supportive functions (e.g. joint purchasing, materials management) is far safer than core functional areas. Engaging in non-core efforts can benefit the larger membership without producing significant risks for participating members. Sharing core network functions increases the financial and operational vulnerability of participating members for several reasons including less control over operational and strategic information, decision-making and mid-course corrections (i.e., group priorities and benefits may run counter to individual organizational interests).

The only area of core network functions that substantially increased since 1996 was the adoption of the same or similar clinical protocols. The integration of network clinical protocols increased more than any other single network function. There are a number of factors that could have contributed to this increase including increasing concerns about malpractice litigation and the need to adhere to commonly accepted standards of practice, as well as the replacement of retired practitioners by clinicians trained to understand the benefits of using clinical protocols.

Few rural health networks provide or arrange clinical or insurance services. While the number of rural health networks contracting with Health Maintenance Organizations (HMOs) increased slightly since 1996, the proportion of networks contracting with self-insured employers remained stable. Networks comprised of hospitals and physicians only are most likely to contract with either employers or HMOs. The reduction of HMO activity in many rural areas and the shifting of employer responsibilities for the costs of health care to employees suggest that few networks are likely to expand contracting activities with HMOs or employers in the near future.

**Figure 4-1**

## *Self-Assessment of Most Significant Network Achievement to Date, 1996–2000*

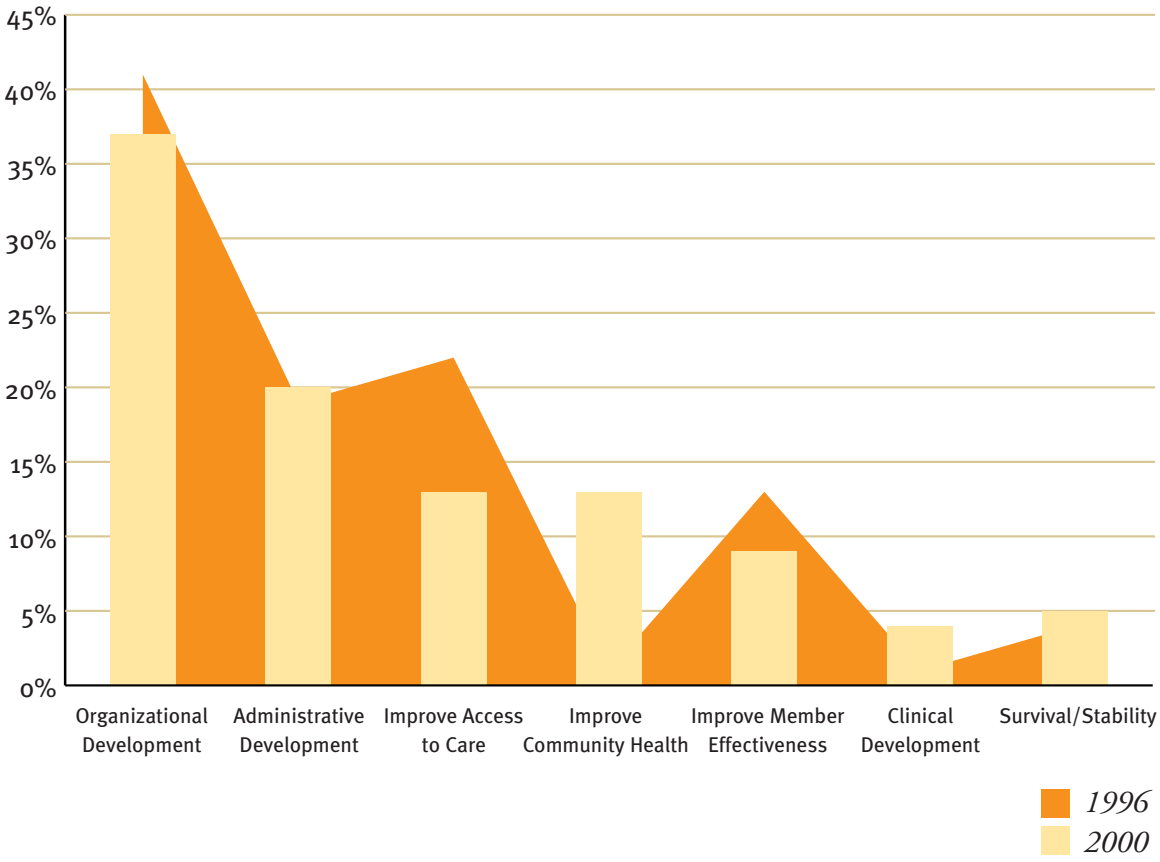



**Table 4-1**

## *Major Network Objectives, 2000*

| Objective | Proportion of Networks with Objectives Targeting this Area of Activity* |
|---|---|
| Help meet the needs of member organizations | 61% |
| Improve. expand and develop local health care capacity | 35% |
| Develop network products/services and joint market strategies | 25% |
| Improve communication, coordination and collaboration | 22% |
| Expand access to health improvement and risk reduction services | 17% |

*Respondents were allowed to identify more than one objective

**Figure 4-2**

*Rural Health Network Integration 1996–2000*
*(Networks with 20 or Fewer Members Only)*

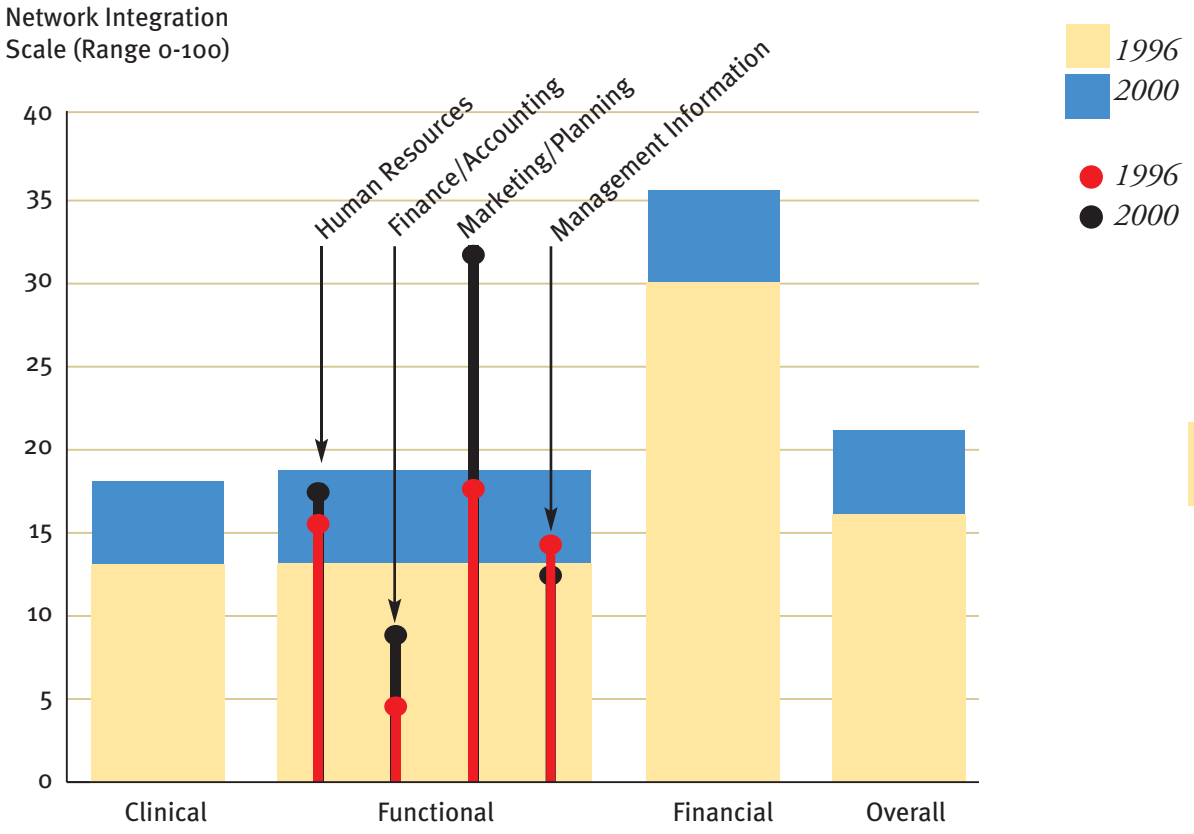


**Table 4-2**

## *Member Participation in Network Functions, 1996–2000*

| Shared Function | 1996 (n=119) | | 2000 (n=129) | |
|---|---|---|---|---|
| | Two or More Members Participate | All Members Participate | Two or More Members Participate | All Members Participate |
| Use the same, or substantially the same, personnel policy manual | 7% | 2% | 17% | 3% |
| Use the same, or substantially the same, salary and wage system | 7% | 2% | 12% | 1% |
| Use the same, or substantially the same, chart of accounts | 9% | 3% | 14% | 4% |
| Use a consolidated network office for payroll and/or accounts payable | 7% | 3% | 8% | 4% |
| Use a consolidated network office for patient billing and collections | 9% | 5% | 10% | 2% |
| Use the same, or substantially the same, health professional recruitment program | 25% | 13% | 36% | 19% |
| Use the same, or substantially the same, network-wide management information system | 21% | 8% | 19% | 5% |
| Use the same, or substantially the same, network-wide materials management system | 18% | 6% | 29% | 16% |
| Use the same, or substantially the same, physician credentialing system | 28% | 16% | 30% | 17% |
| Use the same, or substantially the same, quality measurement and improvement program | 16% | 8% | 19% | 10% |
| Use the same, or substantially the same, clinical protocols developed or approved by network practitioners | 11% | 4% | 36% | 26% |
| Use a system for sharing medical records among network members | 12% | 7% | 17% | 9% |
| Accept a portion of the risk of operating loss on network ventures | 30% | 22% | 33% | 23% |
| Accept a portion of the risk of business failure on network ventures (i.e., pay creditors) | 26% | 18% | 29% | 19% |
| Contribute capital to network ventures | 46% | 30% | 68% | 51% |
| Use the same, or substantially the same, continuing education programs (e.g., for physicians and nurses) | 37% | 25% | 44% | 30% |
| Use shared staff (e.g., nurses, physical therapists) | 33% | 14% | 29% | 15% |
| Participate in common legislative and regulatory advocacy efforts | 43% | 32% | 64% | 54% |
| Use a consolidated network office for marketing and community relations | 17% | 10% | 26% | 17% |
| Use a consolidated network office for planning | 20% | 17% | 33% | 24% |
| Use a consolidated network office or service for grant writing | 25% | 18% | 36% | 27% |

Figure 4-3

*Percent of Rural Health Networks That Provide or Arrange for Clinical or Insurance Services, 2000*

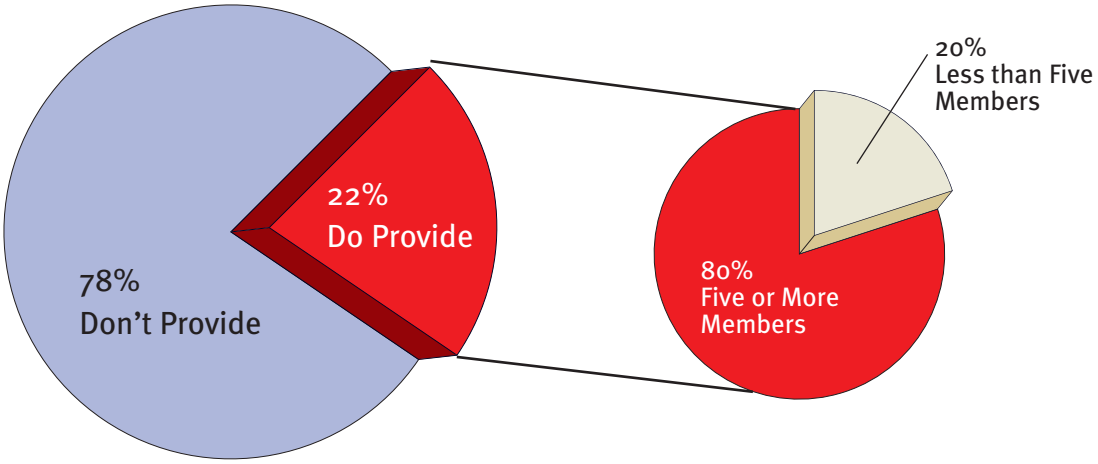





Table 4-3

*Rural Heath Network Contracting with HMO's or Employers by Network Type, 1996–2000*

| Network Type | Contract with Employers | | Contract with HMO's | |
|---|---|---|---|---|
| | 1996 | 2000 | 1996 | 2000 |
| Rural Hospitals Only | 8% | 15% | 10% | 21% |
| Rural and Urban Hospitals Only | 12% | 16% | 12% | 14% |
| Hospitals and Physicians | 35% | 42% | 22% | 67% |
| Hospitals, Physicians and Others | 33% | 22% | 46% | 31% |
| Hospitals and Others (No Physicians) | 13% | 9% | 10% | 17% |
| Total | 20% | 19% | 20% | 26% |

**Table 4-4**

## *Rural Health Network Payment Under Managed Care, 2000 (n=55)*

| | |
|---|---|
| Networks with capitated contracts | 48% |
| Primary care physicians capitated | 26% |
| Specialists capitated | 16% |
| Hospitals capitated | 17% |

**Figure 4-4**

## *Provision of Clinical Services and Insurance Products by Network Size, 2000*

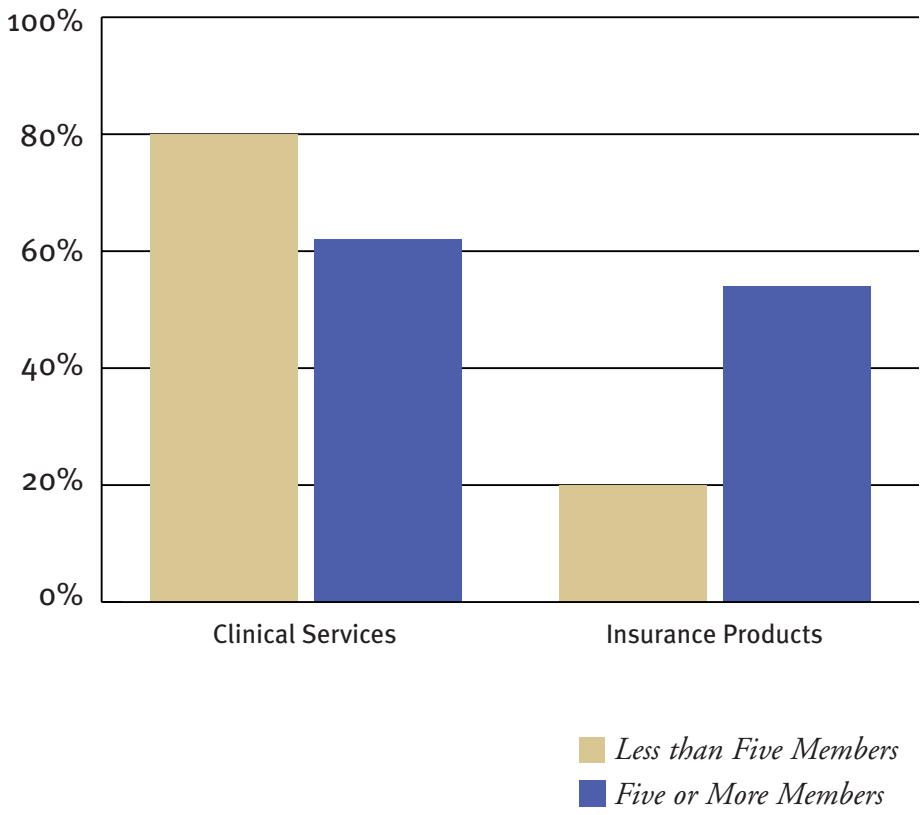
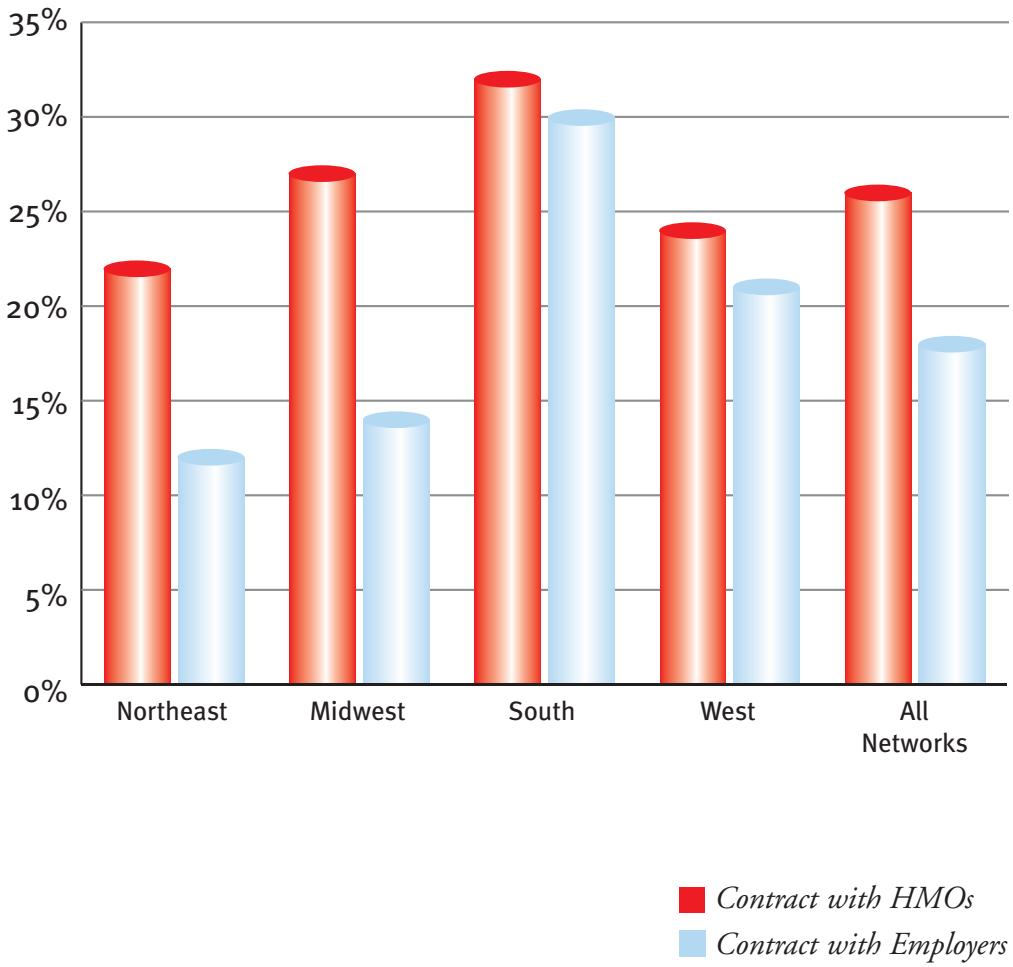


**Figure 4-5**

*Rural Health Networks that Contract with HMO's or Directly with Employers by Region, 2000*



# Conclusions

Rural health networks organized according to formal written agreements have increased in number, size and member diversity over the last half of the 1990s. Operating budgets are larger and more diverse involving multiple sources of funding and a larger proportion of state and federal grant support than in 1996. The types of services the networks are providing or arranging to be provided are much more likely to include community-focused and health-related efforts than ever before (e.g., public health, community mental health, health education and promotion, and social services). With greater resources available and broader constituencies and agenda to represent it is not surprising that networks also exhibit somewhat greater degrees of functional integration (i.e., greater proportions of network members are joining in shared network activities).

Given the above, it is puzzling to find that most networks continue to view organizational and administrative developments as their most significant accomplishment to date. However, this belief is consistent with the finding that many networks have still not significantly integrated core network functions. Without significant integration of core network functions it is difficult to accomplish more than broad structural and administrative goals.

Core operational efforts have remained bounded by the planning and actions of individual network members and accrue benefits mostly to those members.

We conclude this chartbook with a discussion of how these and other findings of our study of rural health network development offer suggestions on future directions for networks.

## Increased Number of Rural Health Networks

A variety of factors converged to fuel a growing popularity in the use of networking strategies for meeting rural health needs. The favorable market conditions of the 1990s along with increasing health care payments created the availability of resources for state and federal networking programs and helped provide a framework for organizing those activities. Rising health care costs coupled with the response of health care plans in lowering premiums and offering expanded coverage fueled efforts to embrace managed care. Many rural providers began to search for ways to prepare for the coming managed care environment. State and federal programs emphasized the creation of provider relationships that reflected greater degrees of vertical integration and organization.

It is difficult to predict whether existing funding incentives for rural health network development will continue into the near future given the weakening of state and federal economies. However, the rationale for network creation and operation will remain, as scarce rural resources become even more the subject of competition and community debate.

As providers continue to struggle with meeting new regulatory requirements, maintaining physical plant resources, keeping pace with technological improvements, and investing in the recruitment and retention of needed health care professionals it will become more difficult to succeed as an independent entity. Collaboration will not be enough. For many, their future survival will depend upon the degree to which they are able to adapt to a new model of organizing and operating.

## Increased Size and Diversity of Rural Health Network Membership

The growth in the availability of public and private foundation funds for supporting network development has made a marked contribution to the dramatic growth in network size and diversity. Both federal and state network development programs have increasingly emphasized the importance of including certain types of providers (e.g., community health clinics, county health departments, mental health providers among others). As efforts have grown to maintain the health care safety net more diverse collaborations have emerged.

Larger sized memberships carry a greater administrative burden for balancing member agenda. Balancing member agenda also becomes more challenging when the membership is diverse. The increase in the use of communication strategies to disseminate network-related information likely is a direct result of the increase in member size and diversity as well as the availability of funds to establish and maintain those strategies. Future network administrators will need to develop strategies for addressing increasingly complex decision-making issues that networks will face.

## Increased Network Financial Support

A significant factor in the increase in the size and diversity of rural health network budgets has been the growth in state, federal and private initiatives emphasizing networking as a strategy. The reliance upon single source funding to support network operations decreased considerably and almost half of the networks obtained some operational support from the direct sale of network products and services. One in ten rural health networks completely supported their operations in this manner. Even though funding oppor-

tunities for networks improved in the latter 1990s, networks have become more sophisticated in generating support for operations. This suggests, at least for some networks, a maturation of administrative and leadership capacity.

## Integration of Network Functions

Finding that the majority of rural health networks still considered achievements of legitimacy and structure as a significant accomplishment more often than the delivery of services to their communities was surprising. With the exception of the shared use of clinical protocols, the integration of core network functional areas was modest at best.

The emergence of more clearly defined and stronger quality improvement initiatives, documentation of the need for a reduction in patient errors, a general shift in focus from process to outcome measures, and increased concerns over malpractice have all contributed to an increased interest in standardized clinical protocols. These are strong environmental incentives that have been largely lacking for the other areas of core network functions.

Does the discovery of only minor increases in levels of core function integration signal a fundamental flaw in network strategy and policy? What is it that makes a rural health network any different than a health care alliance or purchasing cooperative if the only benefits that accrue are to the individual participating organizations? These are critical questions that must be addressed by policymakers and stakeholders. There appears to be a fundamental conflict between the vision that networks convey in policy and strategy and the reality of what providers and communities are able to achieve.

The period of 1996 through 2000 was a transition period where strong beliefs in the benefits of managed care approaches and bullish economic markets began to give way to disenchantment with vertically integrated delivery systems and a bearish economic future. The challenges facing rural health care providers in the coming years will remain much the same as they are now (e.g., limited resources, aging populations, large geographic areas to cover and growing regulatory requirements). Survival will continue to depend upon how well a provider or group of providers is able to achieve and maintain greater efficiencies, cost-savings, capital investments and organizational flexibility. While some providers will benefit from diversification, the majority likely will fall back on their core product-related line that most defines the organization. Unless innovative organizational models are developed, hospitals will find themselves under greater pressure to redefine core products and to capture market share currently held by non-hospital providers.

For many networks, the limited evolution beyond the initial stage of development may be less a measure of the inability of current network policy than a reflection of the larger environmental context of scarcity. In many ways, the development of rural health networks as formal integrated models of health care will remain a solution awaiting a problem. They will continue to offer an effective strategy for managing local market pressures involving small numbers of trusting providers with a clear understanding of their goals and interests. As a national phenomenon, integrated rural health networks likely will need to wait for another window of opportunity similar to that provided by managed care a decade ago. The increasing popularity of using care management strategies to achieve quality improvement goals while enhancing financial efficiencies will require greater degrees of provider cooperation and collaboration. Networks may be able to provide the organizational framework for achieving these goals in rural areas of the country.

# Appendix

Table A-1

# Network Development: Formation, Growth, and Attrition, 1996–2000

| | 1996 | 2000 |
|---|---|---|
| **Formation** | | |
| **How were members of the network initially selected?** | | |
| All hospitals were invited to join | 29% | 30% |
| A small group of providers began to meet informally and invited others to join as they thought appropriate. | 22% | 23% |
| All health providers in the area were invited to join | 13% | 14% |
| All hospitals and their medical staff were invited to join | 10% | 2% |
| Network membership is the same as another organization | 3% | 8% |
| Other[1] | 23% | 23% |
| **Growth** | | |
| Percent of networks that added new members during the previous two years | 52% | 52% |
| **What was the major reason for adding new members?** | | |
| To include members who asked to join the network | 31% | 27% |
| To increase the service area of the network | 29% | 28% |
| To broaden the types of members who participate | 21% | 27% |
| To complete specific activities | 5% | 7% |
| To include members who were originally overlooked | 3% | 1% |
| Other | 11% | 10% |
| **Attrition** | | |
| Percent of networks that lost members during the previous two years | 24% | 29% |
| **What was the major reason given for losing members?** | | |
| Members relocated or retired | 32% | 22% |
| Monetary costs of participation were too great | 14% | 19% |
| Network did not produce expected benefits | 11% | 3% |
| Did not want to collaborate with competitors | 7% | 14% |
| Did not agree with the goals of the network | 5% | 11% |
| Non-monetary costs of participation were too great | 2% | 10% |
| Other | 29% | 21% |

[1]Analysis of open-ended responses included in the "Other" category for the 2000 survey revealed two additional reasons for selecting initial network members: (1) similarity of mission and goals, 11%; and (2) proximity and past experience, 11%

Table A-2

# Examples of Major Rural Health Network Objectives

## Improve, Expand and Develop Local Health Care Capacity.

- Provide a mobile dental clinic
- Develop case management and home health services
- Provide mobile diagnostic technologies
- Expand scope of services and access to EMS
- Train mental health workers on the needs of frail elderly adults

## Improve Communication, Coordination and Collaboration.

- Develop network-wide teleconferencing and telemedicine capacity
- Assess member ongoing needs for new product and program initiatives
- Improve electronic connectivity of members
- Collaborate on staffing problems and shortages
- Expand and strengthen affiliations and relationships among members

## Help Meet the Needs of Member Organizations.

- Create opportunities for education and re-training
- Extend campus initiative for LPN training with two regional colleges
- Expand temp staffing pool
- Develop initiatives in the areas of purchasing, contracting, credentialing and information systems

## Develop Network Products/Services and Joint Market Strategies.

- Centralize managed care contracting
- Develop managed care consulting and contract evaluation capacity
- Develop third party administration capacity
- Diversify into a profit oriented business model
- Develop and provide a service network to self-insured empolyers

## Expand Access to Health Improvement and Risk Reduction Services.

- Provide community health education on tobacco use issues
- Prepare consumers and providers to respond to changes in health care
- Develop senior nutrition education and exercise classes
- Foster wellness, prevention and personal responsibility

Table A-3

## Rural Health Network Objectives by Network Type, 2000*

| Objective | Rural Hospitals Only (n=43) | Rural and Urban Hospitals (n=40) | Hospitals and Physicians (n=24) | Hospitals, Physicians and Others (n=72) | Hospitals and Others (No Physicians) (n=68) |
|---|---|---|---|---|---|
| Improve, expand and develop local health care capacity | 21% | 22% | 33% | 38% | 53% |
| Improve member communication, coordination and collaboration | 26% | 14% | 17% | 28% | 19% |
| Help meet the needs of member organizations | 51% | 86% | 75% | 46% | 60% |
| Develop network products/services and joint market strategies | 18% | 30% | 54% | 26% | 16% |
| Expand access to health improvement and risk reduction services | 8% | 8% | 8% | 28% | 21% |

*Cell percentages reflect the proportion of networks of a particular type that listed at least one major objective for a particular category of objectives.

Table A-4

## Network Integration Scale Scores by Network Age

(Networks with 20 or Fewer Members; n=119, 1996; n=129, 2000)

| | Network Integration Scale Scores | | | | | |
|---|---|---|---|---|---|---|
| | Less than Two Years Old | | Two to Five Years Old | | More than Five Years Old | |
| Type of Integration | 1996 | 2000 | 1996 | 2000 | 1996 | 2000 |
| Clinical | 16.6 | 13.1 | 14.6 | 16.5 | 7.2 | 20.2 |
| Functional | 15.1 | 12.8 | 14.1 | 11.1 | 10.4 | 18.0 |
| Human Resources | 18.9 | 18.1 | 17.5 | 11.9 | 13.9 | 21.6 |
| Finance/Accounting | 2.3 | 2.9 | 7.0 | 3.9 | 6.2 | 15.4 |
| Marketing/Planning | 25.3 | 24.2 | 20.6 | 20.6 | 20.0 | 23.1 |
| Management Information | 6.7 | 5.9 | 21.8 | 7.9 | 10.4 | 11.9 |
| Financial | 39.7 | 22.3 | 29.4 | 35.6 | 24.2 | 40.1 |
| Overall Integration | 19.3 | 17.4 | 16.7 | 17.6 | 11.9 | 24.8 |

Table A-5

# Network Integration Scale Scores by Network Size

(Networks with 20 or Fewer Members; n=119, 1996; n=129, 2000)

| | Network Integration Scale Scores | | | | | |
|---|---|---|---|---|---|---|
| | Less than Five Members | | Five to Ten Members | | Eleven to Twenty Members | |
| Type of Integration | 1996 | 2000 | 1996 | 2000 | 1996 | 2000 |
| Clinical | 17.2 | 42.8 | 7.5 | 14.0 | 12.9 | 4.4 |
| Functional | 14.3 | 20.9 | 11.6 | 20.4 | 13.4 | 7.4 |
| Human Resources | 16.7 | 19.8 | 15.6 | 36.1 | 17.3 | 7.7 |
| Finance/Accounting | 8.4 | 17.3 | 2.9 | 8.4 | 9.0 | 4.4 |
| Marketing/Planning | 19.1 | 29.4 | 18.6 | 26.2 | 11.9 | 13.4 |
| Management Information | 15.7 | 16.9 | 11.7 | 10.9 | 14.0 | 4.2 |
| Financial | 29.2 | 52.4 | 29.1 | 38.4 | 33.1 | 20.6 |
| Overall Integration | 17.2 | 34.6 | 13.5 | 21.8 | 16.4 | 10.9 |

University of Minnesota

Rural Health Research Center
Division of Health Services Research and Policy
School of Public Health
Minneapolis, Minnesota