

Exploring Opportunities to Strengthen the Rural Health Network Development Planning Grant Program

Final Report
February 2012

Walter Gregg, M.A., M.P.H.
Adam Hofer, M.P.H.
Ira Moscovice, Ph.D.

Presented to:
Office of Rural Health Policy
Health Resources and Services Administration
5600 Fishers Lane, 10B-45
Rockville, MD 20857

Presented by:
NORC at the University of Chicago
4350 East West Highway, Suite 800
Bethesda, MD 20814

NORC | WALSH CENTER
FOR RURAL HEALTH ANALYSIS

Rural Health Research Center
UNIVERSITY OF MINNESOTA

This study was funded under a contract with the Health Resources and Services Administration, Office of Rural Health Policy (ORHP), DHHS, Contract Number HSH250200900012C. The conclusions and opinions expressed in this report are the author's alone; no endorsement by NORC, ORHP, or other sources of information is intended or should be inferred.

The Walsh Center's mission is to conduct timely policy analyses and research that address the needs of government policy makers, clinicians, and the public on issues that affect health care and public health in rural America. The Walsh Center is part of the Public Health Research Department at NORC at the University of Chicago, and its offices are located in Bethesda, Maryland. The Center is named in honor of William B. Walsh, M.D., whose lifelong mission was to bring health care to under-served and hard-to-reach populations. For more information about the Walsh Center and its publications, please contact:

Michael Meit, MA, MPH
The Walsh Center for Rural Health Analysis
NORC at the University of Chicago
4350 East West Highway, Suite 800
Bethesda, Maryland 20814
301-634-9324
301-634-9301 (fax)
<http://walshcenter.norc.org>

The mission of the University of Minnesota Rural Health Research Center is to conduct high quality, empirically driven, policy-relevant research that can be disseminated in an effective and timely manner to help shape the delivery and financing of rural health services. The RHRC is part of the Division of Health Policy and Management in the School of Public Health at the University of Minnesota. The RHRC was established with funding from the federal Office of Rural Health Policy in 1992. Our projects address key forces that are shaping quality of care and quality improvement in rural areas, including: the use of technology and health professional staffing to improve quality of care and patient safety; quality measurement and public reporting as tools for improving quality; and the provision of financial incentives for improving care. For more information about the RHRC and its publications, please contact:

Ira Moscovice, PhD
Mayo Professor and Head
Division of Health Policy and Management
School of Public Health
University of Minnesota
420 Delaware Street SE, MMC 729
Minneapolis, Minnesota 55455
612-624-6151
<http://www.sph.umn.edu/hpm/rhrc/>

TABLE OF CONTENTS

Executive Summary	1
Introduction	4
Conceptual Model and Approach	7
A Review of the Literature	8
Constructing the Telephone Survey Instrument.....	11
Data Collection and Analysis	12
Unfunded Applicants	13
Funded Applicants	13
Results	16
Network Size and Service Area Coverage.....	16
Cross-cutting Themes	16
The Role of Grant Review Feedback	18
Network Characteristics	19
Network Planning Activities	21
Challenges to Network Formation.....	24
Network Formation and Governance	26
Sustainability.....	29
Network Successes	35
Limitations	37
Discussion	38
Factors in Operating and Sustaining Networks	38
<i>Value in Membership, Value in Effort</i>	39
<i>Transparency in Planning and Operations</i>	40
<i>Governance Structure</i>	40
<i>On-Going Support of Network Operations</i>	41
References	44

TABLE OF EXHIBITS

Table 1 – Cross-cutting Themes of Network Focus Areas, 2006-2010	17
Table 2 – Rural Health Network Membership, 2006-2010 (N=107).....	20
Table 3 – Percent of Grantee Cohort Participating In Planning Activities (N=107).....	23
Table 4 – Percent Post-Grant Planning Activities (N=79)	24
Table 5 – Most Important Challenge to Network Formation (N=95).....	25
Table 6 – Lessons Learned in Partnership Formation (N=95).....	27
Table 7 – Operations and Governance Related Activities (N=79).....	29
Table 8 – Sources of Network Operational Support (N=79).....	30
Table 9 – Percent Post-Grant Applications and Awards for Network Development and Outreach Grant Awards (N=79)	32
Table 10 – Information Sources Used to Identify Potential Funding Sources (N=70).....	33

EXECUTIVE SUMMARY

The purpose of the Rural Health Network Development Planning Grant (Network Planning) program is to expand access to, coordinate and improve the quality of essential health care services and to strengthen the rural health care system as a whole. A core goal of the Network Planning program is to provide support and technical assistance to overcome critical infrastructure and organizational barriers that have hampered the efficient use of available resources to address important health and related needs in rural communities. Over the course of their grant award, grantees are expected to identify potential network partners in the community or region; convene collaborating network partners; conduct planning activities, including a community health assessment, strategic and business plans, and a sustainability plan to support post-grant network activities.

This report describes the characteristics and post-grant efforts of 107 Network Planning grantees supported by the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (ORHP) over five one-year funding cycles from 2006 through 2010. Information profiling their service focus and organizational structure was compiled from reviews of grant applications supplied by the ORHP. Information on the post-grant experiences of networks supported under the program was collected by two waves of structured telephone interviews conducted by the University of Minnesota Rural Health Research Center during the summer of 2010 and the fall of 2011. A total of 95 former grantees were contacted during the survey process for a response rate of 89 percent.

Study findings include:

- 83% of Network Planning grantees were still in operation at the time of their initial survey contact two to four years following the expiration of their grant award (i.e., 9 of 15 from 2006, 8 of 8 from 2007, 23 of 27 from 2008, 16 of 20 from 2009, and 23 of 29 from 2010).
- 77% of the surviving networks from 2006 – 2009 were able to secure some form of post-grant operational support, although support varied from small state grants to substantial service contracts.
- 20% of the surviving networks relied on member dues to support post-grant operations.

- 69% of the surviving networks expanded their membership over the same period of time.
- 91% of the surviving networks had established a formalized governance structure by the time of the survey.
- Just over one-half (55%) of the network projects focused on one of the following areas:
 - Coordination of care (e.g., horizontal and vertical service integration)
 - Health information technology (including health information exchanges)
 - Services for vulnerable populations (e.g., frail elderly, infants, uninsured, Native American and Alaskan Native populations, and border communities)
 - Mental and Behavioral Health services

Key Recommendations:

- Network planning grantees often face significant resource challenges to implement the resulting network strategic/business plan. To minimize network failures at this vulnerable time consideration should be given to adjusting the schedule of existing grant programs (e.g., Network Development, Outreach Services, and/or Network Planning) to provide added opportunities for newly formed networks to move more smoothly from their planning to implementation phase.
- Leadership is critical for not only forming networks but for sustaining networks as well. In order to minimize downtime following the grant award and to assure that needed management capacity is available to guide network activities as soon as possible, Network Planning grantees should include a list of potential candidates for network director and assurances that hiring a director will be a top priority following award announcement.
 - A network director position should at least be a part-time, paid position and program guidance should identify what proportion of the grant award can be devoted to supporting the director position depending on its part-time or full-time status.
 - To promote management autonomy (e.g., assuring independence from any single network partner organization) and accountability to the network organization, the

responsibility for hiring, evaluating, and relieving a network director should be the sole responsibility of a designated, representative, network board/committee.

- When at all possible, preference for filling the position of network director should be given to individuals with documented upper management experience involving multiple organizational arrangements.
- Program guidance should strongly encourage the formation of a representative governance/decision-making structure as early as feasible in the formation of a network. While the structure does not have to be a formal Board of Directors, it should at least have the authority of the network and be vested with the power to evaluate and hire a network director.
- Network Planning grant applications should include a clearly defined and mutually agreed upon process for conflict resolution (consensus is not a substitute strategy).
- To assure that there is sufficient member buy-in to fulfill proposed work plan objectives, grant applications should include a memorandum of understanding or agreement (MOU/MOA) that outlines the core activities and responsibilities necessary to achieve work plan objectives and identify which network partners will be responsible for meeting those responsibilities (a minimum of three network partner organizations are required to sign the binding agreement).
- It is important for planning grantees to minimize the likelihood of delays in making key network decisions, especially due to members being unable to attend because of geographical distances, climate or similar barriers. Applicants should either avoid proposing membership relationships scattered over large distances or demonstrate that a sufficient backup strategy is available in the event members are unable to attend to assure important network meetings occur on time and on schedule (e.g., telecommunications linkage or a default committee structure requiring fewer members to make critical decisions for the network).
- Establish a rural health network mentor program in which past, successful, network directors participate in a peer-learning group to provide guidance and support to new network directors with the goal of building leadership capacity in rural communities.

INTRODUCTION

This report describes the service focus, network profile, and post-grant experiences of Rural Health Network Development Planning (Network Planning) Grant awardees supported by the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (ORHP) over five one-year funding cycles from 2006 through 2010. Service focus and profile information were collected from grant applications supplied by the ORHP. Information on grant support and post-grant experiences was collected by structured telephone interviews conducted by the University of Minnesota Rural Health Research Center in two waves. The first wave was conducted during the late summer and fall of 2010 to collect information from former grantees supported during the 2006, 2007, 2008, and 2009 award cycles. The second wave was conducted during the fall and early winter of 2011 to collect additional information on funding strategies from the first four cohorts and post-grant data on the 2010 grantees.

The legislative purpose of the Network Planning program is to expand access to, coordinate and improve the quality of essential health care services and strengthen the rural health care system as a whole.¹ The program provides one year of grant support for planning, organizing and developing a health care network. First implemented in 2004, the Network Planning program was developed to complement the Rural Health Network Development (Network Development) grant program launched seven years earlier. The Network Development program provides three years of support to operationalize and expand networks through the integration of administrative, clinical, technological, and financial functions to address local health care needs.

Although numerous applicants to the Network Development program proposed important projects over the years, many lacked sufficient infrastructure and depth of planning to be ready to implement once the grant was awarded. The Network Planning program was launched to help promising projects take that extra step in planning to overcome some of the common infrastructure and organizational barriers that were found to hamper the successful implementation of networks. Successful Network Planning grantees are expected to develop a decision-making and planning capacity to organize and focus member efforts to address important local healthcare needs. A range of activities are possible including: conducting community needs assessments, identifying network

¹ Program Guidance, Fiscal Year 2010.

priority areas, goals and objectives, perform health information technology (HIT) readiness assessments and, if there is a desire to enter into more formal arrangements such as establishing governing boards and a 501 (c) 3 corporation. Program expectations accommodate a range of organizational forms to permit grantees to adapt to local circumstances.

Under the Network Planning program a rural health network is defined as an organizational arrangement among at least three separately owned health care providers that come together to develop strategies for improving health services delivery systems in their community. The principal goal of the program “is to strengthen the rural health care delivery system at the community, regional, and State level by improving the viability of the individual providers in the network.”² Grant funds are typically used to identify and convene potential network partners, provide opportunities for assessing priority issues, and conduct strategic and business planning efforts to address service gaps and other identified needs. While receiving program support, grantees are also expected to plan and develop a strategy for post-grant sustainability. The maximum grant award in the program’s first year was \$100,000. In the second year of the program, fiscal year (FY) 2005, the maximum award was lowered to \$85,000. Since its inception in 2004, the Network Planning program has awarded approximately eleven and a half million dollars and supported 138 network projects at an average award of approximately \$83,000.³

Following submission to ORHP, Network Planning grant applications are reviewed by federal program staff to verify applicant eligibility and then scored by a panel of reviewers based on criteria published in the program guidance for each fiscal year funds are available. The ORHP assembles the scored applications along with any panel recommendations, ranks the applications by their combined scores and makes an award of grant funding in descending order from the highest scored application down based on availability of funding for any given fiscal year. Award and non-award notices are then mailed to all applicants along with a summary statement compiled from review panel comments about the strengths and weaknesses of the application based on published program criteria. This summary statement provides a rationale for the application’s ranking (e.g., highlighting where the application fell short in meeting published review criteria) and advice on how the applicant might strengthen any future proposals. Grant funds are awarded to only one member of

² Program Overview ORHP webpage <http://ruralhealth.hrsa.gov/funding/networkplanning.htm>

³ ORHP Annual Report for 2005 through 2010 www.hrsa.gov/ruralhealth/grants/findgrantees

the proposed network – the lead applicant identified in the application as having the capacity to manage the grant funds and provide oversight for the implementation of the network project. The lead applicant (or grantee of record) must reside in a federally defined rural county or rural census tract of an urban county, and submit the request for funding on behalf of two or more organizations that have committed to working collaboratively to develop an essential capacity for addressing ongoing community health needs as identified in the application work plan. Urban-based organizations may be included as potential members of the proposed network. If the applicant is owned or affiliated with an urban-based organization, the rural component may apply as long as the rural component can directly receive and administer the grant funds in a designated rural area and will be directly responsible for planning, program and financial management of the project. Other organizations such as social services, educational institutions, employers, local government agencies as well as for-profit entities may also be network members.

CONCEPTUAL MODEL AND APPROACH

The purpose of this project is to: 1) identify the challenges and successes of rural health network development grantees; 2) identify cross-cutting operational/service themes; 3) assess the extent to which the awardees sustained post-grant activities and transition to successful networks; 4) examine the role of grant review feedback and other key factors in grantee success; and 5) identify opportunities for strengthening the Network Planning Grant guidance and review process and, provide recommendations for effective network development.

Both secondary and primary data sources were used in the assessment. Secondary data were provided by ORHP program staff in the form of Network Planning grant applications submitted in each of five program funding cycles (2006 – 2010). Primary data for the project were obtained through structured telephone interviews administered to network project contacts identified from the data provided by ORHP. The grant applications were reviewed by UM project staff to verify that all funded and unfunded applications were available and the availability of the data needed to conduct the survey (e.g., network contact information, identification of proposed network members, work plan). This information was used to generate an interview cover sheet to serve as a reference point for assisting the grantees in recalling events and conditions that, for some, occurred as many as four years earlier. Information obtained from the applications was also used in the survey to gauge change over time in network infrastructure and effort (e.g., focus of network activities, plans for post-grant sustainability, proposed governance structures, and expected outcomes from the network planning effort).

A review of the health services research, organizational, and network development literature was conducted to identify factors associated with the successful formation and operation of rural health networks. Indicator questions were developed to identify the presence of infrastructure and process characteristics highlighted in the literature as typical of functioning network arrangements.

An expert network panel was selected to review the draft instrument, provide suggestions for improving the data collection potential of the survey, and keep the length of the survey to a manageable size. The panel members included three representatives from the 330A Evaluation Project advisory committee and one non-committee member with extensive experience in network

development and operation. Panel comments were reviewed by the project team and integrated into a final version of the survey.

A Review of the Literature

Life in rural America has been long 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 on balancing a number of potentially conflicting needs and interests such as organizational self-interest with collective goals and visionary leadership with collaborative models of decision-making and organizational advocacy (Moscovice, Gregg, and Lewerenz, 2003). Networks bring together rural providers and possibly other agencies, employers, or community organizations to address health care problems in their task environment that are rarely solved by a single entity (Wellever, Wholey, and Radcliff, 2000; Wellever, 2001; Moscovice et al., 1995). A network's task environment encompasses those areas that are potentially relevant to goal setting and goal attainment such as customers/consumers, suppliers of materials, labor, capital and equipment, competitors for markets and resources, and regulatory groups (Dill, 1958; Scott, 1981). While a network is a goal-directed, boundary-maintaining, and socially constructed system of human activity like any other organization (Aldrich, 2000), it is a collective strategy that spans the boundaries of other organizations through the identification and management of exchange relationships that improves their ability to control and garner resources (reduce uncertainty and risk), and focuses work efforts to pursue mutual goals (Pfeffer and Salancik, 1978).

A network strategy also makes it possible to manage complex transaction costs – the non-production costs of operation such as the transfer and use of information, coordination of activities and services, and the monitoring and evaluation of output. The higher these costs become, the more likely organizations will seek interorganizational relationships to improve efficiencies by removing the number of competitive exchanges they need to make and by institutionalizing decision rules to standardize behaviors and expectations (Williamson, 1975; Powell, 1990). Grant funding, payment incentives, and favorable policies aside, 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. Research has demonstrated that knowledge about potential partners, in the initial developmental phase, draws heavily upon proximity-based information such as past collaborative or competitive relationships, and image and character of the

organization's leadership, and understanding the mission, vision and goals that focus an organization's efforts (Moscovice et al., 2003).

Rural health networks are a logical course of action for addressing a range of task environment needs because they offer an opportunity to share the costs and achieve economies of scale such as joint purchasing, materials management, staff continuing education programs, staff recruiting, and easier access to services and the capital needed to maintain high quality services (Moscovice et al., 1991; 1995; Gregg and Moscovice 2003) Successful rural health networks have formed when there are perceived and compelling needs, efforts to address such needs are evident, participant self-interests are obvious, strong leadership is present, and program/project focus is clear (Bonk, 2000; Gregg and Moscovice, 2003).

Successful network development and operation depends on the ability of network leaders to take into account the potentially conflicting preferences of other organizations and individuals as they identify and establish network goals. "Leadership is the capacity to help transform a vision of the future into reality" (Size, 2006: 76). Effective leadership is a critical component of network success by fostering early and frequent communication and consultation among network members to include them in the planning and decision-making necessary to keep the network moving forward. It is important to have a monitoring system in place to track project efforts, make necessary corrections, and to seek input from the community to keep everyone informed and to maintain buy-in of the network membership and the community being served (Bonk 2000; Gregg and Moscovice, 2003). The ability to sustain efforts to meet local need, and to retain the flexibility to adapt to changing needs requires not only a stable resource base but also a diversity of funding streams. Citing Max DePree and his *Leadership Is an Art*, Size (2006) highlights eight principles of successful partnership management:⁴

- Mutual trust – when relationships with network members are based primarily on mutual trust the network can go beyond the minimum performance inherent in written agreements

⁴ The eight principles of management were originally written in the context of the hospital cooperative for which Mr. Size is the Executive Director. The word cooperative has been replaced by the word network to make the bullets more conceptually relevant. The management principles apply to either organizational form.

- Commitment – participants may join the network to explore the potential benefit of the collaboration, they remain when they perceive that they are receiving a good return on their investment of time and money
- Participation – each organization must know that it is needed for the success of the network, it is a major mistake to ever take for granted the participation or commitment of any member
- Shared planning – planning is interactive, with the plan for the network being the result of, and feeding into, the plans of the individual organizations
- Big picture – participants need to know where the organization is headed and where they are going with the organization
- Participants' future – the desire for local autonomy needs to be made to work for the network through the promotion of collaborative solutions that enhance self-interest
- Accountability – participants must always know up front what the rules are and what is expected of them
- Decision-making – a clear non-threatening appeal mechanism is needed to ensure individual rights against arbitrary actions

Constructing the Telephone Survey Instrument

Following the literature review and synthesis, a structured telephone survey instrument was constructed to collect information from former Network Planning grantees. The completed instrument was submitted to the University of Minnesota Institutional Review Board (IRB) and was approved for use in the field. The instrument includes a set of screening questions to determine if former grantees remained in operation following the expiration of their planning grant.

Respondents representing networks that were no longer in operation at the time of the survey were asked a series of closeout questions to identify factors associated with dissolving the network.

Questions posed to respondents for operating networks were designed to identify challenges encountered and lessons learned during the network's formation under the planning grant, and changes in organization and operations since their planning grant expired (e.g., membership size and composition, service area, and scope of services). Specific attention was given to information related to network form and functional characteristics that have been associated with successful operations in the literature such as the use of planning and evaluation activities, governance structures, management expertise, and efforts to secure funding sources to support on-going operations.

DATA COLLECTION AND ANALYSIS

Copies of all Network Planning grant applications submitted during each of the five funding cycles (2006 – 2010) were made available by ORHP to identify potential survey respondents and to compile background data on network characteristics and their proposed projects (N = 225). One hundred and seven applications were funded during this period. Data from these applications were used to:

- 1) create a profile of the network projects supported by the program over the past five years;
- 2) identify grantees with sufficient network development and operational experience to participate in the telephone survey; and,
- 3) identify non-funded program applicants for participation in a short survey designed to identify post-application activities (e.g., did proposed applicant efforts cease with the failure to receive Network Planning funding or did applicant continue to pursue their goals by other means).

Following the development of network profiles based on a review of the grantee applications, two waves of surveys were conducted to collect information on grantee experiences with network development and post-grant operations. The first set of surveys focused on grantees funded during the 2006 – 2009 award cycles and was conducted in the fall of 2010. Due to the large percentage of 2009 grantees that had not proceeded to post-grant operations (40 percent had no-cost extensions), complete data on this cohort were not available until the second wave survey during the fall and winter of 2011 when initial data were also collected from 2010 grantees. A short follow-up survey was fielded as well during the 2011 survey period to collect additional information from the 2006 – 2009 grantees on their efforts to obtain post-grant funding. Two of the former networks contacted during the first wave survey could not be located for the follow-up survey (one from the 2008 and one from the 2009 cohort) and seven networks (one from the 2008 and six from the 2009 cohort) had either been absorbed into a different organization or had ceased to operate. Unless specifically noted, the discussion that follows will reference information collected from the initial network contact for each grantee.

One hundred and seven grantees were identified as potential respondents for the telephone survey including 15 grantees from FY 2006, 10 from FY 2007, 33 from FY 2008, 20 from FY 2009, and 29 from FY 2010. One hundred and eighteen applications submitted for review during the five award cycles were not funded. An effort was made to contact a select subset of the unfunded applicants to obtain information on their efforts to organize without Planning Grant support. Due to the short time between applying and grant awards for the 2010 applicants, those not funded during the 2010 grant cycle were not included in the in the sample. Five applications were randomly selected from each of the four unfunded cohorts (36% of all unfunded applications for the 2006 – 2009 award cycles) for this separate survey.

Unfunded Applicants

Locating representatives of non-funded applicants becomes increasingly difficult with each passing year. It was therefore not that surprising that the majority of contacts were made with the most recent applicants. After repeated phone calls and emails, contact was made with 11 of the 20 organizations (five from 2009, and two former applicants each from the remaining three cohorts). Out of the 11 contacts, six reported that the network partners identified in the unsuccessful grant application had disbanded when they were notified that their application had not been funded. Of the remaining five applicants, one reapplied and received funding the following year and another continued at a low level of effort until one of the network members was able to marshal the resources needed to address the principal goal outlined in the original proposal (services for the uninsured). The remaining three applicants have been able to maintain some level of operations using in-kind contributions to stay abreast of organizational interests and local issues but have not been able to implement major efforts.

Funded Applicants

Key background data were abstracted from the funded applications including contact information, the type and number of organizations engaged in each funded project, and the nature and scope of activities that were supported by the Network Planning grant. The resulting data base was used to profile each network project and to develop a telephone coversheet to guide the interview process (e.g., provide a reference point for comparison and validation). Following the review and

finalization of the telephone survey instrument and its clearance by the University of Minnesota Institutional Review Board, project staff began contacting prospective respondents.

The first wave of interviews began in the summer of 2010 and closed in the early fall of the same year while the second wave was fielded in the early fall of 2011 and completed in the winter of the same year. The sequencing within each survey wave started with the oldest grantees to maximize post-grant operational experience among the younger cohorts. As expected, grantee contact information had changed for a large proportion (41%) of the potential respondents between submission of their grant applications and the fielding the telephone survey. In some cases the contact person of record was no longer associated with the network. In other cases, the initial application had identified the CEO of the lead applicant (grantee of record) but responsibilities were transferred to another person shortly after receiving the award or to a newly hired network director. When it was not possible to contact a network representative identified in the grant application, effort was made to contact a representative of one or more of the participating organizations also listed in the application. In cases where phone numbers were no longer valid or direct contact could not be achieved, an effort was made to reach the representative by email. On average it took approximately three attempts before a survey could be completed with some grantees requiring as many as six and seven attempts before contact and survey scheduling/completion could occur.

The survey team was able to reach 95 out of the 107 grantees for an 89 percent response rate. On first contact approximately 83 percent of the respondents reported that their network was still in operation. Considering the difficulties inherent in transitioning from a planning phase to an implementation phase, an 83 percent survival rate is higher than expected and comparable to the findings of past studies of fully implemented rural health consortia/networks (Gregg and Moscovice, 2003).

Fourteen out of the sixteen network closures identified occurred either during the grantees' planning phase (5) or shortly after their planning grant expired (9). The two remaining networks were able to continue post-grant operations for six months in one case and a year and a half in the other. The most common reason given for network failure was a lack of adequate leadership either at the network or participant organization level. Other factors ranged from natural disasters such as hurricane Ike diverting attention from collective goals to individual survival and the turnover of key executives (e.g., "core leaders left their organizations and the consortium fell apart," loss of a key

partner causing the alliance to disintegrate) to competitive differences. In one case, an organization withdrew from the network when the results of the network's strategic planning suggested the best course of action was for the organization to turn over select service responsibilities to other network partners. Six respondents cited a lack of funds to continue. One network that was unable to find funding managed to shift its effort to parallel the focus of a statewide health careers development initiative. Unfortunately, within a year the network lost state support because it could not maintain a sufficient volume of students in its health careers program to meet state funding criteria. Another network folded because a member responsible for core network efforts (non-medical transportation) had to close its doors because public funding was cut. In this later case, it was possible to shift the service responsibilities to another agency that was not part of the original network partnership.

The network closures identified during the follow-up survey in 2011 faced similar challenges in adjusting to post-grant operations. Out of the seven networks that ceased to operate between their first contact in 2010 and their second in 2011, the targeted needs of two networks were still addressed through either the initiative of a single partner (taken over by an executive that did not believe in networking) or by reforming under a statewide initiative with other providers. Two others were unable to obtain needed funding to implement their network plans. In one case network partners were still communicating and a plan was ready once they found funding to support the needed staffing. In the other network, a key partner had been purchased by a competitor leaving the remaining members struggling to find funding to reconfigure and proceed. The remaining three partners could not achieve the collective effort needed to form and operate a network. In one network, the partners could not reconcile their conflicting priorities while in the other two networks, the partners either "never could come together" or were "still struggling to find value in forming a network." In the latter case, the network director commented "maybe it would have been best not to fund us." Among the seven networks that dissolved, we identified specific reasons that contributed to five of the network closures. Even with the additional closures, the survival rate of these networks remains higher than is normally expected (70% at two years and 50% at five years after establishment).⁵

⁵ Source: U.S. Dept. of Commerce, Census Bureau, Business Dynamics Statistics; U.S. Dept. of Labor, Bureau of Labor Statistics, BED

RESULTS

Network Size and Service Area Coverage

A review of applicant proposals revealed that 16 network projects were quite large in scope with 11 encompassing statewide efforts and the remainder five involving large tribal or commonwealth jurisdictions. Of the five, one project encompassed the area of the United States Commonwealth of the Northern Mariana Islands (Saipan, Tinian, and Rota) and the other four served Alaskan Native and American Indian tribal lands (Copper River Region residents, Navajo Nation, Creek Nation and the Three Affiliated Tribes in North Dakota).

Four of the statewide projects focused on the use of health information technology to support the integration of health information (e.g., electronic medical records) and member services. Five other statewide projects focused on horizontal (4) and vertical (1) service integration and member support. The remaining projects focused on services for vulnerable populations (e.g., children with disabilities, women's health in border and tribal communities, community health education for American Indian communities, and specialty and procedural care for American Indian populations, and native elders), oral health and workforce development. Three projects (two involving health education and health promotion and one home health and hospice) claimed service areas that extended across state lines. The service areas of the remaining grantees tended to be much smaller with a mean size of four counties and median of two counties. Approximately one-third of the funded projects claimed only a single county or parish as their service area.

The larger the service area of the network, the greater the average number of member organizations. The average number of member organizations for 16 statewide and tribal/commonwealth projects was almost twice as large as the average for the remaining projects.

Cross-cutting Themes

A profile of each network's scope of effort and service focus was identified by reviewing their abstracts and work plans. The top seven focus areas accounted for more than three quarters (83%) of all network projects and are presented in Table 1. The top ranked area for each cohort is shaded for emphasis. Network focus areas, while seldom limited to only one area, were separated into mutually exclusive categories. For example, projects sorted under the category

'Integration/Coordination of Multiple Health Services' includes those projects that identified their area as integration and/or coordination or improved access to catch-all categories such as essential services and preventive services and those that listed a series of services (e.g., coordinating primary care, mental health, and dental services as a group). Network projects that identified horizontal or vertical network formation as well as those that proposed to enhance a continuum of care are also included under this category.

The area of health information technology (HIT) and health information exchange (HIE) development includes only those projects that limited discussion to efforts to generally establish or expand information technology capacity. Projects that used information technology to specifically enhance, expand, or implement a particular service area are included under those services (e.g., primary care, mental health, chronic disease management). HIT and HIE development ranged from assessing capacity to building capacity. A number of projects focused on developing electronic medical record (EMR) systems while others used HIT to expand services (e.g., provide 24 hour emergency room backup to hospitals, specialty care including mental health services, and chronic disease management such as diabetes and stroke care). Those indicating a specific service application were included under the service category in question.

Table 1 – Cross-cutting Themes of Network Focus Areas, 2006-2010

Focus Area	Focus Area Ranking by Funding Cohort					Total (N=107)
	2006 (N=15)	2007 (N=10)	2008 (N=33)	2009 (N=20)	2010 (N=29)	
Integration/Coordination of Multiple Health Services	33%	10%	18%	30%	24%	23%
HIT/HIE Development	7%	30%	12%	15%	14%	14%
Vulnerable Population Services	7%	40%	6%	5%	14%	11%
Workforce Development	7%	0%	18%	15%	7%	11%
Wellness/Prevention	0%	10%	32%	10%	14%	8%
Chronic Disease Management	7%	0%	12%	10%	3%	8%
Mental/Behavioral Health	20%	0%	6%	5%	7%	7%
Percent Projects Represented	81%	90%	75%	90%	83%	83%

The focus area for vulnerable populations includes those network projects focusing on services to the frail elderly, infants, the uninsured (e.g., reducing childhood obesity, developmental and behavioral health for 0-6 year olds and families, Native American elder care, populations with health

disparities, border communities, children with disabilities, etc.). Mental/behavioral health includes those networks that are either developing capacity for the first time or expanding existing capacity (e.g., supporting Promotores and HIV related services to Hispanic and Latino communities, and linking behavioral health and primary care services for cross-referrals). Workforce development includes networks that are focusing on areas ranging from pipeline projects to channel local youth into health-related fields to recruitment and retention efforts and skills development and retention programs for healthcare professionals. Wellness and prevention include networks focusing on health education efforts, population health screening and chronic disease prevention. The chronic disease management focus area includes both treatment and monitoring of patients to minimize complications of chronic disease and the over utilization of services due to preventable crises of care.

The Role of Grant Review Feedback

A summary statement detailing application strengths and weaknesses is sent to all applicants along with their notice of award or non-award. The statement summarizes the comments of a review panel that was assigned to evaluate the applicant's funding proposal. A key role of the summary statement is to provide a reference for understanding the applicant's ranking in the application process. Respondents were asked to rank the degree to which the summary statement helped the applicant in forming and establishing its network. A five point scale was used where one meant that the grant review feedback had not been helpful and five meant the feedback had been very helpful to the applicant in moving the network forward with its plan to develop and operate.

Just under one third of the respondents (31%) rated the feedback either a four or a five on the five point scale. However, further questions about the significance of the help generated responses largely from those applicants that had rated the summary as very helpful, the remainder had considerable difficulty recalling how the summary helped – they only had a feeling that it was helpful but could not provide specific information. For some this was likely due to the fact that the summary statement describes how the applicant did or did not provide the information required in the program guidelines (e.g., they had the grant therefore comments about how they met grant criteria was a lower priority than shifting focus to get the network up and running). Grantees ranking the summary feedback very helpful typically focused on how the feedback helped to clarify or build consensus among the membership on the plan outlined in their application (e.g., to generate

greater enthusiasm among the membership for the network as an option for addressing local need, provide emphasis on the need to for strategies to handle conflict and to highlight areas of particular importance in successful network formation). Several commented on how the summary statement helped them focus on aspects of their planning that needed strengthening (e.g., focus more on local data for planning, develop a post-grant plan of sustainability early in the process and identify more precise and measurable outcome measures).

Respondents were also asked if there was anything that could have been included or expanded upon that would have better prepared the network for success. Approximately 28 percent of those respondents ranking the grant review feedback provided examples of what might have better supported their network efforts. However, most of these examples extended well beyond the content of the applications and were highly specific to network-specific issues (e.g., advice on the best strategies to use given local circumstances, examples of what similar networks were doing to address the same type of challenges). Questions about grantee awareness and use of the available resources on network formation and development (e.g., on-line and/or availability and utility of technical assistance) were not included in the survey. Although the lack of such information makes it impossible to identify the nature of the challenges facing these particular grantees, their expressed desire for contact information and network examples coupled with unsolicited comments on the usefulness of the All-Grantee Meeting suggest that on-going communication, and perhaps earlier contact, with other network directors could be very beneficial for some networks with specific struggles (e.g., establishment of a peer-learning group to build rural leadership capacity).

Network Characteristics

Hospitals were the predominant network member and comprised eight percent of the horizontal network affiliations with the two remaining horizontal networks comprised of community health centers and local health departments. The involvement of local health departments (LHDs) and mental health providers is comparable to previous work on hospital affiliated networks (33% compared to 30% for LHDs and 24% compared to 29% for mental health providers) (Moscovice, Gregg, and Lewerenz, 2003). Community health centers and community action agencies were also well represented and typically affiliated with larger networks.

Table 2 – Rural Health Network Membership, 2006-2010 (N=107)

Member Type	Percent of Networks with this Member	Average Number of Organizations in Networks with this Type of Member
Hospital/CAH	73%	6.1
Local Health Department	33%	5.3
Educational Organization	31%	6.3
Community Health Center	28%	7.2
Mental/Behavioral Health	24%	5.9
Federally Qualified Health Center	24%	5.8
Community Agency	22%	6.0
Health System	17%	4.9
State Agency	13%	9.4
Medical/Dental Practice	13%	7.1
Foundation/Association	11%	7.6
Social Service Agency	8%	5.7
Rural Health Clinic	7%	7.4
Long-term Care (nursing home & assisted living)	7%	5.9
Home Health	6%	7.3
Tribal Health	5%	6.8
		Average Network Size = 6.2 Organizations

Network size ranged from the minimum requirement of three organizations to 29 members with an average size of approximately six organizations. Seven out of ten surviving networks experienced a change in their membership. Over two-thirds (69%) of the surviving networks had added new organizations to their membership by the time of the survey. New members were added to implement new programs (24%), expand network service areas (24%), increase the organizational diversity of the network (e.g., to expand the scope of available services) (24%), and to accommodate organization requests to join the network (19%). Participation costs of membership (monetary and non-monetary) were the most common rationale for losing members. Other reasons associated with a loss of network members were similar and include costs of participation (monetary and non-monetary) was too high, a perceived lack of value for the services and/or programs provided by the network, and a miss-match/conflict between the network and member goals.

Network Planning Activities

Accepting a grant award under the Network Planning Program carries with it a certain set of expectations about how the grant funds may be used. While the list of acceptable activities is optional and may be pursued in any number of combinations, the program guidance clearly outlines ORHP's expectations and the list has been virtually the same for the 2006 – 2009 funding cycles. They were also included in the 2010 program guidance along with a few additional activities but were presented in a slightly different format. In the 2010 guidance activities were grouped under four categories that included: 1) Community health needs assessments; 2) Business, operation or strategic plans; 3) Economic impact analysis; and 4) Health information technology investments. Category three and four represented the changing landscape of health care policy by broadening the types of efforts that could be funded by planning grantees. Previously approved activities were group under the first two categories on needs assessments and organizational planning and development. However, a slightly different emphasis was presented under the planning category through the addition of efforts to “delineate the roles and responsibilities of the network partners” and “carrying out network activities ... to promote the network’s benefits to the community, increased access to quality care services, and sustainability.” These modifications provided an added emphasis, along with the category on economic impact, to the consequences of network development for the communities in which they operate and a more relaxed emphasis on the range of organizational structures that were acceptable. In earlier guidance, although subtle, the majority of optional efforts listed suggested that Network Planning grantees would ultimately develop a more formalized organizational structure (e.g., developing a business plan, operational plan, strategic plan, and/or creating a 501 (c) 3 corporation). While the 2010 guidelines provide a slightly different frame for organizational development under the program, in doing so they broaden the range of potential program participants. The “shift” to a less formalized structure may encourage organizations, particularly those in competitive markets, to participate in a network while providing an opportunity to retain their organizational autonomy. Assessing the full implications of this shift in emphasis will not be possible until more information becomes available as the experiences of the 2010 grantees and the number of additional grantees grows.

Currently, successful applicants are approved for use of grant funds to lay the foundation for a community health project by convening partners to conduct planning activities, which can include the following activities (underlined text indicates activities added in 2010):⁶

1. Community health needs assessments
 - a. Develop and implement a needs assessment in the community
 - b. Identify the most critical need of network partners to ensure their viability
 - c. Identify potential collaborating network partners in the community/region
2. Business, operation or strategic plans, such as
 - a. Develop a business, operational or strategic plan
 - b. Carryout organizational development activities such as a formal MOA/MOU
 - c. Establish a network board
 - d. Develop by-laws
 - e. Delineate the roles and responsibilities of the network partners
 - f. Establish network priority areas, goals, and objectives
 - g. Begin carrying out network activities, include activities to promote the network's benefits to the community, increased access to quality care services, and sustainability
3. Economic Impact Analysis
 - a. Develop a plan to quantify the economic and service impact of programmatic investment on rural communities by tracing how their funds have been spent throughout the economy and measuring the effects and yield (or projected yield) of spending
4. Health Information Technology Investments
 - a. Use of funds to hire a consultant that could perform a HIT readiness assessment for the network

A review of the work plans revealed that most grantees conducted or planned to conduct a community needs assessment as well as developing either a strategic, operational, or business plan (almost one quarter of the proposed projects included all three planning efforts). A number of grantees, especially the 2006 cohort, did not propose a post-grant sustainability plan (Table 3). A

⁶ Rural Health Network Development Planning Grant program guidance, 2010

comparison between the proportions of 2006 – 2009 grantees proposing a formal network (i.e., development of network by-laws) with 2010 grantees revealed a slight drop in 2010 from 50 percent to 38 percent respectively.

Table 3 – Percent of Grantee Cohort Participating In Planning Activities (N=107)

Planning Grant Activity	2006 (N=15)	2007 (N=10)	2008 (N=33)	2009 (N=20)	2010 (N=29)	Total (N=107)
Needs Assessment	80%	100%	97%	80%	97%	92%
Strategic, Operational, Business Plan	93%	100%	100%	100%	97%	98%
Sustainability Plan	20%	70%	82%	50%	45%	56%
Network MOU/MOA	87%	70%	70%	65%	52%	66%
Network By-Laws	67%	40%	61%	35%	38%	49%

Survey questions were designed to collect information on the extent to which grantees had continued to develop their planning and decision-making capacity. Most of the survey questions closely followed the program guidance (e.g., does your network follow a defined strategic planning process, have a developed plan for sustainability, set of written by-laws, or use feasibility analyses and business plans). However, questions focusing on the use of an operational plan or the use of less formal organizing strategies collected information that represented to core function of the activity. For example, applicants were identified as proposing an operational plan after reviewing objectives and activities listed in their work plans. The judgment was based on several criteria. A key function of operational plans is the capacity to determine if the execution of the work plan is on target. To be effective, such a plan needs to have the support of all network members and be utilized to maintain momentum toward achieving mutual goals and objectives. Respondents were considered to have an operational plan in place if they identified the existence of a “defined, mutually agreed upon evaluation strategy to assess its performance.” In order to gauge the degree to which grantees might be using less formal organizational strategies, respondents were asked if their network “maintain(ed) an agreement that defines the network’s purpose, member roles, and responsibilities.” A comparison of grantee cohorts is presented in Table 4.

Table 4 – Percent Post-Grant Planning Activities (N=79)

Planning Grant Activity	2006 (N=9)	2007 (N=8)	2008 (N=23)	2009 (N=16)	2010 (N=23)	Total (N=79)
Strategic, Operational, Business Plan	89%	88%	83%	88%	96%	89%
Sustainability Plan	56%	63%	78%	56%	57%	63%
Network By-Laws	78%	75%	65%	38%	48%	57%
Network Agreement	100%	100%	91%	81%	48%	78%

A matched comparison between network activities proposed in planning grant applications and post-grant efforts reported by the network respondents (N=69)⁷ demonstrates that with the exception of the general planning category (developing either a strategic, operational, or business plan) one quarter or more of the surviving networks exhibited a net increase in their planning and operational capacities. Out of the number of surviving grantees that had not included the adoption of by-laws in their initial proposal, 28 percent had adopted them by the time of the survey. The proportion of grantees that were now using all three planning tools together (e.g., strategic and operational as well as a business plans) increased by 26 percent while those with developed sustainability plans increased by 25 percent. For many, network development and planning capacity continued to take shape well after their planning grants had expired.

Challenges to Network Formation

Attaining these signposts of network development and operation requires overcoming logistical, organizational, and ideological challenges. Respondents were asked to identify the most important challenge that faced their network during its formation. Their responses are categorized in Table 5. In some ways these categories are artificial in that they share underlying relationships (e.g., implementing network strategies is dependent on the identification and prioritizing of the issues to address which, in turn require sufficient leadership to guide the process and member meetings to identify a mutually agreeable course of action). However, identifying the functional aspects of the larger challenge of network formation can provide insights into how the planning and formation processes might be better facilitated.

⁷ Accounting for the lost and closed networks from both survey waves

Table 5 – Most Important Challenge to Network Formation (N=95)

Challenge to Formation	Percent Networks
Member and/or Community Buy-In	18%
Identifying or Prioritizing Projects	17%
Meeting Logistics (being there or problems communicating at distance)	16%
Implementing Network Strategies	13%
Member Competitiveness and Mistrust	12%
External Factors (beyond the control of the network)	7%
Network or Member Leadership	6%
Resources/Funding and Sustainability	3%
No Challenges	8%
Total	100%

Eight networks reported that they had not faced any significant challenges with formation. Five of those networks had a significant history of collaboration while the remaining networks indicated that network partners had been agreeable from the start of the process. The most frequently reported important challenge to network formation was obtaining member or community buy-in regarding the networks’ purpose and goals. Examples of issues related to member and community buy-in include: recognizing that ‘things developed slower than we wanted them to’ because community buy-in was not optimal, ‘it was difficult for the network core membership to see the value in developing a network’, getting members to invest time when tangible benefits are not immediate, and getting the entire membership to sign off on the general goals of the network. Strategies that were identified to address these and other barriers to collaboration include working with members to get them to see the larger context that the issue was too large for one organization to tackle. Several noted that it was important to recognize the diversity represented in the membership and necessary to find common opportunities/threats that all could focus on. Some challenges like “getting everyone to agree on the priority issues to address” reflected the core goals of the program, as did getting people to the table and creating a structure for planning and prioritizing. Prioritizing how to address issues facing local residents/providers and coming to an agreement on how to best address those issues can become a challenge for a variety of reasons. For example, local circumstances can change between submission of an application work plan and receiving funding to implement that plan requiring a shift in vision and priorities. Others reported that past competitive relationships made consensus building and agreement on a course of action difficult while other challenges were more fundamental such as differences in professional perspective/language or

organizational culture (e.g., physicians and paramedics, civilians and military leaders, and organizational missions). Prior competition was identified as a factor at many levels of the formation process influencing planning (e.g., making it harder to decide on a course of action), governance (e.g., resistance to giving up any autonomy to the collective membership), and implementation of the network work plan (e.g., members positioning their organizations to take advantage of the planning process to expand their market at the expense of other members).

Achieving consensus on a course of action requires trust and commitment regarding network and member organizational goals and needs. The ability to achieve consensus becomes an ever more difficult proposition if the network partners do not have opportunities to discuss issues and reach a shared understanding of priorities and a course of action. More than half of the grantees identifying logistical issues as a major challenge identified geographic distances, weather, and the dispersion of members as key factors. Interestingly, only one of the multi-state network projects reported being challenged by the distances separating its members. Scheduling conflicts was a major factor (e.g., ‘getting people together at the same time’ and ‘member representatives are the decision-makers and because of their many responsibilities, getting everyone to a meeting can be challenging – they also tend to be the movers in the community’) and other factors common to emerging rural partnerships (e.g., resource scarcity and the fragile nature of emerging partnerships).

While only a small proportion of respondents identified network or member leadership as the most important challenge to network development, when considering respondents’ second and third most important challenge, one quarter of the networks identified leadership. Leadership was also likely an underlying factor in higher ranked challenges to formation – a finding consistent with the network literature. For example, some leaders of member organizations were too busy with their day-to-day responsibilities to focus much on the network; others, specifically network directors, failed to lead by example to garner and maintain commitment to network purpose and goals, or lacked experience with multiple organizational collaborations to be effective. The remaining factors affected only a small number of grantees and typical issues for rural projects (e.g., topography and transportation).

Network Formation and Governance

Network governance involves the development of strategies, identification of priorities, and the setting and oversight of organizational goals while, at the same time, recognizing and accommodating member autonomy. Respondents were asked about the key lessons learned during

the formative stages of their network. A variety of strategies were identified to keep partners at the network table and invested in the future of the network (Table 6). Almost one quarter of the respondents emphasized the importance of keeping an open mind when guiding the development process to avoid alienating members, finding opportunities to emphasize the value added aspect of networking for the members, and to find common ground on which to build the coalition. Approximately the same proportion of respondents also noted that it was important to recognize the time it takes to build on successes and to shape a network infrastructure that is both a vehicle for supporting the membership and also a means for efficiently addressing local needs.

As might be expected from a category on leadership lessons learned, the underlying theme for the identified strategies was consistent and clear leadership on the part of the network organization and the leaders of network partners. Several respondents pointed out that to achieve this level of authority and support it is important to realize that network members can be “at different levels of awareness and readiness” and that “you need to be flexible and vigilant” ... “don’t just use your agenda” to shape the network’s vision. Further, members will have different opinions and there will be a need to compromise to move forward.” Members need to see that participation either helps their organization achieve its goals/mission or at least to not be a hindrance to that achievement.

Table 6 – Lessons Learned in Partnership Formation (N=95)

Lesson Learned	Percent Networks
Need to be proactive, seek opportunities to build value and consensus	21%
Build support with members that have time and resources/core group	13%
It’s critical to have an experienced director/leadership with organizational skills	13%
Need to be flexible, open to new ideas	13%
Network formation takes time, need to build on successes and shape needed infrastructure	13%
Use multiple communication methods to keep members informed and process transparent	11%
Begin network development and planning early before applying for funding	8%
Do not know	8%

In addition to their direct response to the survey question, several added emphasis to the characteristics of effective network leadership by describing a leader as a person who always has an ear to the issues of the membership, is open to compromise, and remains vigilant in identifying the member roles and responsibilities that fit their interests and needs. A secondary goal of this approach is to help the members visualize how their participation is important to their institution as well as the community. Although a few network representatives used a consensus approach, most

emphasized that network membership is an amalgam of interests and needs which can naturally gravitate to mutually exclusive interests. However, having mutually exclusive interests does not necessarily undermine the role of the network in meeting important community needs rather, it may simply mean that not all members will work on the same projects. They note that it is not critical for all members to be involved in all projects but that it is important that they all see the general value of the effort and support it as part of the network's vision. Network members can build from a shared vision but remain open and supportive of non-competing projects that have intrinsic value for the members engaged in the project.

It is important to recognize that unanimous participation is not needed on every project but you will need “a core group of people that share a long-term vision of what is to be accomplished” to provide general support for the network as an independent entity. Maintaining that support and willingness to continue the effort requires that members with the time and resources to complete key tasks must be identified for each project and while all may not participate in a given project, it is critical that all members are kept informed as to what is underway. This approach works best when the network director is employed by the network and not by a member organization because it avoids any appearance of conflict of interest.

Over nine out of every ten surviving networks reported having a formal governance structure comprised of either a steering committee and/or a network board of directors, and a one member one vote decision making process. Over three-quarters of the grantees were utilizing an agreement among the network membership that defined the purpose, member roles, and expectations for network operation (Table 7). Of the seven respondents reporting that their networks did not have a one member, one vote decision making process, six were governed by consensus and one allotted its founding members two votes and affiliate members one vote. Each of these networks was relatively small with an average size of four members. Representation on a network decision-making body was less equitable with only 56 percent of the respondents reporting a fully representative governance structure for their network membership. There is likely a relationship between the adoption of network by-laws and the development of strategies for handling conflict. A number of respondents offered that their conflict resolution strategies were included in their by-laws.

Table 7 – Operations and Governance Related Activities (N=79)

Operations and Governance	2006 (N=9)	2007 (N=8)	2008 (N=23)	2009 (N=16)	2010 (N=23)	Total (N=79)
Agreement defines purpose, member roles, expectations	100%	100%	91%	81%	48%	78%
Governing Body (Board/Steering Committee)	89%	100%	91%	94%	83%	91%
One member, one vote	78%	100%	97%	94%	82%	87%
Strategic planning process	78%	75%	74%	75%	83%	77%
Network by-laws	78%	75%	65%	38%	48%	57%
Conduct feasibility analyses	89%	50%	52%	75%	68%	65%
Use defined evaluation strategy	55%	75%	52%	50%	68%	59%
Conflict resolution strategy	78%	63%	39%	25%	55%	47%
Full representation in governance	56%	50%	43%	50%	77%	56%
Key community leaders know about network	33%	12%	52%	38%	55%	44%

In addition to the information listed in Table 7, the survey also collected information about network administrative capacity for managing day-to-day operations. Questions focused on the availability of a network director, if the position was paid, if the director worked full-time or part-time, had experience managing multi-organizational collaboratives before working for the network, and what entity had the authority to hire and fire the director (e.g., the network or network partner). Three-quarters (76%) of the surviving networks reported having a network director and 67 percent of them involved a paid position. There were slightly more full-time (51%) than part-time positions (49%). Just under one half (48%) of the network directors were new to the management of multi-organizational collaboratives. While having a director with prior experience in managing collaboratives did not appear influence governance and planning activities, having a paid, full-time director with experience was associated with more formal organizational including having a Board of Directors (100% vs. 89%), by-laws (75% vs. 61%), strategic plan (92% vs. 75%), using feasibility analyses (83% vs. 63%), and employing conflict resolution strategies (75% vs. 52%).

Sustainability

Sustainability refers to the capacity for maintaining at least core network functions in place following the expiration of the Network Planning grant award. Respondents were asked if their network had a formal strategy for post-grant sustainability in place by the time their network planning grant expired

and, if they did, to rate that plan’s effectiveness on a one to five scale where one meant not effective and five meant very effective. Interestingly, among the surviving networks only sixty-three percent reported having a strategy at the time their Network Planning grant expired and of those, 68 percent ranked the strategy as average or above in effectiveness. Six out of the eight respondents that ranked their strategy as below average could only rely on one-time contributions from their membership to support activities. Of the remaining networks, one was collecting member dues but reported that the scale of their planned effort was too ambitiousness and the other had received a federal grant but thought using “soft” money to support operations was a poor strategy. Approximately 70 percent of the surviving networks had successfully developed a source of internal or external post-grant funding although most could not quantify the amount of support generated to maintain operations. A simple count of the number of funding sources that had been accessed by grantees was made to gauge the measure of effort and success of such activities. As might be expected, the more time spent in post-grant operations, the greater the number of acquired sources, with the 2006 grantees being the most successful (e.g., 3.4 sources compared to 2.9, 1.9, 2.0, and 1.5 for 2007 through 2010 respectively). Although grantees that did not have a formal strategy for sustainability tended, on average, to report fewer sources of support, the small sample makes it a challenge to assess whether the numbers are significantly different. State grants and one-time member contributions were the most commonly reported sources of post-grant support, while member dues and fees were used by 28 percent of the networks (Table 8).

Table 8 – Sources of Network Operational Support (N=79)

Source of Operational Support	Networks
One-time Member Financial Contributions	37%
Federal Grants	35%
State Grants	24%
Network Member Fees	20%
Network Member Dues	19%
Foundation/Private Grants	15%

The use of member financial contributions for supporting network operations is unclear. When respondents were asked if their network received one-time financial contributions to support network operations, over one-third responded yes. However, when later asked what proportion of their networks’ current fiscal budget was comprised of member contributions only 20 percent

identified contributions as a budget line item. It is possible that this difference in reporting merely reflects the periodic nature of member contributions. They are not regular but dependent upon the immediate financial circumstances of the network (e.g., capital start-up costs or needed equipment). Although it was not possible to determine with any certainty the financial investments accruing from member contributions across the cohorts, the proportion of network 2010 – 2011 budgets ranges from a low of two percent to a high of 100 percent with an average of around 25 percent.

Federal and state grants provide the greatest amount of on-going support for the network grantees and vary widely from a few thousand dollars to several hundred thousand dollars. It was difficult to completely distinguish between state and federal grants. Although the respondents provided information as to whether a grant was state or federal in origin, closer inspection revealed that state grants were often a conduit for federal funding (e.g., State Offices of Rural Health providing funds from the federal Medicare Rural Hospital Flexibility (FLEX) Program or the Safety and Health Investment Projects (SHIP) grant program). Other federal sources of funds distributed through state agencies included block grants for preventive health and substance abuse and mental health services through the Centers for Disease Control and Prevention (CDC) and Substance Abuse and Mental Health Services Administration (SAMHSA). A smaller number of grants were from the private sector (e.g., Pfizer and a Public Utility Company) and professional and charitable organizations (e.g., American Heart Association, Bi-State Primary Care Association, Lions Club and United Way). A few networks were able to secure funding through state appropriations, state legislative contracts and federal subsidies (e.g., Federal Communications Commission). Other federal funding included support for the development of health information technology capacity, women's health, and economic development opportunities.

Specific questions were asked about grantee experiences with the Rural Health Network Development (RHND) Program and the Rural Health Outreach Services Grant (RHOSG) Program. Both the RHND and the RHOSG provide an opportunity for fledgling networks to take the next step in solidifying their collaborative efforts and integration of services. Over one half (59%) of the surviving grantees had made an effort to secure a Network Development grant while about one quarter (24%) applied for an Outreach grant (Table 9). The applicants had a 63 percent success rate applying for the Outreach grants and a 43 percent success rate applying for the Network Development grants. One significant difference between the planning grant cohort experiences in relation to these grants is that the majority of the Network Development applications (78%) were

submitted during the 2011 funding cycle while application for Outreach grants were distributed across several award cycles. In addition, the 2008 and 2009 grantees (N=53) were unable to apply for the Network Development grant until the next funding cycle in 2011 while the 2006 and 2007 cohorts had more than one opportunity.

Table 9 – Percent Post-Grant Applications and Awards for Network Development and Outreach Grant Awards (N=79)

Grant Program	Applications	Success Rate of Applicants
Rural Health Outreach Services Grant Program	24%	63%
Rural Health Network Development Grant Program	59%	43%

The surviving networks at the end of the second wave survey were asked how they typically identified funding opportunities. Each respondent could identify more than one source of information. An average of approximately two information sources was identified for each network (Table 10). The two most mentioned internet sites were Rural Assistance Center (RAC Online) (25 percent) and grants.gov (35 percent). Federal funding announcements included the federal Office of Rural Health Policy, HRSA, and the U.S. Department of Agriculture. In addition to project consultants, a number of grantees identified dedicated or contracted grant writers as a key source of funding information. State sources of information included a range of state programs but principally State Offices of Rural Health. The types and proportions of information sources identified by networks that had been successful in acquiring post-grant funding (N=30) since the first wave (approximately one year prior) with those that had not acquired funding revealed no marked differences. Seven funding applicants could not be included in the assessment because they had yet to hear any results from their efforts by the time of the survey.

Table 10 – Information Sources Used to Identify Potential Funding Sources (N=70)

Information Source	Percent Information Source
Internet Searches	33%
Federal Funding Announcements/Program Officers	17%
Professional Associations Announcements/Member Knowledge	15%
Hired Consultant/Grant Writer	12%
State Funding Announcements/Program Officers	11%
Referral Professional Contacts/Organizations Wishing to Collaborate	6%
Foundation Newsletters and Announcements	5%
Other	1%
Total	100%

Survey
were
to

questions
included

determine the degree to which the former grantees had worked with foundations to obtain funding. In addition, they were asked if foundations were approached in the same manner as granting agencies/programs. Approximately 30 percent of the respondents had no opinion regarding similarities or differences between the grant and foundation funding processes or had any experience working with foundations to date. Of those that were familiar, there was an even split between those that felt there was a demonstrable difference and those that did not. Those that did not see a difference in seeking grant as opposed to foundation support tended to focus on objective similarities such as following defined and explicit criteria, proposing a project that was compatible with the mission and focus of the funding agent, and providing sufficient documentation to argue that the project had a high probability of success. Respondents that felt there was a marked difference between seeking a grant and foundation support tended to focus more on the subjective differences such as the amount of development that went into forming a personal relationship with the funding representatives and if successful the further interpersonal activities such as follow-up phone calls and site visits. They also emphasized the more proactive nature of engagement with foundations and a reactive experience with grant funding agencies/programs.

Regardless of the focus of funding effort, the vast majority of grantees had a defined process for processing potential funding information once available. For most, the information was introduced by one or more members of the network to the membership during a scheduled meeting or, in the case of an impending deadline, at a specially called meeting to discuss the applicability of the funding

opportunity for the network as a whole or for a sub-set of the membership. Following open discussion the proposed action would either go to a formal body such as a network board of directors or steering committee and then to a select individual in some cases or subgroup in others to begin the application development process. Interestingly, almost one third of the networks assign this activity to a subgroup of their membership that have been identified as “most interested,” the “best fit,” or “that have a vested interest in the scope of the activity.” Approximately 28 percent of the surviving networks utilized a dedicated or contracted grants writer to assemble their application for funding with the largest proportion from the older 2006 – 2009 cohort grantees. The remainder consigned the task to the network director. One network with a three for three application/award effort since being surveyed in 2010 had a particularly thorough process. Information was introduced to the network board and after determining that the effort was compatible with the network strategic plan and mission, it was assigned to a committee of interested members to each write elements of the application, and then meet to discuss their products and pull everything together as a group. Following the assembly of the application, everyone would review the document including an independent reviewer to make final modifications before submission. The network, a statewide Critical Access Hospital collaboration focusing on quality improvement, had been successful in obtaining a state grant, a private grant, and foundation funding. Two-thirds of the networks that had successfully acquired external funding since the 2010 survey had been identified as having successful post-grant funding efforts prior to 2010.

When asked about the most effective aspect of their strategy for sustainability, several respondents noted that a critical component for lasting success is being proactive about developing sustainability strategies. Start early, where possible, focus on building support with local organizations that have potential for providing financial expertise and support, and remember that a well conceived business plan is essential. One respondent reported that their success in finding post-grant funding was due to early engagement with the network board and having a specific sustainability plan. The same strategy works for obtaining internal support such as member dues, member fees, and contributions to support operations. Of the surviving networks, the older networks were slightly more likely to report using internal support such as dues, fees and member contributions to maintain operations. A few reported that the recent economic downturn made it too difficult for some members to continue to pay dues but that there was sufficient trust and commitment among the network membership that they were not faulted for being unable to pay.

For some networks, the service focus is a natural fit for obtaining post-grant funding either through state contracts and fee-for-service arrangements because of marketable products for their members and consumers, while for others such as those that come together for collective advocacy, structuring revenue models can be very difficult. Several networks, including an advocacy network, reported that they were determined to proceed, even without grant funding. While funding is important to maintaining network operations, the effectiveness of network operations depends upon the creation and sustaining of organizational relationships sufficient to meet the issues at hand.

Network Successes

Respondents were asked to rank their network's post-grant successes in areas closely associated with the key goals of the Network Planning grant program - expanding access to, and coordinating and improving the quality of essential health care services and enhancing the delivery of health care in rural areas. The ranking was based on a one to five scale where one represented ineffective (not successful) efforts and five represented highly effective (very successful) efforts. Five areas were included in the ranking process-improving service coordination, expanding service capacity, sharing resources effectively, maintaining viable services, and advocating for rural health. Some respondents were able to rank their network on all five areas while others could only rank their network on a few areas.

Once the respondents had completed ranking their networks' activities, they were asked to use those areas ranked the highest and lowest as a frame of reference to describe the key factors that were largely responsible for their networks' performance. The most common factors identified as facilitators or barriers to network efforts largely replicated the findings listed in Tables 5 and 6 on challenges to network formation and lessons learned in partnership formation (e.g., community support, membership cooperation and commitment, and effective leadership among others). The respondents revealed upon further probing that some of the key factors in developing and strengthening member support involved inclusiveness (e.g., promoting and supporting member involvement in the authoring of solutions and strategies), the identification and recognition of a clear return on investment (e.g., providing opportunities that instill value in network membership), and creating an environment where "nobody feels like they are in it for themselves." Several respondents focused on the importance of framing the issues so that the membership sees the larger picture and that it was easier to select segments that comprised that larger piece for more actionable

efforts. One respondent put it succinctly as “getting people at the table to understand the breadth of need and the level of resources that exist.” Another respondent emphasized the baby step approach to gradually move the members toward larger engagement and sharing of autonomy stating that the more members who participate on successful projects; the more likely they are to be willing to collaborate on additional projects. She further emphasized that members could opt out of projects and were not asked to support something that was not important to their organization. This approach was also evident in a number of comments on the decision and action processes involved in seeking external funding – allotting responsibility for application development to those members that were particularly interested and vested in the issues the funding would allow them to address.

Community support accrued by virtue of the personalities involved in network leadership and board representation (e.g., by virtue of their relative prestige among local stakeholders – local businesses and providers) as well as in response to a network’s ability to demonstrate its value for the community. For example, outreach efforts could be designed to educate the community about the purpose and intent of a network as well as how network activities align with community values and meet locally perceived needs. One respondent noted that the key was communicating how the network could offer services to local residents that would otherwise not be available by individual organizations. Several respondents stressed that identifying the natural/conceptual linkages that exist between the mission and goals of network members and the focus of the networks activities is an important strategy for cementing member commitments. One respondent succinctly stated this approach as – “the ability to identify and develop projects that not only address local need but serve to strengthen the network in the process.”

When asked for examples of their network’s most lasting success, respondents typically described efforts that were directly related to the operational/service focus reported in their initial grant application. Over half of the reported descriptions of a network’s lasting success (55%) could be classified as either an expansion of service capacity (30%) or improving service coordination (25%). Maintaining viable services was the next most report area of success (19%) followed by sharing resources (16%) and advocating for rural health (10%). However, advocacy for rural health was one of the top ranked accomplishments among the five categories; it appeared to be recognized as a general approach rather than a concrete outcome. Expanding services ranged from recruiting volunteer practitioners to delivering care to underserved populations and establishing new clinic

locations to expanding hours of operation to improving ease of access to existing services. Maintaining viable services involved efforts such as recruiting medical and allied healthcare personnel and improving the financial viability of hospitals in a horizontal network. Improving service coordination for one respondent involved the provision of problem solving training for frontline managers while another focused on the development of an interdisciplinary team to integrate mental health services and primary care services. Sharing resources was most commonly identified in the areas of training and skill retention, such as quality improvement (QI) patient case review, protocol development, implementing best practices among several EMS squads, and education programs offered to member hospitals. Rural health advocacy included a wide variety of efforts from educating state legislators on the formation and support of a statewide taskforce on autism, to taking an active role at the state level to introduce rural mental health issues into the state policy dialogue, to educating the community about available services for the developmentally disabled.

Limitations

The small number of observations (i.e., network project representatives) included in this project make it a challenge to generalize across funding cohorts. The dynamic nature of network formation and operation coupled with the time that had elapsed for some network representatives can make recall difficult. Although the grantee coversheet helps respondent recall, there are always questions about the accuracy of data in the absence of cross-referencing with multiple sources. In addition, network projects, by their collaborative nature, are likely to be multifaceted and multidimensional. Capturing the essence of network formation and operational sustainability through discussions with only one individual (the network director or most knowledgeable person available) provides, at best, a filtered view of events. Social network analysis provides a method for addressing such limitations but the time and financial resources available for this project prohibited the use of such methods (e.g., conducting a survey not only with network directors but representatives of the partnering organizations and community stakeholders as well).

DISCUSSION

The planning and development of the rural health networks included in this study, while guided by the criteria of the Network Planning program and the recommendations provided by program and contract staff, follow somewhat distinctive paths depending upon the provider relationships and history that existed at the time of the grant award. They emerged from different contexts using varied combinations of organizational resources to meet locally relevant goals and objectives that address diverse challenges. Project findings underscore the advantage that prior collaboration can offer Network Planning applicants. Such a history can give the applicant a head start at tackling trust issues among potential network partners and community stakeholders, establishing efficient channels of communication and opportunities for building a history of successful projects. First time collaborators often have much to sort out before they move past this stage and that adds time to their schedule for launching meaningful activities with demonstrated value for the communities being served. Of course, the more similar the issues facing network partners, the more focused the issues are and for many, the quicker they can be handled to move on to the business of network development. Beyond having a head start in working together or finding a good partner match, several factors appear to make a tangible difference in network success under the Network Planning grant program.

Factors in Operating and Sustaining Networks

Four points have been prominently represented in respondent discussions about their challenges successfully creating a network relationship for meeting the on-going needs of rural communities:

- perceived value in being a network member and in the activities provided to communities;
- transparency in planning and operations;
- governance structure that lends legitimacy and authority to a network's existence; and,
- on-going support of network operations beyond the planning grant award.

Overarching all four areas is the importance of experienced leadership that proactively searches out opportunities that bond members together in collective action and provides the stewardship that facilitates efficient decision-making. Whether the survey respondents were discussing the reasons

for failed projects or major successes, a key determining factor was the availability of skilled, experienced leadership at the network level. Successful projects clearly benefit from a history of collaboration among the prospective members, require well-developed plans of action based on accurate assessments of the needs of the community they serve, the resources available to meet those needs, and the most appropriate course of action for employing those resources in ways that complement the purpose and mission of member organizations. However, without transparency mistrust can grow, plans can go awry, and the community and political support so important for the economic success of network ventures can evaporate. Transparency of purpose and action must be shouldered by each partnering organization; leadership is not a substitute for member commitment.

Value in Membership, Value in Effort

Outside of the leadership needed to make it possible, the development and maintenance of perceived value on the part of the network membership and the community it serves is one of the single most important factors in sustaining network success. Networks are voluntary associations and their participants typically have divergent goals and agenda that fuel their interest and commitment to collaborative ventures – one way to describe this organizational dynamic is perceived value in membership. Many factors may account for why an organization chooses to come to the network table (e.g., addressing a compelling need, economies of scale, access to scarce resources). However, if an organization does not perceive some value for its mission to remain at the table, its on-going participation becomes more fragile and is at risk should a significant challenge to the organization occur. Consequently, network success is dependent upon the ability of the network leadership to be aware of and proactively manage the contrasting roles of its members. The more varied the membership (organizational types) the more important it is for the network leadership to take a proactive position to guide organizational development. As highlighted in the discussion on partnership development, effective leaders are diligent about monitoring member issues and needs, open to their ideas, and actively search for opportunities that can foster mutual trust and confidence in the ability of the network to advance not only the collective good but can help them achieve their institutional goals and mission.

Receiving a Network Planning grant award is the result of the ORHP perceiving value in the planning and development of a network's vision. However, the likelihood that a network will survive depends on the degree to which its network members perceive value in remaining engaged and committed, and the likelihood that a network will thrive depends largely on the degree to which

the community, or members in the case of service networks, it serves perceives value in utilizing the services made possible by the network. One service network director pointed out that the concept of a network can be ambiguous at times. In his case, the term is used to mean at least four different things: him as the director, the network office and staff, the network board, and all of the above working together -- but, he stated emphatically, what it never means is the clinical provider who is a member of the network. A network is a vehicle for mobilizing and focusing services – although provision of direct services also is possible depending upon the agreements among the membership (e.g., sharing space, staff and equipment to provide essential services). A key role for the network leadership is to demonstrate and reinforce the notion that the network provides a value for its members that would not otherwise be available without its existence. It is from that synergy of effort that community value is realized for it is then that network members are able to address needs that they otherwise would not be able to address on their own.

Transparency in Planning and Operations

Providing the membership with information about where the network is headed and giving them an opportunity to collaborate in identification of solutions, including having an open forum for voicing their organizational self-interests, is necessary to promote trust and commitment to network goals and on-going viability. Keeping operations and strategies transparent and working to keep members in “the information loop” are vital to creating a level of member commitment that goes beyond the minimum performance found in written agreements. Early and frequent communication with the membership lays the groundwork for developing strategic plans that can be adaptive to changing circumstances whether they are imposed from the market environment or generated from within by changing member (and community?) needs and concerns. Remaining transparent with the community and seeking input from local stakeholders helps keep network planning and action relevant and instills a sense of loyalty.

Governance Structure

While formalized governance structures may be a bit premature for many Network Planning grantees, their discussions of how they were able to overcome a variety of challenges speak to the importance of having at least formalized expectations to serve as a guide for organizational behavior. Networks should be encouraged to work toward a goal of formalizing their governance at least to the point that the network director is accountable to the network and not to a specific network member and that support exists for network-specific staff to serve the membership. By doing so, it

is possible to minimize the perception of conflicts of interest, emphasize how the network can bring value to the members through staff support, and provide a much needed image of an entity separate from the network partners. Creation of a representative governing body that is at the same time answerable in some measure to the communities being served can contribute to the potential for sustaining the network, especially in cases where the activities target areas that are traditionally underfunded or unfunded.

On-Going Support of Network Operations

Project sustainability for Network Planning grantees is likely more problematic than for other 330A grantees. Unlike efforts funded under either the Rural Health Network Development or Rural Health Outreach Services grant programs, which receive three years of support, Network Planning grantees rarely have mature initiatives underway at the end of their one year of support. That does not mean that the member organizations are not providing services, but the network is yet to come into its own and recognized as a force separate from, and adding value to, its members. Until it reaches this stage of maturation, the acquisition of funds for supporting its operations will remain largely local (e.g., member in-kind support, member dues, fees and/or support from local stakeholders).

The reason for creating the Network Planning program remains valid — to help nascent networks further strengthen their vision of how to make the most of existing resources and provider capacity to meet local health care needs. The recent rescheduling of the Network Development grant program funding cycle has made this transition more problematic than it otherwise might be. Grantees from the 2006 and 2007 funding cohorts were very successful in obtaining Network Development grants and it could be argued that this support, made available at a period of significant risk for the transition from planning to operations, was a major factor in their continued survival. This funding opportunity was not immediately available for the 2008 grantees; they accounted for three-quarters of the networks that could not be reached to participate in the survey and half of the networks that failed or were failing at the time of the survey reported that it was because of a lack of funds. The network closures of several of the 2009 grantees between 2010 and 2011 do not detract from this fact; indeed, most were identified as have difficulties finding value in their own existence even before Network Development grants were available to them. There is little substitute for value, transparency and commitment-- without them, providing funding only denies resources to those who could better apply them to a greater good.

Determining which proposed coalition of partners will have the greatest likelihood of success will always have a degree of uncertainty. It can also be difficult to identify those proposed projects that are attempting to address needs that have historically been difficult to meet (e.g., lack of dedicated funding streams, unpredictable growth in costs making commitment of limited resources problematic, and a lack of return on investment to the providers seeking to address the issues). Compassion may spur providers to action, but their ability to sustain efforts are compromised by the reality of “no margin – no mission.” Providers collaborate to collectively contribute to margin so they can fulfill their mission and the Network Planning grant provides an important support toward achieving that goal.

If a greater degree of survival for Network Planning grantees is desirable, it will be important for resources to be made available for them to transition from planning to implementation. This could be achieved by returning the Rural Health Network Development Grant program to its initial cycle schedule or it could be accomplished by adjusting a combination of grant program cycles (e.g., Network Development, Outreach Services, and the Network Planning Grant cycles). The key will be to have some opportunity for keeping those most promising projects afloat in time for them to capitalize on progress made under the planning grant. Certainly, not all rural health networks will acquire additional federal or state support to continue reaching their planned goals. Typically, these types of networks have been able to develop a marketable business plan with products of value for non-network members, leading to public and private revenue streams through contracts and service delivery arrangements. The goal should be to provide the program flexibility to maximize opportunities for networks with such potential to achieve successful implementation.

The fact that over 70 percent of the funded planning grantees have survived over the four year period is significant. Unlike small businesses that enter markets offering direct services of some kind, many networks are building a market among providers because they are better able to provide direct services to the communities they serve. Networks can be a provider of direct health and health related services; however, the networks that historically emerge from the Network Planning program are less mature and have a much more important role in serving as both the glue that holds the membership together and the lubricant that allows decisions to be made efficiently. These decisions allocate scarce resources to meet mutually valued ends for the network membership and the community they serve. The extent to which some of the grantees have achieved success has depended upon opportunity (e.g., public policies that allowed initiatives to gain state legislative or

local government programming support), marketability (e.g., provided services that are of general financial value to non-network members such as information technology infrastructure), transparency in planning and clear vision, and sound leadership to keep the process on track. However, networks continue to be an adaptable and essential vehicle for rural providers and community stakeholders to leverage resources to serve rural Americans.

REFERENCES

- Aldrich, H. *Organizations Evolving*. Thousand Oaks, CA: Sage Publications, 2000.
- Bonk, G. *Principles of Rural Health Network Development and Management*. The Networking for Rural Health Project Services. Washington, DC: Alpha Center, 2000. Available at: <http://www.academyhealth.org/files/ruralhealth/bonk.pdf>.
- Dill, W. "Environment as an Influence on Managerial Autonomy." *Administrative Science Quarterly* 2:409-443, 1958.
- Gregg, W. and Moscovice, I. "The Evolution of Rural Health Care Networks: Implications for Healthcare Managers." *Health Care Management Review* 28:161-178, 2003.
- Moscovice, I., Christianson, J., Johnson, J., Kralewski, J., and Manning, W. *Building Rural Hospital Networks*. Ann Arbor, MI: Health Administration Press, 1995.
- Moscovice, I., Gregg, W., and Lewerenz, E. *Rural Health Networks: Evolving Organizational Forms and Functions*. University of Minnesota Rural Health Research Center, Minneapolis, MN, 2003.
- Moscovice, I., Johnson, J., Finch, M., Grogan, C., and Kralewski, J. "The Structure and Characteristics of Rural Hospital Consortia." *Journal of Rural Health* 7:575-588, 1991.
- Pfeffer, J. and Salancik, G. *The External Control of Organizations: A Resource Dependence Perspective*. New York, NY: Harper and Row, 1978.
- Powell, W. "Neither Market nor Hierarchy: Network Forms of Organization," In *Research in Organizational Behavior*, 12:295-336. Stamford, CT: JAI Press, 1990.
- Scott, W. *Organizations: Rational, Natural, and Open Systems*. Englewood Cliffs, NJ: Prentice-Hall, 1998.
- Size, T. "Leadership Development for Rural Health." *North Carolina Medical Journal* 67:71-76, 2006.
- Wellever, A. *Shared Services: The Foundation of Collaboration*. Washington, DC: Academy For Health Services Research and Policy, 2001. Available at: <http://www.raconline.org/pdf/sharedservices.pdf>.
- Wellever, A., Wholey, D., and Radcliff, T. *Strategic Choices of Rural Health Networks: Implications for Goals and Performance Measurement*. University of Minnesota Rural Health Research Center Working Paper Series #31, Minneapolis, MN, 2000.
- Williamson, O. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York, NY: Free Press, 1975.