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Richard L. Ludtke
University of North Dakota

Kazi Ahmed
University of North Dakota

Jack M. Geller
Universiity of North Dakota

AFFORDABLE RURAL COALITIONS FOR HEALTH (ARCH): AN APPLICATION OF SOCIOLOGY[1]

Richard L. Ludtke, Kazi Ahmed, and Jack M. Geller
Center For Rural Health, School of Medicine
University of North Dakota

Introduction: The Changing Context of Rural Health

The rural context for health care systems has been experiencing substantial stress in recent times. The population, from which providers must obtain patients, is no longer growing as it had during the 1970s, but rather is likely to be either stable or decline where agriculture or energy are the primary economic sectors (Agresta, 1985, Johnson, 1989). Accompanying depopulation, in farming and energy producing communities an economic stagnation or depression has also been occurring. Both the loss of population base and restricted economies serve to limit patient use of clinics and hospitals, reducing their revenues and contributing to a further limitation of services.

Additional activities under federal policies designed to produce cost containment also produce significant stress for rural health care systems. Under Diagnostic Related Groupings (DRGs) and the Prospective Payment System, the rates of reimbursement for rural hospitals are significantly lower (by an average of 37%) than are the rates for larger urban hospitals. This differential jeopardizes the financial base of rural hospitals for whom Medicare often constitutes over 65% of the revenues. Concurrently, Peer Review Organizations (PROs) have contributed to cost containment by inhibiting the use of hospitals through discouraging admissions and reducing the average length of stay (Gutterman and Dobson, 1986). The review process discourages physicians from hospitalizing and/or retaining hospitalized patients

[1] This paper presents a reconstruction of an application of sociological theory to social change in the Affordable Rural Coalition for Health (ARCH) project. ARCH is a national demonstration project intended to promote vitality in rural health services through applying principles of community development. Funded by the W.K. Kellogg Foundation, the ARCH project was jointly managed by the Center for Rural Health of the University of North Dakota and Lutheran Health Systems, a multi-hospital chain.

unless clear clinical indicators warrant inpatient care. Consideration of access factors, such as the distance from a facility, the patient's lives, or their personal living environment was diminished in an effort to contain costs. This occurs in a rural environment where physicians have traditionally derived a higher proportion of their incomes from the hospital than their urban counterparts (Wallock and Kretz, 1977). Again, the reductions in hospital use serve to produce a negative impact on hospital operating margins.

Peoples' conduct in seeking health care services have also contributed to the adverse context for rural health services. Local market shares for rural community health services are reportedly low, with the outshopping for medical services often becoming the norm-- even for primary care services that are readily available locally (Hart, Rosenblatt and Amundson, 1989; Ludtke, Geller and Hart, 1989). While current information does not permit statements regarding trends in health care outshopping, the importance of retaining local clientele under conditions of diminished admissions and lengths of stay would appear substantial.

Finally, physician and hospital liability rates contribute to the stress among rural providers as they increase the per case costs and produce disincentives for rural physicians in the areas of high risk, including obstetrics and surgery. The increases in malpractice insurance costs per inpatient day are particularly devastating to those practicing in small (under 50 bed) facilities located in rural communities (United States Senate Special Committee on Aging, 1988). When rural physicians eliminate the practice of obstetrics and general surgery, both an immediate and direct consequence is experienced by the local hospital in a loss of clientele for two of the traditionally large categories. Indirectly, the loss of these services also transmits a negative message about local services, indicating an incomplete array of services that may often be interpreted as corresponding to lower quality. The image of local clinics and hospitals as "bandaid stations" is thus encouraged through practice limitation in response to liability costs.

The Locality Development Approach to Community Organization

In constructing the ARCH model for community development, a theoretical framework was developed based on a review of alternatives found in the sociological literature. In ARCH, the locality development approach to community organization was used because it provided a theoretical framework appropriate for conceptualizing the ARCH process.

The locality development model used for this demonstration project was adapted from Rothman (1979), and as a model of community organization it can be distinguished from other models by its major assumptions. The principle alternative, the social action model of community organizing, emerges from a conflict perspective and used organizing as a means of developing and asserting power. Locality development, on the other hand, emerges from a consensus perspective, using organizing to build common goals and cooperative efforts among elements of the community that might otherwise be viewed as in conflict. It assumes that effective community changes can be brought about by the active participation of a broad array of local people representing the major sectors of the community, such as the economy, religion, and politics. People's *participation* in community development is motivated by the recognition of *felt needs* by the collectivity. Unlike traditional notions of community development where the forms and nature of changes are imposed from outside, locality development emphasizes procedures that are *democratic* in nature, and based on the voluntary cooperation of local people. It also strongly promotes *self-help* ways and means to confront problems and achieve shared goals. The locality development approach to community change also encourages development of indigenous leadership and *education*. The type of goals pursued by the change agents of locality development is called *"process" goals*. Instead of focusing on specific tasks, process goals attempt to maintain the system and capacity. This goal is oriented toward establishing *cooperative working relationships* among groups in the community, and improving the *power base* of the community among other things. The change tactics and techniques employed here involve gaining *consensus* of local people. It fosters *communication* among communi-

ty groups and interests. A *change agent* in the locality development model performs the roles of a *coordinator* or enabler-catalyst. He or she teaches the *problem-solving* skills and *ethical values*. The locality development approach to community organization attempts to bring members of the *power structure* together as "collaborators in a common venture." The overall approach of locality development takes a *bottom-up view* of community development.

The ARCH process is a system building process. The ARCH process is not restricted to a one-time task. It involves creating innovative approaches for the health care system that in turn will enhance a future capacity for social change. As a result of this orientation toward system maintenance the goals of ARCH are "process" oriented as well as "task" oriented. "Task" oriented goals are not eschewed altogether, but the process goals of ARCH attempt to establish cooperative working relationships among diverse groups in the community and through these to improve the power base of the community.

The Five Stages of ARCH

Locality development, as applied in the ARCH demonstration project was conceptualized as five unfolding stages. These stages were used to classify the dominant theme of the ARCH activity in each stage and are not asserted to be discrete periods as some activities from preceding stages flowed into the subsequent stages as the project evolved over time. The stages of ARCH are presented in Figure 1.

STAGE-I: Project Initiation

Stage I of the ARCH process involves initiating the project. Significant activities that characterize this stage are selecting communities as sites, recruiting and training local ARCH coordinators and facilitating their credibility in the community as the process begins.

Prior to the site selections the Project Coordinator gathered background information from a group of applicant communities. These communities had been invited to apply for participation based on historical ties with either the Center for Rural Health or Lutheran Health Systems and existing information

Figure 1.

THE ARCH PROCESS

that suggested a likelihood of an appropriate fit between the communities and the ARCH project. Additional information involved both on-site interviews with key informants and secondary source data from the AHA guide and Census reports. Information for these assessments covered aspects of local economy, community structure and leadership and input from and about local hospitals and physicians. The field coordinators conducted the on-site interviews, looking for evidence from key informants as to the degree of local receptivity to the ARCH concept and key people's willingness to cooperate in supporting the project. Information was also sought to get a sense of the community's historical record regarding cooperation in the past with new projects. The willingness and enthusiasm of local physicians, the hospital administrator and its board toward ARCH was also sought.

Sixteen communities were selected for participation in the ARCH project. The selected communities came from three states-- Colorado, Montana, and North Dakota. Consortium sites were present in each state, with the Montana consortium containing four communities, while the other two had three communities participating in each consortium. The remaining six communities formed the six single site demonstration projects in North Dakota.

The size of the populations in the sixteen communities ranged from 935 to 15,002. Ten of the sixteen communities had population less than 2,500. Hospital size was a factor in selection in that a distribution was sought for demonstration purposes. In the sixteen communities the number of beds per hospital ranged from 11 to 98. Thirteen of these hospitals had less than 50 beds. The population of each site was also examined in terms of their dependency ratios. Information from 1980 Census provided data on age structure for these sixteen communities. The population under 18 (dependent young) and over 65 (dependent old) were each examined. For the proportion of the local population less than 18 years, the percent ranged from 18 to 30 percent. The population over 65 years presented proportions ranging from 13 to 34 percent. Eight of the sixteen communities had 20 percent or more of their people falling in the 65 and over category. When the percent of people from both categories were added, an overall dependency status was

obtained. This total estimate ranged from 40 to 52 percent and nine out of sixteen communities were found to have a dependency status of 45 percent or more. These dependent populations represent the age cohorts with the highest relative use of medical services, with the 65 and over group also being the medicare population. Thus, the extent of their presence in the population represents an important factor in assessing the local health care system.

Recruitment

An important element of the ARCH model is the role played by the change agents. The change agents are the community organizers responsible for playing the pivotal role in involving the local people and outside support to work together in achieving the tasks and overall process goals. These change agents were called the local ARCH coordinators. They were hired from the local community or the surrounding area. The coordinators were required to have knowledge of the existing local resources base and of other programs in their communities. They had to be willing and able to work with diverse groups and to spend time traveling. Knowledge of the health care field was considered valuable, but was not required. Preference was given to those with experience in community organizing and fund raising.

All five Local ARCH Coordinators were female and had been extensively involved in community and public services. They were all local recruits who were highly motivated and enthusiastic to work on the project. Each consortium was provided a full-time coordinator, while the six single sites were covered by the other two coordinators who each served three local boards.

Training

Training was designed to provide the coordinators with a basic understanding of the issues in rural health care, the theories of community organizing, team building skills and specific project information. A six week training program was designed for the local coordinators. Topics covered in the training program included a discussion of the ARCH concept, an overview of the Rural Health Care Systems, project and program management, skill

building in the areas of community organizing strategies, communications, interpersonal problem solving, fund raising, conducting formal meetings, interviewing and gathering data and writing grant proposals, along with materials on information systems and financial management. The training involved both traditional methods of classroom training and exercises in application. At the conclusion of the training, each coordinator was required to develop a three month plan of action in order to direct their initial activity and to tie their plans to the training experiences.

Local ARCH Initiation

Immediately following the training, each local coordinator had the task of initiating the ARCH process at the local level. This involved both introducing the ARCH project and concept to local people and establishing themselves as legitimate project representatives. In order to promote the ARCH program, the five local ARCH coordinators sought to use key local sponsors such as hospital administrators, school administrators and clergy to provide a forum for presenting the ARCH concept and goals. The coordinators also used formal media such as newspapers, radio and television to announce the project. Lastly, but very importantly, the coordinators spent a great deal of time simply conversing with people in face-to face situations in stores, offices or on the street. All of these activities assisted the project in becoming visible in the communities.

The credibility of the local ARCH coordinator was enhanced by an official introduction of the project and their recent training at the time the formal designation of the project sites was made. It should, however, be noted that the coordinators had to earn local credibility by long hours of effort that met with little immediate reward and much suspicion. After much perseverance, they gradually gained recognition, often late in the process and when results of their long hours became evident through activities, programs or new services.

STAGE II: Involving the People: Formation of A Local ARCH Board

The next step of the ARCH process was to involve the local people in the ARCH process through broad based representation in the formation of a local ARCH Board. This board contained members representing five sectors of the community, ie. government, education, religion, economy and health care. The board was expected to provide direction for the local projects using the community assessment results.

Immediately after returning to their communities, the local coordinators began a search for candidates to serve on the local ARCH board programs. Local coordinators obtained names of potential ARCH Board members by asking the local people to identify three "movers and shakers" in their community. The local hospital administrator, political and economic leaders were asked to provide information in this regard. The local coordinator spoke with all potential candidates to ascertain their interest and willingness to serve on the local ARCH board. The board formation process ended with the local coordinators submitting the names of the recommended board members with bio-sketches to the ARCH Policy Group. The Policy Group served the demonstration project as a formal decision making body for major decisions such as site and project selection. The Policy Group made the final selection of board members. For the nine boards (3 in consortium and 6 in single sites), 89 people were appointed to serve. The size of the boards ranged from 8 to 14 members. The hospital administrator from each site was named as an ex-officio board member. Each board was constituted with broad representation, tying the sectors of the community together in a strong network designed to increase communications between sectors through such representation.

Community Assessment

At the beginning of the local effort it was considered necessary to create a data base that would provide information to local ARCH coordinators and the local ARCH Board members for assessing the needs of their local health care system and constructing the long-term project goals. This data became the primary resource for the community health system planning and it formed

the baseline for future project evaluations.

Three major sources of data were identified. Background information, demographic and economic data for the community, was abstracted from secondary statistical sources, such as census reports and other local or county reports that might have been prepared for other original purposes. The other two information gathering sources involved primary data collected from the community via a mailed survey, and face-to-face interviews with representatives of five major types of health care provider organizations in the community, including hospitals, clinics, public health nurses, nursing homes and social services.

The Mailed Survey

In collaboration with the Project Coordinators and local ARCH coordinators, a standardized questionnaire was constructed for use in all 9 sites. The questionnaire was designed to obtain data on health status and needs, local and non-local use of services, perception of the adequacy of services and facilities, insurance coverage, and demographic and income characteristics of respondents. A stratified random sample of 500 people was drawn from each site using strata representing the primary and secondary service areas for each site. This distinction was made on the basis of driving distance, and patient origin information provided by the hospitals. The survey results were compiled at the Center for Rural Health and each ARCH board received a detailed report of the findings including both descriptive frequencies and cross tabulations. As a result, they were able to use the survey to identify use patterns, expressions of need, patterns of patient outshopping and the like and were able to identify profiles of service users or nonusers as appropriate. The survey results were used both to identify issues and to force recognition and discussion of some sensitive local issues. Some communities experiencing very low market shares, for example, found the initial presentation of this information upsetting, but eventually did confront the issue of patient migration.

Provider Profiles

Information for the community assessment originated from the face-to-face interviews with the director of administration of five key types of health and social service organizations in each ARCH site. The interviews were conducted by the local coordinators. The resulting provider profiles contained information on the array of services available for each site, service utilization, personnel resources and financial information. These reports were compiled by the Center for Rural Health and supplied to each local ARCH board along with the balance of the assessment reports. Thus comparisons could be easily made between the "supply" as documented in the provider profile and the "demand" as documented by the survey results.

STAGE III: - Local Autonomy: ARCH Board Development

Once the local ARCH board was formed, the members were invited to The Center for Rural Health for a short board development program. This initial program was followed up with additional local sessions with each local board. The board development program was organized to assist the board members initially to work in a team and to apprise them of the roles and responsibilities of an ARCH board member.

In addition to team building, the program reflected parts of the coordinator training, enabling board members to better understand the ARCH concept, the needs of rural health care systems, and the ways and means to organize a community to implement creative community based solutions to their communities health care needs.

Follow-up sessions to the board development program consisted of presentations on a) the request for proposals document, b) the planning process, and c) the community assessment study data. A booklet was prepared for the board members which explained the planning process for community organizers. Other follow-up sessions involved explaining the survey process and interpretation of data. The board members were also encouraged to request more detailed analyses of the survey data for answering questions specific to their views of community needs and services. During this

training, the project coordinator provided technical assistance to the boards to assist them in assessing the local health care problems, and in locating alternative and innovative ways to address their communities' problems.

STAGE IV: Local Project Development

The boards were required to prepare local project proposals in response to a request for proposals from the main ARCH Project for which Kellogg funding was available. This project was intended to serve as a lead project for the local ARCH board and with funding would enable them to initiate action regarding at least one of their priorities. The proposals were written with guidance from the project staff and were funded after review by an impartial committee of readers.

The local projects were carried out through a combination of local and Kellogg funds. The local ARCH boards' requests for funds were matched by local funds. This entailed local fund raising and was intended to increase both local visibility and ownership of ARCH. The major criteria used for reviewing the local project proposals involved examining the stated goals of the project. They were: 1) improved working relationships between health care providers, 2) acquiring or maintaining an improved local share of the market, and 3) improving the accessibility and acceptability of local services.

STAGE V: Local ARCH Project Implementation

The process of project implementation produced a wide array of projects, some of which were lead projects and many of which were secondary in nature, based on the enthusiasm of ARCH and not heavily dependent on funds. The following provides a sampler of the projects considered outcomes of the ARCH project.

Direct Outcomes

Education

1. Local instruction for Nurse AID training and EMT training enables people to undertake the programs locally and increases activity at the local level for the public. Educational projects contained strong elements of "meeting local

needs" as well as standards for certification and to bring education to the people rather than requiring people to leave the communities for training.

2. Educational multipliers, where instructional efforts beget additional instructors, were employed to train local personnel who could in turn train others. This was used for classes in CPR and programs for the elderly such as "Growing Younger" and "Growing Wiser".

3. A Consumer Information Center in which medical consumers could view video tapes or use a user-friendly computer system in order to gain information about a medical condition, surgical procedure, or any variety of such questions. This was located off the lobby of a community hospital where assistance was readily available. It was also heralded as one way to encourage people to visit the hospital and become more aware of its offerings.

4. A political forum was the choice for one consortium, using a program to educate candidates for office about local health care issues before letting them speak. No endorsements were made, but candidates did listen intently.

5. Family health fairs provided all ages and walks of life a wide array of testing and information to promote healthy life styles. These were high participation and low cost.

6. Rural preceptors were negotiated in one project as a means of providing rural experience for physicians, nurses and allied health personnel and in order to enhance the recruitment potential of the participating communities.

Communication

1. An inter-agency forum was a common vehicle to encourage information sharing among providers. Alternatively labeled "provider councils" or any variety of names, these groups organized regular meetings and improved information sharing. One consequence of these sessions was improved cooperation and diminished duplication of services.

Direct Service Activity

1. A Cooperative Health Service Organization (CHSO) was developed in one of the consortia sites that established a separate corporation to hire personnel and purchase equipment that the member hospitals or nursing homes could not independently afford and to "lease back" the services to participating members. This enabled the use of an expanded population base, thereby allowing for initial respiration therapists and mobile mammography. Other services were also being examined.

2. Alcohol dependency treatment proved to be a service that could also be provided with a cooperative model in a consortium. Local care provided a significant savings to employers who otherwise lost entire days when counseling was obtained in a neighboring city. In this program counseling was scheduled in each community on a regular basis and local support groups were established.

3. Peer counseling was encouraged by supporting youth training. This program focused on adolescent issues and prepared peers as responsible listeners and support persons.

4. Life Alert services were developed in one site with the hospital providing the staff for a based station and a monitor assigned to each of 24 elderly who were living independently, but considered "at risk" while living alone. This system would enable instant response in case of need and improved the comfort levels of those living alone and their families.

Promotion

1. Consumer education was conducted by a variety of approaches, each of which sought to draw attention to locally available services and improve public awareness. It had been established through the assessments that many of the medical outshoppers were unaware that services they sought elsewhere were, in fact, locally available. In this endeavor several media were used: radio shows, newspaper articles, newsletters, brochures, local directories, speakers bureaus and stickers containing emergency numbers.

Indirect Outcomes

Several outcomes considered indirect also resulted because of the ARCH activity. Ideas for which local action was not dependent on financial support were often undertaken either by the ARCH board or other community groups. One of the communities developed a cooperative wellness program for all public employees because of the demand for such a program evidenced by the community assessment. Thus, while ARCH precipitate the observation of need, another group initiated the response. Other programs sponsored by ARCH, but that were not part of the original proposals and were not dependent on finances include exercise programs such as walking programs for cardiac fitness. These programs used vacant facilities or vacant times, turning to public buildings such as schools and fairground arenas. Video

based aerobic classes were started in one site using surplus hospital space for the class. A local program for parenting labeled a VIP (Very Important Parent) program was also conducted in surplus meeting space at a hospital to help parents of difficult adolescents.

STAGE VI: Evaluation

The evaluation of the ARCH project involved using a continuous collection of qualitative data. The data were archived in coordinator's weekly reports, board minutes, correspondence, a series of quarterly reports and systematic data collection at the conclusion of each stage of activity. Site visits were also conducted for evaluation and information sharing purposes. The evaluation has led to several generalizations about the impact of the ARCH process.

1. Informal contact and communication in the consortia led to new formal ties. This is networking in the most positive sense.

2. Boundaries are redefined for health care purposes when consortia are formed. People begin to think in terms of collective potential or what "we" can accomplish together.

3. Cooperative efforts lead to improved local opportunities for education. This in turn leads to improved local skills and better quality in local care. It also does so without the expense of exporting people for education.

4. Affordability is enhanced with increased critical masses that are formed in the coalitions forged in consortia.

5. New ownership patterns emerge that, like the CHSO, provide for cooperative ownership. This ownership assumes psychological as well as financial implications.

6. The activity of assessing local needs and delineating wants leads to activity as a spinoff even in the absence of ARCH sponsorship.

7. New organizations emerge and new sources of support emerge as change occurs. Every community that sought local financial support was pleasantly surprised at the willingness of the local community to invest in good ventures.

Conclusions

The ARCH demonstration project represents an attempt to apply a model for social change in the context of rural health care. The activity is clearly goal directed, with the objective of enhancing the viability of rural hospitals and medical services. This application of a locality development has been productive of significant change and has contributed to the goal of more viable rural health services. The context of rural services changed drastically during the course of this demonstration project, yet new service activities and support activities have resulted, each of which serve to strengthen local services. The self-help nature of locality development would appear particularly appropriate for this time in history as the external supports common in the past have largely been eliminated and the forces of a free market have become dominant in the 1980's. We are gratified that the locality development approach of ARCH can contribute, but in no way does it represent a panacea. The adversity of the context is substantial and for rural communities in sparsely populated areas, legislative attention would appear essential to ensure adequate quantity and quality of health care. Additionally, as a demonstration project, ARCH did experience a range of problems not reflected in the foregoing discussion and largely beyond the scope of this brief paper. Among the problems were issues such as the division of loyalties and responsibilities for those coordinators who divided their time among three sites. This did not prove to be an ideal arrangement and eventually each local project developed a way of having their own coordinator. A second initial issue was the use of women coordinators in rural environments where males have traditionally dominated. The issue of sexism was important to the coordinators during the early stages while they were gaining acceptance and exacerbated the suspicion that normally surrounds new activities. It did not, however, prove to be an issue that could not be overcome. One final issue of importance to those examining the foregoing reconstruction of the change process refers to the use of information. The model mandated the collection and analysis of data to ensure informed decisions, yet many local board members joined the board assuming that they already knew what the problems

were and had "agendas" in mind from the onset of their participation. The value of this information developing activity was difficult to persuade board members of, especially if the information appeared to bear a negative message about the image of local services.

The foregoing paper chronicles a process for stimulating social change at the grass roots level. It has been presented as a reconstruction of the process. There were barriers along the way to success that may constitute another paper in the future. We conclude that the application of locality development did work to produce changes in health care that were generated by local groups. Under conditions that mandate greater use of local initiatives, the systematic use of locality development has been demonstrated to be effective for improving local health services.

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