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Southern Rural Access Program: An Overview

Michael Beachler, MPH; Curtis Holloman, MA; and James Herman, MD, MSPH

ABSTRACT: *Rural residents experience significant disparities in health status and access to care. These disparities and access barriers are particularly prevalent in rural communities in the South. The Southern Rural Access Program, a national program of the Robert Wood Johnson Foundation, was designed as a long-term effort to improve access to basic health care in 8 of the most underserved states in the country. The program was launched in 1998 with 3 goals: (1) to increase the supply of providers in underserved areas, (2) to strengthen the health care infrastructure, and (3) to build capacity at the state and community level to solve problems. The first 3-year phase of the program made $13.8 million available to communities in the 8 target states, and a January 2002 reauthorization of the program will make an additional $18.9 million available in the next 4 years. This article will provide an overview of the Southern Rural Access Program, focusing on the development and evolution of the program during its first 3-year phase. The article will also highlight some of the refinements that the foundation has made during the 2002–2006 second phase of the program.*

Dr H. W. Stephenson practiced medicine in Walker County, Alabama, in 1935. He was the only doctor left in a coal-mining region that had recently supported 7. Unemployed coal miners could barely afford groceries, much less doctor's bills. For a year he had tended their medical needs but now "they cannot pay, and he could no longer work for nothing." [1] He believed that "the doctor is the forgotten man during these trying days."

Time hasn't changed much in rural America, has it? This excerpt from *Alabama: The History of a Deep South State*[1] is just as relevant today, since it accurately describes the dilemma many rural communities in this country face in obtaining needed medical services. High poverty and unemployment rates contribute to disproportionately high rates of uninsured. These factors combined with poorly funded educational systems make it difficult to recruit and retain physicians, dentists, nurse practitioners, and others and to sustain needed facilities, such as hospitals and clinics, in rural areas.

The problems are particularly acute in the South. More than 40% of the country's population identified as living at or below the poverty level reside in the South. A persistently poor county is defined as one that has had 20% or higher poverty rates for the preceding 4 census counts. There are 535 persistently poor nonmetro counties in the nation. The South is home to 345 or 64% of these counties.[2]

Southern states consistently rank high in the percentage of the population that is uninsured. Federal Bureau of Health Professions data indicate that southern states also rank high in the percentage of the population living in primary care health professional shortage areas. Rural areas have the lowest concentration of active dentists (compared with urban and suburban communities), and the South is the region with the most acute dental supply problems. Not surprisingly, recent federal figures indicate that nonmetro residents in the South are least likely to have seen a dentist in the past year.

Southern states also consistently rank among the least healthy states in the country. *America's Health: United Health Foundation State Health Rankings*[3] ranks Louisiana as the unhealthiest state, followed by Mississippi, South Carolina, and Arkansas. Alabama, West Virginia, and Georgia also rank among the 10 least healthy states. These state rankings consider multiple factors, including infant and overall mortality rates; heart disease rates and risk for heart disease; cancer and infectious disease rates; premature, occupational, and motor vehicle deaths; smoking rates; activity rates; health insurance coverage; and number of children in poverty.

Our thanks to Floyd Morris, Elize Brown, and Anne Weiss, our senior program officers at the Robert Wood Johnson Foundation, for their initial advocacy and ongoing guidance for the Southern Rural Access Program. Special thanks to Nancy Kaufman, Paul Jellinek, Ruby Hearn, and Steve Schroeder of the foundation for their mentoring and leadership skills that led to the development of this important initiative in the most underserved region in the country.
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This concentration of health care access barriers and poor health status rankings were major factors that influenced the Robert Wood Johnson Foundation (RWJF) staff in 1996 and 1997 to consider the development of what eventually became the Southern Rural Access Program (SRAP). Another factor that influenced foundation staff was the recognition that, for a variety of reasons, the national competitive demonstration model that dominated the foundation's grantmaking had not been successful in reaching the most needy communities and regions in the country.

An internal staff review of health care access and state reform investments made from 1992–1996 compared the foundation's investments in Mississippi, Louisiana, South Carolina, Alabama, and West Virginia (the 5 rural states with the highest proportion of residents living in health professional shortage areas) with investments in a medium-sized "progressive" state, Minnesota. The "Needy 5" have roughly 3 times as many residents, 7 times as many uninsured and poor people, and 17 times as many residents living in shortage areas as Minnesota. Yet during the 1992–1996 period, RWJF awarded more access-related grant funds to Minnesota, and when state reform investments are included, then the "Needy 5" received only 76% of the funds that were awarded to Minnesota during that period.

All of these factors combined to create significant momentum for the development of a regional program to help rural, underserved communities in the South. Like many foundations, the RWJF turned to its previous experience with rural programs to guide the development of what became the SRAP.

RWJF and Rural: Programs That Influenced the Design of the SRAP

Historically, the RWJF has not developed many demonstration grant programs explicitly targeted to underserved, rural areas. An early exception was the Rural Practice Project that was developed in 1975.[4] The Rural Practice Project allocated $12 million to support up to 25 projects that developed administrator-physician teams to build not-for-profit primary care capacity in underserved rural areas. A second early effort was launched in 1981, the Rural Hospital Program of Extended Care Services.[5] The $6.5 million program provided funding for 5 state hospital associations and 26 rural hospitals in those states to convert acute care beds to swing beds.

A number of RWJF programs launched in the mid-1980s and early 1990s more directly influenced the design of the SRAP. The first effort was the Hospital-Based Rural Health Care Program, a $9 million grant program started in 1987 that was designed to (1) strengthen the ability of rural hospitals to provide a high quality of care and (2) promote the financial stability of these institutions. In addition, a total of $7.5 million in low-interest loans was made available to grantees to upgrade or expand their service capacity.[6] This program fostered the development of hospital-led, rural health networks. These rural, hospital-led networks used grant funds to develop shared-services programs, plan joint professional recruitment, and develop primary or specialty clinics through the cooperative efforts of participating hospitals.

A second effort was the foundation's only demonstration ever launched that targeted a specific geographic region of the country. This was the Healthy Futures Program: A Program to Improve Maternal and Infant Care in the South. The 4-year $7.2 million program, also launched in 1987, targeted the 19 states that belonged to the Southern Governors Association because these states had the highest infant mortality rates in the country. The foundation invested in 6 state health agencies, and the federal government, using essentially the same program design, funded 6 additional states through its Healthy Generations program. (The other 7 southern states did not receive any funds in this "limited competition" approach.) An important contribution of the Healthy Futures program was that it demonstrated the potential advantages of "regional learning" that might occur from states that had similar health care systems and policy cultures. Healthy Futures grantees were particularly adept at borrowing and adapting each other's grant funded interventions and policy strategies and crafting similar continuation funding approaches.

The foundation launched a cluster of 3 primary care–oriented grant programs in the early 1990s that also influenced the design of the SRAP. The program with the greatest influence was Practice Sights: State Primary Care Development Strategies, a $16.5 million effort launched in 1992.[7] This program challenged states to improve the distribution of primary care providers in underserved areas. Organizations with statewide impact (such as government agencies, state primary care associations, state universities, or state Area Health Education Center offices) in collaboration with local community provider groups and health profession schools worked to develop models to recruit, retain, and support primary care physicians, nurse practitioners, physician assistants, and certified nurse midwives in medically underserved areas. The program had a loan fund component to increase access to capital resources and also worked to improve state-funded health workforce programs as well as state financing policies and practice environments to help communities keep their medical personnel.

Each of the 10 states that received 4-year grants chose to focus its efforts on rural (rather than urban) underserved areas, a clear indication of the more formidable barriers that rural communities face in their states. Practice Sights has influenced the recruitment, retention, and loan-fund efforts found in the SRAP.[8]

The influence of the Generalist Physician Initiative[9] and Partnerships for Training Program[10] on program design was more subtle and modest. Both of these programs focused on the supply side of the primary care workforce issue and neither program explicitly targeted rural areas. The Generalist Physician Initiative provided $32.7 million in grants to medical schools to work with partners to devise strategies aimed at 4 critical points in medical education: admissions, undergraduate medical education, residency, and entry into practice. The Partnerships for Training Program, launched in 1995, provided $16.5 million in support to university-led or Area Health Education Center-led collaboratives that used nontraditional techniques such as distance learning and cross-disciplinary courses to train nurse practitioners, certified nurse midwives, and physician assistants in their home communities. Since these health professionals were being educated in their home communities, they were more likely to practice in those communities when their training was completed. A contribution of these programs was the admissions and/or "grow your own" strategies used by a number of the grantees. These interventions were consistent with the research evidence that indicates that the greatest predictor of rural practice is whether the health professional student is originally from a rural area.

The Southern Rural Access Program

When the RWJF decided to target the South, foundation staff felt a different grant-making approach was needed to increase the chances for making progress in a region with such a concentration of access problems. So although the program borrowed or adapted some of the interventions from previous RWJF programs, it also has developed some unique design features that differentiate the SRAP from other RWJF efforts.

The SRAP was designed as a grant program that preselected the 8 targeted grantee states, all of which were in a specific region of the country. The foundation invested in this regional approach in the belief that regional clusters of states would be more likely to learn from one another. The 8 target states are Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, West Virginia, and Texas (the program targeted only eastern Texas defined by foundation staff as public health regions 4 and 5). The states were selected in recognition of the severity of their health care access and health status problems, as well as the comparative lack of RWJF investment in these states.

All the states are geographically contiguous, except West Virginia. West Virginia has similar health care access problems as the other target states, but it was the willingness of the Claude Worthington Benedum Foundation to provide matching support for the program that was the pivotal factor in the inclusion of West Virginia in the program. In early 1997, RWJF staff approached senior Benedum staff regarding their interest in a grant-making partnership in the program. When Benedum staff indicated a strong interest in this grant-making partnership, a decision was made to include West Virginia in the program.

The RWJF recognized that it would need to make a long-term investment in the program if it wanted to increase the chances for success. Building the leadership and institutional capacity to improve health access in these underserved states was an ambitious goal that would take considerable time under any circumstances. So the program was designed as a "long-term intensive effort." The foundation authorized an initial 3-year phase, providing $13.9 million in grant support during this period, with the first grants starting in November 1998. In the initial request for proposals, the foundation indicated that "based upon the lessons learned from this first phase, the Foundation plans to support subsequent phases of the program."[11]

The SRAP also uses a more complex and multifaceted grant-making approach than most RWJF programs. The foundation believed that no single intervention by itself was likely to improve access to care, and the most promising approach was to combine promising interventions and work in these states during a sustained period.

The 4 strategic components of the core program include efforts designed to:

- Establish a cadre of health professions students from rural communities committed to becoming leaders in rural areas.
- Help rural communities recruit and retain family practitioners, nurse practitioners, physician assistants, dentists, select medical specialists, and other needed health professionals.
- Build rural health networks that make health care delivery more efficient (eg, development of group purchasing programs) and/or use community development collaborative approaches designed to improve access to specific services.
- Establish a revolving loan fund to help rural doctors, clinics, hospitals, and other providers secure capital financing at terms and conditions that better meet their needs.

The program's access improvement strategy is clearly not comprehensive because it does not address one the most fundamental access barriers: affordability of health care for poor rural residents. The program did not include a major health coverage expansion component because RWJF was launching 3 programs around the same time (Covering Kids, State Coverage Initiative, and Communities in Charge) that were working at the state or community level on health care coverage and innovative care financing arrangements for the medically indigent. The foundation anticipated that at least some of these programs would reach the SRAP states.

The SRAP paid greater than usual attention to partnering and leveraging additional resources from philanthropic, local, state, and federal resources. Almost all philanthropies recognize that it is essential to leverage additional resources to both build the program and sustain the effort over the long haul. Many RWJF programs focus on securing matching sources at the local or state level. It is rare for an RWJF program to be structured to also encourage additional leveraging resources from a wide range of federal agencies (eg, federal Office of Rural Health Policy, Bureau of Primary Health Care, Bureau of Health Professions, Medicaid, US Department of Agriculture [USDA], Small Business Administration, and the Department of Treasury).

It is even rarer for an RWJF grant program to attempt to partner with local philanthropies, particularly at the outset of the program. The SRAP was structured to encourage such partnerships to develop with local philanthropies through the program's fifth program component, the 21st Century Challenge Fund. The 21st Century Challenge Fund is a matching grant initiative designed to support innovative pilot access-improvement demonstrations or small analytic projects. Particular attention is paid to partnerships that involve local or regional philanthropies willing to co-fund projects. This program element provides a greater opportunity to be responsive to the high-priority needs defined by the local communities and also takes advantage of the local grant-makers' more intimate knowledge of the local rural community. It acknowledges that many great access-improvement ideas can be crafted by leaders of underserved rural communities. Of the $13.9 million authorized for the first phase of SRAP, $2.5 million was devoted to support 21st Century Challenge Fund projects.

Overview of Phase 1 of the SRAP (1998–2002)

The story of phase 1 of SRAP is best told through the 14 other articles that constitute this special issue of *The Journal of Rural Health*. This section will provide an overview of the lead agency partnership models, summarize some of the common program interventions and themes that the program has developed during these years, and introduce the articles in the special issue.

Each state was asked to select an agency to provide leadership for its grant-making effort. This lead agency was selected by a wide variety of key stakeholders who were present at applicant workshop meetings held in each state during the spring of 1998. These in-state application workshops (average attendance of 100 per state) increased visibility of the program and stimulated earlier than usual participation from community-level representatives, local and state-level philanthropies, and key state and federal (eg, USDA) officials who might participate in the program.

The lead agency–partnership models that have evolved are diverse. In 2 states (South Carolina and Georgia), the lead agency is the State Office of Rural Health. The state Primary Care Association serves as the lead agency in Alabama and Mississippi. The Arkansas Center for Health Improvement (ACHI), a new state health policy center type of agency, serves as the lead agency in Arkansas. The SRAP grant was the first major project of ACHI when it was formed through the partnership of the Arkansas Department of Health and the University of Arkansas for Medical Sciences, with start-up resources from the Winthrop Rockefeller Trust. The Louisiana project is led by a partnership of the 2 most powerful health institutions in the state: the Louisiana State University Health Sciences Center and the Louisiana Department of Health and Hospitals (which houses the State Office of Rural Health and Primary Care). A small neutral convening agency, the Center for Rural Health Development, provides leadership for the West Virginia project. Finally, the East Texas Area Health Education Center provides leadership for that state's 28-county project. Each lead agency's role has been to provide leadership for the project in its state, work with key stakeholders or boards to select the best strategies and projects in the 4 core components of the program, administer and provide support to multiple subcontractors, and in some instances implement the services itself.

The partners and subcontractors play an important role in these projects. Most times these agencies directly deliver the major program interventions in the underserved rural communities. This is illustrated in the Table, which summarizes Arkansas's SRAP efforts. The Arkansas Center for Health Improvement has subcontracted or partnered with 10 separate agencies to carry out programs in the underserved rural communities. Two additional agencies may be selected in the near future for ACHI's current phase 2 project. In addition, ACHI coordinates efforts with Southern Financial

Summary of Arkansas's Southern Rural Access Program Efforts*

Program	Role of SRAP Funds
Lead agency	
Arkansas Center for Health Improvement	Leadership, administration
Rural health networks	
Arkansas River Valley Rural Health Cooperative	Start-up support
Delta Hills Rural Health Network	Start-up support
Crittendon Community Health Network	Start-up support
Arkansas Center for Health Improvement	Network specialist (TA)
Mid-Delta Community Consortium	Network coordinator (TA)
Delta Network (to be announced)†	Start-up support
Recruitment and retention	
Delta Area Health Education Center (Helena)	Regional recruiter
Arkansas Medical Society	Practice management (TA)
Delta Area Health Education Center (Lake Village)	Regional recruiter
Rural leaders	
UAMS College of Medicine	Leaders coordinator (MD)
UAMS College of Medicine	Physician mentor
UAMS College of Nursing	Leaders coordinator (NP)
Cross-cutting	
Arkansas Department of Health	Grant writer
Loan fund lead agency	
Southern Financial Partners	Seed capital

* SRAP indicates Southern Rural Access Program; TA, technical assistance; UAMS, University of Arkansas for Medical Sciences; MD, medical doctor (allopathic physician); and NP, nurse practitioner.

† Selection of this subcontractor will be made in summer 2003.

Partners, the community development financial institution that has provided leadership through 2 separate grants for Arkansas's loan fund efforts.

The first 3-year phase of the program was designed to allow for considerable flexibility regarding program interventions selected by the grantees. Over time, however, grantees have adopted or adapted grant-funded interventions from one another so that there are some common themes between grantees. These themes are summarized herein for each major component of the program.

Rural Leaders. Most projects have supported health professional schools or Area Health Education Centers to provide services to nurture rural and disadvantaged college-level or graduate-level (eg, medical, nurse practitioner, or physician assistant) students. The projects have supported summer enrichment or year-long programs to bolster academic skills, provide leadership development experiences, help students with admissions and/or loan forgiveness and scholarship programs, and provide mentoring by either other students or clinicians practicing in underserved areas. Most of these projects are either explicitly designed to improve the diversity of the health care workforce or otherwise attract a large proportion of underrepresented minorities. In essence, most of these states have decided that the lack of the diversity in their primary health care workforce is a critical issue that needs to be addressed. The Alabama project profiled in this special issue is a fine example of the approach being taken by the states.[12]

Recruitment and Retention. Seven of the 8 projects are using grant resources to build recruitment staffing capacity at either the state or regional and community level. Several of these projects are taking interesting approaches that are described in this special issue.[13,14] All 8 of the projects are using phase 1 or phase 2 grant resources to hire practice-management specialists. This technical assistance service should help improve the financial and operational efficiencies of physician practices, certified rural health clinics, community health centers, hospitals, and other providers.[15] A number of projects have used resources for analytic projects concerning recruitment and retention issues and 3 of them are profiled in this special issue.[16,17]

A final theme has been the development of locum tenems programs to provide relief for physicians practicing in underserved rural areas.

Rural Health Networks. Projects are using resources to provide start-up or enhanced staffing support for rural health networks. Some projects are using resources to provide state-level technical assistance support to help support the network movement in their state. Georgia's multifaceted strategy to promote community health systems development, Louisiana's promising approach to community network development, and the care financing strategy of the Arkansas River Valley Rural Health Collaborative are profiled in this special issue.[18-20]

Revolving Loan Fund. Projects are using resources to plan, staff, and market their loan efforts. The major use of RWJF grant funds has been to provide "unrestricted seed capital" to provide equity so that rural providers can secure loans. The experience of the 5 states with operational loan funds is described by Stewart et al.[21]

21st Century Challenge Fund. As of November 2002, the 21st Century Challenge Fund had awarded nearly $2.31 million to 16 grantees. Another $3.88 million had been secured from 27 philanthropic, municipal, state, educational, or other nonprofit sources. The range of access improvement interventions that have been funded is broad, ranging from transportation expansion and coordination, oral health improvement, strengthening the emergency medical system, and pharmaceutical assistance for the medically indigent to disparity reduction efforts involving diabetes, cancer, or hypertension. Two innovative projects, West Virginia's nonemergency medical transportation project[22] and the Smile Alabama oral health improvement project,[23] are profiled in this special issue.

The Foundation's Reauthorization of SRAP

In early 2001, foundation staff started a process that lasted about a year to decide how they should structure the second phase of the SRAP. The RWJF staff made several site visits to the states and secured considerable information from the National Program Office at the Penn State College of Medicine and the grantees. Two other sources of information affected the foundation's reauthorization decision: program logic information[24] from the independent evaluation of the SRAP conducted by the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill and a commissioned assessment of the program that was conducted by the University of Southern Maine's Institute for Health Policy (A. F. Coburn, J. A. Gale, A. Katz, and W. W. Myers, unpublished data, October 15, 2001).

In January 2002, the foundation's trustees authorized $18.9 million over 4 years in additional grants for the 8 states participating in the SRAP. Phase 2 of the program represents both continuity and change. Phase 2 will continue to focus on rural health leadership development, recruitment and retention of providers, rural health network development, and revolving loan fund development. The 21st Century Challenge will continue at a slightly smaller scale, with $1.5 million of the authorization dedicated to these grants.

Four major modifications were also made to the program. First, emphasis has shifted from statewide and geographically dispersed projects to more geographically concentrated projects. In essence, each state was required to focus on a specific high-need geographic region selected by their key stakeholders or governing boards. The foundation hoped that by clustering or layering interventions in smaller, more defined communities, significant and measurable changes will occur that can be sustained.

A second change was that the foundation informed states that a narrower range of interventions would be funded in the second phase. Foundation staff believed the program was too flexible and that greater synergy would occur if the range of interventions funded were narrower. The 3 policy analyses on recruitment and retention issues profiled in this special issue are examples of projects that will not be funded in phase 2.

A third significant change to the program is the declining funding levels set for years 2, 3, and 4 of the reauthorized program. To encourage sustainability at the end of the foundation's involvement, the funding level for core grants would be gradually reduced such that sites would be funded at 50% of core activities by the fourth year.

Finally, the foundation set aside $600 000 of the authorization for an effort to help the 8 states plan for a single regional forum. This new effort will provide resources for a single regional forum owned by them, rather than RWJF or the national program office. This structure could serve as a forum for sharing best practices, developing technical assistance resources, and conducting data/policy analysis and other core functions.

Each of the 8 SRAP grantees have selected their target regions and in 2002 received an additional 2 years of core funding to sustain them until spring 2004. Three of the grantees, Arkansas, East Texas, and West Virginia, have also received separate seed capital grants to build their revolving loan fund efforts.

Conclusions

The SRAP most likely represents the most significant investment of philanthropic resources ever made to help improve care in underserved rural areas. The effort has the potential to help 8 underserved states and multiple communities make progress on important health care access and rural health infrastructure problems. Like all grant programs, some efforts will succeed, others will have mixed success, and some investments will just not work. The following articles in this special issue will illustrate many of the important efforts being launched or influenced by this grant program. We will emphasize some of the significant challenges and lessons learned, as well as the considerable successes to date of SRAP. We believe that telling the story of the program in an honest and straightforward way can provide important lessons to the rural health field. The access barriers in the rural South may be more acute than in other regions, but there should be considerable relevance for all those interested in improving rural health care in America.

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Use of Program Logic Models in the Southern Rural Access Program Evaluation

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ABSTRACT: *The Southern Rural Access Program (SRAP) evaluation team used program logic models to clarify grantees' activities, objectives, and timelines. This information was used to benchmark data from grantees' progress reports to assess the program's successes. This article presents a brief background on the use of program logic models—essentially charts or diagrams specifying a program's planned activities, objectives, and goals—for evaluating and managing a program. It discusses the structure of the logic models chosen for the SRAP and how the model concept was introduced to the grantees to promote acceptance and use of the models. The article describes how the models helped clarify the program's objectives and helped lead agencies plan and manage the many program initiatives and subcontractors in their states. Models also provided a framework for grantees to report their progress to the National Program Office and evaluators and promoted the evaluators' visibility and acceptance by the grantees. Program logics, however, increased grantees' reporting requirements and demanded substantial time of the evaluators. Program logic models, on balance, proved their merit in the SRAP through their contributions to its management and evaluation and by providing a better understanding of the program's initiatives, successes, and potential impact.*

The Robert Wood Johnson Foundation's Southern Rural Access Program (SRAP) is an ambitious initiative to assist 8 states in the southeastern United States in building their rural primary care infrastructure. This program, the focus of this supplemental issue of *The Journal of Rural Health*, represents a substantial investment of foundation resources and significant effort from the many participating organizations in the Southeast. The SRAP offers promise for meaningful improvement in access to health care for some of the most challenged rural counties of the United States. Given the investment and importance, the foundation sought to evaluate this program to document its effects in the region and to learn how future similar initiatives could be strengthened. Foundation staff contracted investigators at the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill to plan and conduct the SRAP's evaluation.

Designing this evaluation posed many challenges, as would be expected of a program that supports a variety of initiatives implemented independently in each of 8 states on different schedules, each likely to change with the second funding phase. To meet the foundation's central evaluation goal, which is to understand the summative effects of the program throughout its duration, the initial evaluation design planned to track changes in primary care practitioner numbers in SRAP-targeted counties and changes in the population's use of health services and their perceptions of access and barriers to care. Improvements in practitioner numbers and access indicators would indicate the program's effectiveness. By measuring only these downstream indicators of overall program success, we could avoid the challenge of documenting the success and outcome for each of the many specific SRAP-funded initiatives in each state.

State grantees voiced reservations about this initial evaluation plan. They were concerned that practitioner numbers and access indicators were difficult measures to influence by interventions of any type, particularly during the brief 4-year term of our evaluation. They rightly feared that if we assessed only measures of long-term program impact, the evaluation might conclude that their efforts were unsuccessful even if they successfully carried out their initiatives and were on the

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way to achieving program goals. We understood this concern and sought an additional evaluation approach to capture shorter-term success.

We found our answer in an evaluation tool known as the program logic model. By helping grantees create logic models—documents specifying a program's implementation plans, early outcomes objectives, and target dates—then regularly collecting information from grantees on their progress in reaching the specified objectives, we could document early program successes. In choosing this evaluation approach, we did not anticipate the importance logic models would have in the planning, communication, and management work of the SRAP's participants or the amount of work the models would require of grantees and evaluation staff to implement and maintain. In the end, along with many SRAP participants, we concluded that logic models contributed significantly to the SRAP evaluation and to the program itself. This article describes our experiences with these models, highlighting the successes and confessing the problems encountered, and introduces this useful tool to others who will be evaluating or managing other rural and health programs.

Background to Program Logic Models

The program logic model concept is not new; its origins are in project management approaches such as the Program Evaluation and Review Technique and Critical Path Methods, which were used in developing the first nuclear submarine.[1] During the explosive growth of formal evaluation in the 1960s and 1970s, evaluators adopted causal pathways, which are at the heart of these methods. Evaluators have provided much of the recent development in using program causal pathways and hence, unfortunately, some of the arcane terminology; nonetheless, these tools are still used widely in program planning and management.[2-4]

Simply stated, program logic models are charts or diagrams that specify a program's planned activities, short-term objectives, and long-term goals.[4-6] There is no one set of components or structure required of all models; rather, each can vary with the needs for which they are to be used and program circumstances. Some models, referred to as *theory models*, emphasize the causal connections between a program's inputs and activities and its short- and long-term outcomes.[5] *Activities models* give more emphasis to a program's implementation activities, providing details on the sequential steps to be carried out in the program. Managers often find this type particularly useful as a blueprint to guide program implementation. *Outcomes models* focus on a program's intended results, such as the number of participants who are to complete a program and how program participants' attitudes or behaviors are to change as a result of their participation. Evaluators typically prefer outcomes models and theory models.

The key contribution of a program logic model is its ability to explicitly delineate in writing a program's features, goals, and rationale. For evaluators, if a program's goals and activities have not been articulated, it is virtually impossible to answer the questions, "Did this program successfully carry out its activities?" and "Did this program achieve it intended goals?" Often programs are designed, funded, and initiated with many of their features and goals only loosely specified. Without a mechanism that firmly establishes these program characteristics, project leaders and staff will each envision and pursue a somewhat different set of activities and outcomes. Clarifying these features early in a project not only provides evaluators with clear targets for assessing program success, but also gives program staff and managers an opportunity to build a shared understanding of the activities and goals they undertake together.[5,7] A clear, shared understanding can be key to program success.

Program Logic Models and the SRAP

Our primary interest in asking grantees to develop logic models for their activities was to clarify for the evaluation their initiatives, time frames, and measurable objectives. We anticipated that the process of developing program logic models was also an opportunity to build relationships with grantees, help grantees buy into the evaluation, and help us learn the details of their efforts. We also wanted grantees to find the development process helpful and to use their completed models: evaluation for us was not only about documenting ultimate program success or failure but also contributing to the program's work, bolstering its impact, and increasing chances of its success.[5] We envisioned that with program logics established and then regular progress reports from grantees, we could provide grantees and the SRAP's National Program Office (NPO)—the group working on behalf of the foundation to assist grantees and oversee their activities—with timely information on interim successes and problems, and grantees could modify their initiatives as needed.

The timing and participants of the SRAP were typical of the settings in which evaluators introduce logic models into programs. The states' projects had already been designed, funded, and initiated; the only written records of planned initiatives and expected outcomes were the often vague and sometimes inconsistent plans included in the proposals submitted as part of the funding process. Also typical was that grantees were wary of the evaluators from the start (not

inordinately so, but palpably cautious) as expected when one's work is being judged and future funding may be at stake. We knew that some grantees had experience with program logic models and were comfortable with the notion of specifying in writing their program activities and objectives. We recognized that for other grantees the models would be new and some would find the logic model approach stilted and the reporting requirements unnecessary work. Some staff would need guidance on how to report progress information based on explicit objectives and dates. The SRAP's NPO was concerned that the evaluation not place too many early demands on grantees already pressed to initiate ambitious projects. The NPO staff had more expertise and comfort with the intricacies of program management than formal quantitative evaluation.

The SRAP Model Design. We made a number of choices in designing and introducing program logic models to the SRAP. We attempted to keep the models as simple and jargon free as possible so they would be understood and useful to the grantees. We chose a hybrid model that combined elements of both the activities and outcomes models described herein. We asked grantees to specify the key steps they planned to take in implementing their initiatives and to specify measurable objectives. We asked them to include a brief general description of each initiative so that the logic documents were self-contained, understandable summaries of their programs that they could use with funding agencies, legislators, and others. To help them recognize the implicit rationale for their initiatives, the models were to include a statement of the ultimate goals of their programs, even though these goals probably would not be accomplished during the life of the project. These statements helped clarify for the evaluation how grantees envisioned that their projects contributed to rural health care access, the foundation's ultimate goal for the SRAP. Thus, the components of the program logic model used in the SRAP evaluation were (1) a brief overview statement of program activities, (2) a listing of implementation objectives, (3) a listing of early outcome objectives, and (4) a statement of the program's overall goal(s). The Table illustrates a page of a model from West Virginia's logic document for its revolving loan initiative.

The SRAP logic models did not incorporate 3 types of information often used in these models. We did not include detailed specifications of all program inputs (funding, personnel, existing networks, equipment), since we were not interested in assessing program *efficiency*, which one could measure by linking specific inputs to specific outcomes. To make models practical and acceptable to grantees, we also did not ask them to explain how each implementation step was linked to each outcome objective and to overall program goals. Furthermore, we did not ask them to specify theoretical causal models underlying how their programs were supposed to achieve desired outcomes[8]; the evaluation was not charged with assessing the validity of grantees' initiatives and their theoretical bases.

Drafting SRAP Logic Models. In drafting program logic models, we used an approach that is not often used. Typically, evaluators create the initial draft of a logic model based on available documents, then seek input from program leaders to refine the model.[5,7] We used the opposite approach: we had grantees create first drafts of models for which we then suggested modifications. We reasoned this approach allowed the grantees to understand that the program plans and goals represented in the models were theirs, not ours, and that future successes and failures in accomplishing these goals were also theirs.

There were challenges in asking grantees to draft logic models. Some grantees were entirely unfamiliar with the model concept and, obviously, none knew exactly what we expected in the document format chosen for this program, and we had never before instructed others in how to draft logic models. We took several steps to assist grantees:

- Initially, we asked only grantees of 2 states to craft logic models; these grantees had leaders who were familiar with the logic concept and with whom we shared good working relationships. This proved a good place to start.
- After helping us refine the process of drafting logic documents, project directors from the 2 states helped introduce the process to the other grantees in a peer-to-peer process. The first states' models were useful and reassuring examples for others. We asked the other states to begin preparing their logic documents when it was suitable for their work schedules, typically approximately 3 months into their projects.
- We prepared a practical ''how-to'' manual to help grantees with the steps in writing a logic document. In a newsletter to grantees, we provided background information about logic models. At grantees' semi-annual meetings, we presented sessions on how models were to be prepared and how they would be used in the evaluation. In this group setting, grantees learned from one another and we learned about common issues and problems.
- We gave grantees significant latitude in the design of their program logics and the amount of detail they contained. We required only that they retain the 4 model components listed previously and that their

West Virginia Rural Health Access Program Loan Fund Evaluation Logic

Description	Implementation and Outcome Objectives	Programmatic Goals
Development of the West Virginia Rural Health Infrastructure Loan Fund	Implementation: By February 29, 2000, a marketing and technical assistance procedure will be developed using the Loan Fund manager and other sources for technical assistance. Outcome: By March 31, 2000, the following operational components will be in place: • Loan fund operating policies and procedures • Insurance coverage • Tier I and tier II applications • Loan committee • Contracts for Loan Fund administrator and B&FA • Engagement letter for loan closings	Rural providers will have available an affordable source of capital to improve access to health care services in their communities.
Marketing of Loan Fund	Implementation: By December 31, 1999, and continuing through the project period, marketing presentations will be conducted at membership meetings of health provider associations and West Virginia bankers association/other financial organizations. By March 31, 2000, and continuing through the project period, marketing letters and other marketing efforts will have been conducted with the following: • Banks and other financial entities • Health care providers (potential borrowers) By August 31, 2000, the following marketing components will be developed for the Loan Fund: • Web page • Term sheet • General brochure	
Issuance of loans	Outcome: The Loan Fund will be operational and will have *facilitated the issuance* or issued 9 loans to a diverse array of rural health providers by November 30, 2001, as follows: November 30, 2000: 2 loans November 30, 2001: 7 additional loans By November 30, 2001, the target volume for the loans issued will be $2.5 million	
Increasing Loan Fund capital pool	Outcome: By November 30, 2000, and continuing through the project period, additional sources of capital will be sought for the Loan Fund.	

objectives be adequate in number, measurable, and include target completion dates. The firmest requirements were for grantees to include 10 specific outcome objectives we would use in program-wide assessments for each type of initiative. For example, a uniform assessment of all revolving loan programs required grantees to include objectives specifying the number of loans to be written and total dollar amount of these loans.

Helping grantees prepare their program logic documents was a lengthy one-on-one iterative process: they prepared drafts, we noted needed changes and offered suggestions, they revised their earlier drafts, we gave more feedback, and so on. When each model was reasonably polished, grantees sought input and final approval from the NPO, an essential last step. Although we could help grantees craft clear, measurable objectives, as evaluators it was not our role to approve the targeted outcomes and timelines for their projects; this role rightfully fell to the NPO. For example, we could help grantees specify an exact number of learners who would complete a curriculum and help them set a target date, but it was up to the NPO to approve the particular number of learners and date selected. In most cases the NPO accepted the grantees' generally ambitious targets; when necessary, new objective targets and timelines were negotiated. Consequently, grantees and the NPO, not the evaluators, set the objective thresholds the evaluation later used to judge success.

Collecting Progress Data From Grantees and Reporting the Findings. Initially, we anticipated that

grantees would provide us with quarterly, stand-alone reports on their progress in achieving their objectives. Early on, the NPO director suggested that we instead combine the information we needed from grantees with the information his office needed in its program management role. We agreed on a shared quarterly report format on which grantees (1) indicated their progress in reaching objectives targeted for completion since their previous report and (2) reported on particularly noteworthy successes and challenges. Over time the reporting requirement was reduced to 3 times per year. Grantees generally accepted the program's reporting requirements and appreciated all efforts taken to ease the work demanded.

For purposes of tallying information for the evaluation, we created a database of objectives and target dates from each state's logic model. When progress reports were received from grantees, 2 evaluation staff members coded each database objective (variable) that was to have been completed during the reporting period as completely met, partially met, or not met. We also coded if the objective had been met within 30 days of its target date. Incomplete or unclear information in the reports was clarified with grantees.

At several points during the first phase of the SRAP, we tallied the number and percentage of objectives completed and prepared brief reports with this information for grantees, the NPO, and the foundation. On the reports, we indicated success separately for reaching implementation objectives (eg, that a loan program marketing plan was established) and outcome objectives (eg, the number of loans written). Information was presented separately for each type of initiative (eg, for revolving loan initiatives and health professions pipeline initiatives) by summing the data for all 8 states; the relative progress of individual states was generally not assessed. We attempted to maintain a nonthreatening, confidential, and collegial atmosphere in reporting on program progress. The information was intended to help all program participants understand the overall and specific successes of the program and learn how to strengthen their initiatives in the coming months and years.

The NPO and evaluation staffs received the same progress reports from grantees but handled the information differently. For their program management responsibilities, the NPO was more interested in the grantees' descriptions of the hurdles and accomplishments in their activities, especially if these affected whether implementation and outcome objectives would be met. The NPO staff responded promptly and directly to grantees if they had suggestions and assistance to offer. Quantitative tallies of objectives that were or were not met were less useful to their role.

The Contributions and Difficulties of Logic Models in the SRAP. It is a given that no evaluation tool works perfectly or without problems; this is true for how the logic models functioned in the SRAP. We discuss next the key contributions logic models made to the SRAP and the difficulties encountered. These judgments are based on both formal and anecdotal information from a variety of sources. For validation, we shared these assessments with several grantees, the NPO, and foundation staff.

Contributions. For the evaluation, program logics were valuable in clarifying grantees' implementation and early outcome objectives and in providing a useful framework for their progress reports; these were the primary reasons we used logic models in the SRAP. Grantees' detailed models and progress documentation indicated that grantees reached three-quarters of their 835 objectives. This brought recognition of the great volume, work, and successes of their activities and painted a convincing picture of an ambitious program that was accomplishing many of its initial goals. This helped the foundation staff recognize that the SRAP, previously viewed as diffuse and overly ambitious, had demonstrable substance and accomplishments and helped persuade the foundation to proceed with funding the SRAP's second phase. Logic models also yielded indirect benefits to the evaluation, including visibility and acceptance of the evaluators by the grantees.

Program logic models also proved useful in managing the SRAP. A foundation-commissioned external assessment of the program in fall 2001 concluded that "grantees acknowledge the value of the logic models in requiring them to carefully consider and develop their program implementation plans."[9] This assessment even went on to suggest that logic models "should be seen as management and program monitoring tools rather than evaluation tools." Anecdotal reports from grantees stated that the process of setting measurable objectives for the program logics was a welcome stimulus for frank discussions between many lead agencies and their in-state SRAP partners: finalized models became de facto contracts with which lead agencies could monitor the many subcontractors carrying out their SRAP initiatives. Program logic models also helped build a shared understanding between the NPO and grantees of their activities and helped the NPO shape grantees' initiatives early in the program's first phase. Regular reports that documented grantees' objective attainments gave the NPO a means to closely monitor the program.

As evidence for a general appreciation of the contributions of the logic models to the SRAP, foundation staff and the NPO required grantees to submit draft models with their proposals for the second

phase of the SRAP. These were used to help for funding decisions clarify the content, objectives, and timing of the grantees' proposed initiatives. Because logic documents proved themselves useful as a management tool, the NPO assumed primary responsibility for helping grantees develop their second-phase models.

Difficulties. Program logic models, as used in the SRAP, were not without problems. Some grantees, despite overall acceptance, found the reporting requirements burdensome. Grantees tended to provide far more detail about their activities, accomplishments, and setbacks than we needed. We suggested ways they could shorten and simplify their reports; nevertheless, the need for lengthy explanations remained strong. In hindsight, grantees should have been given firmer guidance to limit the number of implementation objectives they set in their logic models. Grantees learned from their phase 1 experiences and most reduced the number of implementation objectives in their phase 2 logic models. Measuring accomplishments against pre-specified objectives also frustrated some grantees when they altered their projects and objectives mid-course to meet implementation realities.

For us, a greater issue was that the reports, despite their length, often did not indicate clearly if objectives had been met and were on schedule. This seemed to happen because grantees saw their projects in all their nuances and complexity and found it difficult to reduce an evaluative assessment of their work to a yes or no statement. Follow-up calls were required to clarify accomplishments and timing.

Despite the promise of objectivity that logic models bring to an evaluation, the SRAP participants came to understand that some aspects of models were malleable and subjective. The latitude the grantees had when independently establishing their program objectives, for example, made it hard for us to make direct comparisons of their successes in meeting their objectives: we could not expect that grantees "set the bar" for their efforts at the same height. In the progress reports, there was often an element of subjectivity in deciding if some objectives had or had not been achieved; deciphering grantees' progress reports also introduced an opportunity for interpretation error. There was even plasticity when using logic models and progress report data to arrive at a bottom-line assessment of the SRAP's success; there is no clear and generally accepted threshold of the percentage of objectives a program must meet to be deemed successful.

The time required to craft logic documents with 8 grantees and code and enter the data from their progress reports proved far greater than we had anticipated. Our timeline for creating logic documents with grantees stretched from a planned 3 months to 14 months. Receiving progress report data from grantees also often was delayed: the few months planned for gathering final report data at the end of the first phase stretched to 10 months.

Conclusions

Program logic models, an accepted evaluation and management tool, made important contributions to the SRAP. Models contributed to a better understanding of the program and its intent by formally articulating grantees' activities, objectives, and aims. Structuring the program into linked details helped program managers plan and monitor the activities they supervised and kept activities focused on planned objectives. Information from the logic models was central to us as evaluators in understanding and documenting grantees' implementation and early outcome successes. Together these benefits helped the foundation to better understand its program and contributed to the overall success of grantees' work and the impact of the SRAP. The principal difficulty encountered in using program logic models was the development effort it required of the evaluators and reporting burden it placed on grantees. Although not an easy or quick tool to use, program logic models proved their merit.

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A Description of the Southern Rural Access Program's Practice Management Strategies

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ABSTRACT: ***Context:*** *Many state, federal, and foundation resources have been invested in improving the recruitment of primary care providers to rural communities. The Southern Rural Access Program of the Robert Wood Johnson Foundation (RWJF) has provided varying levels of support to several southern states to assist with retention of those providers.* ***Purpose:*** *This study describes the strategies that 6 states used to develop and implement practice management technical assistance services for rural health care providers.* ***Methods:*** *Practice managers in each of the 6 states were surveyed regarding how their service was structured, what types of entities were eligible, and the nature of the technical assistance offered. Information regarding what types of entities used the service, characteristics of the practices, and the number of practices served was also collected.* ***Findings:*** *The survey results showed that almost half (46%) of all practices assisted were private stand-alone physician practices, with overall practice assessments being the practice management service rendered most often. Although the type of organizational home for the technical assistance services varied by state, overall states employed an average of 1.67 full-time equivalent practice managers (0.81 full-time equivalent supported by RWJF) and received an average of $136 055 per state from the RWJF for the 2-year period beginning April 2002 for practice management support.* ***Conclusions:*** *Overall, the study found that the type of organizational home did not appear to affect the type of technical assistance services offered. However, the type of organizational home did appear to affect what types of providers used the service, with trade associations assisting their members or constituents at least half the time.*

Throughout the last several decades, many state, federal, and foundation resources have been focused on improving the number and distribution of rural health providers.[1] Despite these efforts, rural communities continue to face many challenges in the recruitment and retention of health care providers. Underserved communities often struggle with identifying qualified candidates, securing incentive or loan repayment resources, and providing adequate practice facilities to recruit providers. Community leaders often focus their energy on the initial recruitment of providers and spend comparatively less time on retaining health care professionals. Similarly, health services researchers often place greater emphasis on recruitment, compared with retention, when examining provider shortages.[2,3] As rural community leaders examine potential barriers to retention, financial issues often come to the forefront. The ability of a rural provider to establish and maintain a financially viable and operationally sound practice is an important factor in retention. Stensland et al[4] cite lack of assistance with the "business side" of the practice as a major factor in why rural primary care physicians sell their practices. Increasingly, providers are realizing that their practice's financial health is paramount to its success.[5]

In an attempt to address the financial viability of rural health care facilities and rural physicians in several southern states, the Southern Rural Access Program (SRAP) of the Robert Wood Johnson Foundation (RWJF) has provided support to 6 states in the development of practice management technical assistance services. This study describes the different models and approaches used to enhance the financial viability and practice environment of rural providers in Alabama, Georgia, Mississippi, South Carolina, East Texas, and West Virginia. The study highlights several program design issues that can affect utilization of practice management technical assistance services. Although effective practice management services can likely enhance the retention of rural providers, due to the SRAP's infancy this study will not report on the possible impact on provider retention. The intention of this study is to describe

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different models of practice management technical assistance for possible replication by other states. For the purposes of this article, the financial viability of a practice addresses the level of financial stability that a practice must sustain and achieve to avoid negatively affecting a provider's retention.

SRAP Overview

The SRAP has used the development of state-based practice management programs as a strategy to build service capacity aimed at retaining medical providers in underserved rural areas. Each state participating in the SRAP has a designated lead agency that serves as the fiscal and programmatic intermediary between the SRAP and health care providers and organizations in their state.

When developing the practice management technical assistance programs, the SRAP lead grantee agencies identified organizational partners that were capable of developing, implementing, and administering a program that would provide services to rural practices in need of specialized practice management assistance. The lead agency in 5 of the 6 states decided to contract with an outside regional or statewide entity to implement its state's practice management efforts. In Alabama, the lead SRAP agency developed the service internally. In each state, practice management specialists and consultants were hired to market the services and provide direct technical assistance to rural health care providers. At the time of this writing, the projects' operational histories ranged from more than 3 years for South Carolina to approximately 6 months for West Virginia.

Practice Management Programs by State

Alabama. The Alabama Primary Health Care Association, a professional association of federally qualified health centers, has provided leadership for the state's practice management effort since fall 2001. One full-time coordinator provides the staffing for the project that targets private physician offices, community health centers, certified rural health clinics, rural hospitals, and other practitioners in the project area. Specifically, the program targets 18 counties designated as health professional shortage areas (HPSAs) in the ''Black Belt'' region of Alabama, with an approximate population of 350 000 people. The technical assistance offered addresses both fiscal and practice efficiency issues. On-site assistance is provided in the areas of billing, coding, reimbursement, patient flow, and scheduling.

Georgia. Georgia's project is led and administered by the Medical College of Georgia's Statewide Area Health Education Consortium (AHEC). Practice management services began in spring 2001 with 3 consultant specialists serving primary care physician practices, community health centers, and certified rural health clinics in the target region of Southwest Georgia. Services are targeted to Medicaid providers in 29 counties, with a total population of approximately 520 000 people. Most of the target counties are designated as HPSAs. Services address fiscal issues, such as billing, coding, and revenue maximization, as well as practice efficiency issues, including patient flow, scheduling, financial policies and procedures, human resource management, and corporate compliance.

Mississippi. The Mississippi Hospital Association has provided leadership for the practice management technical assistance program since fall 2000. Four full-time coordinators provide technical assistance to both ambulatory care providers (certified rural health clinics, community health centers, and private physicians) and outpatient and inpatient services at rural hospitals. Services target the Delta region, encompassing 31 counties in the Northwest and Southwest portions of the state with a combined population of more than 692 000 people. Most of the counties are federally designated HPSAs. The program's focus is on improving operational and financial efficiency, including overall practice assessments, billing, and coding.

South Carolina. The South Carolina Medical Association provides leadership for the state's practice management technical assistance program. The project started operations in fall 1999 and employs 1 full-time practice management specialist. Practice management assistance is provided to rural physician practices, certified rural health clinics, community health centers, and small rural hospitals. South Carolina has chosen to focus its initiative in 17 counties in the Pee Dee and Low Country regions of the state, with a total population of 663 500 people. All targeted counties qualify as entire or partial-county HPSAs. The practice management service offers coding, billing, documentation review, financial policies and procedures, new physician office start-up, collections assessment, fee analysis, super bill correction, medical records procedures, and compliance plan and audit. Additionally, the service assists clients in obtaining information regarding low-cost educational offerings to help comply with provisions of the Health Insurance Portability and Accountability Act.

East Texas. The East Texas project, housed at the Coastal Area Health Education Center, has been operational since winter 2001. One full-time practice management specialist offers technical assistance ser-

vices that focus on improving the operational and financial efficiency of certified rural health clinics, community health centers, and primary care and specialist private practices in the region. The targeted region is composed of 16 counties in the eastern part of the state, with a population of nearly 495 000 people. Eight of the counties are designated as geographic HPSAs and 6 counties are designated as partial low-income population HPSAs. The project provides technical assistance through both group workshops and individual consultations. Services offered include on-site practice assessment and focused reviews of a specific operational area (eg, patient flow or billing and collections).

West Virginia. The Center for Rural Health Development established Appalachian Health Solutions Inc to provide practice management consultation services to rural providers in West Virginia. The practice management technical assistance service, initiated in spring 2002, employs 1 full-time practice management consultant. Services are available to a variety of providers, including private physicians, community health centers, certified rural health clinics, and other practitioners in underserved areas. The effort focuses on 25 counties, with an approximate total population of 782 000 people, spanning the southern coalfields through the central part of the state. Twenty-one of the 25 counties are designated as HPSAs. Technical assistance services have an emphasis on both fiscal issues, such as billing, coding, and revenue maximization, and practice efficiency issues, such as patient flow and scheduling.

Methods

The Survey. Each of the 6 practice management initiatives were surveyed regarding the structure and design of their technical assistance services. The lead author sent a letter and 2-page survey by e-mail to the principal practice management specialist in each state. The surveys were to be completed and returned within 2 weeks, with follow-up calls made when necessary. The survey asked respondents to provide descriptive information on the practices assisted, the services offered, and the organization and structure of the technical assistance service. The survey instrument was developed by the authors of this article with input from health services researchers and practice management specialists in the 6 states.

The survey instrument contained 2 parts. The first part was a chart to be completed with specific information on the practices assisted, including whether the practice was in a HPSA or metropolitan statistical area (MSA); the number of ''provider'' full-time equivalents (FTEs) (MD, DO, NP, PA, or CNM) and ''other'' FTEs; the type of practice; payer mix by percentage of encounters; type of technical assistance provided; and estimated number of on-site technical assistance hours provided per practice. The ''type of practice'' question was categorical in nature and allowed the respondents to select 1 of the following: rural health clinic, community health center, designated federally qualified health center or ''look-alike,'' private stand-alone practice, hospital-based practice, hospital, or other. The ''type of technical assistance provided'' question was similarly structured and asked respondents to select 1 or more of the following: overall practice assessment, billing, collection, coding, patient flow or appointment system, human resources, leadership or management development, workshop, or other. Respondents were asked to provide specific information regarding the ''other'' technical assistance that was provided.

The second part of the survey asked respondents to provide programmatic information, including fee structure, if any; type of organizational home (AHEC, medical association); number of practice management FTEs and their backgrounds; perceived barriers to practices accessing the technical assistance; eligibility, inclusion, and exclusion criteria for services; format of client reports; marketing strategies; evaluation of program outcomes; and program successes and shortcomings. The second part of the survey was structured in open-ended questions and required the respondents to provide their own insight and opinions on various aspects of the program's effectiveness.

Additional information, not included on the survey instrument, was gathered from the SRAP's National Program Office (NPO) regarding the type and level of RWJF financial support that each state received for their practice management efforts.

Data Analysis. On completion of the survey instrument, the practice management specialists submitted the surveys to the SRAP's NPO. After all states responded, NPO program staff tallied the survey results. To compare the data among states, the practice-specific information for each state was calculated and summarized. For the chart section of the survey, the responses to the binary and categorical questions were simply grouped by binary response (eg, 6 in a HPSA, 1 not in a HPSA) and categorical response (eg, 3 rural health clinics, 5 federally qualified health centers, 8 hospitals, and so on), respectively. Average number of provider and nonprovider FTEs, average percentage of encounters by payer (Medicare, Medicaid, self-pay, and third party), and average number of technical assistance

Table 1. Types of Practices Assisted

State	Rural Health Clinic	Community Health Center	Federally Qualified Health Center or "Look Alike"	Private Stand-alone Practice	Hospital-based Practice	Hospital	Other
Alabama			1	4		1	1
Georgia	7			18	1		
Mississippi	3		2	2	8		
South Carolina	6	2		23	8	1	1
Texas	11		2	9	2		1
West Virginia	1		3	1	2	1	1
Total	28	2	8	57	21	3	4

hours provided were calculated for the assisted practices in each state. The second part of the survey was composed of open-ended questions and yielded a wide variety of responses. The authors analyzed the data, grouping similar responses and noting variations in program design and implementation.

Findings. Overall, 123 practices received practice management assistance throughout the 6 states (Alabama, 7; Georgia, 26; Mississippi, 15; South Carolina, 41; Texas, 25; and West Virginia, 9). Ninety of these practices were in HPSAs and 33 were not. Twenty practices were located in MSAs, whereas most (103 practices) were in non-MSAs or rural areas. A state's average number of provider FTEs in assisted practices ranged from 1.8 to 6.3, with a mean of 3.3 among all 6 states. Conversely, a state's average number of non-provider FTEs in practices assisted ranged from 5.3 to 29.3, with the mean being 10.9 among the 6 states. Among the 6 states, 46% of the practices assisted reported to be private stand-alone practices. See Table 1 for a breakdown of types of practices assisted in each state. The average percentage of Medicare encounters in practices assisted was 37.4% among all the states, whereas the average percentage of encounters for Medicaid was 22%, self-pay was 16.6%, and third party was 23.6% (Table 2). The practice management service rendered most often was the overall practice assessment, with 71 practices receiving this assistance. The other practice management services were divided somewhat evenly (Table 3). A state's average number of technical assistance hours provided per practice ranged from 15.3 to 83.5 hours, with a mean of 48.0 hours among all 6 states.

The portion of the survey containing open-ended questions yielded valuable information regarding the structure and implementation of the various technical assistance programs. The organizational home of the technical assistance services varied by state, including 1 hospital association, 1 medical association, 1 primary care association, 2 area health education centers, and 1 practice management corporation. The states also varied in the number of FTEs available to perform practice management assistance and the experience and training of those individuals. The states ranged from 1 to 4 FTEs, with a mean of 1.67 FTEs and a median of 2.5 FTEs. The percentage of those FTEs directly supported by RWJF varied from 0.5 to 1.57 FTEs, with a mean of 0.81 FTEs and median of 1.04 FTEs (Table 4). The experience of the practice management specialists varied widely, including nursing, accounting, information management, educational programming, and medical billing.

The practice management specialists were queried regarding issues they perceived as possible barriers to practices accessing their services. Half the states reported they had insufficient capacity to meet the demand, often delaying services and placing clients on waiting lists. Two states also mentioned that confidentiality was a concern for many practices, because they were concerned that practice information might be released inappropriately. Of the 6 state programs, 3 had not yet implemented a fee schedule for services. Of the 3 states that did charge, 1 charged an hourly flat fee, 1 had a variable fee based on the type of services offered and the expertise of the consultants, and 1 had a 4-tiered system basing fees on variables such as HPSA status, whether the practice was a rural health clinic or federally qualified health center, and the percentage of patients who were on Medicaid or uninsured.

The criteria for including or excluding health care facilities in the practice management program varied considerably among the 6 states. Five had some form of criteria, ranging from a practice's ability to pay to being preceptors for the regional AHEC. Most of the states reported that they narrowed their services to the RWJF-approved geographic region, and many stipulated a requirement that the facility be a primary care practice. All the states provided some form of summary report to the practices assisted, with most providing written reports on completion of the technical assistance. States

Table 2. Average Payer Mix of Practices Assisted by State

State	Medicare (%)	Medicaid (%)	Self-pay (%)	Third Party (%)
Alabama	29.29	37.14	17.86	15.71
Georgia	38.79	22.21	8.21	30.79
Mississippi	69.53	17.2	8.27	4.33
South Carolina	21.82	23.41	32.5	21.59
Texas	22.29	20.29	24.33	33.05
West Virginia	42.71	12.07	8.75	36.48
Overall average	37.41	22.05	16.65	23.66

also reported using numerous marketing strategies to increase awareness of the technical assistance services. Strategies included direct mailings, professional association newsletters, newspaper articles, presentations at meetings, news releases, word of mouth, and other techniques.

States' attempts to evaluate the effectiveness of their services included post-visit surveys, follow-up interviews, benchmarking, and assessing the degree to which practice management specialists' recommendations were accepted or adopted. States' reported perceptions of what worked well varied significantly. Strengths included data collection, high demand for service, flexibility of services offered, strong background of practice management personnel, and the ability to share knowledge among practice managers. Reported program weaknesses included difficulty in weaning clients off of practice management support, less than optimal marketing efforts, time-intensive report preparation, and the inaccuracy of self-reported problem areas from practices.

Financial support from RWJF's SRAP varied widely by state, ranging from approximately $83 000 to more than $197 000 during the 2-year period (Table 4). In each state except Mississippi, RWJF funding was used for operational support for the practice management efforts (eg, administrative support, travel, workshop expenses), in addition to direct salary support for the practice management specialists. Mississippi received only salary support.

Discussion

The 6 technical assistance projects examined in this study illustrate several different strategies and techniques for assisting rural health care providers with practice management issues. Although most of these 6 states have much in common from a demographic and health status point of view (poor health and socioeconomic indicators, high minority populations, large rural populations), each state has unique challenges inherent in their health care delivery systems. These state-specific needs were accommodated by the RWJF's flexibility in allowing states to craft programs to meet specific state challenges and opportunities.

The organizational home of the technical assistance service in each state was examined in relation to the type of services offered. Of the 6 states, 3 projects were housed in statewide trade associations (hospital association in Mississippi, medical association in South Carolina, and primary care association in Alabama), 2 in statewide or regional AHECs (Georgia and Texas), and 1 in a practice management corporation (West Virginia). In 3 states (Georgia, Mississippi, and South Carolina), it was found that at least 50% of practices or facilities assisted were members or constituents of the home organization. For example, in Mississippi, where the state hospital association serves as the organizational home for the technical assistance service, more than half the practices assisted were hospitals. Similar results were found in South Carolina (medical association) and Georgia (AHEC), where most practices assisted were physician offices and AHEC preceptor sites, respectively.

Table 3. Practice Management Services Rendered By Type

State	Overall Practice Assessment	Billing	Collection	Coding	Patient Flow or Appointment System	Human Resources	Leadership Management Development	Workshop	Other
Alabama	7	2	2	2	6	6	5		
Georgia	24	18	12	12	16	17	10	22	6
Mississippi	11	1	1			1			1
South Carolina	7	14	8	18	1			1	10
Texas	21			2	4	3	9	2	6
West Virginia	1	1		1					6
Total	71	36	23	35	27	27	24	25	29

Table 4. Investment of Robert Wood Johnson Foundation (RWJF) Funds in Practice Management Activities*

	Grant Awards 4/1/02 Through 3/31/04		
State	Total RWJF ($)	Non-RWJF Support ($)	Practice Assistance FTEs Funded by RWJF (%)
Alabama	130 972	31 515	0.76
Georgia	197 460	104 852	1.57
Mississippi	150 000	130 000	0.54
South Carolina	87 130	70 455	0.6
Texas	167 232	20 535	0.91
West Virginia	83 533	83 533	0.5
Total	816 327	440 890	
Average	136 055	73 482	0.81

* All states except Mississippi received RWJF funding for operational support in addition to salary.

The type of organizational home did not appear to affect the type of technical assistance services offered, since most states offered similar services (billing, coding, overall practice assessments). Furthermore, no conclusions could be drawn regarding the types of services offered and the background or experiences of the practice management specialists or consultants in a given state. Unfortunately, due to a survey question that lacked specificity, the responses did not yield sufficient information regarding the skills and experiences of each practice management specialist or information regarding which specialist rendered which service in states with more than 1 FTE.

There appeared to be a correlation between the type of practices or facilities assisted and the eligibility, inclusion, and exclusion criteria a state used. In all states, services were limited to a certain geographic region or group of counties, and some states further restricted participation based on primary care status, AHEC preceptor status, number of providers in the practice, Medicaid provider status, and other variables. The type of marketing efforts a state used also appeared to affect the type of practices or facilities assisted. This was especially apparent with trade associations marketing to their own members and may help to explain why most practices assisted by trade associations have tended to be their own members (ie, if a hospital association markets its services through its member newsletter, then most facilities aware of the service and consequently using the service would likely be hospitals). Alabama, where the state primary care association hosts the technical assistance service, was the exception, with 60% of the practices assisted being private standalone entities rather than community health centers or federally qualified health centers.

Respondents cited confidentiality and insufficient capacity as barriers to the practice management services. For the 3 states that charged a fee for service, none cited the fee as a barrier, although Texas did waive its fee on occasion for especially needy practices. Furthermore, states that charged a fee, as well as those that did not charge, reported that they had more demand for their service than they could handle.

Each of the 6 states reported that it provided clients with a report of findings in some manner, mostly written reports, and only 1 state (Texas) reported this to be a barrier to service or a program weakness. States also reported a variety of program strengths, including great need for the service, diversity of services offered, well-qualified practice management specialists, and the inherent flexibility to meet varying client needs. Reported program weaknesses included ineligible providers who requested service, difficulty in detaching from dependent clients, demand for service from outside the RWJF-approved areas, and lengthy report preparation. There was not a high degree of consistency in the reported strengths and weaknesses among the states.

Although the practices assisted differed widely by state and by the specific structure of each state's practice management service (organizational home, number and background of specialist FTEs, services offered), many of the practices shared similar characteristics. On average, most practices assisted were in a HPSA, employed approximately 2 FTE providers and approximately 5 FTE nonproviders, and had an average payer mix of 37% Medicare, 22% Medicaid, 17% self-pay, and 24% third party. Almost 80% of all the practices assisted in the 6 states were either private practice offices, independent rural health clinics, or hospital-based rural

health clinics or practices. More than half of the practices (58%) received assistance in the form of an overall practice assessment, with billing and coding being the next most used services at 29% and 28%, respectively.

Conclusion

This study illustrates 6 approaches to offering subsidized practice management technical assistance in rural areas. Although each of the states planned and implemented their program differently to address state needs, there are similarities among the models. Characteristics of the average practice were investigated, and similarities and differences of the states' practice management service were examined. This analysis reveals that a few factors, particularly decisions made in the design and development of the state programs themselves, can have an impact on who ultimately uses the service. The organizational home of the technical assistance service; eligibility, inclusion, and exclusion criteria; and marketing efforts appear to have an impact on what type of rural providers use the service. However, charging a fee, what types of services were offered, and the structure of client reports and program evaluations did not appear to be significant barriers to utilization of the services.

One variable that warrants additional attention is the background and experience of the practice management specialists. Although the survey instrument used in this study did not provide sufficient information, the authors think further investigation of the relationship between the background and experience of the practice management specialists and the types of services offered may reveal important information. Furthermore, the study design failed to collect information regarding the impact that practice management services ultimately had on the entities receiving service. Querying practices as to the effectiveness of the technical assistance and any modifications that were made based on the practice managers' recommendations would have yielded valuable information. This limitation in the study design should be addressed in future examinations of this issue.

Comparing the efforts of the 6 states was difficult, since each had a different start date and thus each possesses varying levels of program maturity. This study provides an important insight into how decisions regarding the structure and design of subsidized practice management technical assistance services can affect which type of health care providers ultimately benefit. More work is needed to determine whether the overall objective of rural provider retention is affected by the provision of subsidized practice management services.

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Rural and Urban Physicians' Perceptions Regarding the Role and Practice of the Nurse Practitioner, Physician Assistant, and Certified Nurse Midwife

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ABSTRACT: ***Context:*** *There is a dearth of literature citing the differences in rural and urban physicians' perceptions of the role and practice of nurse practitioners, physician assistants, and certified nurse midwives (nonphysician providers).* ***Purpose:*** *The purpose of this study was to investigate and compare differences, if any, between rural and urban primary care physicians' perceptions of the role and practice of nonphysician providers.* ***Results:*** *Despite a 15.55% response rate using a mail-out survey in South Carolina, data from 681 rural and urban primary care physicians indicated that they perceived that nonphysician providers possess the necessary skills and knowledge to provide primary care to patients, are an asset to a physician's practice, free the physician's time to handle more critically ill patients, and increase revenue for the practice, but increase the risk of patient care mistakes and a physician's time in administrative duties. Urban physicians' mean scores were higher for perceiving that nonphysician providers are able to see as many patients in a given day as a physician but experience impediments in the delivery of patient care.* ***Conclusions:*** *Results will be used to clarify physicians' perceptions regarding the role and practice of nonphysician providers to reduce impediments to patient care access.*

In the past 10 years the demand for nonphysician providers (nurse practitioners, physician assistants, and certified nurse midwives) has exploded, resulting in a 10-fold increase in the numbers of nurse practitioners and certified nurse midwives practicing in South Carolina and the establishment of a physician assistant program at the Medical University of South Carolina in 1996.[1,2] Licensure data show that nurse-managed centers, rural clinics, physicians, and institutions have used and incorporated nonphysician providers in a variety of practice settings.[2] Anecdotally, the information suggests that nonphysician providers serve a valuable outreach role for South Carolina communities to increase access to care, lower costs, and provide quality care in the management of acute and chronic health problems. This appears to be especially true in rural or underserved areas where data indicate that 51% of nonphysician providers practice.[2] South Carolina is composed of 46 counties, 32 of which are designated as rural.[2-4] Rural South Carolina reports higher than the national rates of infant mortality, unintended pregnancy, teenage pregnancy, HIV/AIDS cases, new syphilis cases, suicide, cervical cancer, heart disease, and diabetes.[4] Given these poor health indicators, ensuring access to quality, cost-effective care is critical.[5-8]

Although the literature reports that nonphysician providers increase access to care, increase practice revenue, and provide quality care, physicians' perceptions of nonphysician providers have been mixed.[5,8-19] Specifically, the perceptions of primary care physicians were mixed regarding the level of care, practice patterns, and general roles of nurse practitioners, physician assistants, and certified nurse midwives. For example, primary care physicians cited concerns regarding the creation of a 2-tiered health care system that would result in second-rate care from nurse practitioners, physician assistants, and certified nurse midwives; competition for patients; and the blurring of roles between the physician and the nonphysician providers.[7,9,18,20,21] Primary care

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physicians also expressed concern over the possible expansion of the scopes of practices for nonphysician providers, thus adding to the competition and confusion of the roles between physicians and nonphysician providers.[9,14,22-24] Nevertheless, primary care physicians cited positive contributions, indicating nonphysician providers provide quality patient care, spend more time on patient teaching, and free the physician for more critical patient care needs.[10,11,15,16,18,25,26] Primary care physicians also cited positive results in increased practice income and less physician burnout.[9,14,27,28] Finally, primary care physicians indicated that their practices were able to increase patient census, shorten scheduling times for appointments, and meet federal designation requirements for rural health clinic status when nonphysician providers were incorporated into their practices.[5,7,14,18,21,26,28-30] Albeit primary care physicians' perceptions of nonphysician providers have been mixed, little is known about the differences between rural and urban physicians' perceptions of nonphysician providers. According to Aaronson,[31] if the use of nonphysician providers is to be optimized in the delivery of rural health care where resources are limited, physician acceptance is critical and, therefore, physicians' perceptions must be clarified regarding the role and practice of nonphysician providers.

The purpose of this study was to investigate and compare differences, if any, between rural and urban primary care physicians' perceptions of nonphysician providers. Specifically, this study addressed the following questions:

- What are the perceptions of primary care physicians regarding the role and practice of nurse practitioners, physician assistants, and certified nurse midwives?
- What are the differences, if any, between rural and urban primary care physicians' perceptions of the role and practice of nurse practitioners, physician assistants, and certified nurse midwives?

Key objectives of the Southern Rural Access Program are to identify and clarify the role and practice of nonphysician providers as perceived by physicians, increase the availability of rural health providers, and remove barriers to access. Thus, the results will be used to identify and clarify the role and practice of nonphysician providers in rural and underserved areas, clarify misconceptions, if any, and remove barriers to access, if any, as a result of perceptions.

Methods

The instrument survey was developed out of a substantive literature review[8,9,15,16,27,32-45] and qualitative data from interviews conducted with primary care physicians.[46] Pilot testing was conducted with 65 primary care physicians who were randomly selected from a database generated by the state's licensee data renewal information form.[2] Questions were aimed at identifying the physician's perceptions of the nonphysician provider's role in providing primary care, level of skills and knowledge to provide primary care, and contributions or barriers to practice. Following pilot testing, the final instrument was reduced to 14 items on a 5-point Likert-type scale. The self-administered mail-out survey with a 3-week follow-up postcard reminder was sent in May 2001, targeting 4463 primary care physicians practicing medicine in South Carolina. The statewide list of physicians was supplied by the 2001 South Carolina Board of Medicine active licensure database.[2] Primary care specialties were defined as family practice, general medicine, internal medicine, pediatrics, women's health, urgent care, and geriatrics.[2] Rural and urban status was defined by the State Office of Research and Statistics using 2 criteria: the number of citizens (fewer than 50 000 per county) and the number of health care providers (tertiary level III hospitals, specialists, and primary care providers) available in a given county.[2] Nonphysician providers were defined as nurse practitioners, physician assistants, and certified nurse midwives. Data collection occurred during a 4-month period following institutional review board approval. The informed consent contained information on the overview of the study, the purpose of the study, and procedures for maintaining anonymity and indicated that returning the survey implied the respondent's consent to participate. Subjects were instructed to complete the questionnaire packet in privacy at their convenience and then place the completed questionnaire into a sealed, self-addressed return envelope to be mailed back to the investigator. Study coercion was avoided since this was voluntary participation and respondents could withdraw at any time without penalty. Anonymity was protected since questionnaires were not matched with return envelopes, and therefore, tracking of specific respondents was not possible. However, to facilitate statistical analyses between urban and rural physician respondents, questionnaires were precoded by ZIP code as rural or urban status.

Data Analysis Plan. The survey data were coded, entered into a computer database, and analyzed using SAS statistical software.[47] To eliminate investigator bias, an external grant research committee (composed of 2 biostatisticians, 2 public health researchers, and 1 primary care physician) reviewed all procedures and data analyses for interpretation of findings.

Results

Six hundred ninety-six surveys were returned, indicating a 15.55% response rate. Two surveys were returned as undeliverable and 13 surveys were returned blank or with more than 50% incomplete answers and thus were eliminated from the analysis, leaving the final sample of 681. Despite the low response rate, the respondent profile was compared with the larger population and found to be representative in terms of sex profile, practice specialties, and geographical location. The sample was composed of 482 male physicians (72.48%) and 183 female physicians (27.52%). For practice specialties, 237 physicians (35.16%) indicated they were in family practice, 18 (2.67%) in general medicine, 100 (14.84%) in internal medicine, 115 (17.06%) in pediatrics, 81 (12.02%) in women's health, 11 (1.63%) in urgent care, 3 (0.45%) in geriatrics, and 16 (2.37%) in multispecialty practices. Three hundred twenty physicians (47.13%) practiced in both rural and urban areas, 183 physicians (26.79%) practiced in urban locations, and 173 (25.4%) practiced in rural locations. Three hundred nine physicians (47.32%) indicated they worked with nurse practitioners, 123 (20.95%) worked with physician assistants, and 43 (7.76%) worked with certified nurse midwives.

The descriptive statistics showed that primary care physicians, rural and urban, agreed that nonphysician providers possess the skills and knowledge to provide primary health care (n = 502, 74%), are an asset to a physician's practice (n = 461, 68%), represent an economic advantage to a practice (n = 351, 52%), free the physician for patients requiring a higher level of care (n = 470, 70%), and are preferred by patients as the provider of choice (n = 313, 46%) and that patients are attracted to practices that incorporate nurse practitioners, physician assistants, and certified nurse midwives as providers (n = 109, 16%). Additionally, the descriptive statistics showed that primary care physicians perceived that a lack of payer acceptance to nonphysician providers is an impediment to patient access for health care (n = 194, 29%), that nonphysician providers cannot see the same amount of patients as a physician in a given day (n = 429, 63%), and that the use of nonphysician providers would increase the physician's time in administrative duties (n = 462, 68%) (Table 1). Physician respondents also indicated that if they were looking for an additional provider, they would consider hiring a nurse practitioner (n = 346, 51%), a physician assistant (n = 286, 42%), or a certified nurse midwife (n = 189, 28%) for their practice (Table 2).

The physicians' perceptions were analyzed using independent-sample t tests (Table 1). Because the probability of F was nonsignificant ($p>.05$), t tests were based on equal variances.[47] Analyses showed some significant urban and rural differences between group mean scores for the 5-point scale questions (5 indicates strongly agree and 1 indicates strongly disagree; note that in the Tables, responses of 4 and 5 indicate agree and 1 and 2 indicate disagree). Urban physicians scored higher than rural subjects for perceiving that current regulations impede the scope of practice (n = 669, $t = 2.87$, $p<.005$), a lack of payer acceptance impedes patient care access (n = 664, $t = 2.83$, $p<.005$), patients would see a nonphysician provider in lieu of a physician (n = 678, $t = 1.87$, $p<.05$), and nonphysician providers can see the same amount of patients as a physician in a given day (n = 679, $t = 4.13$, $p<.0001$) (Table 1). Other t testing analyses failed to demonstrate significant differences between rural and urban physicians' perceptions. Subjects in both the rural and urban groups had similar mean scores regarding their perceptions that nonphysician providers possess the skills to provide primary care (n = 675, $t = -1.07$, $p>.28$), are an asset to a physician's office (n = 677, $t = -0.91$, $p>.36$), provide an economic advantage to a practice (n = 679, $t = -0.24$, $p>.81$), increase the risks of patient care mistakes (n = 680, $t = 1.44$, $p>.15$), are too limited in their knowledge to provide primary care (n = 672, $t = 0.76$, $p>.44$), can free the physician for other patient care (n = 681, $t = -0.40$, $p>.68$), and can increase a physician's time in administrative duties (n = 681, $t = -0.53$, $p>.59$).

In terms of practice arrangements, physicians were asked to give their perceptions of how nonphysician providers should practice in terms of diagnosing conditions or treating patients. Overall, physicians (n = 586, 86%) perceived that nonphysician providers should not be able to practice independently for a patient's unstable health conditions, and there were no statistical differences between rural or urban physicians' mean scores (n = 666, $t = 0.02$, $p>.05$). Physicians (n = 268, 40%) also perceived that nonphysician providers could practice independently for a patient's stable health condition, and there were no statistical differences between rural or urban physicians' mean scores (n = 666, $t = 1.37$, $p>.05$). Physicians (n = 404, 60%) also perceived that nonphysician providers were able to practice collaboratively with physicians for diagnosing conditions and treating patients, with no statistical differences between rural or urban physicians' means scores (n = 666, $t = 0.90$, $p>.05$) (Table 3).

Discussion

Acknowledging that the low survey response rate has implications for the validity of the study, the descriptive findings suggest that primary care physicians (rural and urban) perceive that nonphysician

Table 1. Physicians' Perceptions Regarding the Role and Practice of Nurse Practitioners, Physician Assistants, and Certified Nurse Midwives (n = 681)*

	% (No.)			
Physician Perceptions	Agree	Neutral	Disagree	Mean/SD Urban-Rural Response on 5-Point Scale†
I feel that NPs, PAs, or CNMs have the skills to provide primary health care services in the practice setting.	74 (502)	10 (66)	14 (93)	Rural: 3.9/1.0 Urban: 3.9/0.97
I feel the current regulations impede the scope of practice of NPs, PAs, or CNMs.	9 (59)	29 (194)	59 (400)	Rural: 2.1/0.86 Urban: 2.4/0.97‡
I feel that a lack of payer acceptance of NPs, PAs, or CNMs impedes patient access to care in a practice setting.	29 (194)	32 (218)	37 (251)	Rural: 2.8/1.0 Urban: 3.1/1.0‡
I feel that NPs, PAs, or CNMs are an asset to a physician's practice.	68 (461)	18 (119)	12 (83)	Rural: 3.8/1.0 Urban: 3.9/0.97
I feel that employing NPs, PAs, or CNMs increases the risk of mistakes in patient care.	44 (299)	21 (142)	33 (223)	Rural: 3.1/1.1 Urban: 3.0/1.2
I feel that patients are attracted to practices that employ NPs, PAs, or CNMs.	16 (109)	47 (319)	35 (237)	Rural: 2.7/0.8 Urban: 2.8/0.8
I feel that NPs, PAs, or CNMs provide an economic advantage to physicians who hire them over physicians who do not.	52 (351)	34 (227)	13 (87)	Rural: 3.5/0.9 Urban: 3.5/0.9
I feel that NPs, PAs, or CNMs are too limited in their knowledge base to provide primary care.	26 (176)	17 (116)	50 (343)	Rural: 2.5/1.1 Urban: 2.4/1.0
I feel that patients will see NPs, PAs, or CNMs in lieu of a physician for their primary care.	46 (313)	23 (153)	29 (197)	Rural: 3.1/1.0 Urban: 3.1/1.1§
I feel that NPs, PAs, or CNMs can see the same amount of patients in a given day as a physician.	19 (127)	16 (106)	63 (429)	Rural: 2.1/1.1 Urban: 2.6/1.0‖
I feel that hiring an NP, PA, or CNM would free up the physician's time for critical care or higher level of care.	70 (470)	15 (102)	14 (93)	Rural: 3.7/0.9 Urban: 3.7/0.9
I feel that hiring an NP, PA, or CNM would increase the time you spend in administrative duties such as reviewing their charts.	68 (462)	15 (102)	14 (97)	Rural: 3.6/0.9 Urban: 3.6/0.9

* NP indicates nurse practitioner; PA, physician assistant; and CNM, certified nurse midwife.
† A score of 5 indicates strongly agree and 1 indicates strongly disagree.
‡ $p<.01$.
§ $p<.05$.
‖ $p<.0001$.

providers are an asset to a physician's practice, provide an economic advantage to a practice, can free a physician's time to manage more critically ill patients, and are preferred providers. These results are compatible with the literature.[26] Findings also indicate that primary care physicians (rural and urban) perceive that nonphysician providers possess the necessary skills and knowledge to provide primary care. Physicians reported that nonphysician providers can even independently diagnose and treat stable health care conditions and, in collaboration with a physician, can diagnose or treat other conditions. These findings may suggest a possible comfort level among some physicians in their perceptions of the competency of nonphysician providers and are congruent with the literature reporting the level of skills, knowledge, and quality of care given by nonphysician providers.[8,11,13,15,48,49]

The results demonstrated a need to reduce practice impediments imposed on nonphysician providers. In particular, urban physicians perceived that regulations impede the scope of practice of nonphysician providers but a specific scope of practice regulatory impediments was not identified. This finding was unexpected but may be due to a 6-month on-site requirement for physician supervision when employing physician assistants, regardless of the physician assistant's experi-

Table 2. Physicians' Willingness to Consider Hiring a Nurse Practitioner, Physician Assistant, or Certified Nurse Midwife (n = 681)*

	% (No.)		
If your practice were looking for an additional provider, would you consider hiring a:	Agree	Neutral or No Opinion	Disagree
Nurse practitioner	51 (346)	15 (99)	30 (204)
Physician assistant	42 (286)	17 (115)	31 (209)
Certified nurse midwife	28 (189)	31 (208)	32 (214)

* There were no statistically significant ($p<.05$) differences between rural and urban physicians in their consideration to incorporate nonphysician providers into their practice.

Note: Percentages do not sum to 100% because they are proportions of total sample (n = 681) rather than total respondents for each row.

ence. Another explanation may be due to the lack of full controlled prescriptive authority for nonphysician providers. As a result, physicians are required to write these prescriptions. In rural areas, this requirement is particularly problematic, since many nonphysician providers do not practice onsite with the physician. Moreover, this requirement becomes more cumbersome when urban practices set up satellite offices in rural areas and the physician may be more than 1 or 2 hours away. Tracking down physicians to write these prescriptions results in delays in treatment and patient care. Urban physicians also perceived unnecessary payer barriers to nonphysician providers. Possible explanations for this perception may be due to the lack of payer acceptance, inadequate or decreasing reimbursement rates, and billing restrictions by health insurance payers that refuse or deny claims submitted by nonphysician providers in urban areas. Ultimately, practices are unable to collect for services rendered by nonphysician providers, which leaves the practice to either absorb the cost of free care or deny patients access to care.[30] Another possible explanation may be that rural physicians receive a higher reimbursement rate, especially if designated as a rural primary care center incorporating nonphysician providers.

The finding that rural physicians perceived that nonphysician providers do not see as many patients as a physician in a given day may be explained in part

Table 3. Physicians' Perceptions Regarding Nurse Practitioners', Physician Assistants', and Certified Nurse Midwives' Practice Arrangements for Diagnosis and Treatment (n = 681)*

	% (No.)	
Physician Perceptions	Yes	No
NPs, PAs, or CNMs are able to diagnose and initiate treatment for any condition independently.	12 (80)	86 (586)
NPs, PAs, or CNMs are able to diagnose and initiate treatment for stable conditions independently.	40 (268)	59 (398)
NPs, PAs, or CNMs are able to collaborate using agreed protocols to make a diagnosis and treat.	60 (404)	9 (62)
NPs, PAs, or CNMs are able to collaborate using agreed protocols to make a diagnosis but should not treat.	12 (79)	86 (587)
NPs, PAs, or CNMs require physician supervision to make a diagnosis and treat.	33 (226)	65 (440)
NPs, PAs, or CNMs require physician supervision to do assigned tasks and should not diagnose or treat.	14 (98)	83 (568)

* There were no statistically significant ($p<.05$) differences between rural and urban physicians' perceptions of how nonphysician providers should practice in terms of diagnosing conditions or treating patients. NP indicates nurse practitioner; PA, physician assistant; and CNM, certified nurse midwife.

Note: Percentages do not sum to 100% because they are proportions of total sample (n = 681) rather than total respondents for each row.

by nonphysician providers spending more time in patient teaching and patient communication activities. According to the literature, spending time with patients is a valued activity.[42,50] Another possible explanation could be nonpatient activities required of nonphysician providers in patient care settings. These activities include calling in prescriptions, obtaining laboratory reports, or supervising ancillary personnel. Until recently, nurse practitioners and certified nurse midwives were required by state regulations to call in patient prescriptions themselves instead of delegating this activity to a licensed nurse or ancillary personnel in the office.[51,52] Delegating this activity to a licensed nurse in the office has freed the nurse practitioner or certified nurse midwife for more direct patient care in the office. Another possible explanation may be due to nonphysician providers having less educational preparation than physicians and, therefore, maybe needing more time to synthesize data to formulate diagnoses and plans of care.

The study indicated that rural physicians were less likely to perceive that patients would see a nonphysician provider instead of a physician. This finding was unexpected. However, a possible explanation for this finding may be that rural citizens fail to differentiate the physician and nonphysician provider, leading to role confusion.[7,9,18,20,21] Another possible explanation could be that rural citizens tend to form strong bonds with their physicians and, therefore, may be reluctant to see a nonphysician provider.

Even though most physicians cited that nonphysician providers possess the skills to provide primary care, 45% of the respondents perceived that collaborating with the nonphysician providers could increase the risk of patient care mistakes. A possible explanation for this finding may be the result of the litigious atmosphere in which health care now operates and the recent increase in liability insurance premiums for health care providers.[53] The recent unprecedented increases in the cost of liability insurance for health care providers has raised the level of awareness of the risk associated with providing health care. This point is well illustrated by the compliance departments in various practice settings that are reinforcing the need for scrupulous documentation to prevent potential lawsuits.[54]

Another finding of the study was the perception that employing nonphysician providers could increase a physicians' time in administrative tasks such as reviewing the charts or prescriptions. In reality, this finding was not a surprise since many practice settings require that physicians conduct chart audit as a means to oversee the practice and care delivered by nonphysician providers. The scope of practice for physician assistants requires that physicians conduct audits of physician assistants' charts on a periodic basis.[55] South Carolina laws that govern nurse practitioners and certified nurse midwives do not require such oversight. However, many practice settings require periodic chart audits for these nonphysician providers as well.

Limitations. The major limitation of the study was the low return rate of the survey. To determine if the sample matched the larger primary care physician population, frequency distributions were conducted. Data demographics were also analyzed against 2001 licensure data of the primary care physician population and were found to be congruent with sex, practice specialties, and geographical locations. Nonetheless, a higher response rate would increase the validity of the findings. As a side note, the low response rate may have been due to the medical community's reluctance to participate in the survey. One physician who responded to the survey wrote anonymously as a postscript that some primary care physicians had been instructed by a physician's organization not to participate in the study. This possible interference was of concern to the investigators. The fact that 75.97% of the physician respondents worked with nonphysician providers may indicate that physicians who felt negative about or did not work with nurse practitioners, physician assistants, or certified nurse midwives declined to participate. Conversely, this could also indicate that physicians who worked with nonphysician providers may have perceived a greater need to respond to the survey. The number of nonrespondents working with nonphysician providers was not available in the licensure database,[2] and tracking of responses was impossible since questionnaires were not matched with specific addresses. In addition, since the study was conducted in a small southern state, findings can only be generalized to similar populations. Another limitation was the self-report data method. As a result, audit of data was impossible. Also, instrument reactivity may have affected the subject's responses in filling out the questionnaire. However, the use of a Likert-type scale would more closely approximate the differences in opinions offered by respondents.

Conclusions

Even though the study outcomes are based on a low survey response rate, the findings indicate that urban and rural primary care physicians perceive that nonphysician providers contribute positively to the delivery of care but nonphysician providers experience practice barriers. Currently, approximately 15 payers in South Carolina enroll nonphysician providers, but some major

health insurance payers remain reluctant to revise their provider enrollment policies to incorporate nonphysician providers. Revising provider enrollment policies would allow more patients in all areas to access a participating provider. Changing these policies will call for a concerted effort on the part of nurse practitioners, physician assistants, and certified nurse midwives to make a case for the revision of such polices. Already, a nurse practitioner and certified nurse midwife group has convened to meet with health insurance payers for such policy revisions.[56] Previous attempts to legislatively mandate reimbursement for nonphysician provider services have failed in the state legislature.[56] Other specific regulatory impediments were not identified on the survey despite some physicians' perception that current regulations impede the scope of practice for nonphysician providers. Further research is needed to identify specific impediments. Along these lines, some physicians have expressed in writing to the regulatory boards that nonphysician providers need expansion in controlled substance prescriptive authority to meet patient care needs.[57,58] Additionally, nonphysician providers have articulated to the respective regulatory boards that controlled substance prescribing is too limited to meet the patient population needs and that not having this capability impedes patient care, since many nonphysician providers do not practice on-site with physicians.[59] In light of these meetings with the regulatory agencies, negotiations have begun for possible changes in the respective practice acts to expand controlled prescriptive authority.

In summary, the contribution of this study was to identify physicians' perceptions of nonphysician providers and to compare differences between rural and urban physicians' perceptions regarding the role and practice of nonphysician providers. Based on the results, the professional nonphysician provider groups are developing fact sheets to clarify the role of nonphysician providers in the delivery of rural care. Additionally, they are meeting with payer systems to discuss the removal of reimbursement policy barriers to increase options for patients in accessing participating providers. Primary care physicians and nonphysician provider groups are also negotiating with the regulatory boards and policymakers to enhance the prescriptive authority scope of practice guidelines to facilitate patient care in rural areas.

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A Comparative Assessment of West Virginia's Financial Incentive Programs for Rural Physicians

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ABSTRACT: ***Context:*** *Financial incentive programs are increasingly being used as a strategy to recruit physicians to underserved rural areas. Critical evaluation of state-supported programs is often lacking but is necessary to determine their efficacy and to improve outcomes.* ***Purpose:*** *The purpose of this study was to assess 4 service-contingent programs in West Virginia, a state with critical physician shortages.* ***Methods:*** *Survey instruments were developed to evaluate the effectiveness of these programs and to document the practice environments and career paths of obligated allopathic and osteopathic physicians compared with a control group of nonobligated rural practitioners. Data were also collected from physicians who were recipients of multiple incentive programs and from obligated physicians who had defaulted.* ***Findings:*** *Responses from more than 60% of surveyed physicians indicated that the typical respondent was a married white male who was a midcareer family practice physician. Obligated physicians were more likely than nonobligated physicians to have graduated from a West Virginia medical school and residency program, to be influenced by financial factors in their career decisions, to provide care to uninsured patients, and to work in offices that offered sliding fee scales. Both groups of physicians demonstrated similar retention patterns, reported a high degree of job satisfaction, and expressed a need for more practice management training.* ***Conclusions:*** *Although these financial incentive programs were found to be effective in recruiting primary care physicians to medically underserved areas of the state, the financial support of these programs was found to be too modest, and improved marketing of the programs was indicated.*

The shortage and maldistribution of trained primary health care providers is a critical concern in West Virginia, where more people live in primary care health professional shortage areas (HPSAs) and where there are fewer physicians than in the United States as a whole (180 versus 198 per 100 000).[1] To help address these disparities, West Virginia has invested in financial incentive programs that offer scholarships and loan repayment to attract medical students, residents, and physicians to practice in rural and underserved areas of the state.

Historically, the most common types of primary care access programs created by states were those providing scholarships and loans to medical students and residents.[2] The loan repayment program was the most rapidly growing type of service-contingent program in the late 1980s and early 1990s,[3-5] attracting health practitioners with outstanding loans around the time they completed their training. Practitioners enrolled in loan repayment programs become available to needy communities soon after they commit to the program, yielding a quick, measurable return for program investment while meeting the immediate needs of underserved communities.[6] Growing debt for young physicians makes loan repayment options increasingly attractive; some think these programs are more successful in encouraging physicians to return to their home

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states and communities than scholarship programs.[7,8] Scholarship programs tied to service requirements obligate students early in their training, when many are concerned about meeting the costs of their training and being able to complete it. Many observers believe that it is best to provide a mix of service-contingent programs to assist and entice practitioners at various points in their training and careers.[9,10] West Virginia offers both loan repayment and scholarship support.

With a few exceptions,[5] there has been little formal evaluation of state support-for-service programs to document their successes and to help clarify program features responsible for positive outcomes. State programs are generally less visible than federal programs,[2,11] are not required to undertake formal assessments, and do not have the funds or expertise needed for evaluations.[2,4,5] Nevertheless, basic outcomes data are essential if we are to understand (1) how successful these programs have been in placing their participants in needy areas (recruitment), (2) how long they stay at those sites (retention), (3) the reasons why some practitioners default on their obligations, and (4) ways to minimize defaults.[5]

Nationally, it has been found that generalist physicians who are serving commitments in exchange for training cost support, compared with those without obligations, are more likely to work in rural areas and provide care to Medicaid-covered and uninsured patients.[12] However, many participants (as many as 60%) of some programs buy out of their obligations,[6,13] and programs with stiffer buy-out penalties have been found to have lower default rates.[14] Concerns have been raised in West Virginia that program default rates are high, so it is important for the state to substantiate the problem and examine the factors that contribute to program success and shortcomings.

The purpose of this evaluation was to assess how well West Virginia's financial incentive programs for rural physicians are fulfilling their shared goal to enhance the recruitment and retention of rural practitioners in the state. Through a mail survey, we assessed characteristics of the practices, communities, and patient populations served by obligated practitioners and queried practitioners' satisfaction, career intentions, and recommendations for improving these programs. A comparison group of nonobligated rural primary care physicians was also surveyed.

Funds for the West Virginia Rural Health Access Program came from the Robert Wood Johnson Foundation's Southern Rural Access Program (SRAP) and the Claude Worthington Benedum Foundation. The project was conceived as a collaborative effort by members of the West Virginia SRAP Recruitment and Retention Workgroup as part of a comprehensive strategy to improve recruitment and retention in underserved rural areas of West Virginia.

Background on West Virginia's Incentive Programs

Like many states in recent years, West Virginia created and participated in programs to help recruit and retain physicians in its underserved rural areas through financial incentives. We assessed 4 West Virginia incentive programs: the Community Scholarship Program (CSP), the Health Sciences Scholarship Program (HSSP), the Recruitment and Retention Community Project (RRCP), and the State Loan Repayment Program (SLRP) (Table 1). One additional loan program, the Medical Student Loan Program, was not assessed here because, unlike the other programs, its recipients are not required to serve in an underserved area but only to enter a primary care field. A description of each program, including default information, is given below. For the purpose of this article, a default or defaulter is defined as a physician who decided not to practice in an underserved area approved by his or her financial incentive program.

The CSP was a federal grant program administered by West Virginia University between 1991 and 1997 that offered scholarships for medical, nurse practitioner, nurse-midwife, and physician assistant students who were from a HPSA and were willing to commit to go back to that same HPSA after completion of their training, serving 1 year for every year of funding received. Federal funds paid 40% of the scholarship, the community sponsor paid another 40%, and the state paid the remaining 20%. Scholarship amounts were determined by the sponsoring community agency (eg, community hospital or primary care center), with a maximum amount set by federal policy. Average total scholarship for CSP medical students was $42 500. Between 1991 and 1997, West Virginia sponsored 17 CSP medical students, 6 of whom have defaulted (1 of these 6 dropped out of medical school after completing only 1 year and so was not sent a defaulter questionnaire) and 7 who were still in training and, for this reason, did not qualify for this assessment (1 in medical school and 6 in residency training), leaving 4 who qualified to receive the questionnaire for financial incentive program recipients. Three of the 4 CSP recipients currently practicing in rural West Virginia responded to the survey (Table 2).

The HSSP is a program developed and administered by the West Virginia Higher Education Policy Commission since 1996. Eligible recipients are fourth-year medical students at a West Virginia medical school who are entering primary care internships or residency programs in West Virginia and nurse practitioner,

Table 1. West Virginia's Primary Care Recruitment and Retention Financial Incentive Programs

Program	Eligibility	Amount Awarded	Obligations	Buy-out Provisions
Community Scholarship Program (CSP) (discontinued in West Virginia in 1997)	Medical and midlevel practitioner students who were from a HPSA* and agreed to return to that same HPSA	Scholarship amounts determined by the sponsoring community agency, with a maximum set by federal policy: 40% from federal funds, 40% from the community sponsor, and 20% from the state (taxable)	Minimum 1-year service commitment for every year of support received, in the HPSA where the student's home is located	Students who do not serve their obligation are required to repay the scholarship award within 1 year from the date of the breach of contract. Failure to comply may result in the assessment of interest at the prevailing rate, costs incurred in collecting the money, and any other sanctions permitted by law.
Health Sciences Scholarship Program (HSSP)	Fourth-year medical students who match to an in-state primary care residency program and midlevel practitioner students	$10 000 one-time award at time of survey; is now $20 000 for medical students (not taxable)	Minimum of 2 years service in an underserved area	Students who do not serve their obligation must repay the scholarship plus 15% interest, accruing from the date of contract default, within 1 year.
Recruitment and Retention Community Project (RRCP)	Medical residents, physicians and other qualified health professionals	Up to $20 000 each year for up to 6 years: 50% of funding from sponsoring agency and 50% from the state (taxable)	One-year service requirement in an underserved area for each year of funding; money can be for residency or training stipend, sign-on bonus, loan repayment, locum tenens, etc; individual must be a US citizen	The sponsor must repay the state the full amount of the grant award plus 20% within 60 days of the default. If the participant starts but fails to complete the period of obligated service, a prorated repayment schedule may be substituted at the state's discretion. It is up to the sponsor to make arrangements with the participant for repayment.
State Loan Repayment Program (SLRP)	Physicians and other qualified health professionals	Up to $40 000 for a 2-year commitment; contracts may be extended for 2 additional years at $25 000 per year; will pay for qualified educational loans and reasonable living expenses (taxable)	Minimum 2-year service commitment at a nonprofit site in a HPSA; applicants cannot be obligated to any other state or federal program; must be a US citizen with a valid, unrestricted West Virginia license and/or certificate	A participant who fails to complete his or her obligation will be required to repay the total amount received for loan repayment plus an unserved obligation penalty ($1000 per month of unserved time) within 1 year from the date of default.

* HPSA indicates health professional shortage area.

physician assistant, or nurse-midwife students who are in the final year of a West Virginia–based educational program. Between 1996 and December 2001, the program sponsored 86 medical students, 50 of whom were in their residency program and 9 of whom were fourth-year medical students at the time of this study. During that time, a medical student scholarship entailed a one-time award of $10 000 in return for a 2-year commitment in an underserved area after completion of a primary care residency program. At the time of this study, half (13) of the physician recipients who had completed residency training had defaulted and paid back their scholarships in lieu of service. Fourteen HSSP physician-recipients were in practice in West Virginia at the time of this assessment and were mailed a survey; 6 of the 14 responded.

The RRCP is a program developed and administered by the West Virginia Bureau for Public Health to

Table 2. Number of Recipients and Responses by Program*

	CSP	HSSP	RRCP	SLRP	Total
No. of financial incentive recipients receiving a full questionnaire	4	11	24	34	73
No. of financial incentive recipients receiving an additional supplemental questionnaire†	0	3	6	1	10
Total No. of questionnaires mailed	4	14	30	35	83
No. of full questionnaires returned	3	3	14	24	44
No. of supplemental questionnaires returned†	0	3	3	1	7
Total No. of returned questionnaires	3	6‡	17‡	25	51
Response rate (%)	75	43	57	71	61
No. of defaulter questionnaires mailed/No. returned	5/2	13/4	4/1	0§	22/7

* CSP indicates Community Scholarship Program; HSSP, Health Sciences Scholarship Program; RRCP, Recruitment and Retention Community Project; and SLRP, State Loan Repayment Program.

† Supplemental questionnaires were mailed to physicians who were recipients of more than 1 financial incentive program. These physicians received a full questionnaire for the program to which they signed with first and supplemental questionnaire(s) covering 5 program-specific questions (drawn from the full questionnaire) for the program(s) they signed with subsequent to the first program. The program name was specified on the front of each questionnaire.

‡ One recipient who received money from the HSSP and RRCP completed both the full and supplemental questionnaire for the RRCP program. The responses to the full questionnaire were entered into the database. This recipient is counted as a respondent to the RRCP program questionnaire only.

§ Two SLRP recipients served most but not their entire obligation and so were not initially identified as defaulters by program staff; one recipient defaulted after study was under way

help rural communities recruit and retain primary health care providers in medically underserved communities by providing financial support in the form of recruitment grants (loan repayment) and retention grants (locum tenens) or other incentives approved by the Bureau for Public Health, such as a salary bonus or moving expenses. Eligible candidates are primary care providers who have successfully completed their training and are licensed to practice in West Virginia. They must agree to provide medical services with the community sponsor for a number of years equal to the number of years of support or for a period of 2 years, whichever is greater. They must also agree not to discriminate against patients on the basis of their ability to pay for health care services and they must agree to provide full-time clinical practice that includes a full continuum of care with arrangements for after-hour care and acute care. The sponsoring community organization must provide a 50% match, not to exceed a combined total of $20 000. At the time of this study, 4 physicians had defaulted on their obligation to the RRCP program; 30 RRCP physician-recipients were identified for this survey and 17 responded.

The SLRP is a federally funded, state-run program administered by the West Virginia Bureau for Public Health that offers medical loan repayment to primary care physicians, nurse practitioners, nurse midwives, and physician assistants in return for obligated service in a HPSA in West Virginia. Recipients must agree to provide primary care services for a minimum of 2 years. Physicians receive $40 000 for a 2-year commitment that may be extended for a third year and a fourth year of support at $25 000 per each additional year. Thirty-five SLRP physician-recipients were identified for this survey (2 of whom served most of their entire obligation and so were not identified as defaulters by program staff, 1 of whom defaulted after the study was under way) and 25 responded.

Evaluation Methods

A 9-page, self-administered questionnaire was mailed to all physician-recipients of 1 or more of the 4 state financial incentive programs who were currently in their service practice or who had completed at least 1 year of their service since the inception of the programs. Seventy-three physicians were identified for the obligated (financial incentive recipient) group and were mailed a questionnaire that included questions pertaining to their service practice. Ten of these physicians participated in 2 or more of West Virginia's financial incentive programs. They were mailed the full questionnaire plus a supplemental questionnaire for each additional financial incentive program to get program-specific information on each financial incentive program in which they participated. The supplemental questionnaire consisted of 5 program-specific questions drawn from the full questionnaire, which covered

factors that influenced their decision to sign with the program, information on interaction with the staff of the program, their level of concern regarding their financial situation, whether they would opt to sign with the program again, and suggestions regarding ways to improve the program. Eighty-three questionnaires were mailed and 51 returned. Response rate was calculated as a proportion of mailed questionnaires that were returned (Table 2). Responses to the full questionnaire and the supplemental questionnaire(s) were treated as if the responses were from separate individuals for the analysis of the 5 program-specific questions.

A comparable questionnaire (minus questions pertaining to the "service" practice) was sent to a comparison group of 168 physicians identified from the licensure files of the West Virginia Board of Medicine and the alumni database of the West Virginia School of Osteopathic Medicine. The West Virginia Board of Osteopathy was unable to provide us with names or contact information. The comparison group consisted of all primary care physicians who graduated from US medical schools and were practicing in West Virginia counties defined "rural" by both the federal Office of Management and Budget *and* the West Virginia Rural Health Education Partnership (WVRHEP) program. The WVRHEP is a program that provides the infrastructure and a curriculum for rural rotations in West Virginia for all health professions students enrolled in state-supported schools.

Information collected on the questionnaires from both the obligated and comparison group included demographics, career aspirations as a student and resident, factors that influenced first practice site selection, practice characteristics, level of satisfaction with the practice, intentions to remain, exposure to rural practice as a student and resident, and recommendations for marketing financial incentive programs. Additionally, obligated physicians were asked questions regarding satisfaction with the financial incentive program and factors that influenced program commitment.

Secondary data were obtained from the Area Resource File,[15] which contains data from sources that include the American Hospital Association, the American Medical Association, the American Dental Association, the American Osteopathic Association, the Bureau of the Census, the Health Care Financing Administration, Bureau of Labor Statistics, InterStudy, and the Veteran's Administration.

Testing for statistical significance involved analysis of variance, Wilcoxon rank sum testing, or the χ^2 method. For χ^2 testing of some categorical variables, responses were lumped when 1 or more of the initial contingency table cells contained a low number. The level of significance used for statistical testing was .05. Approval for the protocol of this evaluation was obtained from the West Virginia University Institutional Review Board for the Protection of Human Subjects.

An anonymous questionnaire consisting of one question ("Would you please take a few minutes and write your thoughts on issues that would have made the incentive program better or that would have better allowed you to complete a service obligation?") was mailed to all physicians identified by individual program staff in spring 2001 who had defaulted on their obligation to West Virginia service programs.

Results

Comparison of Obligated and Nonobligated Physicians. The response rate was 61% for the obligated physicians and 64% for the comparison group physicians. Forty-two percent of all respondents reported that they had never heard of one or more of West Virginia's service programs.

As expected of relatively new programs, the participants of these programs were younger overall than the comparison group, which represented nonobligated West Virginia rural primary care practitioners of all ages. The median year for beginning their first service practice for the obligated group was 1996, 6 years later than the median year the comparison group physicians began working in their first rural practices. Also, participating physicians were significantly more likely to have graduated from a West Virginia medical school and to have completed their residency training in West Virginia. Otherwise, the 2 groups were similar for the assessed demographic characteristics (Table 3).

There was a significant difference between the obligated and comparison groups in the mean of their reported educational debt levels after finishing medical school, with the obligated group having an approximate debt of $83 000 compared with $51 000 for the comparison group ($P<.01$) (Table 3). The obligated group also demonstrated a significantly greater concern about their finances in their first years following residency than did the comparison group ($P<.01$) (data not shown). Since the educational debt question was phrased, "What was your total educational debt when you finished medical school?" the level of debt reported by the obligated group most likely did not deduct the amount of their scholarship or loan repayment, since awards are made the last month of medical school (HSSP), during their residency program (RRCP), or after completion of their residency program (SLRP and RRCP). The exception would be the CSP recipients, who received money annually throughout medical school. Two of the 3 CSP respondents answered this question, one reporting a total

Table 3. Characteristics of Respondents

Characteristic	Obligated (n = 44)	Comparison (n = 107)
Mean age (y)*	40	44
Female (%)	27	31
Racial-ethnic minority, % (No.)	7 (3)	4 (4)
Married (%)	86	77
Graduating West Virginia medical schools (%)†	80	59
Completing residency in West Virginia (%)*	64	32
Allopaths versus osteopaths (%)	60/40	60/40
Emergency medicine (%)‡	2	0
Family practice (%)	70	73
Internal medicine (%)	15	15
Obstetrics-gynecology (%)	4	5
Pediatrics (%)	9	7
Completed a primary care residency (%)	87	81
Respondent's home town population below 100% of the federal poverty level (%)	19	17
Per capita income of home town population ($)	12 720	14 853
Mean educational debt after completing medical school ($)*‖	83 000	51 000

* $P<.01$.
† $P<.02$.
‡ The Recruitment and Retention Community Project program offers financial awards to emergency medicine physicians practicing at 1 of the state's 13 critical access hospitals.
‖ Since the educational debt question was phrased, "What was your total educational debt when you finished medical school?" the level of debt reported by the obligated group most likely did not deduct the amount of their scholarship or loan repayment award.

educational debt at the end of medical school of $15 000 and the other reporting $80 000.

Most (93%) of the financial incentive recipients stated that their need for financial assistance had a moderate or major influence on their decision to apply for their program, and 90% said that the program allowed them to work in their preferred setting. Approximately 68% of all obligated physicians indicated that familiarity with the practice site had a moderate or major influence on the decision to apply for their financial incentive program. Nearly half reported that it was important in their decision-making that their spouse's situation did not preclude their program enlistment.

Fifty percent of obligated respondents had participated in training as a medical student or resident in their service community, whereas only 29% of the comparison group had trained in the community where they were working ($P = .02$). The obligated group reported having had more interest in practicing in West Virginia when they were fourth-year medical students ($P = .03$) and final-year residents ($P = .04$) than did the comparison group, and the comparison group reported having had more interest in owning their practices than did the obligated group as students ($P<.01$) and as residents ($P<.01$) (Table 4).

Most physicians in both groups reported that the factors of greatest significance in their choice of a practice location were a long-term work or life opportunity, a need for physicians in the area, and proximity to their families. The only statistically significant differences between the groups were that obligated physicians were more likely to report choosing a site that would help them pay off their loans quickly ($P<.01$) and comparison physicians were more likely to report placing more value on a site for long-term settlement ($P = .05$) (Table 5).

The counties of the first service practice of the obligated group had a significantly lower physician-to-population ratio (1:3014 population) than the comparison group (1:2449 population) ($P<.01$). Physicians in the comparison group were more likely to own their practices (37% versus 14%; $P<.01$). Obligated physicians reported that they provided care to a higher proportion of uninsured ($P = .02$) and were significantly more likely to work in a practice that offered a sliding fee scale ($P<.01$).

Both obligated and comparison group physicians reported that their work was personally rewarding, that they felt a sense of belonging to the community, and that they were satisfied with their practice. A greater percentage of the obligated respondents (98% versus 85%) agreed that their clinical work was personally rewarding ($P = .02$).

Median reported hours worked per week for the obligated physicians and comparison physicians were 45 and 50, respectively, and additional call obligations were 3 and 3.5 nights per week, respectively. Call required a median of 3 (obligated) and 2 (comparison) additional hours per week (Table 6).

Obligated physicians were less likely to leave their service sites during the first 4 years of practice than were nonobligated physicians to leave their work sites (Figure). After obligations were completed and physicians were free to leave, retention dropped into the range seen among nonobligated physicians. Fourteen (32%) of all obligated respondents reported that they were no longer at their first service practice site compared with 41 (38%) of the comparison group respondents who responded that they were no longer at their first rural practice site. Forty-two percent of these 14 obligated

Table 4. Practice Interests as a Fourth-Year Medical Student and as a Final-Year Resident

	Percentage Answering "Moderately" or "Very" Interested			
	As a Fourth-Year Medical Student		As a Final-Year Resident	
How Interested Were You in Eventually:	Obligated	Comparison	Obligated	Comparison
Practicing in a rural area	91	89	91	91
Practicing in a medically underserved area	84	75	91	81
Practicing in West Virginia*	82	64	91	77
Owning your practice†	38	63	38	63

* $P = .03$ for fourth-year medical students; $P = .04$ for final-year residents.
† $P < .01$ for fourth-year medical students and final-year residents.

respondents reported leaving their rural service practice to go to another West Virginia rural site, whereas 82% of the 41 comparison group respondents reported going to another West Virginia rural site (Table 7).

Obligated physicians who were still in their first service practices when surveyed anticipated remaining an average of 18 more years in rural practice and 21 more years in West Virginia. Physicians in the obligated group who had left their first service practice sites anticipated remaining in rural practice for an average of another 14 years and in West Virginia for another 16 years. The nonobligated physicians had similar expectations of their future tenures in rural practice and in West Virginia.

Physicians were asked if they needed assistance or more training in specific areas. Responses are summarized in Table 8. The majority of both the obligated physicians and the comparison group felt that they needed more assistance or training in practice management. There were no significant differences in responses between the groups for any items.

Obligated Physicians' Assessment of Programs. Obligated physicians were asked whether they received too little, too much, or the right amount of contact, assistance, and responsiveness from their program personnel. In no realm did a single respondent feel that he or she had too much contact, assistance, or responsiveness, suggesting both that respondents value this interaction and that programs were not overdoing their support efforts. On the other hand, generally one third to half of recipients of all programs felt they had too little contact, assistance, and responsiveness, indicating a need for greater interaction between programs and their obligated physicians.

Obligated physicians were asked if they would sign up for their financial incentive program again, a question that may best indicate their satisfaction with the program. Thirty of 41 respondents to this question answered ''definitely yes'' or ''probably yes.'' There were no significant differences among programs. A smaller but not insignificant number of respondents reported that they would ''definitely not'' or ''probably not'' commit to their service program, with responses ranging from 10% of SLRP recipients to 38% of the CSP and HSSP participants (due to low numbers of respondents in these 2 programs, responses of recipients were combined). When presented with hypothetical award scenarios, open-ended responses included, ''I'm not sure how important $$ are to deciding where one will practice'' and ''I do not feel the problem is purely financial'' (comparison group) to ''more money.'' Of 18 open-ended responses to the question, ''Can you suggest a new type of financial incentive program that would appeal to future students, residents, or primary care physicians in West Virginia?'' 6 comments mentioned the attractiveness of tax-free financial incentive awards.

Physicians were asked to rate the usefulness of various means of distributing information about financial incentive programs to third- and fourth-year medical students and to medical residents. Both the comparison group and obligated group felt that one-on-one counseling and school presentations were the best means of disseminating information.

Defaulter Responses. There were 22 defaults identified and 7 questionnaires returned: 1 response

Table 5. Factors That Influence Choice of a Location for Their Practice Site

Factors	Percentage Giving the Factor "Moderate or Major Consideration"	
	Obligated (n = 44)	Comparison (n = 107)
A place to settle for the long term*	80	91
Area had great need for physicians	77	81
Area is near family	69	54
Area provided opportunity to pay off loans quickly†	57	21
Area offered amenities for their children	48	42
Area offered good recreational opportunities	36	42
Area offered good employment opportunities for spouse	21	31
Area was close to an urban area	18	13

* $P = .05$.
† $P < .01$.

Table 6. Practice Characteristics

Characteristics	Obligated	Comparison
Physician-to-population ratio of first service or rural practice*	1:3014 population	1:2449 population
Median No. of other physicians working in their rural practice	1	1
Median hours worked per week, apart from call	45	50
Median weekday nights and weekend days on-call per week (apart from scheduled clinic hours; maximum = 7)	3	3.5
Median hours per week of actual patient care and telephone calls performed when on call	3	2
Percentage who are shareholder or partner of practice*	14	37
Mean percentage of patients using Medicaid	40	36
Mean percentage of patients with no insurance†	19	15
Practice has a sliding fee scale*	73	44

* $P < .01$.
† $P = .02$.

from an RRCP recipient, 4 responses from HSSP recipients, and 2 responses from CSP recipients (Table 2). The 7 physicians who responded to the defaulter survey gave 4 general reasons for not selecting an approved site: family considerations (in 2 cases, there were no available sites in the location preferred by the family), inadequate award amount, lack of timely responsiveness from the rural site, and changes in professional or personal priorities after an early commitment (during medical school).

Discussion

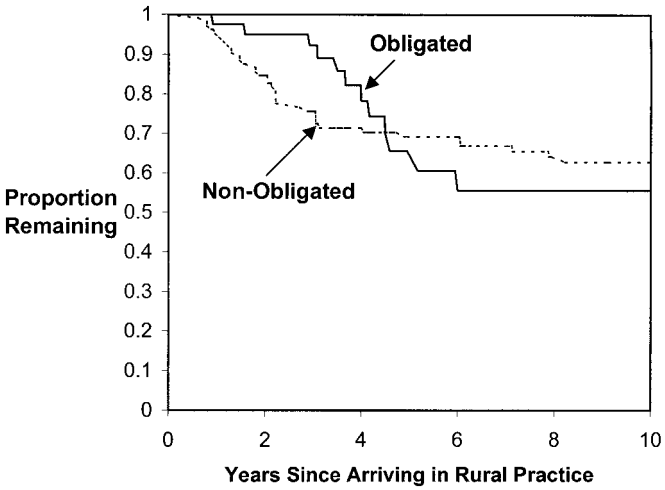
Rural states have long had difficulty recruiting and retaining physicians, often relying on programs such as the National Health Service Corps and the J-1 Visa program. These programs, however, do not fill all gaps in medical care availability and are not seen as particularly successful in promoting retention.[16-18] Some now believe that the solution is for states to recruit their own medical school graduates, initially by introducing them to practice in underserved areas as medical students, as is done in the WVRHEP program, then by promoting in-state residencies, and later by offering financial incentives to practice in rural and underserved areas of the state.

The significant differences between the percentage of obligated and comparison respondents who had participated in training in their service community as a medical student or resident may reflect the curricular requirements of the younger obligated group. Eighty percent of the obligated respondents graduated from West Virginia medical schools and 62% graduated from medical school after 1990, the year the WVRHEP program began phasing in the requirement for all students to train 3 or more months in rural West Virginia. By contrast, only 59% of the comparison group graduated from West Virginia medical schools and only 25% graduated medical school after 1990.

We find in this evaluation that West Virginia's financial incentive programs are succeeding in their goal to promote access to medical care for needy West Virginians. The counties represented by the first service practice of the obligated group had a significantly lower physician-to-population ratio (1:3014 population) than the comparison group (1:2449 population). Obligated physicians also reported that a significantly greater proportion of their patients were uninsured, and more reported that they worked in practices that offered a sliding fee scale.

Physicians fulfilling service obligations are generally satisfied with West Virginia's financial incentive programs. The vast majority (98%) of obligated physicians found their clinical work personally rewarding. Most also felt a sense of belonging to the community and stated that they were, overall, satisfied with

Comparative Retention of Obligated and Nonobligated Physicians in West Virginia.



their practice. Surely in part due to their satisfying experiences and to the penalties for leaving before fulfilling their obligations, obligated physicians were more likely to remain in their practice sites during the first 4 years than were the comparison physicians. However, as seen in the Figure, the retention benefit of the obligated group ceased to appear after 4 years.

It is also important to know whether these service programs are reaching the physicians for whom financial support is important. We found that obligated physicians had greater educational debt and greater concern about their finances in their first years following residency than the comparison physicians and were more likely to be drawn to practice opportunities that would help them pay off their loans quickly.

The vast majority of physicians stated that their financial incentive program allowed them to work in their preferred setting, indicating that the programs did not attract significant numbers of recipients who were not already interested in underserved rural areas but, possibly, made these areas more appealing. The programs also did not attract significant numbers of recipients interested in owning their own practice. The significant difference between the obligated and control groups in regard to past aspiration of owning their own practice may be due to less of an entrepreneurial inclination by the obligated group or to anticipation that their obligation requirements would preclude private practice ownership.

Both the comparison group and obligated group felt that one-on-one counseling and school/residency program presentations were the best means of reaching students and residents. Program administrators may improve the marketing of their financial incentive programs by increased use of these methods for information dissemination. No respondents felt that they had too much contact, assistance, or responsiveness from program staff of the financial incentive programs, suggesting both that they value this interaction and that programs should increase their support efforts.

Two major limitations of the programs were noted by defaulters. First, the money offered by the HSSP ($10 000 for a 2-year commitment) was not enough to encourage work in a town where "you could potentially be overwhelmed with patients and call." Second, recruitment efforts by the program staff were not aggressive enough, especially when surrounding states have very aggressive recruitment for their rural communities.

Two additional issues were raised by defaulters that highlight market conditions in West Virginia. First, salaries need to be competitive. One respondent took a position across the river, in another state only 13 minutes from home, and was offered $70 000 more per year (including loan repayment) than he or she would have made at the West Virginia site under consideration. Second, the malpractice situation in West Virginia was raised by an obstetrician-gynecologist who is contemplating dropping obstetrics or closing the practice and moving out of state. Interestingly, 2 defaulter respondents believe that, although they were not able to meet their obligation, they are serving underserved populations in their positions, so they consider themselves success stories for rural health.

There are several limitations in generalizing these results and recommendations to other states. The financial programs studied have a specific structure that may not apply elsewhere. The sample size was limited, especially for some of the programs. Only rural physicians trained in the United States were surveyed in either group, and the only osteopathic physicians included in the comparison group were those trained at the West Virginia School of Osteopathic Medicine. There may be inherent biases in that obligated physicians were younger, began rural practice at a later date, were more likely to have been trained in West Virginia, and were more likely to have had exposure to a required rural curriculum. Responses could have been affected by respondents who were working in federal clinics (most likely obligated respondents) where physician employee status may be more likely and where care of economically disadvantaged patients may be subsidized. Conclusions regarding comparative retention between the 2 groups are limited by the relatively short time that obligated physicians have been in practice. The narrative data from defaulters were too limited and diverse to allow identification of dominant themes.

Table 7. Rural/Urban Status of Next Practice Town (for Those Who Left Their First Service or Rural Practice Town)

Status	Obligated Group	Comparison Group
No. of respondents no longer working at their first service or rural practice site	14	41
Percentage of total respondents	32	38
No. of respondents listing their next practice site	12	33
No. whose next practice site was a rural West Virginia county	5	27
No. whose next practice site was an urban West Virginia county	5	2
No. whose next practice site was a rural out-of-state county	1	1
No. whose next practice site was an urban out-of-state county	1	3
Percentage leaving first rural or service practice county to go to another rural West Virginia county	42	82
Percentage staying in West Virginia	83	88

Table 8. Percentage Responding That They Need Assistance or More Training in the Following Areas

	Obligated Group	Comparison Group
Practice management	56	62
Conflict management	33	31
Health care of the poor	27	14
Certain areas of clinical medicine	22	24
How to work with communities	22	13
Leadership	13	11

Further studies are suggested by the results of this study. There is a need for more specific information regarding shortcomings of the financial incentive programs and other reasons for leaving the service practice site. The narrative responses that would provide such information were sparse. Specific information might be better obtained through the use of exit interviews and focus groups. A sufficient volume of narrative data would allow qualitative analyses for identification of important themes. Also, the effect of enhanced financial incentives on recruitment and retention needs further study. In regard to choice of rural practice site (recruitment), the emphasis placed on financial factors by the obligated physicians is an expected result, but the role of other factors could be further studied by use of a larger sample size. The data on retention in this study cover a limited time period and analyses of these data in the future may be more revealing in comparison of retention rates for obligated and control group rural physicians. Studies of financial incentive programs and of resultant recruitment and retention to underserved areas in other states would be valuable, especially where larger numbers of provider subjects could result in information of greater statistical validity.

Recommendations for West Virginia Programs

Based on the findings of this study, we make the following recommendations to strengthen West Virginia's incentive programs. Many of these recommendations may be pertinent to similar programs in other states.

1. Financial incentive awards should be commensurate with the increasing medical education debt load of recent graduates. Obligated providers had a higher debt load, were younger, and were more concerned about financing their education than were nonobligated physicians. Based on anecdotal information from other states and comments from recipients within the state, a minimum award of $10 000 per year of service is recommended, although this should be reviewed when tuition and fee policy is used as a strategy by institutions to address budget deficits.
2. Financial incentives should be tax free or include additional funds to offset the tax liability incurred by the award recipient. Due to the large dollar amounts of awards, the tax liability can be as much as 30% to 40%, thus reducing the incentive for the recipient.
3. Electronic technologies should be used to market and administer financial incentive programs, but program staff members must maintain a regular personal presence to ensure maximum benefit of these programs. Small group presentations at training sites followed by one-on-one counseling are recommended to market and to meet the needs of applicants and recipients of financial incentives.
4. Medical training programs need to improve curriculum in the area of practice management, since both obligated and nonobligated physicians indicated a need for more training in this area. Addressing this curricular need may increase retention of providers in underserved rural areas.
5. Financial incentives to practice in underserved rural areas need to be evaluated on a regular basis to ensure efficacy in a rapidly changing health care environment.

Program Change Update

Due in part to the findings of this assessment, the West Virginia legislature voted in the 2001–2002 legislative session to increase awards made by the HSSP to fourth-year medical students from $10 000 to $20 000 for a 2-year commitment. It is expected that this increase will provide a more competitive incentive and, possibly, decrease the numbers of defaulters. The HSSP subcommittee that made this recommendation to the state legislature also recommended that the medical schools take a more active role in recruiting these students, thereby decentralizing this process. Medical schools will be encouraged to recommend suitable candidates to the state's Recruitment and Retention Committee, which could improve communication and nurture relationships with scholarship recipients.

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Recruitment of Rural Health Care Providers: A Regional Recruiter Strategy

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ABSTRACT: ***Context:*** *Access to care in rural areas is a major problem. Despite more than 20% of the US population residing in these areas, only 9% of physicians practice there. Extensive research has documented multiple issues that affect where physicians decide to locate and maintain practices. Creative strategies have been used to influence these recruitment and retention decisions. An emerging strategy, borne out of the Robert Wood Johnson Foundation's Southern Rural Access Program (SRAP), effectively uses a targeted regional approach to assist rural communities and health care facilities in assessing health care needs and recruiting primary care providers.* ***Purpose:*** *This article examines the issues surrounding recruitment and retention of primary care providers to rural areas and describes the experiences of the regional recruitment strategy in several states and in particular in the Mississippi Delta region of Arkansas.* ***Methods:*** *A case study approach is used to examine the targeted regional recruiter strategy in the Mississippi Delta region of Arkansas.* ***Findings:*** *The regional recruiter strategy, which combines traditional recruitment efforts with community development activities, has been successful in recruiting health care providers to rural communities. The cost-effective strategy can be easily replicated in other rural states.* ***Conclusions:*** *Community factors affect provider decisions on practice locations. Addressing community factors in recruitment efforts through community development activities may increase their success.*

Despite improvements in overall health status in the United States, rural Americans have a poorer health status than their urban counterparts.[1,2] Lack of health insurance coverage,[3,4] socioeconomic hardships, and physical barriers to access such as distance and availability of transportation make rural populations especially vulnerable.[5,6] Another significant contributor to the poor health status of rural populations is the lack of physicians practicing in rural areas.[2,6-8] Despite an overall increase in the number of practicing physicians in the 1990s[1,6] and the fact that 1 in 5 Americans resides in rural areas, only 9% of physicians practice there.[4] The purpose of this article is to describe a promising approach to recruiting and retaining primary care providers in rural areas. Borne out of the Robert Wood Johnson Foundation (RWJF)–supported Southern Rural Access Program (SRAP) initiative, regional recruiters in Arkansas, East Texas, and Louisiana are helping rural communities improve access to primary health care.

Why Physicians Practice Where They Do

Regional and national studies have been conducted in recent years that reveal a number of factors that influence physicians' decisions on practice locations. Spousal preferences,[9-11] employment opportunities for spouses,[9,11-13] practice relief coverage for vacation and continuing education (F. E. Wise, unpublished data, December 1997),[14,15] compatibility with medical community,[9,15] quality primary and secondary educational opportunities,[9,13,15] availability of quality housing,[15] recreational[9] and cultural activities, the availability of capital for practice development,[16] and consultation availability (F. E. Wise, unpublished data, December 1997)[15] continually surface as major influencing factors. Likewise, there is a strong association between the size of the communities physicians grew up in and the

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size of the communities where they prefer to practice (F. E. Wise, unpublished data, December 1997).[9,17-21] In particular, women physicians are significantly influenced by employment opportunities for their spouses, availability of childcare, flexible scheduling opportunities, and the interpersonal skills of the recruiter.[22]

Many characteristics of rural places make attracting medical services difficult. Long distances and the high rate of poverty among rural residents are often cited as causes.[23] At the same time, another major challenge in attracting and retaining physicians to rural settings is the financial difficulty of serving populations that either are largely dependent on Medicaid and Medicare programs with limiting reimbursement policies[24] or have no source of payment. Similarly, many rural hospitals are in a state of crisis for the same reasons.[25]

The decision to remain in a rural area to practice may not always be influenced by the same issues that drive initial practice location decisions.[26] Practice ownership, having children at home,[27] and community factors,[10] as well as the level of resident rotation in rural areas,[28] have been shown to promote retention.

Common Strategies to Increasing Access to Care

Many state and federal programs have been initiated to improve the supply of primary care providers (physicians and nonphysician providers) in underserved rural and urban areas. Health professions training and placement that grew out of the federal health professions educational assistance acts, such as the National Health Service Corps (NHSC) and the Area Health Education Centers, have been particularly important. The NHSC, a program to exchange rural practice for health professions scholarships and/or educational loan repayment, has supported and placed more than 20 000 health care practitioners in underserved practice locations.[29]

As of 1996, 81 scholarship, loan forgiveness, and related programs existed in 41 states to assist primary care providers in paying for their education in exchange for service for a specified period in an underserved area. This was more than double the number (39) of similar programs reported in 1990.[29] Another popular strategy offers medical students rural rotations in hopes that the experience increases the likelihood that graduates will seek a rural practice.[19,29,30] Other recruitment and retention strategies include recruitment fairs,[31] placing foreign medical graduate physicians in rural areas using J-1 visa waivers,[32] maintaining databases of employment and practice opportunities,[6] promoting medical careers among rural high school students,[11,30] and compressed video for consultation and professional education.[6]

Nonphysician primary care professionals, such as nurse practitioners, physician assistants, and certified nurse midwives, began to be promoted in the 1960s as a strategy for expanding access to health care in communities with physician shortages.[6] Since the 1990s, the number of these nonphysician providers practicing in the United States has increased rapidly.[33] These professionals have now established themselves as important members of the health care team providing care to rural residents.[6,34] Although midlevel providers have helped to mitigate the rural access problem, issues that affect recruitment of physicians to rural areas have also been shown to affect recruitment of nonphysician providers. For example, Hart et al[34] noted that long hours, isolation, and low reimbursement from Medicaid and private insurance policies negatively influenced the supply of nurse practitioners in rural areas.

Targeted Program to Improve Access

Recognizing the need to address the health care access barriers that face rural Americans, the RWJF developed the SRAP in 1997 and reauthorized the program in 2002. As a long-term effort, the RWJF has made available more than $32.5 million[35] to strengthen institutional and leadership capacity necessary to improve access to basic care in underserved rural communities in Arkansas, Alabama, Georgia, Louisiana, Mississippi, South Carolina, East Texas, and West Virginia.[36,37]

Each grantee was allowed creativity and flexibility in developing activities to address the core SRAP components of increasing rural health care leaders, recruiting and retaining primary care providers, developing rural health networks, and improving the health care infrastructure through access to development capital. The Table illustrates the range of activities developed by the grantees to help recruit and retain primary care providers in rural parts of their states.

This article will focus on the development and implementation of the regional recruiter strategy, probably one of the most innovative of all of the recruitment and retention activities used by SRAP grantees. In fact, a review of the literature and discussions with national health policy experts failed to identify another program that had used a combined regional recruiter–community development strategy similar to the one originally developed through the Arkansas Southern Rural Access Program (ARSRAP), administered by the Arkansas Center for Health Improvement at the University of Arkansas for Medical Sciences, Little Rock.

Current Recruitment and Retention Component Strategies Used by Southern Rural Access Program Grantees*

Program Location	Opportunity Listings	Practice Management	Toolkits	Locum Tenens	Regional Recruiters	Other
Alabama	X	X	X		P	
Arkansas	X	X	X		X	X
Georgia	X	X				
Louisiana					X	X
Mississippi	X	X		X		X
South Carolina		X		X	X	X
East Texas	X	X	X	X	X	X
West Virgina	X			P		X

*X indicates current activity; P, planned activity. Data are from the Southern Rural Access Program State Project Summaries obtained September 30, 2002, from http://www.hmc.psu.edu/rhpc/SRAP%20Program%20Summaries.htm.

Development of the Regional Recruiter Strategy

The ARSRAP recruitment and retention activities were developed to (1) increase success of rural Arkansas communities to recruit and retain primary care practitioners, (2) improve access to primary health care in targeted Arkansas Delta counties and improve the health status of their residents, and (3) increase resources available to rural communities for recruitment and retention efforts. Component strategies included developing a statewide group to coordinate recruitment and retention efforts performed by various state and local organizations and institutions, developing and distributing a community toolkit (Note 1) to assist rural towns in their recruitment and retention activities, and establishing a regional recruiter position.

The idea for the regional recruiter approach to recruitment emerged at Delta-based stakeholder meetings held to obtain local input for the development of the ARSRAP grant application. Stakeholders identified the difficulty and cost of recruiting providers as a key issue for rural Delta communities. In this context, grant funding was requested from the RWJF through SRAP to hire a Delta-based recruiter (DR) to assist communities with provider recruitment and retention. Although the recruiter was to be grant funded initially, stakeholders believed the position could be sustained over time by communities, rural clinics, hospitals, and other providers as they began to experience the benefits of this relatively low-cost resource.

The ARSRAP program staff developed the Delta Advisory Committee (DAC), which was composed of representatives from the Delta Health Commission, the Delta Area Health Education Center (DAHEC), the Delta Studies Center, key providers, hospital administrators, community health center representatives, city and county officials, economic development and educational representatives, and other stakeholders. The DAC helped secure an institutional base from which the DR would operate and assisted in design of the scope of work of the DR. The DAC secured a place for the DR in a private, not-for-profit organization in Almyra (Arkansas County), Arkansas. Shortly after the beginning of the grant period, the DR position was moved from this institutional base to the DAHEC in Helena (Phillips County), Arkansas. Moving the position to the DAHEC was practical because it serves 7 of the targeted counties in the DR's geographic area, shares a mission of provider recruitment, and increases the likelihood of position sustainability.

The scope of work of the DR was designed to be broader than that of a more traditional "professional" recruiter, which usually only involves soliciting candidates for an open position. The DR uses a holistic approach to recruitment and retention that involves coupling traditional recruitment activities with community development activities. Community development activities involve the mobilization of community members through cooperation and collaboration to address mutually identified issues (in this case the lack of adequate health care) through adoption of mutually agreed on solutions.[38] By engaging the community in development activities, the DR can work toward making a community more attractive to recruit and retain new recruits. Hart et al[34] noted that because of the diversity of rural environments and residents, standardized programs to address access to health care in both urban and rural areas may not be appropriate. This suggests that community development approaches that are tailored to address the needs of specific

communities may be particularly important for rural areas.

Once in a community, the DR maintains contact with newly recruited providers to smooth the transitions into their new practice and to integrate them into the community. In addition, the DR works to link the new providers with available resources to support the development of their practice. These resources, which include other SRAP components such as the revolving loan fund and practice management among others, play an important role in retention activities.

Specific examples of DR activities include the following:

- Works with local residents, primary care providers, and health care facilities to design and implement community improvements that make the area more attractive to new and existing providers;
- Builds relationships with local health care providers, residents, and community leaders and works to unite them into action groups;
- Provides technical assistance to enhance local capacity to self-assess needs and map resources;
- Guides action groups in developing strategic plans to address identified needs and build on identified assets;
- Informs community about alternative solutions to increasing access to primary care, such as use of nonphysician professionals (nurse practitioners and physician assistants);
- Assists in developing grant proposals to bring needed resources to the community;
- Nurtures new providers to ease their transition into their new community; and
- Links new providers with resources to improve practice retention.

The formal qualifications for the DR position under the ARSRAP include a bachelor's degree in a health-related field plus a minimum of 2 years of related experience. However, a person with less formal education (less than a college degree) but with additional public health or health care–related experience may be able to perform the duties of the position. Degree or not, the DR position requires a person who can work with community leaders, agency directors, physicians, and the diverse members of the rural Arkansas Delta; can accurately assess barriers to the program and make prompt yet informed decisions about actions needed to address those barriers; and be able to function with a high level of independence.

Measurable process and outcome objectives for the DR position were outlined in the original grant application submitted by the Arkansas Center for Health Improvement to the RWJF. The external evaluation team and the SRAP National Program Office developed program logic charts to outline the objectives and to demonstrate success. Although clearly designed as a mechanism for the RWJF to monitor and evaluate the program, the program logic report provides the grantees with a valuable tool for self-monitoring of their progress in achieving their program goals and objectives.

DR Helps Rural Communities

In one Arkansas community with a population of approximately 2500, the DR was successful in helping meet the health care needs of the residents. For many years, the community had enjoyed a strong economy driven by the productive agricultural industry of the area. During more prosperous times, the community supported 3 practicing physicians. With declining crop prices in more recent years, many farm families left the area, and with them, 2 of the 3 physicians moved. The community successfully supported the remaining physician until he left for personal reasons. Until recently, the community only had access to a part-time rural health clinic managed by a nurse practitioner. The next-closest health care facilities and practicing physicians were 30 miles away. Recognizing the gap in the health care system, the mayor, business leaders, and residents solicited the help of the DR. The DR organized the group into an action team that worked together to informally assess the community's health care needs and begin the recruitment process. Several physicians practicing in the region were contacted to try to fill this community's vacancy, but with no success.

The action team sought both long-term and short-term strategies to address their health care access issues. To address the long-term needs, the action team was able to enter into a community match contract with an individual who committed to practice in the community after medical school graduation in exchange for the cost of attending medical school (Note 2). The individual grew up in the community and has family still residing in the area. Although the community match contract does not provide an immediate remedy to the health care needs of the community, it allows the community to "grow" a physician more likely to remain in the locale because of his rural heritage, familiarity with the area, and family ties. Such a strategy was advocated by Crandall et al,[11] although they caution that some graduates may need salary and/or income guarantees to be ensured adequately remunerated practice opportunities.

To address the more immediate needs of the community, the DR assisted in developing a proposal to the Health Resources and Services Administration (US Department of Health and Human Services) to have the health care services of a community health center in

a nearby town expanded into the same rural community. Until the expansion proposal was granted, the community health center agreed to set up a mobile health clinic, which operated in the community 2 days per week. Once the expansion proposal was approved, a permanent community health center was opened that is staffed by a physician 2 days per week and by a full-time nurse who provides routine wellness check-ups for the residents. Those who live in the community are proud of their accomplishment in establishing the community health center, bringing the physician to the community, and supporting the medical education of a resident who will serve as their physician in years to come.

The DR's success in helping rural Arkansas goes beyond this one example. Using the holistic community development approach to recruitment, the Arkansas DR has been able to successfully recruit 3 nurse practitioners, 3 primary care physicians, and 2 specialists to the Arkansas Delta region since June 2000. After recruitment, the DR continues to work with each provider and community to ensure a smooth transition. The nurturing of newly recruited physicians can help integrate them into the community, which has been identified as a critical factor in rural provider retention.[13] Although we believe the success of the DR in recruiting 8 providers to the Delta was primarily due to the integrated approach used, other factors may have played a role. For example, the placement of the DR in a visible organization with complementary goals (DAHEC) allowed the DR activities to be layered with other efforts to increase the number of providers practicing in the Arkansas Delta. In addition, the DR, a native of the region, was familiar with the positive and negative aspects of the region and had an extensive network that may have facilitated her efforts with both community development and recruitment.

Cost and Sustainability

The DR approach may provide a more cost-effective and affordable recruitment option than many common recruitment strategies. For example, to secure 1 provider for 1 rural community, scholarship and loan repayment programs spend on average $10 000 per year for up to 5 years of service, for a total of $50 000.[29] Likewise, rural hospitals, often under financial strain[39] and lacking internal staff recruiters, may not be able to afford the $15 000 to $25 000[40] typically charged per successful recruit by professional employment agencies. The DR approach requires salary and program expenses for at least 1 full-time regional recruiter plus the cost of a supervisor. The DR approach, including salary and fringe for 1 full-time DR, program supplies, and a supervisor (0.10 full-time equivalent), averages approximately $75 000 per year. In a 2-year period, the DR was able to recruit 8 primary care providers to the Arkansas Delta, for an average cost of $18 750 per recruit. Scholarship and loan repayment programs could cost as much as $400 000 for the same number of recruits, whereas the professional recruitment fees could total as much as $200 000. However, it should be noted that communities within the target area also receive community development assistance through the DR strategy, a service not provided through other more traditional recruitment strategies. As such, the cost comparison is for general illustration purposes only.

The DR strategy is currently supported with grant funding from the RWJF through its SRAP. However, a number of options are being considered to sustain the position at the end of the grant period. These include seeking dedicated state funding, developing a membership organization to support the position through annual fees, fees for services, obtaining additional grant funding from other philanthropic sources, or a combination of these options.

DR Approach Replicated

Due to the success of the DR in the ARSRAP program, other SRAP states have begun to replicate the regional recruiter approach to address recruitment and retention issues in their rural communities. The Louisiana SRAP (LSRAP) program, administered by Health Services Center at Louisiana State University in New Orleans, began using a regional recruiter in October 2001. To date, the LSRAP has been able to recruit 1 provider to their target area using this strategy. The East Texas Rural Access Program (ETRAP), managed by the East Texas Area Health Education Center of the University of Texas Medical Branch at Galveston, adopted the regional recruiter approach in August 2001. The ETRAP has focused on developing a community toolkit to help rural communities recruit and retain providers. Both programs provide recruitment services for any health care facility in their target area. Although these services are currently provided without fee, both programs are considering adopting a sliding scale fee structure. In addition, the Alabama SRAP (ASRAP) program, managed by the Alabama Primary Health Care Association in Montgomery, has received grant funding to support a regional recruiter position and has worked with the Arkansas DR to develop a job description (J.S., written communication, 2002).

A New Strategy for Recruitment and Retention Efforts

Research has shown that factors that influence physicians' decisions about locating and remaining in

rural practices are often rooted in the community. These factors range from quality housing and educational opportunities to recreational amenities and employment opportunities for spouses. As a result of their importance in practice location decisions, addressing community issues should be a part of recruitment and retention strategies. Integrating the community and health care into these efforts increases their success.[26]

Despite this connection with community issues, most recruitment and retention strategies do not use a combined recruitment and community development strategy. A review of the literature and conversations with key rural health policy experts around the country could not identify a similar regional recruiter strategy to the one described herein. This strategy has been responsible for recruiting 8 health care providers to an underserved rural area. We consider the integration of community development and provider recruitment as the key to the success of the DR strategy used in the Arkansas Delta through the ARSRAP. Its success in Arkansas and its easy replication in 3 other states make the regional recruiter strategy a model for recruitment and retention efforts in other rural states.

This strategy has positive implications for both future research and state and federal policies aimed at increasing providers in rural areas of the country. As the strategy matures with its continued use in the 4 SRAP states, additional research and evaluations should be conducted to further quantify its impact. Findings from current efforts and future research should be disseminated to state and federal policymakers as they consider expanding existing or creating new recruitment and retention programs.

Notes

1. Copies of the Arkansas Community Toolkit, which can be easily adapted for use in any rural community, can be downloaded from the Arkansas Center for Health Improvement Web site at www.achi.net.
2. The Arkansas Community Match Student Loan and Scholarship Program, established in 1995, combines state funding with Arkansas rural community funding (50-50 match) to provide financial assistance of up to $16 500 per school year for Arkansas resident medical students contracted to provide full-time primary care in a match community. One year of service is expected for every year of assistance received during medical school.

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A Community Development Approach to Rural Recruitment

C. Ken Shannon, MD, PhD

ABSTRACT: *Programs designed to empower rural communities for health care provider recruitment have usually focused on the health care sector without aggressively addressing broader community development issues. The Recruitable Community Project (RCP) in West Virginia includes community education on recruiting and also assessments of and recommendations to rural communities on broad-based community development, aiming to enhance communities' recruiting potential. The project provides multidisciplinary university-based planning assistance programs for small communities, involving collaborative community visits. The project also uses a project manager as a "community encourager" who participates in community education and in the formulation of sustained community recruiting efforts. From August 1999 through August 2001, 7 underserved rural communities completed the RCP organizational processes and hosted planning assistance teams. Members of community recruitment boards gave high marks to the RCP process, its planning assistance teams, and its usefulness in establishing community ties to state and academic agencies. Since working with the RCP, the 7 communities have recruited 27 providers, success possibly stimulated by their RCP involvement (data current as of September 2002). This model of community training and development to empower rural communities to better recruit health professionals shows early promise. This model could be broadened to include more collaboration of community development and health science disciplines programs for recruitment and retention efforts.*

Small rural communities have long had difficulties recruiting health care providers. The role of rural communities in the recruiting process has been uncertain, and rural community members have traditionally lacked experience in recruiting, often not addressing links between community development and recruiting potential. Programs designed to enhance community decision-making in health care[1-9] have involved sectors other than health care to a varying degree, although the interrelationships of health care services and the local economy have been acknowledged.[10-12] Several programs, including those of national organizations such as the Cooperative Extension Service and the National Rural Development Partnership, have included health care system topics in community development initiatives, although not specifically for enhancement of recruitment. There have been calls for and examples of academic outreach programs that benefit community health status and include elements of community development,[13,14] but these have not included a deliberate community development effort focused on enhancement of the community's recruiting potential.

Links between prospective providers and rural communities in need of health care providers have not traditionally been strong. Residency training programs in this country have not always addressed the problems that the recently graduated prospective provider may face in a rural location nor have they uniformly assisted the provider in the transition from an academic to a rural setting.[15-17] Lifestyle and cultural issues have been important in rural recruitment,[18-21] but there is no consensus on how these issues should be addressed or whether a combined community development and education effort may have utility in making underserved rural communities more attractive to health

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care providers or in promoting community recruiting readiness.

West Virginia is a poor rural state with many unmet health care needs. Fifty of 55 counties have medically underserved areas (MUAs) or health professional shortage areas[22] despite the presence of 3 medical schools and multiple rural training sites for health professions students. As in other states, these MUAs are generally economically disadvantaged areas. The economic picture is not likely to change substantially in the near future. Furthermore, there have been reports of a decrease in the number of physicians in the state due to a variety of factors. It is, therefore, essential that West Virginia develop new approaches to enhance rural recruitment to help avoid a worsening shortage of providers.

The purpose of this article is to describe an innovative approach developed in response to West Virginia's rural health care provider recruitment needs. The Recruitable Community Project (RCP) is centered on an effort to promote general community development, leadership, and education. Based on the premise that rural community recruitment potential is correlated with general community development and a proactive community effort, the RCP combines the efforts of a project-sponsored "community encourager,"[1,6] university-based community planning assistance programs,[23-26] and health care provider recruitment initiatives.

Development of the RCP

The RCP was implemented in late 1998 by faculty of the Department of Family Medicine at West Virginia University (WVU). Faculty collaborated with state agencies, university departments, and community assistance teams before funding application and during implementation of the project. Two of these university-based assistance teams (the First Impressions Program [FIP] and the Community Design Team [CDT]), which already had been addressing various issues of community development in the state, were integrated into the RCP. With this, suggestions regarding general community development outside traditional health care topics were available to RCP communities. Thus, the RCP design represented a new model to help train community members on barriers to successful provider recruitment, broad-based community development, and sponsoring elective rural clinical rotations for primary care trainees. The community assistance teams function through the efforts of volunteers from various institutions, agencies, and communities and are founded on the strong service commitment of West Virginia's academic departments and agencies. The use of these community assistance teams allowed investigation of the basic RCP premise that health care provider recruitment to rural communities can be enhanced through general community development.

The RCP design is based on the assumptions that (1) health care personnel are attracted by a community's physical attractiveness, local supports for the practice and family, and the welcome they feel; (2) communities do not understand what health care personnel are looking for or how their community is perceived by potential recruits; (3) communities can learn and can effect positive changes; (4) outside assistance from trusted in-state resources can provide this needed assistance; (5) assistance is best delivered in a supportive and collaborative fashion; and (6) an explicit recruitment plan serves as a good vehicle through which to focus the community's efforts.

Funding for the RCP, as a demonstration project, was initially secured from the Claude Worthington Benedum Foundation in 1998. With the advent of the West Virginia Rural Health Access Program (WVRHAP) in 1999, a component of the Robert Wood Johnson Foundation's Southern Rural Access Program that operates in 8 southern states, RCP funding was supplied entirely by the WVRHAP. The WVRHAP derives its funding from both the Robert Wood Johnson Foundation and Claude Worthington Benedum Foundation. Funding covers costs of project personnel and travel, administrative costs of the community assistance teams (total of $3500 for each RCP community), and a stipend for primary care trainees who elect 1-month rural rotations to sites approved by project personnel.

Structure and Operation of the RCP

The project is directed by a multidisciplinary project oversight committee, which is composed of personnel from West Virginia agencies involved in recruitment and retention, private and community organizations, and various academic departments. Project personnel include a physician with rural West Virginia practice experience, a project manager with community programs experience, and a part-time secretary.

The RCP functions in a sequential fashion. Initially, information regarding the RCP was distributed throughout West Virginia through a statewide rural training network, the Cooperative Extension Service, and mailings to chambers of commerce and health care facilities. Ongoing efforts include an informational brochure and Web site that outline the program and the application process. The RCP program manager then visits interested communities and assists community members in supplying the required information regarding community eligibility for project entry. Eligi-

bility criteria include the following: (1) location in an underserved rural area; (2) demonstrated ability to organize for a recruitment effort (formation of a recruitment board composed of key community members); (3) willingness to prepare for and host the community assistance teams; (4) perceived ability by community and project personnel of community ability to support a viable practice; and (5) identification of a sponsor, such as a hospital or clinic, that would offer a contract to a prospective recruit. On the basis of available information, the project oversight committee then annually selects 2 or 3 RCP communities.

After project entry, RCP communities then perform further self-assessment and the recruitment board works with project personnel, learning of barriers to recruitment and positive initiatives that communities may use to help overcome barriers and to build community capacity. The RCP project manager serves as an encourager to several communities, traveling frequently to the RCP communities, providing one-on-one consultation and assistance, conducting community workshops, and helping communities to plan their recruitment effort and to prepare for visits from community assistance teams. The latter requires extensive community assessment and information collection.

The RCP includes an early educational initiative that focuses on enhancement of recruiting knowledge and abilities of rural community leaders. Many community recruitment board members experienced their first opportunity to learn of important recruitment issues, such as practice viability, practitioner debt, and lifestyle issues, through their involvement with the RCP. Educational tools for communities have been developed, including a short recruitment manual, a video on recruitment and retention, and a board game that introduces community members to the hurdles and pitfalls associated with rural medical practice and the important contributions communities can make to the success of a practice and to the retention of practitioners.[27]

In addition to building the capacity of participating communities to recruit interested practitioners, the RCP also works to link practitioners and communities through other efforts. The RCP linkage efforts include sponsoring funded trainee rotations in any underserved rural West Virginia community that is recruiting, presenting information at primary care training sites, and sponsoring opportunity fairs where prospective recruits can interface with community members.

One of the essential components of the RCP is the community assistance offered by multidisciplinary community assistance teams that are administered from academic departments at WVU. These teams incorporate expertise from various agencies, institutions, and communities and are valuable as outside resources that can assist a community in self-assessment and in suggesting initiatives for community development. These teams have historically had a role in various community assessment and development activities and their continuation is based on the strong service commitment of academic departments and state agencies in West Virginia. When incorporated into the RCP process, these teams also assume additional functions by assessing the local health care system and making recommendations for improvements, particularly those involving recruitment of primary health care providers.

One such community assistance program is the WVU FIP.[23,24] The FIP has supported community assessment at WVU since 1997 and has visited approximately 20 West Virginia communities. The FIP team is composed of approximately 5 volunteers who independently visit the community as anonymous first-time visitors and later present to the community their impressions of the town and their recommendations about ways to improve appearances and avoid negative first impressions. The FIP team members gain their impressions by driving around the community and talking to community members. The team formulates this information into a written report that is made available to the community and to a subsequent planning team, the CDT.

The WVU CDT[25,26] visits the community for a more comprehensive effort, resulting in recommendations in various areas of community development. The CDT has been functional since 1997 and has visited approximately 20 communities throughout the state. It has addressed a variety of individual community development issues that have been identified by the community, by the FIP, or through the required application process. The CDT is typically composed of 12 to 20 volunteers from West Virginia agencies, communities, and academic departments, representing a variety of disciplines, such as engineering, public administration, landscape architecture, historical preservation, extension services, community economic development, and recreation.

When functioning as a component of the RCP effort, the CDT also addresses issues of health care access, particularly recruitment of health care providers, previously detailed through the RCP process of community interaction. In RCP communities, the CDT also includes the RCP physician project director, project manager, and personnel from health care disciplines such as family medicine and community medicine. Community members host these CDT members during a 3-day community visit when community input is sought, collaborative assessment and planning are performed,

and general recommendations are made for community development and recruitment.

The community provides input through the host families, presentations by community members to the CDT, and a community forum typically held in the evening at a local facility. The most pressing issues challenging the community are identified. The CDT members are assigned to various groups to suggest possible solutions and collaboratively develop recommendations on each topic. The CDT groups present their findings and recommendations to the community at the end of the visit and subsequently submit a written report to the community and county leaders. The topics most often addressed have involved health care and economic development, including community-specific topics such as community revitalization and leadership, transportation, recreation, tourism, and historical preservation. Follow-up consultations and site visits by CDT members are provided as needed. (The Figure provides an outline of the RCP community process.)

RCP Implementation and Experience

As of September 2002, 12 communities had submitted applications and 7 were selected to participate in the RCP. All 7 RCP communities are rural, with populations ranging from 400 or more to nearly 4500, and are located in MUAs. As of August 2001, all 7 had completed the self-assessment, convened a recruitment board, and hosted the 2 planning assistance teams. Since the RCP is too new to assess its long-term successes, only early experiences and outcomes are described.

As of September 2002, these 7 communities had recruited a total of 27 health care providers, including 14 physicians, 6 nurse practitioners, and 7 physician assistants since their entry into the RCP. Given that rural rotations have traditionally been a major effort to improve rural recruitment, it is noteworthy that only 2 of these recruits had participated in an RCP-sponsored rural rotation, thus highlighting the role of these communities in proactive recruitment of providers who had not performed a local RCP clinical rotation.

An anonymous survey of community recruitment board members has provided early evidence of program success from the perspective of those respondents. Of 25 board members surveyed, the 17 respondents rated the value of the FIP, CDT, and overall RCP process to community development, attitudes, knowledge, and recruiting potential. High numerical ratings and positive comments were given to each program. High value was placed on the FIP in promoting awareness of community appearance, development, and leadership issues. The CDT was valued for increasing the level of community interest in development, leadership, and recruitment issues; increasing the level of interest of county leadership in development issues; and promoting a positive community attitude toward the academic institution (WVU) as a partner in development issues. The overall RCP process was given high marks for promotion of community knowledge of and readiness for recruitment, personal leadership and cooperative skills, and a positive community attitude toward the academic institution.

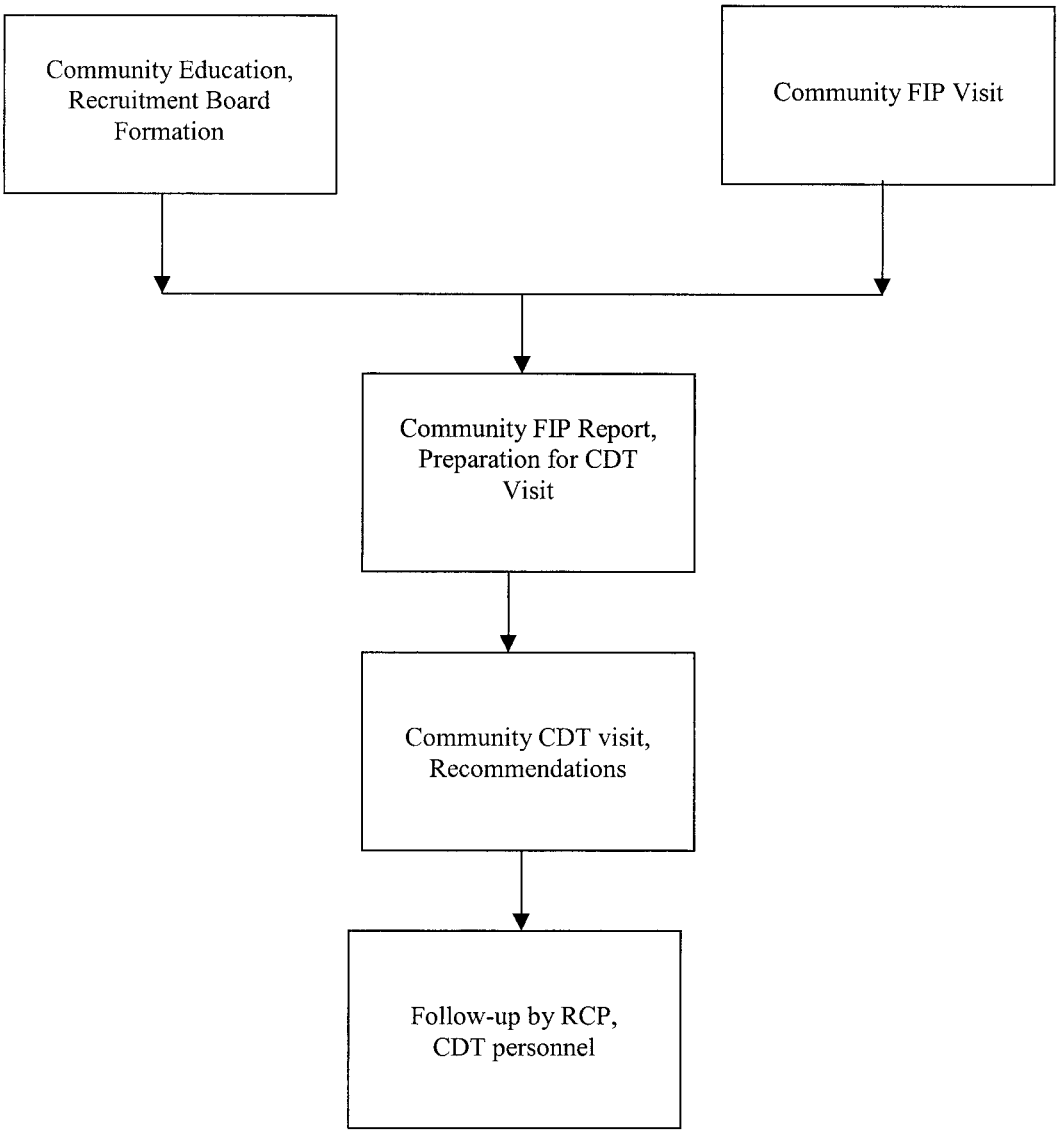
Discussion

This report describes the RCP, a unique approach to enhance the recruiting potential of rural Appalachian communities through general community development, including enhancement of community knowledge on health care and recruiting issues. The use of community assistance teams for the purpose of enhancing recruiting ability through broad-based community development initiatives is the most unique aspect of this program. General community development is closely related to economic issues and seems to be an important issue for maintenance of health care services. A common problem cited by RCP communities was the exodus of potential patients to more ''developed'' communities.

Intuitively, it would seem that a rural community that proactively prepares for recruitment by actively engaging in community development activities intended to improve the health of its community is more likely to be successful in its recruitment efforts. The RCP attempts to assist communities in making a positive impression on prospective recruits and in addressing barriers to rural recruitment by promoting community readiness for recruitment through educational processes and general community development. These barriers are addressed through a sequential process of proactive community training and development. The RCP communities had some successes in recruiting providers after completing the processes of organization for recruitment and the hosting of the community planning assistance programs. Aside from any recruitment issues, the community perception of strengthened readiness for development has been an evident outcome. The program has also strengthened links between communities and academic and state agencies.

The success of programs such as the RCP depends on a number of factors: (1) community interest in proactive efforts in recruiting (interest was ascertained in this project by evidence of completion of application materials and through meetings involving community and project personnel); (2) the role of the project manager as an encourager and resource for sustained community efforts (the importance of this has been evident); and (3) the collaborative efforts involving

Recruitable Community Project (RCP) Community Process.



CDT: Community Design Team
FIP: First Impressions Program

community, state, and academic partners. With an atmosphere of cooperation initially established by interaction of community and project personnel, the small Appalachian communities have been receptive to recommendations from outside personnel and agencies, and the communities have often acted on these recommendations.

Preliminary evidence suggests that community efforts in adopting a proactive stance in community development and recruiting can attract health care providers. Although more complex and labor intensive, these efforts may be more effective in rural recruiting than are the efforts in supporting rural RCP rotations for trainees.

This model for enhancing rural community recruiting potential could be used on a wider scale in other

states and regions of the country where commitments for funding and multidisciplinary collaboration can be secured. State agencies and large academic institutions commonly have existing community development programs; promotion of multidisciplinary input into such programs, including that of experienced rural practitioners, could allow recruitment initiatives similar to those of the RCP. Project initiatives could be expanded to involve a more developed collaborative program that integrates traditional community planning and development programs with input from rural health care providers, training programs, health care workforce planners, and consultants, so that stronger initiatives could be more tailored to the requirements of the recruiting site.

There are limitations to evaluation of this model at this preliminary stage. The effect of community development initiatives in stimulating recruitment successes is unknown and needs more study. More experience with a larger number of communities and more information on recruits are needed for a more complete evaluation. No assessments of practice obligations or of retention of recruits has yet been completed. There has not been enough experience with the model to allow a comparison with a control group of communities, although it is known that past recruitment into rural West Virginia has traditionally been difficult.

Conclusions

As a program to stimulate recruitment of health care providers by rural communities in West Virginia, the RCP has shown some preliminary successes. The attempted enhancement of rural community recruiting potential through processes of community education and general community development may have utility in promoting rural health care provider recruitment, but more study is needed. The use of university-based planning assistance programs in community development for enhancement of rural recruitment is the most unique aspect of the RCP program. These community efforts may be more effective in promoting rural recruiting than are RCP efforts in supporting rural rotations for trainees. This approach to rural recruitment may be enhanced through further collaboration of traditional community planning and development programs with health care workforce initiatives. This approach may be tested through further evaluation of the RCP and through its implementation in other rural areas.

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The Southern Rural Access Program and Alabama's Rural Health Leaders Pipeline: A Partnership to Develop Needed Minority Health Care Professionals

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ABSTRACT: *Rural Health Leaders Pipeline programs are intended to increase the number of youth interested in and pursuing health professions in rural communities. This paper presents 2 complementary approaches to Rural Health Leaders Pipeline programs. Two different organizations in Alabama recruit students from 18 specified counties. One organization is a rural, community-based program with college freshmen and upperclassmen from rural communities. Students shadow health professionals for 6 weeks, attend classes, visit medical schools, complete and present health projects, and receive support from online tutors. The second organization is a university-based program that supplements an existing 11th grade-medical school rural medicine pipeline with 10 minority students from rural communities who have graduated from high school and plan to enter college as premedical students in the following academic year. Students participate in classes, tutorials, seminars, and other activities. Students earn college credits during the 7-week program, maintain contact with program staff during the school year, and by performance and interest can continue in this pipeline program for a total of 4 consecutive summers, culminating in application to medical school. Each organization provides stipends for students. Early experiences have been positive, although Rural Health Leaders Pipeline programs are expensive and require long-term commitments.*

Rural Health Leaders Pipeline programs are intended, at minimum, to increase the number of youth interested in and pursuing health professions in rural communities in order to eliminate the maldistribution of health care professionals and improve access to care. At maximum, these programs aim to produce an ample supply of rural health professionals who are leaders in community health as well as clinicians. This article describes the 2 components of the Alabama Rural Health Leaders Pipeline program developed to increase the number of health professionals in Alabama's underserved rural communities. This undertaking is important because 65 of Alabama's 67 counties include medically underserved populations.[1] Inadequate access to quality health care for area residents and the adverse economic impact on communities are a result of insufficient numbers of health professionals in Alabama's economically distressed Black Belt region, which includes counties located through the center of the state. These counties have the state's largest concentration of low-income and African-American residents.

Two Alabama Rural Health Leader Pipeline components, the Health College Connection Program II (HCCP-II) and the Minority Rural Health Pipeline Program (MRHPP), collaborate to prepare rural disadvantaged students to pursue health professions. The Robert Wood Johnson Foundation's (RWJF) Southern Rural Access Program (SRAP) is a major partner, providing funding through the Alabama Southern Rural Access Program (ASRAP). An additional funding partner is the Alabama Family Practice Rural Health Board.

Working with rural health leaders pipelines has given project leaders a better understanding of the long-term commitment that is required and of the attrition that occurs along the way. The strategies to achieve success in directing rural students to become health care

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professionals who will embrace rural service must be as multifaceted as the barriers they and the component programs will encounter.

Historical Context

Social developments in Alabama have disproportionately affected both the educational opportunities and health of low-income and minority populations. Nowhere is this more apparent than in the Black Belt region, a strip of 19 counties across the middle-lower girth of the state defined by the rich dark loam that until recent decades was committed to cotton. Still in search of a modern economic engine, this region's population is primarily rural and poor. It contains the greatest ratio of private to public schools and the lowest tax base to support the latter. Health statistics in Black Belt communities reflect the region's poverty and unmet primary care needs. All or segments of all Black Belt counties are designated as medically underserved areas and health professional shortage areas.

A common perception, endorsed by the RWJF ASRAP, is that health care professionals can become the leaders required to develop programs, services, and movements that can advance the health of rural communities. In response to this proposition, 2 distinct Alabama entities became partners with ASRAP in developing the Alabama Rural Health Leaders Pipeline to produce health care professionals for future service in the Black Belt. These entities arrived at this partnership from separate backgrounds and directions. One is a community-based program in historic Tuskegee, Ala, and the other is a college department in the traditional university town of Tuscaloosa.

Partners in Alabama Rural Health Leaders Pipeline Program

The partners in the Alabama Rural Health Leaders Pipeline Program are the Tuskegee Area Health Education Center (TAHEC) and the University of Alabama Department of Community and Rural Medicine (CRM). In 1972, TAHEC became the first area health education center (AHEC) in Alabama.[2] The purpose of TAHEC is to develop and support community-based education for medical, dental, nursing, pharmacy, allied health, and other students to meet continuing education needs for a broad array of health professionals; recruit underrepresented and disadvantaged persons into health care careers; conduct health promotion and disease prevention activities; and assist communities in recruiting and retaining health care providers. Its service area includes all of Alabama's Black Belt counties.

In 1994, TAHEC began a program to increase local high school students' knowledge of different major health conditions common in the Black Belt and of health professions that could address the conditions. The program, called the Health College Connection Program (HCCP), includes students in grades 11 and 12 from 1 local high school. The Rural Leaders Pipeline Program, about which this article is written, grew out of the HCCP and is called the Health College Connection Program II (HCCP-II).

The University of Alabama Department of CRM is a product of the Kurt Deuschle philosophy of community medicine, which was developed in Kentucky to prepare physicians for Appalachia.[3] William R. Willard, often called the father of the specialty of family medicine and the founding dean of the University of Kentucky School of Medicine, brought the community medicine concept to Alabama in 1970 when he became founding dean of the College of Community Health Sciences (CCHS), a community branch campus of the University of Alabama School of Medicine (UASOM). It was Willard's notion that community medicine teaches students the social underpinnings, organization, and resources of a community, preparing them to become leaders in community health, as well as clinicians.[4]

Prior to 1990, CRM largely confined its medical educational role to conducting rural community rotations for medical students and family medicine residents of CCHS. Since then, CRM has led CCHS and UASOM to produce a rural medicine pipeline from high school through medical school.[5]

The UASOM rural medicine pipeline begins with the Rural Health Scholars Program (RHSP), started in 1993, and attracts yearly 25 rural high school students with diverse geographic and ethnic backgrounds to the University of Alabama to consider medicine as a career. The Rural Medical Scholars Program (RMSP), which was started in 1996, selects 10 rural students per year to enter medical school after a year of health studies. Rural Health Scholars are favored for admission to the RMSP.

In 1999, it was clear that the success of creating a diverse RHSP at the high school level was not transmitting through college to the RMSP. After 3 years, the RMSP had no African-American students enrolled and very few representatives of the Black Belt counties. RMSP staff made diversity a program priority, a necessity in order to produce physicians with cultural competence in rural Alabama and to provide rural Alabamians opportunity to choose physicians who match their cultural preferences. This priority was the impetus for CRM to submit a proposal to the RWJF ASRAP to create the Minority Rural Health Pipeline Program to strengthen the existing rural medical pipeline program and make it more responsive to the Black Belt population of Alabama. CRM and CCHS are

situated on the University of Alabama campus in Tuscaloosa, which sits on the edge of the Black Belt and serves as a regional center for a large portion of the area.

The TAHEC Health College Connection Program II. The TAHEC HCCP-II began in 2001. The planning committee used the basic HCCP framework to develop HCCP-II as part of a proposal in late fiscal year 2000. The program includes preceptor-led shadowing experiences with health care professionals such as physicians, nurses, pharmacists, occupational therapists, and physical therapists; enrichment classes to improve communication and quantitative reasoning; research projects on health-related conditions prevalent in the Black Belt counties; and field trips to 2 regional medical colleges. College students are the target population. Students who live in 1 of the targeted 18 counties must submit applications, transcripts, 3 references, and 2-page essays on why they want to participate in the program and why it is important for disadvantaged students to pursue health profession careers.

HCCP-II goals are that 60% of program participants will select health profession majors and that 33% will graduate with a degree in a health discipline and work in a health profession at least 1 year in an Alabama rural community. It is too early to tell if the program has been successful. Annually, TAHEC mails questionnaires to previous program participants to discover if they are attending a college or university, their majors and classifications, changes in name, addresses, and, if they have graduated, the location and career field in which they are working. Students must agree to provide this information as a condition of participating in HCCP-II.

The program starts in late fall. Before student recruitment begins, the project director recruits preceptors, reserves classrooms, charters buses, contacts medical schools to coordinate trips, orders supplies, secures housing for students who live more than 50 miles from Tuskegee, and hires additional staff. Students are recruited by contacting school counselors; through flyers, newsletters, and college department heads; and through the TAHEC web site. Previous HCCP-II students can reapply but must compete for the opportunity to continue participating in the program. TAHEC staff reviews applications and makes selections.

If accepted, students younger than 19 must have parental consent to travel on trips to medical schools and attend an orientation that includes rules for working with patients, confidentiality, infection control, attire, and attendance.

For students to make informed decisions about pursuing a health professions career, they need to know what happens daily in that profession. Through TAHEC's partnership arrangement with the local Department of Veterans Affairs Medical Center, students shadow health professionals in 1 of more than 21 health professional disciplines at the medical center for 6 weeks, usually for an entire daytime shift. The benefits to the medical center are (1) increased possibility that students will return for employment after graduating from health profession schools, and (2) student-related motivation of preceptors to keep current in their field.

Students attend classes to increase quantitative reasoning and communication skills. Instructors administer pretests to students to identify skill deficits and design curriculum. Students who have test scores that indicate mastery of subject matters are exempt from attending classes. Program management added this provision in response to students' suggestions and to reduce redundancy. The quantitative reasoning instructor has an earned terminal degree and teaches medical school admission test preparation at the university level. The second instructor, with a graduate degree, has more than 30 years' experience teaching communications and English. Debating is one technique used to enhance students' verbal, persuasive, and organizational skills in the communication course. Students attend classes for 30 hours during the summer program. In addition to these classes, TAHEC teaches American Heart Association basic life support classes for students. In the 2002 summer program, only 1 student failed to earn CPR certification. Two students earned basic life support instructor certification.

The program is punctuated each summer with a health summit. The summer 2001 HCCP-II health summit featured only presenters from outside agencies. However, summit evaluations by students strongly recommended peer presenters. Consequently, the health summits were altered to let student teams build and demonstrate skills in researching and presenting health topics that adversely affect residents of Alabama's Black Belt. Teams develop survey instruments, survey a valid sampling of residents, and compile the data. All teams present their findings. Teams choose topics such as breast cancer, prostate cancer, diabetes, domestic violence, sickle cell anemia, and sexually transmitted diseases. Each team member must make substantive contributions to the project. Summit 2002 evaluations showed that students were more interested in, attentive to, and learned more from peer presenters compared with students of the previous year. These conclusions were supported by posttest evaluations.

Students travel to at least 2 medical schools. During 2002, they traveled to the Morehouse School of Medicine in Atlanta, Georgia, and to the University of South Alabama College of Medicine in Mobile, Alabama. Medical faculty and staff informed students of the admission criteria, competition for admittance,

Minority Rural Health Pipeline Program Participants by Level and Year of Participation

	Program Year			
Participation Level	2001	2002	2003*	2004*
First year	10	8	8	8
Second year	0	8	6	6
Third year	0	0	4	4
Fourth year	0	0	0	4
Total	10	16	18	22

* Projections. Actual number will be determined by available funds.

available resources, and expenses to expect. They recommended ways to prepare to increase their chances for acceptance and allowed students to tour the facility and a teaching hospital to see the newest technology, such as the use of robots. Medical students shared their medical school experiences.

Each student who completed all requirements for the summer session received a $1200 stipend. The purpose of the stipend is to remove the barrier to attending the program because of the need to earn money for school. To be accepted into the program, each student signs an agreement to provide follow-up information about her or his educational status, name of school currently attending or last attended, major, graduation date, degree earned, and current occupation. The HCCP-II web site provides information to aid students in their studies and social aspects of college life. TAHEC polls students about their most challenging courses and provides web cameras and online tutors to assist students with the courses. TAHEC staff maintains contact with students via e-mail, regular mail, and visits to college campuses.

Minority Rural Health Pipeline Program. The Minority Rural Health Pipeline Program (MRHPP) is designed specifically to increase the number of minority students from rural backgrounds who qualify for admission to medical school through the RMSP of the UASOM. The MRHPP was planned under the premise that 4 goals must be accomplished for successful transition of a minority rural high school graduate into a student accepted for admission to medical school. These goals are (1) nurturing a sustained interest in rural medicine, (2) developing appropriate personal qualities and social skills for practicing health professionals, (3) maintaining an above-average undergraduate academic record, and (4) achieving a competitive score on the Medical College Admission Test (MCAT). Based on the observation that achieving the minimum MCAT score of 24 required by the RMSP is the major obstacle, the central emphasis of the MRHPP is development of skills needed for competitive performance on the MCAT. The other 3 goals receive significant but secondary attention.

A basic tenet in the design of MRHPP is that all these goals are best developed through a long-term approach beginning before entrance to undergraduate premedical study. In regard to the goal of a competitive performance on the MCAT, the program is designed to introduce students progressively over a 4-year period to the required test skills, rather than waiting for a traditional short-term preparation normally initiated no earlier than 9 months before taking the MCAT. Beginning at the point that a rural minority student graduates from high school and continuing for 4 years to a successful admission to medical school, MRHPP is a comprehensive program for nurturing career interests in rural medicine and building progressive skills needed for becoming a competitive medical school applicant.

The principal objective of the program is to produce 4 successful minority rural applicants to medical school each year, beginning in 2004. The recruitment goals of the program have evolved in accordance with available funding. The current enrollment pattern is shown in the Table.

In the first year of the program (2001), minority students graduating from high school in all rural counties of Alabama were recruited. Minority students who had participated previously in the RHSP in the summer after the 11th grade were the first to be notified and recruited. The other primary method of recruitment was through information sent to high school teachers and counselors. Information about the program was also added to the University of Alabama Rural Programs web site. To apply, students were required to complete a 1-page personal data form, write a brief statement of interest, and supply 2 references from teachers. Over 60 complete applications were received. Because students were to enroll at the University of Alabama during the summer phase of the program, only students who met the University's admission requirements were considered. This criterion reduced the number of applicants to 30. Offers to become participants were extended to 12 students in order to fill the 10 places in the program. Subsequently, the 10 students completed the first-year program, and 8 of these students were accepted as second-year participants in 2002.

Recruitment of new students for the second year of the program in 2002 concentrated on 18 Black Belt Alabama counties as designated by the SRAP. This

emphasis reduced the total number of applicants to 20, of whom 8 were selected as first-year participants in 2002. Thus the total number of participants was 10 in 2001 and 16 (8 second-year and 8 first-year participants) in 2002. Each year the ratio of female to male applicants has been approximately 4:1. The actual enrollment in 2001 consisted of 8 women and 2 men. Fifteen women and 3 men made up the 2002 enrollment.

In 2001, the program included a 10-week summer period on the University of Alabama campus. The on-campus period for the 2002 program was reduced to 5 weeks. Participants were housed in a special dormitory section with 2 advanced undergraduate counselors. The only special regulation for participants as compared with other undergraduates was that they were required to receive permission to leave campus overnight. Activities in the program were scheduled only between Monday morning and Friday afternoon. Although many participants lived within 1 or 2 hours driving distance, the majority remained on campus during weekends.

The first set of participants entered MRHPP in the 2001 summer session and were scheduled for the following:

1. Survival Skills Class (3 hours per week). This class was conducted by a staff member of the Teaching/Learning Center at the University of Alabama in a manner similar to that of a regular course offered to first-semester students. The class topics included time management, control of financial resources, social adjustment, note taking, and study and test-taking skills.
2. Chemistry Class (8 hours per week). Students attended as auditors a general chemistry class offered in the regular 10-week summer session of the university. They took all class exams but did not receive a grade in the course. This gave the participants an opportunity to experience a regular university class without the pressure of achieving a competitive grade. This class was supplemented by a group tutorial meeting 3 times per week.
3. Physics Class (3 hours per week). Because none of the participants had taken physics in high school, a special class was offered for 5 weeks to acquaint them with some of the mathematical and quantitative thinking skills required for problem-solving courses such as physics.
4. Biology Class (3 hours per week). A special-topics biology class was offered for 5 weeks. The topics concentrated on the importance of molecular biology.
5. Reading Comprehension Class (4 hours per week). This class addressed the importance of reading comprehension as a skill needed for the MCAT. An emphasis was placed on reading for information that could be recalled quickly and accurately in response to questions about a passage, a skill needed for the MCAT.
6. Current Events and Medicine Seminar (3 hours per week). This class was conducted in a seminar style and focused on medically related topics in recent and current news. Students were asked to read articles and be prepared to report on them in class. The class was intended to develop skills in reading for information, identifying important facts, and transposing ideas into an articulate expression of an opinion.

Because of limited funds, the 2002 summer session was shortened to 5 weeks, the physics class was eliminated from the program, and the other courses were adjusted in content to the 5-week time period. Otherwise, the schedule for 2002 first-year students was similar to that outlined above for 2001.

The 5-week summer schedule for second-year students in 2002 was as follows:

1. Chemistry Review (4 hours per week). For the 7 students who had not completed general chemistry in their first year of college, a group tutorial in general chemistry was conducted. The tutorial incorporated some exposure to practice MCAT questions dealing with general chemistry topics. The 1 student who had completed general chemistry was offered a limited introductory tutorial in organic chemistry.
2. Biology Review (4 hours per week). All of the students had completed at least 1 semester of college-level biology. A tutorial was offered to assist students in applying their knowledge of general biology to interpreting short passages of biological information such as those encountered on the MCAT.
3. Reading Comprehension (4 hours per week). Because of the importance of reading comprehension, the second-year students were combined with the first-year students in the before-mentioned reading comprehension class. The content of this course was sufficiently varied from that of the previous year so that it was not a repeated experience for the second-year students.
4. Health Issues (4 hours per week). The second-year students participated in a health issues class dealing with 4 major health problems of rural minorities in Alabama: hypertension, diabetes, breast cancer, and HIV/AIDS. In groups of 2, participants made an in-depth study of each topic and presented a joint poster presentation at the conclusion of the 5-week session.

Clinical and field experiences are designed to play 2 important roles in achieving the goals of MRHPP. First, they nurture the commitment of the participants to serve the medical needs of rural areas. Second, for participating

students they enhance the confidence that they can be successful in the pursuit of a career in medicine.

In the 2001 session, each participant spent a half day observing a physician in an outpatient clinic at the Capstone Medical Center of the University of Alabama. This proved to be such a popular experience that it was expanded in summer 2002, although the total time period was shortened. First-year students in 2002 spent 4 half-days in a clinical observation. Each second-year student was assigned to spend up to 1 full day per week with one of the collaborating local African-American physicians.

Several field experiences were scheduled each summer. In both years, 1-day field trips were scheduled to rural community clinics in west Alabama. One-day field trips were scheduled to the University of Alabama Medical Center in Birmingham in 2001, and to Meharry Medical School in Nashville, Tennessee, in 2002. As a cultural enhancement, a trip to Tuskegee University and the Alabama Shakespeare Festival in Montgomery was offered in 2001, but this could not be repeated in 2002 because of a shortage of time and funds.

Shortening the on-campus summer program from 10 weeks in 2001 to 5 weeks in 2002 provided an opportunity to add additional off-campus clinical experiences for participants. Each participant was matched with a physician in her or his home county for 40 hours of clinical observation/assistance over a 2-week period following the on-campus session. Students submitted a report on their experiences as a requirement for successful completion of the summer program.

A challenge for MRHPP has been the design of follow-up for the academic years following each summer session. The 10 students enrolled in the 2001 summer program elected to attend 9 different higher education institutions, and the 16 participants in 2002 are currently enrolled at 8 different colleges and universities. Follow-up has included the following elements: collecting data on the academic progress of participants, communicating frequently with participants through e-mail, visiting campuses where participants are enrolled, and convening on a mid-year weekend for a convocation at the University of Alabama campus.

Collaboration Among Component Programs

HCCP-II and MRHPP were planned, proposed, and developed independently, each based on prior successful ventures of the separate program directors in dissimilar contexts. As the programs were being developed, the value of collaboration became apparent and was strongly encouraged by officials of the SRAP. Based on the theory that joint activities would strengthen the experience for the students of each program, several activities were planned in the first year that revolved around reciprocal field trips between the 2 institutions. In year 2, we sought to develop a field experience with students of both programs participating in a health fair conducted in 1 of the Black Belt communities. Both the expertise of TAHEC in health education and CRM with rural medicine were found to be useful and complementary. Because collaboration was not incorporated in planning during year 2, collaborative activities did not occur during the summer session. As the Alabama Rural Health Leaders Pipeline (RHLP) evolves, we still seek to build on this experience a feasible collaborative framework that will require foresight and funding to implement.

Discussion and Lessons Learned

We readily acknowledge that the Alabama RHLP is a work in progress. Although there are rigorous evaluation plans and processes in place, current observations are too few to make quantitative judgments and not yet sufficiently detailed for qualitative pronouncements. At this time, we can only provide anecdotal observations made by program staff: observations that make sense to us and resonate with our prior experiences and philosophies. We present these "lessons learned" for what they are worth, anticipating that some may be substantiated by the evaluation, whereas others will not find support.

It should also be stated that the context within which efforts such as the RHLP are conducted exerts a major, and perhaps overriding, influence on the program, program developers, and student participants. Alabama has a unique history that interacts with its current socioeconomic milieu to produce a particularly vexing context within which to launch the Alabama RHLP. The Black Belt's social separation pervades a large part of the sociopolitical, institutional, and interpersonal resources of Alabama. It is a separation based largely on ethnic and socioeconomic factors and characterized more than euphemistically as "black and white" (recent data show a growing third sector of Latin Americans). It is our belief that the care and skill with which we assist a new generation of health care leaders to cause these separate social realities to converge will correlate directly with their commitment to and success in the rural health professions and with the health of their communities.

The following details what we have learned:

1. Partners from different cultural, institutional, and programmatic backgrounds can strengthen one another. In dealing with basically the same population, HCCP II and MRHPP have taken different approaches to similar goals. As partners, each

recognizes strengths in the other. These strengths can be viewed for their potential to be incorporated wholly or with modification in the partner program or in a combined comprehensive program. For example, changes could be made in the number of students to accept, the structure of the program, amount of the stipend, or the length of the summer component.

Likewise, it would be beneficial to compare and contrast the efforts of HCCP II and MRHPP to additional pipeline projects, perhaps considering also elementary and high school programs. Some examples are found among other RWJF-funded programs,[7] such as the Mountaineer Public Health Pipeline in West Virginia, the Thurgood Marshall Elementary School Pipeline in Pennsylvania, and the Community Oriented Rural Leaders Pipeline Effort of the East Texas Rural Access Program.[8] Taken together, our understanding of effective pipeline approaches could be enhanced.

2. Partnerships are expensive. There is no doubting the importance of partners, collaborations, inclusive dialogue, and deliberation to the success of this special program. It is our strong belief that between 2 dominant cultures in Alabama, success will require committed partnerships among opinion leaders, institutions, programs, communities, groups, and individuals, partnerships that mature over decades and generations, in order to affect a lasting favorable change in the health status of Alabama's underserved communities.

   Although the RHLP partnership between TAHEC and CRM is easy to endorse because of common goals and a history of prior successful joint efforts, we have found that providing the tangible fruits of such a partnership is costly. There is the cost of travel and communication across distance (which expensive technology could alleviate) and across cultures. Time is lost in jettisoning familiar methods in order to interpret and learn new ways that can be joined by colleagues from different institutional and cultural contexts. For example, the cost for 35 students from TAHEC and its project staff to travel approximately 3 hours to join the MRHPP students for 1 day included the cost for a chartered bus, meals, and a 12-hour workday. The chartered bus was approximately $800 and meals cost approximately $430. The cost for MRHPP students and project staff to reciprocate was more because it included an overnight stay in a hotel. We recommend that such partnership costs, in addition to program costs, be included in the planning and funding of the continuing RHLP and similar ventures in the future. These costs are high, but the long-term success and rewards hinge largely on the investment in making and maintaining mandated partnerships.
3. Money is required for disadvantaged rural minority students to participate. We could not have attracted an adequate number of qualified students without stipends. These students need financial assistance to forego summer work or to counter other summertime academic experiences (also offering stipends) that often take students out of Alabama and/or into pipelines of other disciplines.

Our knowledge is woefully inadequate. As we observe these bright and eager youth, we are constantly reminded of our lack of needed information to chart a successful course that will direct each student to the secure harbor of his or her desired profession. It is not clear yet whether our best intended efforts are positive or negative. At best, we have learned to engage staff partners and program directors from diverse cultures and from multiple disciplines with the students in considering each intervention as the need arises. We seek to document what we do and the outcomes we observe and to encourage additional research in the field in order to create a better map for the future of these students, our institutions, and Alabama. The students are enthusiastic, hopeful, and capable. It remains for us to develop the capabilities to assist them to retain motivation and master skills necessary to achieve their goals and to improve rural community health.

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Transforming the Delivery of Rural Health Care in Georgia: State Partnership Strategy for Developing Rural Health Networks

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ABSTRACT: *Since 1996, 19 networks covering 74 of the 117 rural counties in Georgia have emerged. This grassroots transformation of rural health care occurred through a series of partnerships launched by state government officials. These partnerships brought together national and state organizations to pool resources for investment in an evolving long-term strategy to develop rural health care networks. The strategy leveraged resources from partners, resulting in greater impact. Change was triggered and accelerated using an intensive, flexible technical assistance effort amplified by developmental grants to communities. These grants were made available for structural and organizational change in the community that would eventually lead to improved access and health status. Georgia's strategy for developing rural health networks consisted of 3 elements: a clear state vision and mission; investment partnerships; and proactive, flexible technical assistance. Retrospectively, it seems that the transformation occurred as a result of 5 phases of investment by state government and its partners. The first 2 phases involved data gathering as well as the provision of technical assistance to individual communities. The next 3 phases moved network development to a larger scale by working with multiple counties to create regional networks. The 5 phases represent increasing knowledge about and commitment to the vision of access to care and improved health status for rural populations.*

The health care environment in many rural communities in the United States has been in crisis for over 10 years. Often, rural areas have the "highest levels of mortality and morbidity" while being "accompanied by the fewest health care resources."[1] Rural Americans are generally older, poorer, and sicker than urban residents, and rural communities grow more slowly than the rest of the United States. Because many rural areas have little industry and the residents are often self-employed or are part-time employees, rural residents are less likely than their urban counterparts to be covered by health insurance.[2]

The challenges faced by rural Georgia with respect to health care systems and economies are similar to those faced by rural communities across the United States.[1-3] Access to primary care is severely limited in rural Georgia. In rural counties with declining economies, a significant number of the hospitals are at serious risk of closure.[3] Nationally, rural communities are losing revenue because their residents seek health care outside the communities.[4] In Georgia, nearly 70% of dollars spent on behalf of rural residents are spent outside the rural community.[3]

Over the past 10 years, in an effort to alleviate this crisis, rural communities across the nation have been engaged in various efforts to increase access to health care and improve health status. Many of these efforts centered on building rural health networks as vehicles for rural communities to strengthen their health care systems. These networks developed for a variety of reasons, including responding to managed care market forces, maximizing resources through services, and serving as mechanisms for increasing access to care and improving health status.

A 1996 Georgia Medicaid study confirmed that the health care delivery systems in Georgia's rural counties required intervention, yet at the community level there was little or no organizational structure in place to turn the situation around.

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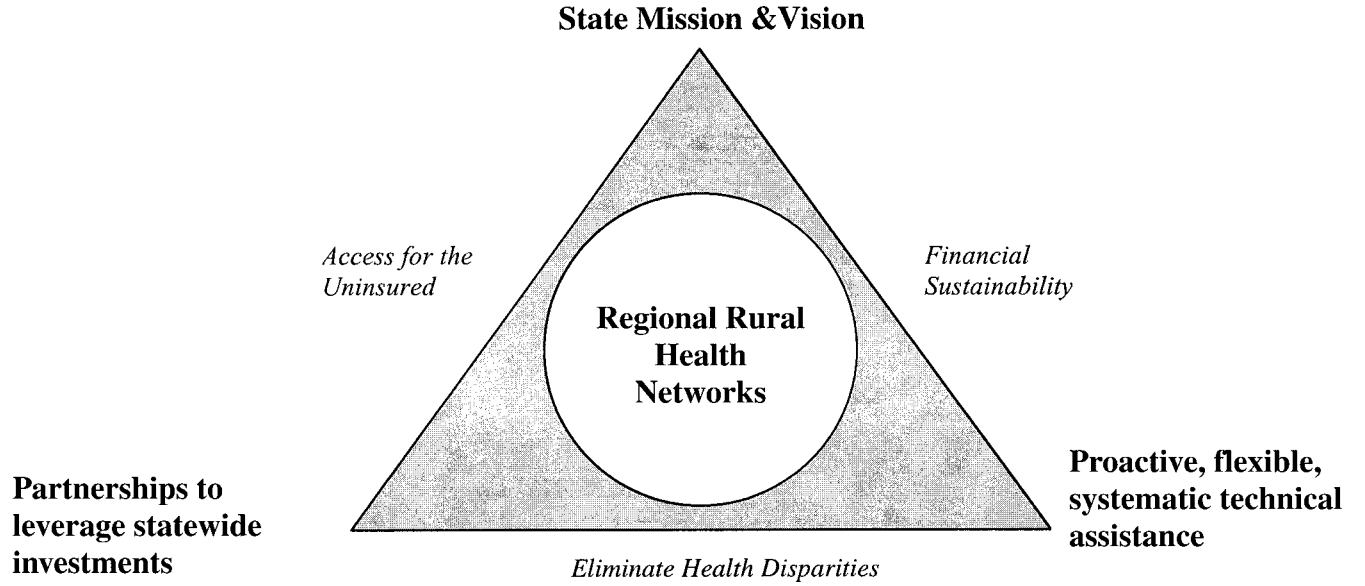
Figure 1. Georgia State Strategy for Developing Rural Health Networks.



Today, there is a different picture. Since 1996, Georgia state government and its partners have invested $14 million in an evolving strategy to build rural health networks. With 19 networks covering 74 of the 117 rural counties, Georgia now has a number of networks in place that are effective partners with state government and national programs to improve health status and increase access to health services. Georgia's experience and processes can be replicated by other states and used by communities to build regional health care networks.

From Georgia's extensive experience, building a state strategy should be based on the following critical elements (Figure 1):

1. Clear state vision and mission. State government should set rural health system development as a state priority.
2. Partnerships to leverage statewide investments. It is critical to foster partnerships involving state agencies, academia, and the philanthropic community to create and guide this investment. By aligning and leveraging resources from organizations with common interests and missions, progress can be faster and the impact greater.
3. Proactive, flexible, systematic technical assistance. Relevant, timely, neutral technical assistance tailored to local needs provides a critical support system for communities moving through the often challenging network development process.

A State Campaign to Transform the Delivery of Health Care in Rural Georgia

A network is a formal organizational arrangement among many health care providers and, often, community leaders working together to share resources and rewards under a common commitment with mutual responsibility and authority to ensure a more relevant, coherent, and viable health care system.[5] Networks can bring together physicians, hospitals, community health agencies, local public health agencies, social service providers, and other stakeholders to accomplish efficiencies and improvements in the quality of health care services. By organizing multiple, independent players, networks bring new capabilities to the community. For example, they enable rural communities to plan strategically using population-based assessments of community health care needs, to run campaigns that retain health care dollars in the local community, to integrate elements of the delivery system for better outcomes and greater efficiency, to manage the care to special populations to reduce cost and improve quality, to secure new funding, and to fill gaps in service. Networks create the opportunity for rural communities to operate at this strategic level.

In Georgia, the grassroots transformation of rural health care occurred through a series of partnerships launched by state government officials. These partnerships brought together national and state organizations to pool resources for investment in an evolving long-term strategy to develop rural health care networks. The

strategy leveraged resources from the partners, resulting in greater impact. Change was triggered and accelerated using an intensive, flexible technical assistance effort, amplified by developmental grants to communities. These grants were made available for structural and organizational change in the community that would eventually lead to improved access and health status.

There was not a prescribed linear process, but rather a series of opportunities that have come together partially by chance and partially by clear intent. Retrospectively, it seems that the transformation occurred as a result of 5 phases of investment by state government and its partners. The first 2 phases involved data gathering and analysis of the severity of the provider crisis in rural areas as well as the subsequent provision of technical assistance to individual communities working to alleviate the crisis:

- 1996: The state Medicaid program conducted a benchmark study to assess the fragility of rural health care providers.
- 1997 to 2001: Georgia's state health agencies and the Georgia Health Policy Center (GHPC, at Georgia State University) implemented Networks For Rural Health (NFRH), a very intensive technical assistance program. Approximately 40 rural communities were supported in local needs assessment, planning, and networking activities.

The next 3 phases moved network development to a larger scale by working with multiple counties to create regional networks. Grant support for infrastructure development was provided along with technical assistance.

- 1998 to present: The state and GHPC partnered with the Robert Wood Johnson Foundation's Southern Rural Access Program (SRAP) to create regional networks in Georgia focused on improving both health care access and health status.
- 2000 to 2002: The state Office of Rural Health Services (ORHS, part of the Georgia Department of Community Health [DCH], which was created in 1999) launched the Rural Health Systems Development Program with the support of the GHPC to fund the development of 11 regional networks. The DCH/ORHS subsequently partnered with the GHPC to provide developmental technical assistance.
- 2001 to 2003: A partnership was forged between the ORHS, the Robert Wood Johnson Foundation, the new Philanthropic Collaborative for a Healthy Georgia, and GHPC to launch the Access Georgia Rural Health Initiative. The program supports the development of 9 multicounty regional networks.

The 5 phases represent increasing knowledge and confidence, as well as an increasing statewide commitment to the vision of access to care and improved health status for rural populations. Successes in one phase led to bolder steps in latter phases.

Georgia's success involved a partnership of the DCH and other committed investors. Depending on the phase, the GHPC provided development, operation, and/or implementation support for the comprehensive partnership (Figure 2). The evolution of this partnership around the 5 phases is described in the following sections (Figure 3). It began with some bad news.

State Government Responds to a Crisis in Rural Community Health Care Delivery. In 1996, Georgia was facing a bleak future with regard to rural health. At that time a study by the state Medicaid program found that hospitals, physicians, pharmacies, and nursing homes in rural markets were at risk of closure.[6] Communities were not able to organize a delivery system in which local providers could effectively attract patients and thereby access state, federal, and private funding. The fragility of rural providers alarmed state Medicaid officials. They concluded that they had to act or rural Medicaid beneficiaries would be without access to care.

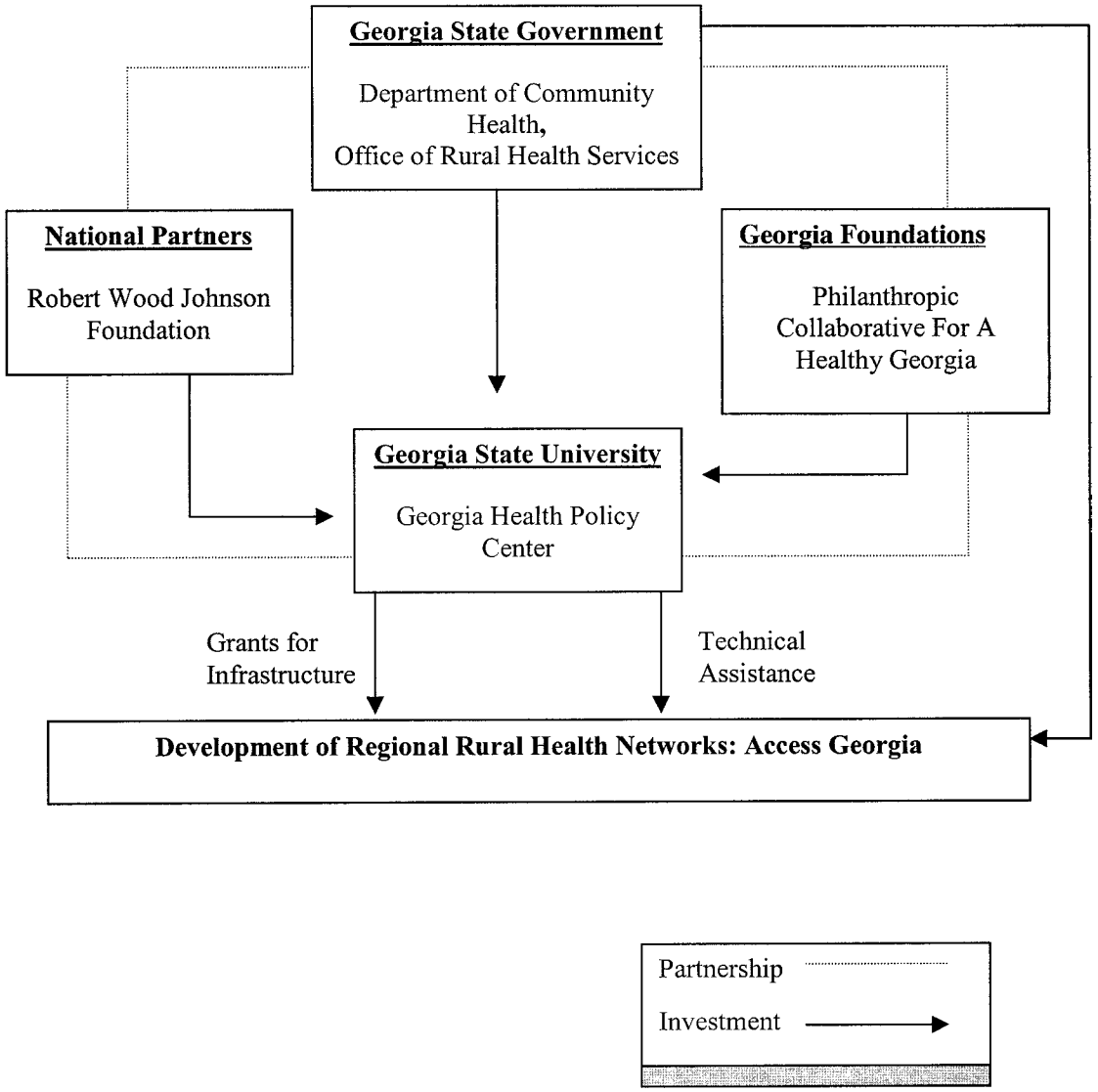
Georgia's geographical diversity posed additional challenges. This diversity is evidenced by the fact that Georgia is a large state with a population of nearly 8 million people living in 159 counties. Furthermore, Georgia has a diverse population distribution. Nearly 50% of Georgians live in the 20-county Atlanta metropolitan area, and approximately 20% live in 22 counties with smaller cities. The remaining 30% of Georgians reside in the 117 rural counties.[7]

It appeared that an important part of the solution would involve the development of new local and regional partnerships among community leaders and health care providers to strengthen and save their own local health care systems. This need to organize effectively was compounded by the fact that few communities possessed the internal capacity or readiness to develop the critical network relationships required.

Experience in other states demonstrated the value of technical assistance in strengthening rural health infrastructure.[8] As a result, in 1997 state officials began investing $4 million over 4 years in the GHPC's technical assistance program to help communities rebuild their health care systems. The center became the operational arm of the state strategy.

The strategy encouraged communities to form local collaborations and then helped them create a sustainable single-county health care network using existing community assets. The networks were expected to achieve 5

Figure 2. Georgia State Strategy for Developing Rural Health Networks: A Public, Academic, and Philanthropic Partnership.

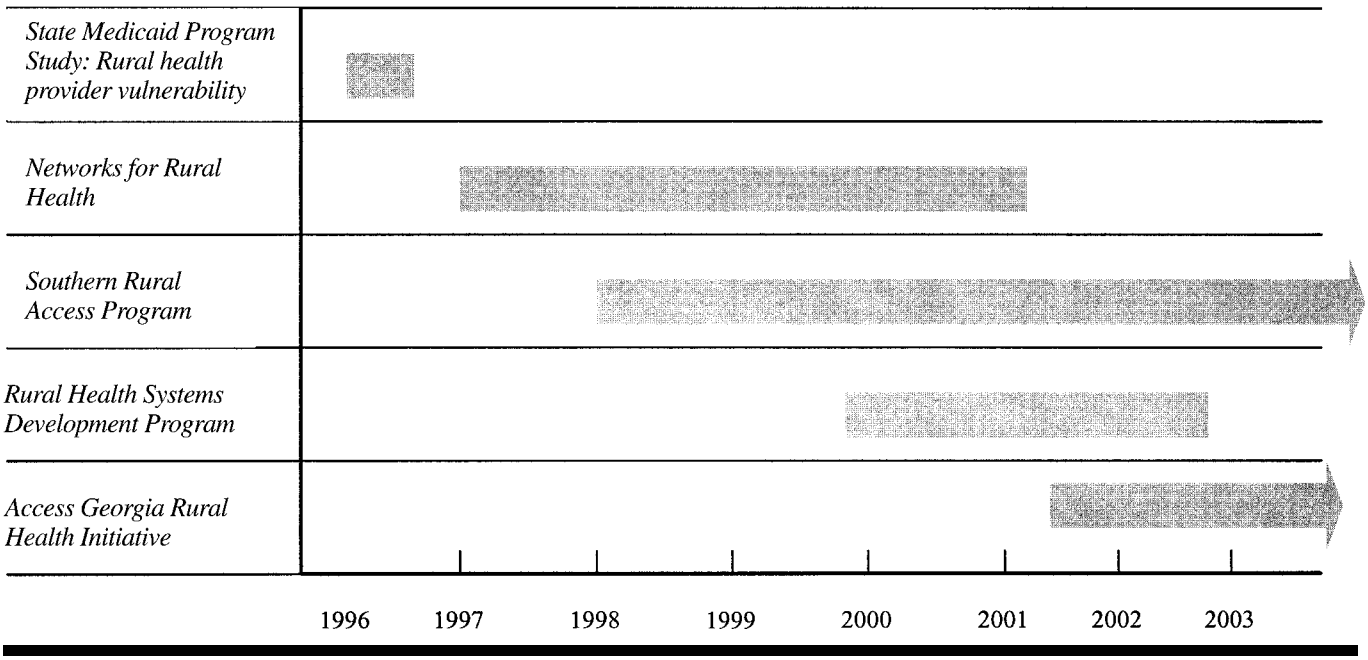


outcomes: (1) provision of clinically relevant services, (2) financial viability, (3) improved quality and coordination of care, (4) expanded access to care for the uninsured, and (5) improved health status.

Networks for Rural Health: Developing an Effective Technical Assistance Program to Develop Single-county Health Networks. The GHPC's technical assistance program, NFRH, was based on a review of the literature and a survey of national best practices. The development period lasted 18 months. Ultimately, NFRH assisted 38 counties.

Technical assistance was organized around a framework that took into account the frequently complex relationships among a variety of stakeholders—community residents and providers, local and regional government, and state policy makers—and their relative roles in creating a stable community health system.[3] This framework was based on the understanding that community involvement and ownership is critical.[9-12] The framework was implemented by GHPC's multidisciplinary team of "rural health system developers" backed by a group of on-call specialty consultants. Each community had an assigned developer who tailored

Figure 3. Georgia State Strategy for Developing Rural Health Networks: Community Health System Development Phases.



a program of technical assistance based on that community's identified needs. The developer had access to a cadre of experts (financial, actuarial, organizational, economic, and regulatory) who were available to the communities on an as-needed basis.

GHPC's technical assistance program was characterized by the following:

- Relationships. Long-term involvement with communities allowed for the development of trust and immediate response to needs as they emerged.
- Neutrality. Neutral facilitation and mediation were critical in helping communities overcome histories of division among organizations and leaders.
- Knowledge. Relevant, community-specific information provided a sound foundation for local planning and data-driven decision-making. Descriptions of state and national best practices provided inspiration.
- Flexibility. Technical assistance was tailored to local needs and adjusted based on community readiness, situation, and aspirations.
- Proactive assistance. Rather than being reactive, technical assistance providers gave information to communities that would help them anticipate needs that might emerge over time.
- A systematic approach. The process used in each community was organized into 4 phases, which were introduced and implemented as efficiently and effectively as possible.
- Peer learning. Opportunities were created for communities and networks to share their stories and experiences with others in order to shorten the learning process.

Over a 3-year period, a series of 12 community case studies was conducted to understand the impact of NFRH technical assistance and to compare community outcomes in 4 areas: community collaboration (formation of regional networks and new partnerships); financial expansion (improvement in hospital reimbursement, increased local government funding, and increased grant funding); clinical service improvement (promotion of health centers, recruitment of physicians, and changing scope of services to meet local needs); and service delivery system integration (addition of case management, central intake, and referral systems). The analysis demonstrated that 75% had definite progress in community collaboration, system integration, and financial improvement. In addition, 25% had clinical improvements. Significant improvements were observed in at least 1 of the outcome areas for all 12 communities in the study.[13]

This early technical assistance also uncovered a ground swell of local interest in addressing the needs

of the uninsured. Rural communities were ready to develop local initiatives that would increase access and improve health status. There was a high demand for technical assistance throughout the rural communities because individual communities did not have all the resources necessary to address the challenges they faced. Three findings emerged: (1) a high level of community interest in moving local health care to a multicounty network model existed; (2) regional approaches had promise because the natural health care markets were multicounty and diversified; and (3) community groups perceived outside funding for infrastructure and organizational development as a powerful incentive to accelerate the formation of both single-county and multicounty networks.

State officials and GHPC staff realized the advantages of multicounty regional networks as mechanisms for maximizing rural resources and improving local health care. It became increasingly important to look for partners willing to support that work.

Southern Rural Access Program: Moving to Multicounty Networks With a National Partner. Because their mission and vision were aligned, Georgia's Office of Rural Health (later named the Office of Rural Health Services) formed a strategic partnership with the Robert Wood Johnson Foundation's SRAP, a national program designed to improve access to health care in rural, medically underserved states, which served as a catalyst for multicounty network development in Georgia.

In 1998, with $75 000 from SRAP, the East Georgia Health Cooperative (EGHC) became the state's first multicounty rural health network focused on improving access and health status. The opportunity to obtain Robert Wood Johnson Foundation funding was the primary incentive that brought together health care providers from the new network's 9 counties to begin working cooperatively to improve health care. This marked the first time that multiple types of health care providers in Georgia "crossed county lines" to work together. State officials and the GHPC committed to provide technical assistance to the EGHC to support the new collaborative efforts. The early successes of this network served as a model for policy makers and peer communities statewide.

Rural Health Systems Development Program: The State Reorganizes and Invests in Regional Networks. In 1999, the state created the Georgia DCH with the mission to improve community health and increase access to care. Demonstrating a major policy and financial commitment to develop rural regional integrated health networks, DCH reorganized the Office of Rural Health as the new ORHS to improve health status and eliminate health disparities in rural and urban underserved areas. The development of regional systems of quality care was its priority. It assumed responsibility for the SRAP initiatives in Georgia.

Following the experience with NFRH and SRAP, DCH/ORHS officials remained committed to the multicounty, regional network concept. They sought to design and secure funding for a grant-making program that would expand regional networks. In 2000, the General Assembly appropriated $3.5 million to DCH to establish rural health "systems and organizational capacity." DCH/ORHS organized the Rural Health Systems Development Program.

Contracts were awarded through a competitive process. Applicants were required to integrate inpatient and outpatient services and involve at least 3 separate health care entities that would ultimately support a multicounty, integrated health care delivery model. Eleven networks (including the EGHC) received $2.75 million in funding in 2001. The remaining $750 000 was allocated for intensive network-development technical assistance provided by GHPC.

With 11 networks under development, Georgia was moving toward reaching a critical mass of multicounty networks statewide. It was understood that additional investment would be needed to help the current grantees reach financial sustainability and to expand the concept to uncovered rural counties. However, future legislative funding was not certain. DCH officials began to look for strategic partners to invest in the multicounty network development campaign.

Access Georgia Rural Health Initiative: New State Partners Emerge to Invest in Multicounty Regional Network Development. To continue developing multicounty, regional networks, Georgia sought foundation support. The state has a large number of private foundations with an interest in health care; however, few private foundations independently have sufficient resources to significantly impact Georgia's health needs.

In 1999, the Philanthropic Collaborative for a Healthy Georgia was formed. It was an informal, loosely structured partnership that brought Georgia foundations together to better understand and respond to the health-related challenges facing the state. The primary purpose of the collaborative was to enable foundation staff and trustees to be more informed and effective in their own health-related grant-making activities. It sponsored conferences, newsletters, and policy papers to help grantors learn more about Georgia's health-related problems and issues, as well as potential solutions. The GHPC served as the administrative home, providing staff support including

researching issues and best practices, developing policy briefs, and organizing symposia and workshops.

In 2000, the governor addressed members of the Philanthropic Collaborative regarding the importance of public/private partnerships. The DCH commissioner proposed a program and suggested that for health initiatives where interests and priorities of the state and foundations converge, the state would match funds committed by private, corporate, and community foundations. This promise spawned the Matching Grants Program, through which numerous foundations pooled their resources to leverage the greatest possible state investment and community contributions. The result was a unique opportunity to bring together public and private interests toward the mutual goal of improving the health of Georgia's citizens. As the administrative home, GHPC coordinated these innovative funding initiatives.

One initiative of the Philanthropic Collaborative addressed the expansion of regional rural health networks. DCH leadership, recognizing the need to continue the momentum of rural health network development, joined with the Collaborative, the Robert Wood Johnson Foundation, and GHPC to create an investment partnership. With its 21st Century Challenge Fund, the Robert Wood Johnson Foundation challenged the state and other foundations to match a $500 000 investment in demonstration projects in rural health care innovation. Georgia met the challenge.

In 2002, the Access Georgia Rural Health Initiative was launched. The program leveraged $500 000 in 21st Century Challenge funds, $500 000 in Georgia Philanthropic Collaborative money, a $1 million match from DCH, $700 000 from Georgia State University through salary contribution and overhead decrease, $371 000 in a federal match, and a $1.3 million cash and in-kind match from participating local communities. The challenge resulted in $4 million for Georgia's rural network development.

The program funded 9 multicounty networks serving 37 rural Georgia counties and provided for intensive technical assistance from the GHPC to ensure the greatest impact. The Access Georgia Rural Health Initiative was a culmination of 7 years of partnership cultivation, visioning, leveraging resources, and systematic learning.

On-site Technical Assistance, Coupled With Project Grants, Stimulated Multicounty Network Development. Georgia has invested more than $7 million since 1997 in grants and technical assistance to support community network development. Through committed partnerships, Georgia has leveraged an equal amount of matching funds.

The strategy for encouraging communities to form networks has been twofold: ongoing technical assistance and project grants to support network building. The technical assistance provides a support system that brings the network vision to the community and creates a channel through which information and assistance flow. The grants provide an incentive for community leadership groups to begin working together in new ways. They provide incremental resources to build network infrastructure and to carry out specific projects that accomplish established goals.

Using the multiyear investment from the state, GHPC created a flexible technical assistance program that can be tailored to meet the needs of the community. It was organized to provide the following types of assistance:

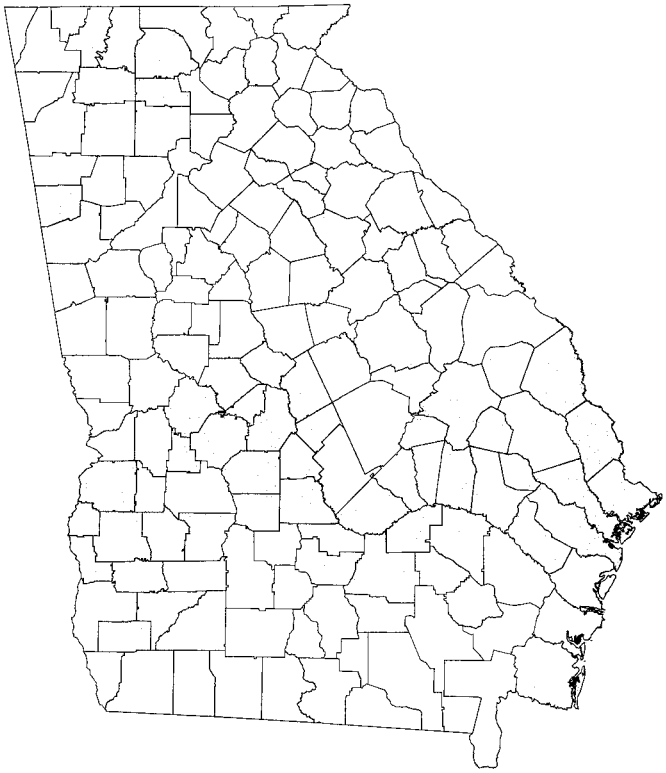
- Facilitation of community dialogue and network formation
- Strategic planning and program design
- Collection and analysis of population and health care data
- Development of effective governing boards
- Evaluation of performance
- Education in the methods of becoming sustainable
- Mediation, conflict resolution, and collaboration
- Provision of specialized technical experts and benchmark programs

Network development is a long-term process in which the technical assistance needs of the community change over time. To provide the critical assistance needed to propel networks, the GHPC's team of rural health system developers traveled the state for more than 3 years, establishing critical long-term relationships with local leaders. They spent most of their time on-site in the communities and developed a unique understanding of the reality faced by rural residents on a daily basis. In collaboration with a cadre of specialty consultants, they were able to provide the needed assistance at the right time and in the best setting.

Current Status of Network Development in Georgia

Network Coverage. Since 1996, 19 regional rural networks have been established in Georgia, covering 74 of its 117 rural counties (Figure 4). The number of counties included in the networks range from 2 to 11, with service areas as great as 4331 square miles. The networked counties have an average population of 22 000, with approximately 20% living below the federal poverty level. An estimated average uninsured rate in these counties is 20%. Many of the counties are also designated as Health Professional Shortage Areas.[7]

Figure 4. Georgia Counties Currently Engaged in Regional Multicounty Networking Activities.



Organizations in Place. Each network has an identity and organizational vehicle through which to operate. Many networks have achieved independent nonprofit 501(c)3 status. Many network participants and board members include a broad range of partners across health care provider types (physicians, small rural and large tertiary hospitals, public health, and Federally Qualified Health Centers) as well as community leaders from local businesses, government, faith-based organizations, and civic groups.

Common Goals, but a Variety of Strategies. The 3 network-development grants programs implemented in Georgia left a great deal of discretion to communities in how they proposed to use the resources. Funds generally supported organizational development as well as project activities appropriate to the stage of development of the network (see Table 1). Although the accomplishments to date vary based on the maturity of each network, the networks do share 3 common goals: increasing access to care, improving health status, and maximizing health care resources. The specific targets and strategies they set vary with local needs, interests, and assets (Table 2).

For communities with no history of collaboration, the grants provided an incentive for providers or local elected officials to initiate dialogue about sharing health care resources and developing new health partnerships. These start-up networks focused on developing trust among partners and clarity of purpose.

Many collaboratives were engaged in extensive planning and relationship-building prior to grant awards. The additional funding enabled them to implement efforts deemed critical for improving health and health care in the region. These networks are beginning to show results.

A few networks have been in existence for 5 years or more. The development grants offered an opportunity to add programs to an already fairly sophisticated array of existing activities and to build additional organizational infrastructure. They are now achieving sophistication in the use of health system data for strategic planning and are able to replicate successful programs from other communities.

Table 1. Funding Supports Developmentally Appropriate Activities

Age of Network at Time of Grant Awards	Grant-enabled Activity	Examples of Network Accomplishments
0-1 y	• Initiation of dialogue with local stakeholders and neighboring communities • Staff development • Board development • Planning	• The Coastal Medical Access Project has been able to hire an executive director, draft bylaws, achieve 501(c)3 status, and form a professionally and ethnically diverse advisory board
2-4 y	• Implementation of regional health programs based on previously developed plans • Expansion of existing services • Development of organizational infrastructure • Sharing of resources among network members	• Community Health Works network had, as of December 2002, recovered approximately $57 000 from Medicaid reimbursement • Community Health Works has provided a primary care home to almost 1000 uninsured individuals, resulting in fewer hospital and emergency room visits • Greene Morgan Putnan Health Network, through its prescription assistance program, has documented a cost savings of approximately $190 000 per month
5+ y	• Addition of new services to network portfolio • Replication and expansion of activities • Analysis of recent data to support strategic planning	• The Northwest Georgia Healthcare Partnership has been able to expand its program to include services to the Hispanic population • The Northwest Georgia Healthcare Partnership has also been able to assemble a team of 45 health professionals who provide care on a volunteer basis to the medically underserved

A Multilevel Learning System Statewide. All phases of the network development strategy have been viewed as a dynamic learning process. At the state level, DCH and GHPC have been committed to understanding and documenting the complex issues influencing the sustainability of rural health systems. The lessons learned through extensive field experience have been translated for use by local and state policy makers and administrators. This grassroots information has influenced policy decisions and budgets, resulting in the formation of exciting new partnerships and programs.

At the community level, network grantees have agreed to participate in state-level evaluation and replication activities. With the networks in place, innovation can more rapidly permeate the state. The formation of networks created a new market for knowledge about best practices.

Better Community Access to an Array of Funding Opportunities. Local and regional collaboration, catalyzed by DCH, positioned many rural Georgia networks to compete successfully for more than $10 million in cash and in-kind resources from providers and partners, as well as local, state, and national philanthropic funding and federal grants. Approximately 60% of that $10 million has originated outside of Georgia, and more than 5% has been secured through local matching (Table 3).

Continuing Technical Assistance Relationship. Through a close partnership with the ORHS, GHPC continues to provide targeted technical assistance to the existing and emerging networks. GHPC offers technical assistance critical to the progress of the networks. An important part of the technical assistance delivery is peer mentoring and learning. GHPC and ORHS create opportunities for networks to share experiences, lessons learned, and accomplishments.

Evaluation of Success. To date, evaluation has focused on success in the formation of networks, on the performance of networks, and on the progress of project grants. Network development is moving to a stage where evaluation of outcomes is timely and appropriate. Hence evaluation of success in providing access to the poor and uninsured and in eliminating disparities will be a high priority in future phases.

Discussion

Regional Rural Health Care Networks Can Be Developed and They Work. Georgia's emerging strategy for developing rural health networks consisted of 3 elements: a clear state vision and mission; investment partnerships; and proactive, flexible technical assistance. Six years of experience with this strategy yield the following 7 lessons within these 3 elements.

Table 2. Network Strategies Share 3 Common Goals

Network Goals	Examples of Related Network Strategies
Improved access to health care services	• Opening of new service sites, including Federally Qualified Health Centers • Establishment of volunteer clinics • Consolidation of nonemergency transportation services across county lines • Patient assistance with pharmaceutical companies' free and low-cost drug programs • Enrollment of eligible individuals into Medicaid and SCHIP • Targeted outreach to underserved populations with special needs (eg, Latino population) • Enrollment of uninsured in programs offering primary care • Expansion of oral health services
Health status improvement	• Biopsychosocial care management for patients with chronic disease and behavioral health needs • Faith-based outreach, screening, and health education programs • Integration of physical and behavioral health care services • Community-based lifestyle change programs for patients with heart disease and high blood pressure
Maximization of health care resources	• Sharing administrative and clinical services across health care providers • Decreasing the number of emergency room visits and avoidable hospitalizations for the uninsured by improving access to primary care and case management • Participating in multicounty physician/provider recruitment efforts • Shared staff • Securing volunteer services from local physicians and pharmacies

Table 3. Examples of Resources Leveraged by Communities

Grants
State of Georgia Demonstration Grants for the Uninsured
Access Georgia Philanthropic Collaborative Matching Grants
ORHS Rural Health System Development Grants
Federal Office of Rural Health Policy Network Development Grants
HRSA Community Access Program
Southern Rural Access Program—Robert Wood Johnson Foundation
Communities in Charge—Robert Wood Johnson Foundation
Healthcare Georgia Foundation
Other resources
Contributions from local philanthropic organizations
Donation of space for network offices
Donation of staff to support network
Collection of network membership dues
Private financial contributions
Volunteering of clinical services
Investment of Indigent Care Trust Fund resources from Disproportionate Share Hospital network members

1. Rural health status and access to care are compelling visions at all levels: Improving health status and providing access to care for the uninsured and the poor are callings around which partnerships are ready and eager to form. Many institutions are ready to invest if they see the way. Communities are ready to engage.
2. State leadership and effective policy can make it happen. The GHPC conveyed to the Georgia legislature the lessons it learned from its work with the communities, the governor, and the DCH executives and managers who all played leadership roles in transforming rural health care. Throughout the 6 years, state government held the vision and mission that made it happen. The State health agencies were able to organize the investment to help rural communities. They did it with state policy, bold partnerships, creative funding mechanisms, aggressive technical assistance, grant incentives, and peer learning among networks.
3. Investment partners are out there to be found and organized. At the national, state, and regional levels there are many organizations ready and willing to invest in the development of rural health care systems. Georgia's investment partnership history shows how state leadership can create a space for those partners to be found and partnerships to form.
4. State partners must be able to see and hear the community leadership. State partners and the communities had to work hard to achieve a shared vision. In the beginning, there were differences on a number of policy-relevant questions such as what constituted an "integrated system," who had to be involved in the discussions, how certain parties can be part of the discussion, and why participation is important. A key lesson of the early work is that investment partners must understand the community history, situation, and aspirations, and they must recognize and acknowledge the community's role in leading the effort.
5. The keys to successful networks have been documented. The network strategies employed in Georgia are largely based on an assumption that communities

build successful health care systems from the inside out. Based on experience with networks nationally and in Georgia, the GHPC has documented those characteristics that appear to be common among successful networks. These keys to success include a clear vision and intent, strong governance, clinical and administrative leadership, effective communication and advocacy, and a specific plan for sustainability. These keys serve as the framework around which the technical assistance can be organized in order to promote network success in a systematic way.

6. An evidence-based, knowledge-driven dialogue will catapult communities into action. Communities respond to evidence regarding area health needs and the performance of their local health care systems. Accurate, relevant data and analysis create a powerful foundation for convening and identifying common needs and interests among stakeholders. Case studies about best practices, successful models, and innovative programs inspire and move groups into action. Technical assistance programs use empirical evidence and knowledge as powerful teaching and action-forcing tools.
7. Technical assistance that is flexible, proactive, and systematic accelerates progress. The issues plaguing rural health systems are complex and require multidimensional solutions. External consultation and technical assistance are often crucial to long-term success because of the broad nature of change that is necessary. An effective external support system creates a more conducive environment in which networks may develop more rapidly and with fewer setbacks than those that do not have assistance throughout the change process.

The statewide strategy to provide access to care and eliminate disparities continues to evolve in Georgia. Future efforts may focus on nurturing and improving the sustainability of existing networks; expanding the number of rural communities engaged in the network development process; building additional statewide capacity for providing facilitative and technical support for communities engaged in transforming their systems of care; and perhaps most importantly, ensuring that the impact of networks on the viability of area providers, access to care, and health status are adequately documented. Only with compelling evidence of the value created by networks will there be ongoing political, financial, and community support for this important health system development process.

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Connecting Our Resources: Louisiana's Approach to Community Health Network Development

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ABSTRACT: *Louisiana's rural community health systems are in crisis because of pressures fueled by the rising costs of health care, sustained poor health status, state budget shortfalls and changes in priorities, and a sliding rural economy. The development of community health networks is providing new infrastructure and capacity for communities to reprioritize, formulate innovative partnerships, and leverage new resources. Successful elements of Louisiana's network development experience include community commitment to engage in study and action; the availability of capable and motivated technical assistance; an approach that involves open-engagement, community-driven decision-making; and data-driven problem definition, prioritization, and solutions. Louisiana's experiences illustrate the benefits of developing networks along with, or as a result of, a community health plan. When a community owns its health improvement plan, it is more likely to support the new network as a structure for implementation. Broad-scale participation is also a principle of success. When social service agencies are included along with health agencies, more comprehensive strategies result, and they bring additional resources, resulting in more holistic solutions. The cases of 2 networks are presented as illustrations. One involves the facilitation of a community planning process for an existing network. The plan helped to expand the network's community connections and support and provided the content for a successful application for a Health Resources and Services Administration Community Access Program grant. In the second case, a new network was developed, and it leveraged federal funds from the federal Office of Rural Health Policy's Network Development Grant Program.*

For many rural residents of Louisiana, access to primary or preventive health care is severely limited. Although there are similarities between rural communities, health access issues are complex and each community is unique with respect to its problems and resources. A rural community in Louisiana typically may be facing any combination of some, if not all, of the following access problems: a shortage of medical manpower, the closing of a public health unit, a struggling federally qualified community health center or centers (FQHC), a failing community hospital, large numbers of uninsured and high-poverty residents, insufficient health care resources to meet the basic health needs of the residents, geographic isolation, an increasing elderly population, and lack of transportation.

Louisiana has some characteristics that create unique challenges that must be addressed as a part of improving local health systems. Louisiana has one of the largest statewide public hospital systems, which offers extensive outpatient services. Currently operated by the Louisiana State University Health Care Services Division (HCSD), this hospital system has been a regionally orientated safety net for indigent residents statewide. The HCSD hospitals, formerly referred to as the charity or state hospitals, have for decades offered primary, secondary, and hospitalization services for individuals who have no other health care alternatives. For most of its history, HCSD has been staffed by faculty, residents, students, and staff hired by the medical school and has been closed to outside physicians. Within recent years, HCSD has explored ways to open the medical staff to community physicians and to the medical staffs of FQHCs, but the medical school requirements and state regulations have complicated these attempts. More recently, HCSD has become a victim to severe state budget shortfalls, and the cost of its maintenance is competing with pressures to repair

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and develop new community-oriented health care delivery systems. The restructuring of this closed system is being pressured by the need for vertical and horizontal integration of health services and health services organizations and the need for more community-oriented care. In the meantime, there is growing political pressure for the legislature to subsidize local private providers and increase state investment in local, private, and community-operated hospitals. In addition to this complex and dynamic environment, Louisiana's opportunities to improve health are further adversely impacted by populations with high chronic disease rates, poor compliance, and high obesity and smoking rates that exceed the national average.

All of the above factors interact and unfavorably impact the integrity of community health systems. As a result, Louisiana's rural communities are in a severe health care crisis that is complex to understand and even more difficult to resolve. Community health networks offer a framework for both problem-solving and for reorganizing community health systems to respond to the dynamic and challenging business and social environment that characterizes a rural community in Louisiana. Wellever defined a rural health network as a "formal organizational arrangement among rural health providers (and possibly insurers and social service providers) that uses the resources of more than 1 existing organization and specifies the objectives and methods by which various collaborative functions will be achieved."[1] In general, community health networks can provide a vehicle for improving operational efficiencies, providing better quality care, utilizing or developing alternative financing arrangements, providing more comprehensive services to a population, and sharing the costs of expansion, including new providers or equipment.

This article describes the early experiences of organizing community health networks in rural Louisiana. It describes how these networks have evolved, some positive outcomes, and the challenges they are facing. Louisiana's approach centers around providing technical assistance to communities, including conducting community health assessments, facilitating the planning process, and assisting with resource development through grant writing. Leadership development is also accomplished through mentoring and training. The approach of Hartley et al[2] to community health network development addresses some of these same elements, including using community health assessments, building or recognizing leadership, and providing technical assistance and resource development.[3] Although their ultimate objective was preparing for managed care, they also viewed networks as a vehicle for developing community health infrastructure.

History of Rural Health Networks in Louisiana

The first rural community health network in Louisiana was established in 1996 through the leadership of the Teche Action Clinic, an FQHC in St Mary Parish. This network, which is named the Bayou Teche Community Health Network (BYNET), serves several communities in St Mary and Iberia Parishes that are located along the banks of the Bayou Teche. BYNET is a vertical network in its membership, as it includes 2 FQHCs and the local public health unit, which are preventive and primary care providers, a community hospital or secondary health care provider, and 2 HCSD hospitals, which both provide some tertiary care. BYNET also includes a social service provider, the local community action agency. BYNET is still working toward the integration of services, one of its initial goals, and beginning to see some progress in this area through the development of new services that are of common interest to all of the members.

The Louisiana Rural Health Access Program (LRHAP) was established in 1999 by the Louisiana State University Health Sciences Center (LSUHSC) and the Louisiana Department of Health and Hospitals (DHH), and was initially funded by the Robert Wood Johnson Foundation (RWJF) Southern Rural Access Program (SRAP). One of the goals of the LRHAP program is to increase the number of community health networks. As a recently formed community health network located in the LRHAP pilot area, BYNET was an active partner in the LRHAP from its inception. BYNET served as a model and test bed for some of the LRHAP early network development and network support technical assistance.

The LRHAP model of developing and supporting rural community health networks is based on a foundation of community-wide involvement and planning and is oriented toward developing single-parish health planning bodies (these initially were known as Chambers of Health, but the name has not been used consistently across communities). Because communities are all different, the LRHAP approach is flexible and adapts its technical assistance for community planning and network development to the existing situation.

Since the program was initiated, LRHAP has worked in 6 rural parishes in southwest Louisiana. In St Mary and 1 other parish, it has worked with networks that already existed, and in 3 other parishes it has been directly involved in the formation of new community health networks. The sixth parish participated in the planning process but did not develop a network. This parish had only 1 hospital that was closely affiliated with a larger hospital located in the nearby small metropolitan area. However, in all the parishes that the

LRHAP has engaged, including those with existing networks, there have been limited or no previous community-wide health planning efforts. LRHAP has demonstrated that combining community planning activities with network development is a critical factor for developing community health networks. In the model developed by the LRHAP, network development and community health planning ideally occur simultaneously.

LRHAP Health Planning Bodies

The goal of the community health planning process is to gauge residents' and providers' perceptions of the most pressing issues affecting access to primary and preventive health care in their parish, and to collectively address these needs through the development of a network. The LRHAP community health planning and network development model is focused around a key staff person, known as the community health network development coordinator (CHNDC). The CHNDC was hired through the local Area Health Education Center. To date, all of the program's CHNDCs have had experience in community planning or facilitation and have possessed an advanced degree in public health, health administration, or business. LRHAP's CHNDCs have combined planning and assessment approaches using and adapting a number of models. For logistical purposes, it is best if the CHNDCs reside near the communities they will be facilitating, as it is important that they be visible and active in a specific community for 6 to 9 months of intense activity.

The CHNDC leads motivated members of the community through a strategic planning process to develop a plan for effectively addressing those issues. This process is broken down into several steps:

1. Assessment of health care needs and resources
2. Recruitment of participants in the planning process
3. Identification of key issues and development of committees to explore those issues
4. Strategic planning to determine how to best address the issues
5. Implementation of the plan by network or other relevant agencies or organizations to create a self-sustaining program

Community health planning can take place before, after, or concurrent with the development of the parish's rural health network. When it is initiated depends on many factors, including the political climate, the prior history of collaboration among area health care providers, and parish residents' willingness to engage in this activity. The network development coordinator and director, in consultation with the LRHAP program director, must use this information to determine how best to proceed to get the desired results.

Forming the LRHAP Health Planning Structure

An integral part of the success of the community health planning process is the involvement of a sufficient number of parish residents from various backgrounds and economic and social strata. Because each participant brings his or her own experiences to the planning process, the inclusion of people from many different groups ensures that the resulting community health plan will reflect the needs of the parish as a whole. Recruitment and retention of community representatives throughout the planning process is one of the challenges of community health network development. Human capital represents one of the most important resources that may be least available in a struggling rural community.

The CHNDC recruits health care providers, health care consumers, government officials, civic and business leaders, social service agency representatives, educators, and clergy to participate in the process. The CHNDC will visit with various groups and individuals in the parish to discuss the health planning process. This serves 3 purposes: (1) the CHNDC can answer any questions regarding the LRHAP or the health planning process that may arise; (2) the CHNDC can collect anecdotal information on the state of health care access in that area; and (3) the CHNDC can identify the formal and informal community leaders. The CHNDC sends those people identified as community leaders direct mailings announcing the first meeting for the health forum and briefly explaining the health planning process. He or she also utilizes local newspapers, radio, and television to encourage parish residents to get involved in this effort. At the first forum meeting (Chamber of Health "Kickoff"), the CHNDC asks the attendees to commit to being a part of the process by signing a membership application.

Developing the Community Access Improvement Plan

Effective community health planning starts with good research. The CHNDC performs an assessment of the parish's existing health care resources and needs. Prior to entering a parish, the CHNDC conducts a needs assessment consisting of identification of existing providers and services offered by each, review of parish profile available from the state DHH, comparison across a public health region (5 to 7 parishes) of demographic

and health status data, and a survey of consumers opinions on barriers to accessing health care in their parish. He or she collects data on death rates due to diseases such as diabetes and cancer, immunization rates, percentage of women receiving adequate prenatal care, and Medicaid health care expenditures for parish residents.

The LRHAP also sponsors the administration of 2 surveys within the parish, the Louisiana Health Access Barriers in the State (HABITS) survey and the Parish Physicians Survey. HABITS utilizes random-digit dialing telephone interviews coupled with in-person interviews to develop baseline data on obstacles parish residents may face when accessing primary and preventive health care services. HABITS is administered by the Health Informatics Center of Acadiana (HICA) at the University of Louisiana at Lafayette (UL). Availability of this data provides the network development coordinator with relevant health information that is current and local and is a critical factor for engaging local providers, political leaders, and the media within a parish (see the Table). A second needs assessment activity is to conduct the Parish Physicians Survey of local physicians. The purpose of this study is to assess the supply of physicians in the area and determine retention factors in the community.

Once the CHNDC develops a core group of participants in the community health planning process and completes the initial assessment phase, he or she leads them through a discussion of health care access issues in their area. The CHNDC presents data from various state and federal sources as well as information gleaned through the administration of the HABITS survey to assist the group in pinpointing the major health care access issues for that parish. The group then whittles down the list of health care access issues to include only those that can be addressed on a local level. From the identified issues, the group selects the areas in which it wants to focus. The group then establishes committees to explore each topic in more detail and to develop a plan to address them. The committees do further research on their selected issue to find additional information and models being used in other areas. Led by the CHNDC, each group goes through the strategic planning process to identify workable solutions that will assist local residents in overcoming identified barriers to health care access.

Each committee's results are compiled into a Community Health Access Improvement Plan. This document will be used by the parish's rural health network to guide its activities and ensure that it is responsive to the needs of area residents. The network is then charged with the responsibility of implementing this plan. The forum members continue to act in an advisory capacity to support the network's initiatives and monitor its progress.

Formulating the Network: Implementing the Plan

For several reasons, network development can be an abstract concept that is difficult to grasp at the community level. Often, health care providers in a parish will consist of a variety of competitive entities: for-profit and not-for-profit hospitals and affiliated rural health clinics (RHCs), FQHCs, and private providers. The varied infrastructures and competitive natures of these entities tend to form, in the beginning of this process, an atmosphere of reticence and/or suspicion. Another factor contributing to the challenge of network development is the need for planning in an operating environment that is not conducive to allocating long-term personnel commitments specific to planning. With communities reacting on a daily basis to the health care needs of their population, few providers and social service agencies are inclined to give time and resources to a planning process that can easily span 9 to 15 months. Communication and facilitation skills, combined with community trust in the CHNDC, are keys to the success of developing a network in a parish.

The network development process can occur concurrent with the planning process. As mentioned previously, the network planning process begins with the CHNDC pursuing individual meetings with the local health care provider chief executive officers (CEOs) and executive directors within a parish. During these introductory meetings, the CHNDC provides a commentary on the health status of the parish and explains the LRHAP program mission as well as the community health planning and network development process. The rapport established between the network coordinator and the parish health care providers at these early meetings is the basis for the relationships that are necessary for the long-term planning for network development. The length of time for meeting with provider CEOs and executive directors to begin developing relationships varies due to the providers availability and receptivity as well as the number of providers within the parish, but this usually lasts 2 to 3 months.

Typical participants in the LRHAP network development process include representatives from the health providers (hospitals, FQHCs, rural clinics); physicians; the local medical society; social service agencies that augment health care (transportation, counseling, pharmaceutical assistance, etc); the local government (both parish and community); the local business community (Chamber of Commerce); and the

faith-based community. The health care providers and physicians are approached first, with social services, government, and faith-based entities following. If the health care providers and physicians are receptive to the LRHAP model, then the process proceeds with the goal of developing a provider network. If the health care providers and physicians are less enthusiastic, then social services, government, and faith-based entities are added to the mix and the process proceeds with a goal of developing a more broadly defined community health network. Thus far, the LRHAP's work in southwest Louisiana has resulted in the formation of networks that include both health and social service organizations.

Once the CHNDC has identified the major participants needed for this network development process, a meeting is conducted with all of the health care providers, social service agencies, local government leaders, and local business leaders who have been contacted. Much of the same information is covered at this meeting as was discussed in the individual meetings, with more emphasis placed on the health status of the parish, available services, and health access barriers identified through the HABITS survey. The goal and culmination of this meeting is to obtain a commitment from the participants that they are ready to proceed with network development.

Ideally, at this time in the network development process the parish begins to seek consumer opinion and input. The consumer opinions and energy that surface during the community health planning process are designed to become the foundation of the network's initiatives within the parish. However, the combination of facilitating both network development and community health planning is very challenging for the CHNDC, and the processes can occur consecutively without negative impact.

With the participants' commitment to move forward with network development, the group is formalized into a network advisory board or planning board and signs a memorandum of agreement with the LRHAP. This acts as an agreement between the network and the LRHAP, which states both parties' responsibility in and commitment to the network development process. This advisory board begins monthly meetings to select its leadership, identify priority issues from the accumulated data, recruit additional community leaders to participate in this planning process, identify and pursue potential funding sources, and draft bylaws and articles of incorporation for formalizing this advisory board into a network corporation. A reasonable time frame for these activities is 6 to 9 months. Generally network members remit some level of dues or entry fee by way of providing the network with some start-up funding or commitment. In all parishes the advisory board has continued as a viable support group to the network, providing an important link to the consumer energy and opinion that can and should be the driving force of future network initiatives.

Funding and Sustainability

With the network formally organized with bylaws and articles of incorporation, the LRHAP's role shifts to that of providing technical assistance and training on board dynamics, strategic planning, and resource development. In all instances, the LRHAP has provided grant-writing assistance to communities. The LRHAP also acts as a vehicle for communicating with other networks elsewhere in the country. This role of identifying best practices is facilitated by the RWJF SRAP national program office, which provides conferences and funds specialized technical assistance on occasion. Such communication among parish/county networks enables a learning process that includes the sharing of ideas, the awareness of obstacles faced elsewhere and how other networks dealt with such obstacles, and initiatives developed and implemented to positively impact their communities' health.

Key Elements for Success

Several elements have contributed to the LRHAP's successes in network development thus far. The expert facilitation from the LRHAP community health network development staff is a critical factor in supporting the community's planning and network development efforts. Community members and leaders are busy, and most lack the in-depth knowledge of the health care field and the process for developing a network. Facilitation provided by the CHNDC includes conducting research for planning and needs assessment data, doing the staff work between meetings, coordinating meetings, and providing technical assistance using best practices and identifying technical experts via national contacts. As noted, the RWJF has been an excellent source of technical expertise through conferences, funding feasibility studies, and funding specialized technical assistance when absolutely necessary.

The LRHAP community planning process is data-driven. The HABITS study and the Parish Provider Survey are used to rationalize and support decision-making. As a result, community leaders learn to use health data and become more educated about how their parish compares with neighboring parishes, the state of Louisiana, and the nation. Local data have also been found to be of intense interest to local media. The HABITS and Parish Provider Survey data are ''fed'' to

Health Care Access Barriers in the State Survey for Vermilion and St Mary Parishes*

Variables	Statistics by Parish: St Mary (%)	Vermilion (%)
Health care access barriers		
Percentage of households reporting care or medication difficulties or lack of health insurance	42.1	38.5
General population (random telephone survey)	39.5	33.7
"No-phone" population (in-person interviews of households without telephones)	62.5	80.0
Care experience (in last 12 months, had difficulty, delayed, or did not receive needed care)		
General population (random telephone survey)	17.9	14.9
"No-phone" population (in-person interviews of households without telephones)	37.5	20.0
Medication experience (in last 12 months, had difficulty obtaining medications prescribed by physician)		
General population (random telephone survey)	21.1	10.9
"No-phone" population (in-person interviews of households without telephones)	50.0	26.7
Lack health insurance (currently, household includes at least 1 family member who lacks health insurance)		
General population (random telephone survey)	23.7	19.8
"No-phone" population (in-person interviews of households without telephones)	37.5	66.7
Causes of barriers		
Financial (lack of adequate health care insurance and high health care costs—"could not afford")		
General population (random telephone survey)	4.7	7.9
Barrier population (telephone and in-person interviews)	12.4	18.8
Prescription medication ("costs too much or not covered by insurance")		
General population (random telephone survey)	20.0	9.8
Barrier population (telephone and in-person interviews)	50.5	30.2
Transportation ("had no transportation" or "had to rely on other person")		
General population (random telephone survey)	10.5	10.1
Barrier population (telephone and in-person interviews)	23.7	24.0
Insurance: general population (random telephone survey)		
Household includes at least 1 family member who lacks health insurance	23.7	19.8
Household includes at least 1 family member who has . . .		
Employer-sponsored plan	58.9	53.5
Medicare	26.3	27.7
Medicaid	15.3	14.9
LaChip	7.4	5.0
Main reason family members are without coverage is . . .		
Could not afford to pay the premiums	44.0	50.0
Lost jobs or changed employers	26.0	25.0
Employer does not offer or stopped offering coverage	†	15.0
Insurance: barrier population (telephone and in-person interviews)		
Household includes at least 1 family member who lacks health insurance	63.9	77.1
Household includes at least 1 family member who has . . .		
Employer-sponsored plan	35.1	26.0
Medicare	25.8	14.6
Medicaid	32.0	38.5
LaChip	18.6	27.1
Main reason family members are without coverage is . . .		
Could not afford to pay the premiums	44.0	46.0
Lost jobs or changed employers	20.0	22.0
Employer does not offer or stopped offering coverage	†	†
Lost Medicaid or medical assistance	†	†
Insurance company refused coverage	†	†
Circumstances of respondents and their households		
Source of care: general population (random telephone survey)		
Report having a place the family members in household go most often for health care	89.0	89.1
Type of place reported gone most often for health care is . . .		
Doctor's office	50.0	72.3
Clinic at a hospital	5.3	8.9
Clinic or health center	27.9	2.0

Continued

Variables	Statistics by Parish: St Mary (%)	Vermilion (%)
Hospital emergency room	5.8	5.9
Household lacks any person thought of as main personal doctor or health care provider	17.9	10.9
Source of care: barrier population (telephone and in-person interviews)		
Report having a place the family members in household go most often for health care	89.7	87.5
Type of place reported gone most often for health care is . . .		
Doctor's office	41.2	63.5
Clinic at a hospital	6.2	8.3
Clinic or health center	37.1	6.3
Hospital emergency room	5.2	9.4
Household lacks any person thought of as main personal doctor or health care provider	19.6	20.8
General health of respondents (respondents consider their personal general health as poor or only fair)		
General population (random telephone survey)	24.7	20.8
Barrier population (telephone and in-person interviews)	44.3	30.2
Respondent demographics and household income		
Respondent age (percentage of population aged 18–29 years)		
General population (random telephone survey)	15.3	12.9
Barrier population (telephone and in-person interviews)	25.8	38.5
Respondent race (percentage of population self-identifying as White)		
General population (random telephone survey)	74.7	91.1
Barrier population (telephone and in-person interviews)	71.1	70.8
Respondent race (percentage of population self-identifying as Black or African-American)		
General population (random telephone survey)	20.5	6.9
Barrier population (telephone and in-person interviews)	26.8	25.0
Respondent education (at least 1 year of college)		
General population (random telephone survey)	27.9	35.7
Barrier population (telephone and in-person interviews)	26.8	19.8
Respondent education (not finishing high school)		
General population (random telephone survey)	18.9	22.8
Barrier population (telephone and in-person interviews)	33.0	36.5
Respondent employment status (employed full-time for wages outside the home)		
General population (random telephone survey)	42.6	40.6
Barrier population (telephone and in-person interviews)	27.8	21.9
Respondent employment status (able, but unemployed)		
General population (random telephone survey)	7.9	2.0
Barrier population (telephone and in-person interviews)	19.6	23.9
Household income (household income less than $20 000 per year)		
General population (random telephone survey)	27.9	27.7
Barrier population (telephone and in-person interviews)	53.6	66.7

* The Health Care Access Barriers in the State (HABITS) was commissioned by the Louisiana Rural Health Access Program to the Health Informatics Center, University of Louisiana at Lafayette. The data were collected in 2002 through a random digit dial survey and in-person interviews.

† <10%. (Due to small number of respondents for this item, frequencies of less than 10% are not considered significant.)

the media with press releases throughout the planning process. LRHAP has consistently received front-page and extensive coverage in local newspapers throughout the planning process. This intense and localized media support helps maintain local interest and support for the planning process and has boosted the involvement of the area's leadership.

Allocating sufficient time to conduct the planning process is also paramount to its success. In Louisiana, network development activities have consumed 6 to 9 months of planning time per parish. The LRHAP also continues to work in the same communities providing follow-up technical assistance for nearly another full year. Thus network development is labor intensive and relatively expensive.

Community commitment is another element of success. The health planning and network development processes require a time commitment and a commitment

from individuals and organizations to actually change how they will interact in the future. Such changes require new alliances, are steeped in local politics, and are affected by long-term personal relationships. To obtain community commitment, the CHNDC takes time to assure that the community leaders are brought to the table early through conducting individual meetings before the planning process begins. Informal commitments and support are sought through these initial contacts.

These small meetings are followed by a community-wide public forum. During the forum, health data are provided and community members are allowed to speak publicly about their primary health concerns and opinions. The LRHAP staff and leadership are present and offer the community the opportunity to be provided with program support to conduct community planning and network development. Information on the benefits of network development is provided, along with success stories from the neighboring parishes. The BYNET has also provided assistance by providing testimony on how the network has benefited St Mary Parish. Staff members provide a description of the planning activities, the time commitment, and the type of support that is provided. Community volunteers are then sought to participate in the planning process by signing up as volunteers or members of the health planning body. LRHAP initially referred to these bodies as Chambers of Health, but the name has not been used consistently across communities.

LRHAP formalizes the community commitment by requesting that the community planning body enter into a memorandum of agreement with the program to actively engage in and commit to the community planning process. Although this memorandum is not legally binding, it does serve to emphasize the importance of community involvement and spells out some of the expectations of the program in order to successfully complete the process. Thus far, the LRHAP has experienced high community commitment, with local government actually sharing in the costs of problem solving and financing some of the programs that result.

Benefits and Outcomes

The primary benefit of the LRHAP approach to community planning and network development is that it results in community buy-in and support of the resulting strategies. Due to their direct and intense involvement, community members establish ownership of the community health network, including its successes and failures. Organizations and individuals are willing to pledge manpower and resources to assure its success, and community volunteerism to support network activities is also higher. The success and local buy-in can be increased by support of the local media in covering network activities and promoting the successes of the network, such as announcing new network services.

Another benefit is that the planning and resulting network organization positions the community to receive grants that are critical to support the start-up networks and to finding other resources to build the community health infrastructure. The following 2 case studies will highlight the grants that have been secured by parishes focused on improving access to care. Because of the relatively young age of these networks, it is still unclear how they have impacted access. The HABITS study does provide local baseline data on consumer perceptions about access, and it can be repeated to determine if perceptions have improved. Health status improvements will be even more difficult to measure until the networks are sufficiently sophisticated enough to address population-based health problems. As noted in Hartley et al,[3] community health networks are developing a platform for creating referral networks and integrated information systems that will position Louisiana communities to more effectively address health status improvements at a community level. This will be the next phase of community health network evolution in Louisiana.

Challenges

Sustainability is one of the challenges of community health networks. Opportunities for revenue generation in a poor community where residents lack health insurance or the dollars to pay high out-of-pocket costs are limited. Initially, rural community health networks must rely upon government grants as their primary source of income. Networks will have to develop ways of generating revenues or sufficiently reducing costs for network participants to justify their continuing support. Their long-term survival may also be tied to changes in health care financing that will provide incentives for community providers to integrate services at a higher level.

Two Case Studies

Bayou Teche Community Health Network. The BYNET was formed in 1997 as a non-profit, vertically integrated rural health network to serve the underserved residents of St Mary Parish and sections of neighboring Iberia Parish. St Mary Parish has a population of 53 500 people (63% Caucasian, 32% African-American, and less than 2% Native American, Asian, and other).[2] Per capita income for parish residents is

$19 805, whereas the state average is $22 306.[3] The health delivery system is characterized as fragmented and uncoordinated with excessive duplication of services. Care for the under- and uninsured in St Mary Parish largely falls to the community health centers, 2 community hospitals, the HCSD hospitals, and the public health units.

The LRHAP approached the BYNET in 1999 to pilot the Chamber of Health community health planning model. After approval from the BYNET board president, the Chamber of Health coordinator and members of the BYNET board met with key stakeholders such as parish officials, local mayors and city council members, administrators from the 2 area hospitals and the 2 state-run charity hospitals that serve the area, leaders of the local Chitimacha tribe, and the parish Chamber of Commerce director, as well as various other community leaders and social service agency representatives. The purpose of these meetings was to explain the Chamber of Health concept and gain the support of these important community members.

To develop a more complete picture of the state of health care access in the area, the BYNET and the LRHAP identified and recruited a group of St Mary Parish residents who were uninsured health care consumers to participate on a consumer advisory board. The LRHAP staff conducted a training session for this group to educate them on the strategic planning process, its purpose in improving health care access in the parish, and why their input and involvement in this process was crucial. The LRHAP then held a consumer symposium so members of the advisory board could relay their experiences in seeking health care to the key stakeholders.

In February 2000, the LRHAP and BYNET held the first parish-wide Chamber of Health meeting. Members of the LRHAP staff introduced the program and explained how the Chamber of Health concept could provide a means for improving health care access for more St Mary residents. The Chamber of Health coordinator presented information on key health status indicators and Medicaid spending for the parish, demonstrating the pronounced degree of need for better health care access in the area. State and local officials also publicly endorsed the program and pledged their support to the Chamber of Health and to the BYNET. The LRHAP staff surveyed attendees to find out what they felt were the major health care access issues affecting parish residents. Before adjourning, the Chamber of Health coordinator encouraged the attendees to complete a membership application, saying that they would participate in this community health planning process. At the end of the evening, there were over 70 members of the newly formed St Mary Parish Chamber of Health.

The next meeting was held at the end of the month. At this time, the Chamber established a governance structure and nominated candidates to serve as chamber chairman and vice chairman. These positions would be filled at the following meeting in March.

The results of the survey conducted at the first meeting were used to determine which issues were most important to the group. Those issues included physician recruitment and retention, transportation, financial constraints, health education, and medication. The chamber membership then established committees to explore these issues more in-depth and to develop viable and effective ways to address them.

The committees met regularly for the next 6 months, reporting their progress at the monthly Chamber of Health meetings. The Chamber of Health coordinator attended each committee meeting and assisted the members in accessing the information they needed on their particular issue and helping to guide them as they formulated their plans. Due to the complexity of transportation needs and resources in the parish, the transportation committee continued to meet throughout 2001 and worked with a national transportation consultant. The consultants' final report was presented to the committee in May 2002 and the transportation strategic plan was completed.

The LRHAP continued to conduct research on health care access in the parish. The program contracted with the Health Informatics Center of Acadiana to perform the Louisiana HABITS survey (the Table). The Chamber of Health coordinator, with assistance from members of the physician recruitment and retention committee, developed and administered a survey of parish primary care physicians. The purpose of this survey was threefold: (1) find out how local physicians view health care access in the parish, (2) inventory physicians currently practicing in the parish to determine where recruiting efforts need to be focused, and (3) determine what factors were most important to area physicians when they chose to practice in St Mary Parish.

One of the most compelling findings from the needs assessment process was the amount of health care revenues that were leaving the parish because parish residents were using hospital and outpatient care in other communities. A study conducted by LRHAP with assistance from the Louisiana Medicaid office indicated that St Mary Parish was losing in excess of $10 million annually due to the out-migration of residents seeking services that were available in the parish. This proved to be of interest to the provider community and local officials and generated substantial interest among local leaders to pay attention to the community planning process.

In September 2000, the St Mary Chamber of Health completed its Community Health Improvement Plan, with the exception of transportation (which was not completed until the following year), and presented it to the public. The plan's components included intervention strategies related to transportation, prescription medication for the uninsured, health services education, and provider recruitment and retention. By the end of that month, the BYNET board president signed a memorandum of agreement with the Chamber of Health stating that it would implement the components of the plan. Also in September 2000, BYNET hired its first executive director.

BYNET incorporated the programs outlined in the plan into its second application for a Community Access Program grant from the US Health Resources and Services Administration, for which it was awarded $512 000 for Fiscal Year 2002–2003 to expand its pharmacy access program, implement a dispatch program across all transportation providers, and further develop its health education and referral program.

Vermilion Parish Rural Health Network. Vermilion Parish is located along the Gulf of Mexico in southwest Louisiana. The population was 50 755 in 1995. The unemployment rate was approximately 6.9%. The median household income was $23 512, and 26.5% of residents lived below the federal poverty level.[4]

The Vermilion Parish Rural Health Network was established in March 2001 with the mission of addressing access to care in a more comprehensive, cost-effective, and efficient manner. The community-based, vertically integrated network is comprised of local health care, social service, consumer, government, and business representatives. The network's members include each of the parish's 3 hospital districts, the Vermilion Parish Police Jury (equivalent to county commissioners) or city council, and an advisory board of the Vermilion Parish Council on Aging, the community action agency, a practicing pediatrician, and a representative for the 3 Vermilion Chambers of Commerce.

Beginning in November 1999, the founding members of the Vermilion Parish Rural Health Network, the parish's 3 hospital districts and the police jury, had been informally engaged in studying and pursuing ways to improve access to care for parish residents. The LRHAP program (using RWJF program funds) and the Vermilion Police Jury funded, in 2000, a primary care market analysis to identify gaps in primary care services and to determine the best model and location for a new primary care clinic. Information and recommendations from this market analysis report were used the following year during the community health planning process, which the network embarked upon immediately after formalization. This community health planning process mobilized the participation of over 70 community representatives to develop a community-based health improvement plan that would serve as the work plan to guide the network's activities, ensuring its responsiveness to the needs of area residents.

The LRHAP worked with local residents to establish the Vermilion Parish Chamber of Health in April 2001. The Chamber of Health consisted of Parish residents; health care providers; health care consumers; members of the business community; and education, civic, and governmental leaders, all with an interest in finding ways to improve access to primary health care in the area.

The LRHAP selected Vermilion Parish as a chamber project for several reasons. One was the parish's high rate of poverty. According to Census 2000, over 50% of the parish's population is at or below 200% of the federal poverty level.[5] As a federally designated health professional shortage area, the parish also faced severe shortages of primary care physicians, specifically for the un- and underinsured populations, leaving many local consumers without a usual source of primary care. The LRHAP studied the amount of Medicaid dollars flowing out of the parish. During fiscal year 1998–1999, over $9 million in Medicaid funds was spent on health care outside the parish for Vermilion residents. In addition, the LRHAP noted the disproportionately high rate of heart disease mortality in the area. According to the Louisiana State Office for Health Statistics, the mortality rate due to heart disease was 386.4 per 100 000.[6] Finally, establishment of the Vermilion Rural Health Network indicated an interest, on behalf of parish health care providers and parish government, in investigating and dealing with local issues related to access to care. This high level of interest was a key reason for the LRHAP's establishment of the Vermilion Parish Chamber of Health.

The Chamber's first step was to assess the state of access to health care in the parish. The Louisiana Rural Health Access Program sponsored the HABITS survey to help the Chamber identify the challenges encountered by Vermilion Parish residents in getting needed primary and preventive care. The HABITS survey results showed that 38.5% of respondents had experienced some type of barrier to accessing primary health care, and that lack of health insurance coupled with the high cost of health care were the major obstacles they faced. At least 1 family member lacked some type of health insurance coverage or public assistance for medical services in 19.8% of Vermilion Parish homes. In households that reported some type of access barrier, that number rose to 77.1%. Of those households surveyed, 10.9% of parish households reported that they

do not have a main personal doctor or health care provider. Furthermore, it is also estimated, based on the survey's responses, that nearly 6000 Vermilion Parish residents had problems obtaining medications prescribed to them by a physician in the previous 12 months.

After reviewing the access to care data collected (HABITS, health provider and consumer focus group responses, Medicaid claims data, and health status indicators), the Vermilion Chamber of Health established 5 priority areas. These areas were provider recruitment, access to prescription medication, business development, provider reimbursement, and consumer education/literacy. These priority areas were then merged into 3 standing committees: business development, provider recruitment, and medication. The ensuing community health plan outlined each of the committees' plans for improving access to care for each focus area. A survey of existing community resources and an investigation of national, state, and local best practices were used to identify and develop intervention strategies within each committee that would effectively address each issue, without duplicating existing services. As a result, the Vermilion Chamber of Health proposed the development of the Vermilion Community Clinic, a volunteer-based clinic providing nonemergency primary care to working uninsured residents, the implementation of a comprehensive pharmaceutical access program, provider recruitment in specific health specialties, and the implementation of a community campaign designed to raise community awareness of the quality and availability of local health care services.

In May 2002 the Vermilion Parish Rural Health Network received a federal grant for $197 340 from the Health Resources and Services Administration (HRSA) Rural Health Network Development Program, with recommended future support for years 2003 and 2004 in the amount of $177 540 and $179 604, respectively. These funds are to support the network's development and infrastructure, business development of Vermilion Parish health providers, implementation of a multisite pharmacy access program, and the Vermilion Community Clinic volunteer clinic initiative.

Lessons Learned From a Broader Perspective

Community Health Network development has overall provided a framework and impetus for recreating community health care delivery. The LRHAP planning process and the associated benefits have consistently resulted in creating new community capacity. This capacity has taken the form of new and better-informed community leadership and new relationships among existing agencies that enable improvements and expansions of service delivery capacity. Goodman et al[2] describe the dimensions of community capacity to include participation, leadership, skills, networking resources, a sense of belonging, having common history, and the ability to engage in critical reflection. These elements of capacity are developed or enhanced through the LRHAP planning and network development process and make a definite contribution toward a community's success in defining problems and developing solutions. The formation of the network represents new infrastructure that positions the community for additional resources for service enhancement, expansion, and improved efficiency. In summary, for Louisiana, community health planning and network development has served to

1. Provide a forum for local providers (clinical and social) to formulate new relationships that can provide more comprehensive services to improve access, quality, and efficiency.
2. Provide a framework for identifying community-wide health needs, prioritizing those needs into achievable initiatives or solutions, and establishing community-wide health-related goals and objectives to implement their plans.
3. Position rural parishes to apply for and receive foundation and federal funds to establish new programs that improve access to critical services. These include transportation and pharmacy access programs in 2 new communities.

Future challenges that can be addressed by community networks include

1. The need to accomplish real services integration, which includes common patient registration and shared patient information (with appropriate consumer protections), and to achieve the resulting efficiencies and improved quality and effectiveness of care.
2. The need to engage in policy discussions on how to best restructure the way health care is financed, so that all citizens can enjoy some level of coverage. This will require education and exposure to best practices that are occurring in other communities.

In the future, the LRHAP will continue to work on evaluation questions that can demonstrate the long-term benefits of developing community health networks. The HABITS survey is providing some baseline data against which future comparisons can determine if consumers' opinions and reports regarding access problems are positively impacted by the interventions that are being implemented today. Evaluation results will be of great interest to the host communities and the

new community health networks and will be tracked by the local media. If the LRHAP efforts are successful, the solutions will belong to the community and its providers. If these networking efforts prove to be effective, the community leaders will be better informed, and future health initiatives will almost certainly be community-driven.

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The Arkansas River Valley Rural Health Cooperative: Building a Three-pronged Approach to Improved Health and Health Care

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ABSTRACT: *This paper describes the Arkansas River Valley Rural Health Cooperative (ARVRHC), one of the Arkansas networks jump-started with support from the Southern Rural Access Program (SRAP). The initial goal of the network was to develop a subsidized health insurance program to provide affordable medical services for the uninsured population (23%) in the 3-county service area. When planning efforts called for the network to address broader needs, the ARVRHC crafted a more comprehensive 3-pronged program model consisting of 3 interrelated programs: (1) the Health Care Access Program (HCAP), (2) the Health Education and Disease Management Program (HE&DMP), and 3) the Information and Assistance Program (I&AP). The HCAP is designed to address the financial barriers to access through a community-based health plan. The HE&DMP focuses on improving the health of individuals through education, counseling, and preventive care. The I&AP links low-income families to existing public assistance programs (eg, Medicaid) and social support services. The Prescription Drug Assistance Program is one of the I&AP programs that helps individuals without prescription coverage obtain drugs at no cost. A key lesson learned is the importance of combining technical assistance with funding. The ARVRHC has been successful in leveraging funding, having received over $1.7 million in grant funds since 1999. A critical challenge facing the network today is the need for ongoing subsidy funding. Proposed legislation for a federal demonstration of the HCAP and similar programs would enable full implementation and evaluation of this model.*

The underlying intent of the Southern Rural Access Program (SRAP) is to improve access to basic health care in the most underserved, poor, rural states in the nation. Development of rural health networks is 1 of 4 strategies used to achieve this goal (see "Southern Rural Access Program: An Overview" in this issue of *The Journal of Rural Health*). Networks can strengthen local economies by increasing the viability of local providers, by facilitating more effective use of existing rural health services, and by making primary health care available to individuals and their families who currently lack such access.

The focus of the Arkansas program has been to support local development of community-based networks that will address needs identified by network members, their partners, and their target populations. This decentralized approach has been implemented by a lead agency-based staff person providing technical assistance and has resulted in the creation of several networks that differ in approach but aim to improve access to health care. This paper describes programs developed through the Arkansas River Valley Rural Health Cooperative (ARVRHC), one of the Arkansas networks jump-started as a result of SRAP support.

Background: The Environment That Gave Rise to Network Development

Several forces joined together in 1999 to drive the development of the ARVRHC network. Primary issues included the high proportion (23%) of uninsured, low-income, working adults in the network service area; the need for prescription drug coverage; the lack of access to timely, effective care and preventive services for the uninsured; and the high cost of resultant uncompensated care.

The network area, consisting of Franklin, Logan, and Scott counties in west-central Arkansas, covers approximately 2000 square miles and has a population of 51 300 (based on 2000 US Census data).[1] These 3 rural

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Table 1. Cost of Medical Services and Amount of Uncompensated Care Provided to Franklin, Logan, and Scott County (non-Medicaid and non-Medicare) Patients in Fiscal Year 2000*

	Franklin County		Logan County		Scott County	
	Total Cost of Services†	Uncompensated Care	Total Cost of Services	Uncompensated Care	Total Cost of Services	Uncompensated Care
Local hospital inpatient	$0.43 M‡	$0.11 M	$1.30 M	$0.31 M	$0.94 M	$0.40 M
Local hospital outpatient	$1.28 M	$0.16 M	$2.77 M	$0.55 M	$1.78 M	$0.55 M
Ft Smith hospitals inpatient	$6.96 M	$1.45 M	$10.91 M	$2.09 M	$5.72 M	$1.24 M
Ft Smith hospitals outpatient	$4.08 M	$0.84 M	$5.77 M	$1.15 M	$3.21 M	$0.70 M
Local medical clinics	$0.95 M	$0.28 M	$1.73 M	$0.66 M	$0.65 M	$0.17 M
Ft Smith medical clinics	$5.87 M	$1.59 M	$5.65 M	$1.80 M	$2.66 M	$1.00 M
Total	$19.57 M	$4.43 M	$28.13 M	$6.56 M	$14.96 M	$4.06 M

* Arkansas River Valley Rural Health Cooperative network survey of local and regional health care providers. Costs and uncompensated care for patients from each county reported by providers based on patient ZIP code.
† Total cost of services includes the figures in the Uncompensated Care column.
‡ M indicates million.

counties are sparsely populated, with population densities of 24 per square mile for Franklin County, 29 for Logan, and 11 for Scott (82% of the land in Scott County is in the Ouachita National Forest). Although rich in natural beauty, the tricounty area is economically poor, with an average per capita income of $18 640, compared with the state's average of $22 750.[2] About 20% of the population is below the federal poverty level (FPL), whereas over half are below 200% of the FPL.

The 3-county ARVRHC service area includes roughly 28 000 nonelderly adults (18 to 64 years old), an estimated 6500 (23%) of whom do not have health insurance. The need to address this problem was borne out by community surveys conducted by the network, which indicated access to health care services for low-income, uninsured families as a major area of community concern. Interest in this issue was echoed by local and regional health care providers who were giving a large volume of uncompensated care in the network area.

The primary health care delivery system in the network service area includes 4 community hospitals, 18 primary care physicians, and 2 general surgeons. All 4 hospitals have been certified as Critical Access Hospitals (Note 1). In addition to the services provided by the local provider network, a significant portion of the hospitalization and emergency medical services provided to residents of the tricounty area is provided by the 2 large regional hospitals in Fort Smith (population 80 300), the major city nearest the tricounty rural area. Medical clinics in Fort Smith also provide a significant portion of primary care and specialty medical services received by network area residents.

Table 1 gives results of a survey the ARVRHC network administered to local and regional health care providers to document the amount of uncompensated care they were providing to network area residents. The total annual estimate for uncompensated care was $15 million. Feedback of these findings was useful in securing the support and participation of providers in the network.

SRAP Support of Early Network Efforts

In March 1999, health care providers and community leaders from each of the 3 counties (representing multiple sectors, including social services, public health, the faith community, and private business) met with representatives from the Arkansas Center for Health Improvement (ACHI), the implementing agency for the Arkansas Robert Wood Johnson Foundation Southern Rural Access Program (SRAP), to discuss the development of a network to serve the low-income uninsured residents in the area. An informal steering committee was formed at this time.

SRAP support was instrumental in jump-starting the network by providing technical assistance in the form of grant development to the emerging network. This resulted in receipt of a rural health network development planning grant from the Health Resources and Services Administration (HRSA) Office of Rural Health Policy. At this same time, the network received a program development grant from the St Louis Foundation of the Sisters of Mercy of the Americas, and it was incorporated as a private nonprofit organization.

At present, the organization is governed by a 9-member board of directors with representatives from

each of the network members. Each board member is elected to a 3-year term. However, with the rapid increase in the size and scope of the organization's programs and activities, board members have recognized the need to re-evaluate the board structure. The board is currently considering a proposal to increase the size of its membership and to form standing committees. A key part of restructuring will be expansion of board membership to include consumers participating in each of the ARVRHC programs.

Although the initial goal of the network was to develop a subsidized health insurance program to provide affordable medical services for the low-income uninsured population, the subsequent business planning effort revealed the need to simultaneously address other related health care issues. With this in mind, ARVRHC crafted a more comprehensive 3-pronged program model called Community HealthLink, which consists of 3 separate (but interrelated) programs, each addressing a different major area of need and targeting different (but overlapping) populations. This integrated set of initiatives includes a Health Care Access Program, a Health Education and Disease Management Program, and an Information and Assistance Program.

Health Care Access Program. The Health Care Access Program (HCAP) is a community-based health plan designed to provide working, low-income uninsured adults an affordable means of accessing needed health care services. HCAP is not an insurance plan. However, enabling state legislation has been necessary to exempt the program from state insurance laws (Note 2).

The HCAP model is analogous to a self-insured health plan model, which many large employers have adopted in an effort to curb rising health care costs. However, in the HCAP model, it is the network providers (rather than a large employer) that assume the insurance risk. To some extent these providers were already bearing this risk because this population had no previous source of payment.

A key feature of the HCAP model is "extended partnering," wherein the partners in the program—including the program enrollees, local and regional health care providers, businesses and community organizations, and the federal and/or state government—all share in the responsibility, cost burden, risk, and benefits associated with membership in the program. The program has 3 basic types of members: provider network members, supporting members, and program enrollees.

In the operation of the HCAP, ARVRHC serves the dual roles of program administrator and intermediary. As the program administrator, ARVRHC has set up the infrastructure and maintains the processes needed to support ongoing program operation (e.g., contract negotiations, contract management, collection of dues, and claims processing). As an intermediary between the network providers and the program enrollees, ARVRHC organizes and maintains a contract-based network of local and regional providers and recruits and enrolls small businesses and individuals in the program. The provider network includes 2 regional tertiary care hospitals, 4 critical access hospitals, 7 local primary care clinics, 4 local mental health counseling centers, and over 200 medical specialists. Each of the providers in the network has agreed to provide services to HCAP enrollees on a reduced fee-for-service basis. Overall program and individual enrollee "payment caps" have been established to limit the total amount of reimbursement that will be paid to these providers in any given year. If either of these payment caps is reached, the providers agree to continue to provide services to the program enrollee(s) for the remainder of the contract year in exchange for copay only. The incentive for providers to join the HCAP provider network is the extended partnership arrangement that allows other entities to share in the cost of care below the cap, for which they formerly received little to no reimbursement. Clearly, providers were already motivated to "do the right thing" and serve this population, but this program provides them a reasonable mechanism for doing so, as described above.

Enrollees in the HCAP pay monthly membership dues. Enrollment is limited to working uninsured individuals with family incomes less than 300% of the FPL. For enrollees with incomes less than 200% of the FPL, the cost of program membership is discounted on an income-based sliding fee scale. The balance of the per-member-per-month cost of services is paid through a subsidy program.

The ARVRHC began operation of the HCAP on a pilot basis in March 2002. Due to limited availability of subsidy funds to pay for premiums, enrollment is currently restricted to 80 individuals. The network is currently seeking additional subsidy funding to allow for increased enrollment in the pilot project. When the program is fully implemented, the subsidy program is expected to involve matching federal/state funds with dues and cash contributions received from the program's supporting members (eg, local businesses, churches, community organizations, and individual donors).

Enrollment in the HCAP is available to small businesses that do not currently provide health insurance benefits to their employees, as well as to uninsured individuals. In order to be eligible for group enrollment, a business must agree to offer the program to all employees meeting the program's eligibility criteria, and must agree to pay a certain minimum

portion (about 30%) of the membership dues. The membership dues for individual program enrollees are somewhat higher than for group enrollees (roughly 10% to 15%), and the individual enrollee is responsible for paying the total amount of the additional cost. For an individual enrollee, that portion of the dues that would otherwise be paid by the employer will be taken from a fund consisting of contributions received from the program's supporting members. The average total per member per month cost, which was initially based on actuarial studies, is $140. The average enrollee pays approximately one third of this cost ($46). The employer or community supporting members pay one third, and the remaining third is borne by the subsidy fund.

Health Education and Disease Management Program. The Health Education and Disease Management Program (HE&DMP) is designed to promote community health/wellness and to provide individuals/families information needed to better manage their personal health. This program supports prevention concepts that result in more cost-effective health care and exploits the health plan's ability to mandate enrollee participation in health improvement activities. The focal point for the delivery of services to be provided under this program is the Health Resource Centers (HRCs) to be located in each of the network's 4 community hospitals distributed throughout the service area. Each HRC will be equipped with health-related educational resource materials and computer terminals that will provide access to the Internet and to 1 or more CD-ROM medical libraries. Each center will include a room for individual counseling sessions and an area for support group meetings and small conferences. In addition, each center will be linked together in a wireless telecommunications network, which will provide each network member with dial-up teleconferencing, telehealth, and telemedicine capabilities. This network will enable residents throughout the tricounty service area to participate in programs (e.g., conferences, workshops, or support groups) broadcast by satellite or sponsored by the University of Arkansas for the Medical Sciences (UAMS) or the Arkansas Department of Health. The first of these 4 hospital-based HRCs was recently opened at Mercy Hospital/Turner Memorial in Ozark, Arkansas, and the other 3 will follow within the next year.

The HE&DMP will include a chronic disease management (CDM) program that is designed to enable patients with certain high-risk chronic illnesses to better manage their health condition and enjoy a better quality of life. Like the other components of the HE&DMP, the CDM program will be hospital-based and will involve one-on-one checkup and counseling sessions between a midlevel practitioner (employed by ARVRHC) and chronically ill patients referred to the program by their primary care physicians. Educational modules and protocols of this program focus on several different chronic health conditions, including low back pain, obesity, hypertension, asthma, diabetes, hyperlipidemia, heart disease, and cronic obstructive pulmonary disease. Enrollment in the CDM program will be available to any chronically ill individual referred to the program by one of the network primary care physicians. Any individual enrolled in HCAP who suffers from one of the chronic illnesses targeted by the program will be required to participate in the CDM program as a condition for their enrollment and continued participation in the HCAP.

Information and Assistance Program. The Information and Assistance Program (I&AP) helps low-income individuals and families obtain needed social support services, gain access to needed health care services and medical supplies, and enroll in the various public assistance programs (eg, Medicaid, ARKids First). When fully implemented, access points for the delivery of these services will include ARVRHC's headquarters and each of the 4 hospital-based Health Resource Centers (HRCs).

As part of the I&AP, ARVRHC has developed a Prescription Drug Assistance Program (PDAP) to assist low-income individuals with no prescription drug benefits obtain free prescription medications through the assistance programs operated by most major pharmaceutical companies. This program was developed in response to a 2-month pilot study conducted by the network in its planning stage. This study involved contracting a nurse to assist people in signing up for free drug programs. To market this program, an advertisement was placed in the local newspapers and a radio interview was aired on one of the local radio stations. In response to these ads, 60 individuals contacted the network during the 2-month pilot. Of these individuals, 70% were found to be eligible for at least 1 program. On average, each of the eligible individuals was taking 4.1 different prescription medications at an average cost of $43.16 each. During the pilot study, these individuals saved a total of $6125 per month, or an average of $142 per client.

The program utilizes the Volunteers in Health Care software, which interacts with the web-based RxAssist program. (The Volunteers in Health Care program was developed with funds provided by the Robert Wood Johnson Foundation. Information about how to obtain the software, which is free of charge to public and nonprofit organizations, is available on their web site.[3]) About 2.5 full-time equivalent employees, including a full-time registered nurse, are currently involved in supporting the operation of this program. All PDAP

enrollees are also enrolled by ARVRHC in a prescription drug group discount program, which is operated by another organization and includes most of the pharmacies in the local service area and throughout the state. Program enrollees are issued membership cards that enable them to purchase drugs not available through the free drug assistance programs at discounted prices. Over 700 individuals have been enrolled in the program since its implementation in July 2001, and enrollment continues to grow at a rate of about 50 per month. PDAP enrollees pay dues to ARVRHC, which vary from $5 to $15 per month depending on income level. These enrollees are saving, on average, over $200 per month on the cost of their prescription drugs.

Evaluation

The ARVRHC as a network falls somewhere in the middle of the typologies described by Moscovice et al.[4] Specifically, its level of integration moves beyond cooperation to contractual relationships, and yet is far from a merger. Its level of complexity is reflected by the variety of types of members and the range of services offered. In regard to assumed risk, although the contracted providers assume the highest level of risk, the network overall is still in a shared risk arrangement.

Evaluation of the impact of the network is needed to determine whether there have been changes in outmigration of patients and services; whether participation in the network has helped provider members to improve their financial performance; and whether network programs have had an impact on the utilization behavior and health status outcomes of consumers. Assessment of the ARVRHC network's performance in relation to these measures of efficiency and distributional effects will create a unique contribution to the growing body of literature on networks and determinants of their effectiveness.[4]

Determinants of Network Survival

Studies of the determinants of networks that thrive identify several factors that are consistently associated with success.[5-8] Some of the most important features include having a full-time network director, involving physicians and other providers in development of the network from the start, always looking for "win-win" solutions in which the many interests of the network members are balanced, and having a governing board that is not dominated by 1 or more of the collaborative partners. That is, "network members must have the ability to separate their individual goals from the common goals of the network and the vision to see the potential benefits of joint action."[9] In the ARVRHC network, there was a clear mission among the members that brought them together for the benefit of the communities they serve, in spite of some having a history of being fiercely competitive. By incorporating these key elements of success, the ARVRHC network has been able to leverage both technical assistance (i.e. substantive expert consultation) and financial resources.

Technical Assistance and Leveraging Funding

One of the key lessons of this network is the importance of combining technical assistance with funding when trying to move the network's vision to reality. Without funding, the input from technical assistance cannot be implemented. On the other hand, when appropriate expertise and knowledge are available, funding can be more effectively utilized to reach the network's goals. Recognizing the importance of these 2 pieces of the puzzle, both RWJF and HRSA have provided ample access to technical assistance either through or along with grant funding they have provided to the network.

Along these lines, ARVRHC has been very successful in leveraging both public and philanthropic funding to support planning, administrative staff, and infrastructure development. The network has received a total of $1 729 020 in grant funds since 1999 from the RWJF/SRAP, HRSA, the Sisters of Mercy Catherine's Legacy Foundation, and the Arkansas Department of Health (Table 2).

In spite of the program's success in leveraging resources, most grant sources will not allow funds to be used to pay for services. Therefore, subsidy funding continues to be the most challenging financial need to be addressed. Proposed legislation for a federal demonstration of the HCAP and similar 3-share programs would enable full implementation and evaluation of this model.

The 3-Share Model

The 3-share model is the term that has been given for programs such as ARVRHC's HCAP and the Access Health Initiative[10] in Muskegon, Michigan, which provide limited-benefit health care coverage within a defined geographic area and depend on a partnership to assume the insurance risk. The 3 shares making up the support of these programs include the uninsured, the providers, and small businesses or other community entities. These programs target (1) small businesses that have not provided health insurance benefits for their employees; (2) businesses with classifications of part-time employees who have been intentionally left uncovered because of cost; (3) businesses located in

Table 2. Funding Leveraged by the Arkansas River Valley Rural Health Cooperative Since September 1999

Grantor/Program	Grant Amount ($)	Funding Period From	To	Purpose
HRSA-ORHP* Rural Network Development	142 000	9/99	2/01	Planning grant to develop HCAP business plan
St Louis–Sisters of Mercy Catherine's Legacy Grant	149 920	1/00	12/02	Develop and implement HCAP Pilot Program
RWJF† Southern Rural Access Program (SRAP)	62 192	8/00	1/02	General support (staff salaries and travel)
Arkansas Dept of Health–Rural Health Revolving Fund	22 418	3/01	3/02	Strategic planning and organizational development
HRSA-ORHP* Rural Network Development (year 2)	199 250	5/01	4/02	Community HealthLink Program development
HRSA‡–Community Access Program Grant	437 200	10/01	9/02	Capital expenses—infrastructure development
HRSA-ORHP Rural Network Development (third and final year)	200 000	5/02	4/03	Operational expenses
RWJF/SRAP	5000	3/02		Develop HCAP research methodology
RWJF/SRAP	5000	9/02		Travel expenses
HRSA-CAP grant (continuation)	306 040	9/02	8/03	Capital expenses—infrastructure
HRSA-ORHP outreach (year 1)	200 000	5/03	4/04	Operational expenses; service delivery
Total	1 729 020			

* Federal Health Resources and Services Administration, Office of Rural Health Policy.
† Robert Wood Johnson Foundation.
‡ Federal Health Resources and Services Administration.

communities with limited affordable commercial options; or (4) low-income, working uninsured individuals who are either self-employed or work for employers that do not provide health care coverage. These programs have provided the impetus for proposed new federal legislation that is now being considered to provide an ongoing programmatic source of federal funding to support these types of community-based health plan models. In contrast to more traditional Medicaid demonstrations, state bureaucracies would be bypassed to provide resources directly to the community generating the match. This community focus is particularly important in rural areas because of its potential to increase utilization of local providers and because of the preponderance of self-employed persons and small businesses in rural areas. In contrast to the Community Health Center model, which often involves superimposing a new health care infrastructure on the local system, this model builds on and reinforces the existing health care infrastructure.

Discussion of Lessons Learned and Future Challenges

The first 3 years of the ARVRHC have provided a wealth of experience from which to learn and draw lessons about what is important and where the greatest challenges for the future lie. Key lessons include

- The importance of taking time and applying focus to develop concepts into practical and procedural applications, and obtaining buy-in from community leaders, providers, and state legislators. Three years of planning preceded implementation of the programs described above.
- Importance of technical assistance combined with grant funding in moving from vision to reality.
- Importance of an early focus on business planning, network sustainability, and board development.
- Importance of key leaders at both the staff and board level.
- Importance of the small early "win" of the pharmaceutical access program to keep community perception of the value of the program positive. This initiative has provided concrete benefit to the community before the full-scale community health plan could kick in and has also helped secure additional funding.
- Importance of securing buy-in from state policy leaders, particularly as state legislation was required (insurance regulation waiver).

One of the future challenges will be to make the cooperative self-sustaining through decreased reliance on grant funding and expansion of the membership and income generated by services provided. Another fundamental challenge to overcome is that of securing premium dollars to subsidize the health plan. This will be essential to expand upon the currently limited scale of the model pilot and will clearly require buy-in from other major players.

Notes

1. The Critical Access Hospital (CAH) Program was created by the 1997 Balanced Budget Act as a safety net device to assure rural Medicare beneficiaries access to health care. Rural hospitals limiting their size and lengths of stay can be designated as a CAH and receive cost-based reimbursement from Medicare.[11]
2. In March 2001, temporary legislation was passed that allowed the HCAP to be implemented on a pilot basis. In April 2003 permanent enabling legislation was signed into law by Arkansas Governor Mike Huckabee as Act 660 of 2003, "An Act to Establish a Statutory Framework for Community-based Health Care Access Programs."

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Improving Access to Capital for Health Care Infrastructure: The Experience of the Southern Rural Access Program's Revolving Loan Fund

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ABSTRACT: *Lack of access to affordable capital is a formidable barrier that compromises rural health care infrastructure development in poor rural areas. Commercial lending institutions are often limited in their ability to respond to those needs due to traditional lending criteria: creditworthiness, equity, management ability, experiences, and cash flow or profits. In the Southern Rural Access Program, a development model more frequently used in other sectors has been successfully applied to health care to help clear these hurdles. This paper describes the 5 operational loan funds in Arkansas, Louisiana, Mississippi, South Carolina, and West Virginia receiving support from the Southern Rural Access Program. Two models of loan funds have evolved: those led by health agencies and those led by community development finance institutions whose mission is rural economic development. This paper outlines major distinctive features of these 2 approaches and describes major implementation challenges these loan funds face. Key accomplishments are highlighted, including the ability to leverage additional resources from state, federal, philanthropic, and private sources through these funds. These loan fund programs provide models for other states interested in improving access to capital to help build the rural health care infrastructure while making health care more economically viable through integration with other community development initiatives.*

The need for improved access to capital in underserved areas is widespread. Rural providers are often assessed as being high-risk by conventional financing sources because of insufficient levels of reimbursement, poor cash flow, lower patient volume, and limited management expertise.[1,2] These aspects of rural practice often increase the challenge of recruitment and retention of rural providers.[3]

In addition, many rural communities have inadequate, older health care facilities, including many Hill Burton–era hospitals that have never been updated or extensively renovated.[4] Many of the more than 700 hospitals that have received Critical Access Hospital designation since this program was established in 1997 have capital needs. A 2002 national survey found that 38% of rural hospitals with under 50 beds reported having deficiencies that by law required renovation or remodeling, and that the median cost of correcting the deficiencies was $1 million. Most of these hospitals reported that they would need to borrow funds to fix these deficiencies, and 19% indicated that they could not qualify for a loan because of their recent financial condition.[5] Another recent survey of 195 federally funded community health centers in 16 states found a current capital need of $371 million.[6] A national extrapolation of these data would mean a national need for additional capital of up to $1.4 billion. The Bush Administration's plan to double the number of CHC access points over the next 5 years will create an even greater demand for capital purposes from community health centers.

Rural communities suffer from out-migration of the local patient base. One of the factors that may influence this out-migration is a deteriorating health care facility perceived to be in less than optimal condition. This out-migration results in loss of jobs in communities that can scarcely afford it and an increasingly weakened local economy.[7,8]

The revolving loan fund (RLF) component of the Southern Rural Access Program (SRAP) is designed to

This paper describes programs that have resulted from the work of many dedicated people. Specifically we want to acknowledge the leadership and staff of the lead agencies, the loan fund grantees staff, and the key partners of the loan fund initiatives in Arkansas, Louisiana, Mississippi, South Carolina, and West Virginia. For further information, contact: M. Kathryn Stewart, MD, MPH, Arkansas Center for Health Improvement, University of Arkansas for Medical Sciences, 5800 West 10th St, Suite 410, Little Rock, AR 72204; e-mail mkstewart@uams.edu.

address some of these important financing issues[9] with solutions that can be generalized beyond the SRAP 8-state target area, making it one of the most important, replicable aspects of this initiative. RLF programs have been implemented through SRAP in Arkansas, Louisiana, Mississippi, South Carolina, and West Virginia.

Summary of The Robert Wood Johnson Foundation Experience With Program-related Investments and Loan Funds

The Robert Wood Johnson Foundation's (RWJF) approach to lending in the SRAP initiative derives primarily from experience gained through previous programs in which the foundation made loans through program-related investments (PRIs).[10] In the earliest programs, RWJF funds were distributed in the form of loans, rather than grants. In 1982, RWJF made its first PRI of $3 million to the United Student Aid Funds for medical student scholarships targeting underrepresented student populations. Since that time, over half of the $35 million made in loans by the foundation went to programs in which there was no grant funding investment.

Through RWJF's Program on Chronic Mental Illness, $9 million was made available in the form of PRIs to 9 different local mental health authorities created through grant funds to serve people with serious mental illness. The PRIs enabled the authorities to buy and renovate residential units to house patients and enable them to be supported while staying in the community. Another $8 million was provided in PRIs to the Community Health Facilities Fund to help 30 community-based behavioral health organizations across the United States obtain the financing needed to build and renovate treatment facilities for people with mental illness, substance abuse problems, and developmental disabilities. This Community Health Facilities Fund has allowed these behavioral health facilities to secure approximately $85 million in loans.[10] None of the borrowers on these loans have defaulted to date, and all those due have been repaid.

Two RWJF national programs that targeted rural communities have had mixed results with PRIs. The Hospital-based Rural Health Care Program launched in 1987 made a total of $7.5 million in low-interest loans available to its 14 grantees. Only 3 of the projects secured PRIs, and only 2 of these projects actually made loans.

The Practice Sights Program, designed in the early 1990s to address barriers to rural provider recruitment and retention, is another foundation experience with PRIs that had less than consistent success.[11] Four states received PRIs under this program: Virginia, Minnesota, Nebraska, and Idaho. The Virginia and Minnesota projects have been the most successful, closing almost $8 million in loans to date. The Virginia Health Care Foundation's partnership with First Virginia Bank has closed more than $6.2 million in loans since 1996.[12] First Virginia Banks recently received the American Bankers Association's Main Street Award in recognition of its Practice Sights contributions.[13] The Virginia project's decision to use interest earned from its PRI to hire a loan fund specialist has been an important factor in the success of its effort.

On the other hand, the Idaho and Nebraska projects discontinued their programs and returned the funds to the foundation. The Idaho project never made any loans. The Nebraska project made only 2 loans: the first ended in default and the second loan bailed out the first. Both states indicated that the loans were too stringently structured—they felt that the 5:1 leveraging requirement was too high, that the 3% interest rate charged by the RWJF was not competitive, and that the PRIs should have been made for more than 10 years.

General Design Features of the Southern Rural Access Program Revolving Loan Fund Component

The experiences described above informed the development of the SRAP RLF component. RWJF members decided that grants, rather than PRIs, would provide a greater opportunity for success of the SRAP loan fund efforts. A grant has more leveraging potential than a PRI, and it was also thought it would help avoid the prolonged and contentious negotiations that often characterized PRI negotiations with the foundation. Grant funds could be used to plan the loan fund or to pay for dedicated staff to provide technical assistance and to support marketing activities. Grant funding could also provide up to $500 000 in seed capital to help build the loan fund and make it easier for individual projects to become bankable loans. The seed capital often serves as equity to allow layering of multiple financing sources, making higher risk loan applicants more attractive to traditional lenders. In order to secure the seed capital grants, the applicants have had to secure a minimum of $200 000 in hard cash resources as well as develop a credible plan that would result in the leveraging of private and/or public resources that would result in a minimum of $3 million in loans by the end of the grant period. In addition, grantees were encouraged to target a wide range of provider loan applicants including physicians, dentists, community health centers, certified rural health clinics, and hospitals.

Table 1. Agencies Implementing Revolving Loan Funds in Arkansas, Louisiana, Mississippi, South Carolina and West Virginia*

State (Initial RWJF investment)	Organization	Type
Arkansas (10/99)	Southern Financial Partners	Community Development Financial Institution (business loan fund)
Louisiana (3/99)	Southeast Louisiana AHEC	Health Professions Training Institution
Mississippi (12/00)	Enterprise Corporation of the Delta	Community Development Financial Institution (business loan fund)
South Carolina (11/98)	Office of Rural Health and Wachovia Bank	Nonprofit health organization and for-profit bank
West Virginia (2/99)	Center for Rural Health Development	Non-profit health organization

* RWJF indicates Robert Wood Johnson Foundation. AHEC indicates Area Health Education Center.

Description of Models Funded

Two models are currently being implemented through the SRAP RLF component. These models, based on the general type of organization administering the fund, include 2 state RLFs (Arkansas and Mississippi) being implemented by community development financial institutions (CDFIs), and 3 state RLFs (Louisiana, South Carolina, and West Virginia) being administered by some type of health agency. Table 1 lists the RLF-implementing agencies within each state and the date when the first RWJF investment was made.

The Coalition of Community Development Financial Institutions defines CDFIs as "private-sector financial intermediaries with community development as their primary mission. While CDFIs share a common mission, they have a variety of structures and development lending goals. There are 6 basic types of CDFIs: community development banks, community development loan funds, community development credit unions, microenterprise funds, community development corporation-based lenders and investors, and community development venture funds. All are market-driven, locally controlled, private-sector organizations."[14]

The Arkansas and Mississippi CDFIs had considerable lending experience in other areas but virtually no experience in health care lending until they became SRAP grantees. On the other hand, the RLFs administered by health agencies had considerable knowledge about health care provider needs but essentially limited or no lending experience.

Experience of Loan Funds

These loan fund projects have used RWJF resources in different ways to meet their states' needs since the beginning of the program. Since early 1999, South Carolina, Louisiana, and West Virginia have used SRAP funds to support staff to plan the loan fund as well as market the fund and provide technical assistance to providers. From 1999 to 2001, South Carolina used SRAP resources to hire a loan fund specialist and used their existing relationship with Wachovia Bank (which started in about 1996) to facilitate the making of loans to rural health providers. South Carolina did not receive its seed capital grant until November 2001. Since its first grant in early 1999, Louisiana has chosen to use SRAP resources to provide staffing support for its loan fund, and Louisiana generated resources to provide seed capital for the fund. (The Louisiana project does intend to apply for a seed capital grant in 2003.) West Virginia secured planning and staffing resources in 1998 and received its first seed capital grant in November 1999.

In contrast, Arkansas and Mississippi have almost exclusively used SRAP funds for seed capital grants. These projects have not secured SRAP resources to provide support for loan fund specialists who would market the fund and provide technical assistance to providers. Instead they have used existing loan development officers to fulfill these functions.

An important aspect of the seed capital provided through the SRAP is the leveraging it has enabled states to achieve. Table 2 shows the hard cash resources that have been generated to supplement the SRAP funding in each state. This hard match distinguishes the SRAP from 2 other RWJF rural-oriented projects (Practice Sights and the Hospital-based Rural Health Care Program) that were not able to leverage any cash match. This result is largely due to the fact that RWJF provided grant, rather than PRI, money in the SRAP.

A variety of sources have been leveraged for the fund, including foundation; state government (West Virginia); public financing authorities (Louisiana); the US Department of Agriculture (Arkansas, Louisiana, South Carolina, and West Virginia); and CDFI/loan

Table 2. Cash Match Leveraged by Funds

Organization	Cash Match Leveraged From Other Sources* ($)	RWJF Seed Capital Grants* ($)
Southern Financial Partners—Arkansas	803 337	1 000 000
Southeast Louisiana AHEC	600 000	None
Enterprise Corporation of the Delta—Mississippi	500 000	500 000
Office of Rural Health and Wachovia Bank—South Carolina	332 000	481 000
Center for Rural Health Development—West Virginia	2 750 000	1 000 000
Total	4 985 337	2 981 000

* Figures for amounts leveraged and granted are as of November 2002. RWJF indicates Robert Wood Johnson Foundation. AHEC indicates Area Health Education Center.

fund intermediary resources (Arkansas and Mississippi). West Virginia in particular has been highly successful in leveraging both state and philanthropic funding (through the Claude Worthington Benedum Foundation) to support their loan fund. As a consequence of having this larger pot of unrestricted funds available, the West Virginia Loan Fund has been able to make more loans at lower interest rates.

Table 3 presents figures on the productivity of the 5 loan funds to date: specifically, for loans approved and loans closed. The number of loans closed ranges from 1 in Mississippi to 40 in South Carolina, whereas the total amount loaned ranges from $1.57 million in Louisiana to $11.1 million in South Carolina. The higher productivity of the South Carolina fund is positively influenced by 2 factors: their strong relationship with Wachovia Bank, which started in 1996, and the dedicated efforts of the RLF loan specialist. The large difference between loans approved and closed in Arkansas is due to 3 multimillion dollar loans that were approved but subsequently withdrawn by the provider prior to closure. The Mississippi loan fund, which started later than the other loan funds and has been somewhat slow to develop, currently has 3 large loans in the pipeline. If these loans are closed, the project will have a dollar volume of close to $4 million.

Table 4 indicates the types of providers for whom loans have been closed. The most common loan recipients across the 5 loan funds are private physicians, community health centers, and certified rural health clinics. This is not surprising since the median size of the loans being made through this fund was $360 000, which is particularly appropriate for these types of providers. The purposes for which loans were made ranged from establishing lines of credit, purchasing land and facilities, construction and/or renovation, purchasing equipment, working capital, debt restructuring, and practice purchase. The emphasis of loans varied between states. For example, in South Carolina over one fourth of the loans were for a line of credit, whereas

Table 3. Productivity of Southern Rural Access Program (SRAP) Revolving Loan Funds to Date: Loans Approved, Loans Closed, and Mean and Median Size of Loans Closed

	Loans Approved		Loans Closed			
State	Number	Amount* ($)	Number	Amount* ($)	Mean Loan Amount* ($)	Median Loan Amount* ($)
Arkansas	16	8 784 000	12	3 932 000	327 667	147 500
Louisiana	6	1 570 000	6	1 570 000	261 667	230 000
Mississippi	2	2 631 000	1	2 000 000	NA	NA
South Carolina	41	11 146 812	40	11 094 812	277 370	102 500
West Virginia	13	7 088 300	12	6 188 300	515 692	360 000

* Figures for loan amounts approved and closed are as of November 2002.

Table 4. Types of Providers Reached Through the Revolving Loan Fund (by State)

	Health Professionals								
State	Physicians	Certified Nurse Midwives	Dentists	Other	Hospitals	Community Health Centers	Rural Health Clinics	Rehabilitation Facilities	Other Facilities
Arkansas	2	1		2	2	1	1	1	2
Louisiana	3					1	1	1	
Mississippi					1				
South Carolina	17		3		1	6	13		
West Virginia	2		1		2	5		1	1
Total	24	1	4	2	6	13	15	3	3

other states focused more on facilities and equipment. However, in all 5 states at least half of the loans were made to purchase facilities or land or for construction, renovation, or equipment purchase.

Challenges These Loan Funds Face. Most of the RLFs have experienced start-up delays in getting their loan funds off the ground. The West Virginia and Louisiana funds took over 2 years after receipt of RWJF funds before they closed their first loan, and the Mississippi project took about 15 months. These are complex projects, and sites have needed to develop loan policies, market the loan fund, set up loan approval committees, and many other tasks before they became operational. The health agency models have faced the challenge of having to develop credibility with the banking community. The CDFI models face a similar challenge with the health provider community. The "language" of health agencies, CDFIs, and private banks are somewhat different, and it takes time to foster constructive communication. The first few deals have been the most difficult to negotiate, and progress has generally accelerated after the first few deals have closed.

The turbulent market and trend toward consolidation in the private banking community is another challenge these loan funds face. The Arkansas and Louisiana projects have seen potential partnerships with private banks affected by this trend. And uncertainty concerning the effect of Wachovia's Bank merger with another institution influenced the South Carolina project to supplement their partnership efforts with Wachovia with other private banks that have a presence in small rural communities.

A third challenge these projects face is the ongoing need to raise additional seed capital. These projects have great potential to become self-sustaining but need additional unrestricted seed capital to attain the scale to continue to make new loans. Fortunately, RWJF has made an additional $3.5 million available for unrestricted seed capital during the SRAP's Phase II (authorized in 2002), and West Virginia and Arkansas have already secured additional RWJF resources.

A fourth challenge these loan funds may face is the possibility of a default of 1 or more of the loans. The health agency models may be particularly vulnerable on this issue because their sole loan products are health care loans, and the fiscal environment for rural health care providers is difficult. All of these loan fund projects have established fairly sophisticated loan monitoring procedures, and projects are either actively providing or considering the provision of ongoing technical assistance to providers who are financially vulnerable.

Implications for the Field (Rural Providers/Advocates and Public and Private Funders)

Observations from the SRAP thus far indicate that there is a niche, primarily within small to moderate capital health care projects, for these types of revolving loan funds. Although the SRAP experience with these funds to date is promising, this is not a panacea for the rural health care capital access problem. Significant additional investments from both public and private resources are needed to reduce capital access gaps for rural providers. These models can provide an important mechanism for investing in rural community growth in a way that lessens dependence on grants while increasing sustainability.

The 2 models may, over time, provide helpful lessons for the field. It is too early to say which model, if either, will ultimately be most productive. To date, the health agency models (particularly in South Carolina and West Virginia) have been more productive in both number and dollar volume of loans. Both of these states

have full-time staff dedicated to the project. These 2 states have also launched the strongest ongoing marketing efforts focusing on the health care provider community, and in West Virginia on the banking community as well. The South Carolina project has benefited from its strong relationship with a private bank, whereas West Virginia has been particularly good at leveraging money from a wide variety of sources. The CDFI models have also made some progress. Neither of these projects has specific staff dedicated to the health component of their loan funds. However, both the Arkansas and Mississippi projects have very large loans in the pipeline. Their greater access to capital, more diversified lending portfolio, and more sophisticated risk management capability may make these loan funds more productive in the long run.

A significant degree of information sharing has also occurred between funds and across the 2 models. The health agencies are bringing their greater knowledge of the health care sector to the table, and the CDFI models are bringing their greater experience in loan monitoring and risk management of loan funds. Perhaps one reflection of this sharing is that WV submitted a CDFI application in early 2003; other health models are considering converting as well.

The experience with the RLF program of the SRAP suggests it may be replicable in other states not included in the SRAP, particularly as states seek more efficient ways to use their limited resources to leverage additional capital for health care needs within their borders. This article has described 5 states' efforts to develop the mosaic of relationships bridging the multiple sectors of health care, economic development, business, and the banking industry necessary to build a successful loan fund. These examples of successful collaboration between sectors that rarely intersect so intensely are an important unintended benefit of this initiative that will no doubt bear other fruit in the future.

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Getting From Here to There: Evaluating West Virginia's Rural Nonemergency Medical Transportation Program

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ABSTRACT: *With funding from the 21st Century Challenge Fund, the West Virginia Rural Health Access Program created Transportation for Health, a demonstration project for rural nonemergency medical transportation. The project was implemented in 3 sites around the state, building on existing transportation systems—specifically, a multicounty transit authority, a joint senior center/transit system, and a senior services center. An evaluation of the project was undertaken to answer 3 major questions: (1) Did the project reach the population of people who need transportation assistance? (2) Are users of the transportation project satisfied with the service? (3) Is the program sustainable? Preliminary results from survey data indicate that the answers to questions 1 and 2 are affirmative. A break-even analysis of all 3 sites begins to identify programmatic and policy issues that challenge the likelihood of financial sustainability, including salary expenses, unreimbursed mileage, and reliance on Medicaid reimbursement.*

Travel is an often-noted barrier to access to nonemergency health care services for rural populations. Operationally, travel has been defined by distance to services, driving conditions, and by access to transportation. Rost et al[1] showed that needing to travel long distances is related to rural patients with depression not receiving mental health services. Travel distance is also a factor in rural residents not receiving general medical services[2,3] and rural minority patients not receiving preventive services.[4] The willingness of individuals to drive distances is also a factor that varies regionally. Ricketts et al[3] commented on the nature of the roads rural residents must travel for care as a factor favoring or inhibiting access. He noted that "landscape provides a variety of physical obstacles to travel." Weather is also a factor that contributes to people's willingness to travel.

More important than distance, road conditions, or weather is having available a way to get from point A to point B. Rogers[5] recognized that communities aging because of the departure of their young will experience problems providing services as the result of the "special problems of transportation" brought about by the limited availability of health care facilities and resources and the difficulties in delivering services associated with geographic isolation. Williamson[6] noted that in rural areas "[a] high proportion of [emergency] transportation may be for nonemergencies, eg, transporting elderly patients from the nursing home to the hospital and back again," pointing at the limited nature of transportation options.

Stamatiadis et al[7] looked at the reasons why elderly residents of 2 rural Kentucky communities travel and their choice of transportation. Their findings indicated that regardless of the reason for travel, elderly respondents prefer to travel by car, whether as the driver or as the passenger. Further, as residents age, the purpose of travel is more often for medical care or its associated activities (eg, picking up medications) and is more often as a passenger.[7]

Although transportation is recognized as a critical "enabler" of access to nonemergency medical care (eg, getting to a medical appointment, picking up medication, clinic visits, dialysis treatments, etc), relatively little research or policy attention has been given to looking at

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models for community transportation, how these are financed, and their impact on health status.

West Virginia

West Virginia has the oldest population in the country, with a median age of 38.9 years.[8] Sixty-four percent of West Virginia's residents live in rural communities of fewer than 2500 spread over 24 000 square miles. Topographically, West Virginia has some of the most rugged land in the nation for a state its size. There is a strong probability that unless you are driving along a river, you are either driving uphill or downhill.[9] According to the West Virginia Department of Transportation,[10] the state has 37 370 miles of public roads, 34 610 miles of state highway, 88 miles of the West Virginia Turnpike, 549 miles of interstate highway (of the nation's 46 068), 1736 miles of the National Highway System (of the nation's 158 920), 6343 bridges (of which 32% are more than 100 feet in length), and 2 national and 8 state scenic byways. Distances in the state are more accurately described in terms of the time it will take to drive, barring inclement weather (eg, the floods of 2001 and 2002, the snows of 2002, etc), versus the actual mileage, due to narrow 2-lane roads that snake through the mountains.

In spite of geographic and climatological challenges, transportation to a health provider was not a problem for close to 90% of respondents to the 2001 West Virginia Health Care Survey.[11] However, it is a problem disproportionately for those West Virginians who are over the age of 75 (17.7%), have incomes less than $10 000 per year (24.1%), and have less than a high school education (18.5%). Not surprisingly, these individuals are less likely to drive themselves and more likely to depend on household and nonhousehold members for a ride. When transit services are available, these populations, including those with mobility limitations, are also traditional users of these systems.[12]

In 2000, the West Virginia Rural Health Access Program began the Transportation for Health Program. The program represented an attempt to demonstrate community models to address the need for rural nonemergency medical transportation (NEMT) services. In the request for proposals, communities were encouraged to develop their own models and to incorporate multiple transportation resources (eg, school buses, Head Start buses, church vans, taxis, etc) into a single NEMT system. The evaluation of the project has attempted to answer 3 questions:

1. Did the project reach people who traditionally need transportation assistance, defined as (1) people who drive themselves, but have unreliable vehicles or disabling conditions that make it difficult to drive; (2) people who rely on informal transportation including friends, relatives, and neighbors, and are dissatisfied with this arrangement; and (3) people who have no means of transportation.
2. Are users of the transportation project satisfied with the program?
3. Is the project sustainable?

The results provide information for other communities and other states on how to create similar programs and inform policy making related to financing of future programs.

Background

Funding for the Transportation for Health Project was provided by the 21st Century Challenge Fund with matching funds from the Claude Worthington Benedum Foundation. To participate in the program, successful community applicants were expected to meet certain requirements, including that they serve everyone within a particular geographic area without regard to ability to pay or demographic and categorical characteristics such as age, serve all health care providers within the region, bill for services to establish a revenue stream, and coordinate efforts with others.

The program began in 2000 with 5 communities. The lead agencies for these communities included a regional human resource/social services planning agency, a public transit authority, a hospital, a senior services agency, and a combination senior services center/transit system.

Two of these projects (one led by the hospital and the other by the regional human resource/social services planning agency) were dropped from the program after the first year for not meeting some of the requirements noted earlier or, due to changes in leadership, not meeting their schedule of deliverables.

Today, 3 projects continue to participate: the Potomac Valley Transit Authority (PVTA, a public transit authority); Preston County Senior Citizens, Inc (PCSC, a combination senior services center/transit system); and Senior Life Services of Morgan County (SLSMC, a senior services agency). Table 1 summarizes information relating to the 3 projects. The projects together serve a 7-county service area (Figure 1).

Potomac Valley Transit Authority. PVTA provides fixed-route (Note 1) public bus transportation for a 5-county service area and demand response services (Note 2) from eastern Hardy County to the county seat in Moorefield on a weekly basis. The facility offers route-deviated service (Note 3), up to three fourths of a mile from the regular route, when requested in

Table 1. Service Area Comparison, 2001

Provider*	Area Served (Counties)†	Population/ (mi^2)‡	Annual Number of NEMT Passengers/Round Trips§	Annual NEMT Miles Traveled§	Fleet‖
PVTA	Grant, Hampshire, Hardy, Mineral, Pendleton	35.3	2026	110 512	Four 18-passenger ADA buses¶; four 12-passenger ADA buses; twelve 24-passenger ADA buses
PCSC	Preston	45.4	965	41 396	Eight 24-passenger ADA buses, 7 ADA vans, 1 van, 1 Jeep
SLSMC	Morgan	66.7	1394	70 113	3 ADA vans, 1 van, 1 minivan

* PVTA indicates Potomac Valley Transit Authority (a public transit authority); PCSC, Preston County Senior Citizens, Inc (a combination senior services center/transit system); SLSMC, Senior Life Services of Morgan County (a senior services agency); NEMT, nonemergency medical transportation.

† Source: 2002 West Virginia Transportation Providers Directory, West Virginia Department of Transportation, Division of Public Transit.

‡ US Census.

§ Providers' estimates to the Center for Business and Economic Research (Marshall University) for the period of November 2001 to October 2002.

‖ Source: 2002 West Virginia Transportation Providers Directory, West Virginia Department of Transportation, Division of Public Transit.

¶ A lift-equipped bus to assure accessibility to persons with disabilities.

advance. The PVTA operates Monday through Friday from 0430 until 1930 hours.

Preston County Senior Citizens, Inc (Buckwheat Express). Buckwheat Express, operated by the PCSC, offers route-deviated service up to three fourths of a mile from the regular route, when requested in advance. In addition to providing NEMT, the PCSC provides service to senior citizens (nutrition sites and medical appointments) and the Preston County Sheltered Workshop. The Buckwheat Express operates Monday through Friday from 0500 until 1800 hours.

Senior Life Services of Morgan County. SLSMC provides transportation services for residents of Morgan County. In addition to providing NEMT services, SLSMC transports senior citizens to nutrition sites, shopping, activities, and medical appointments. SLSMC operates Monday through Friday from 730 until 1630 hours. SLSMC is the only provider of "door-through-door" service (Note 4) for clients when required and requested in advance.

Traditional users of transit services include the elderly over age 65, individuals with limited mobility, and nonelderly with low incomes. These groups account for over one quarter (28.3%) of the population in PVTA's 5-county service area, 31.8% of the population in Preston County (PCSC), and 26.1% of the population in Morgan County (SSCMC; Table 2).

Methodology

To answer the evaluation questions, multiple methodologies were employed, including telephone surveys of a sample of the general population, telephone surveys of a sample of service users, break-even analysis of revenues and expenses overall, and interviews with key informants.

Surveys. Telephone surveys (general population

Figure 1. West Virginia Counties Served by Transportation for Health Project.

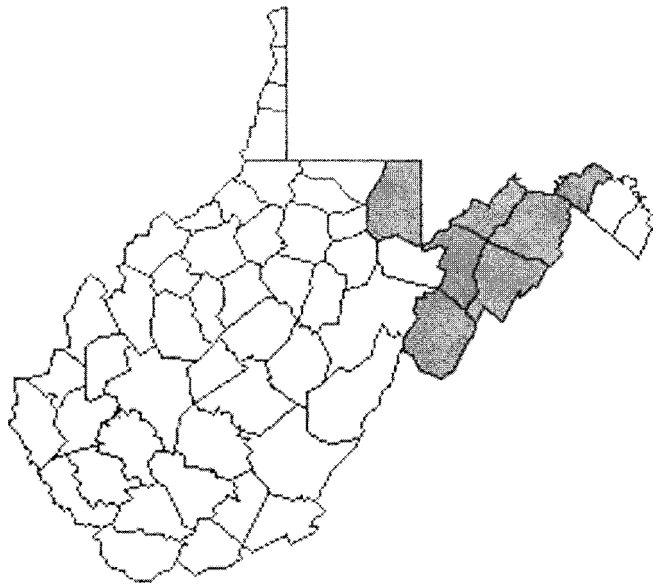


Table 2. Population Characteristics of Transportation Provider Service Areas*

			Service Area Population	
Provider	>Age 65 (%)	Limited Mobility (%)	Nonelderly Low Income (%)	Total
PCSC/Buckwheat Express	14.6	2.1	15.1	29 822
SLSMC	17.5	1.1	7.6	14 026
PVTA	15.4	1.5	11.5	77 973

* PCSC indicates Preston County Senior Citizens, Inc; SLSMC, Senior Life Services of Morgan County; PVTA, Potomac Valley Transit Authority.

and users) were conducted in 2002. The intent of the general population survey was to describe the potential target population; to measure awareness of services; the purpose for which service was used, if used; and satisfaction with services. Users were surveyed to provide specific feedback for the NEMT provider and to describe differences between the populations of NEMT clients and those who have never used NEMT. The Institutional Review Board at the West Virginia University Health Sciences Center approved the survey methodology and tools.

The general population survey was administered to a sample of residents in each of the project sites using random digit dialing. A total of 375 surveys were completed: 175 in the PVTA 5-county area, 100 in Morgan County (SLSMC), and 100 in Preston County (PCSC). The survey of users employed lists compiled by local site coordinators of at least 75 clients who had used the service in the preceding 6 months and included their telephone numbers. A total of 203 user surveys were completed for a 90% response rate.

Survey data were analyzed using SPSS Version 11 (SPSS Inc, Chicago, Ill). Basic descriptive statistics were employed. χ^2 was used to test for significant within-group differences. Significance was set at $P<.05$.

Break-even Analysis. The objective of the break-even analysis was to assess the individual sites in terms of movement toward self-sustainability (ie, the point at which revenue and expenses "break even"). The Center for Business and Economic Research (CBER) at Marshall University conducted the break-even analysis. Using a form developed by CBER, each project site provided information monthly on their revenues and expenses. This information included the numbers of passengers transported, miles traveled, and the amount and source of reimbursement received. Data collection began in May 2002. Each of the 3 sites assembled data retrospectively for the 6-month period November 2001 through April 2002, and then reported prospectively each month for May through October 2002.

Results

Does the Project Reach the Population of People Who Need Transportation Assistance?

General Population. Close to three quarters of all community respondents drive themselves to medical appointments; 21.6% depend on family or friends. Just fewer than 3% use commercial transportation (ie, service provider, taxi, or bus) or a local service.

Twenty-seven percent of respondents reported experiencing difficulties getting to the doctor rarely (1 to 2 times) or often in the last year (Table 3). Difficulties were experienced significantly more often by those who did not drive themselves than by those who did, 50% compared with 19% ($P<.01$).

Women were almost twice as likely as men to depend on others for transportation (30% versus 17.8%, $P<.009$), but no more likely to have experienced difficulties getting to an appointment in the last year (30% versus 21.5%, $P>.20$) Those over age 65 were nearly 3 times as likely as those age 19 to 64 to depend on others for transportation (43.3% versus 16.2%, $P<.001$), and significantly more likely to experience difficulties getting to care in the last year (37.7% versus 20.4%, $P<.001$). Respondents who reported their health status as fair or poor were significantly more likely to depend on others and to report experiencing difficulties in the last year.

Overall, approximately one third of the community respondents needed transportation assistance, based on the definition of "need" proposed earlier (having unreliable vehicles or disabling conditions that make driving difficult; relying on informal transportation including friends, relatives, and neighbors, and being dissatisfied with this arrangement; and relying on formal, but perhaps less timely and more expensive, forms of transportation).

The proportion of respondents needing assistance

mirrored the proportion of the service area populations representing traditional users of transit services.

Transportation Users Survey. The NEMT users surveyed met the target profile, with some variations by site. Over three quarters (76.8%) of respondents were women. The majority of those who have used NEMT transportation services were over age 65; however, there was some variation in the age profile of NEMT users by site. Thirty-one percent of the PVTA client population was over age 65 compared with 62% of SLSMC and 76% of PCSC.

Medicaid and Medicare were the 2 dominant sources of health insurance reported by respondents. In fact, 47.3% (n = 96) of respondents were dual eligibles whose transportation is covered by Medicaid.

Are Users of the Transportation Project Satisfied With the NEMT Service? Overall satisfaction with the transportation service was consistently high across sites. Over 90% of respondents said they were satisfied or very satisfied with scheduling, 92.2% with length of time on the van, 92.6% with courtesy of drivers, 92.1% with the promptness of drivers, and 92.1% with the cost of the service (Table 4).

In spite of high reported satisfaction, 21.7% of respondents reported that they no longer used the service. The predominant reasons given were that the need no longer existed (n = 13), they had an alternative mode of transportation (n = 5), or the expense of the service was too high (n = 6).

Is the Project Sustainable?

Expenses. Salaries and benefits were notably the largest expense group for the 3 providers, accounting for 52.2% to 74.3% of total costs. The greatest annual expense was associated with drivers' salaries, averaging 29% to 42% of total expenses. This was followed by wages for the dispatcher and coordinator, averaging 19% to 30% of total costs. The vehicle expense component was similar for PVTA and SLSMC (13.5% and 17.3%). PCSC's vehicle expense approached 32%. Indirect expenses were roughly similar for all 3 providers, ranging from 12.2% (PVTA) to 18% (SLSMC; Table 5).

Revenues. The PVTA quadrupled its ridership from the beginning of the study period, from 79 passengers/round trips in November 2001 to 349 passengers/round trips in October 2002. Most of the increased ridership was Medicaid recipients. The PCSC ridership fluctuated from 47 to 108 passengers/round trips per month over the 12-month period. Just over half of the PCSC NEMT users were Medicaid recipients. The PCSC recorded the highest use by private pay users as a percent of both total and average monthly ridership. The SLSMC nearly doubled its ridership from the beginning (92 passengers/round trips) to the end (151 passengers/round trips). Most of the riders were Medicaid recipients.

Table 3. Difficulties Getting to the Doctor/ Hospital by Transportation Status (n = 373)*

	Drive Myself		
Experience Difficulties	Yes	No	Total
Never	226 (81%)	48 (50%)	274 (73.5%)
Rarely	51 (19%)	37 (38.5%)	88 (23.6%)
Often	0	11 (11.5%)	11 (2.9%)
Total	279	96	373

* Random-digit dial telephone survey of general population in transportation program service areas.

PVTA provided NEMT services to 2026 riders during the period November 2001 through October 2002, at an average cost (expense) of $87 per trip (ranging from $39 to $130). Revenues from Medicaid and private pay offset the expense by $39, with Medicaid covering the lion's share. Ninety-five percent of the PVTA NEMT riders were Medicaid recipients.

Buckwheat Express served 965 riders for the same period at a cost of $101 per trip ($67 to $179). Revenues offset the cost by $20. Fifty-seven percent of all Express riders were Medicaid recipients.

The SLSMC served 1394 riders at an average cost of $55 per trip ($45 to $71). Revenues offset costs by $30. Eighty-four percent of SLSMC riders were Medicaid recipients.

The average private pay actually collected varied among the 3 providers. The PVTA charges people as they board the vehicle, resulting in a collection rate of 100%, whereas SLSMC, which bills people after the service has been performed, has a private fee collection rate of 44.5%. Collection rates for the SLSMC and PCSC fluctuated monthly, due to lags in billing, seasonal (eg, Christmas, post–school year start) collection efforts, billing policies, and personnel changes. The differences in how fees are collected can best be understood by looking at the "business" of each of the providers. Neither the SLSMC nor the PCSC have the equipment or the personnel available to support payment at the time of service, something that PVTA has in place for its traditional transit service.

Medicaid. Outside of private pay, Medicaid is the major funder of NEMT services. The average Medicaid cost per trip was $16 for the United States. However, this number does not represent the actual cost of

Table 4. Satisfaction With Nonemergency Medical Transportation (NEMT) Services (n = 203)*

	Frequency	Percent
Overall, how satisfied are/were you with this service?		
Very satisfied	117	57.6
Satisfied	68	33.5
Dissatisfied	2	1.0
Very dissatisfied		
No opinion	16	7.9
How satisfied are/were you with scheduling arrangements?		
Very satisfied	112	55.2
Satisfied	73	36.0
Dissatisfied	4	2.0
Very dissatisfied		
No opinion	14	6.9
How satisfied are/were you with length of time on van?		
Very satisfied	113	55.7
Satisfied	74	36.5
Dissatisfied	3	1.5
Very dissatisfied		
No opinion	13	6.4
How satisfied are/were you with cost?		
Very satisfied	119	58.6
Satisfied	68	33.5
Dissatisfied	1	.5
Very dissatisfied	2	1.0
No opinion	13	6.4
How satisfied are/were you with courtesy of drivers?		
Very satisfied	126	62.1
Satisfied	62	30.5
Dissatisfied	1	.5
Very dissatisfied		
No opinion	14	6.9
How satisfied are/were you with promptness of drivers?		
Very satisfied	127	62.6
Satisfied	62	30.5
Dissatisfied	1	.5
Very dissatisfied		
No opinion	13	6.4

* Sample of clients who had used service in preceding 6 months.

providing 1 trip, only the Medicaid-funded portion of the trip expense. West Virginia Medicaid pays $20 for the first 30 miles, starting from the client pick-up point, and then $0.75 for every mile thereafter. The mileage from the provider's home base to the client home or pick-up location is known as "deadhead miles" (Note 5). Deadhead mileage is unreimbursed. Over the study period, 42% of PVTA's total miles were unreimbursed, a monthly average of 3839 miles. PCSC averaged 1808 deadhead miles monthly, or 27% of total miles traveled. SLSMC averaged 1842 deadhead miles, 32% of their total. Deadhead miles are one reason why just increasing ridership does not necessarily increase the profitability of a service.

Another reason increasing ridership may not increase profitability has to do with the nature of the clients and their health care needs. According to interviews with the directors and coordinators for the 3 programs, and a review of intake data from the early part of the project, the most costly trips are associated with visits to a specialist for a chronic illness and/or specialty care services (eg, dialysis, chemotherapy) for which the nearest qualified provider is located out-of-county. The reference to chronic illness is partially validated by the percent of Medicaid/Medicare dual eligibles represented in the survey of NEMT users. These trips may involve driving 2 or more hours one way. Often, again according to the coordinators, it is not feasible to coordinate the schedules of multiple passengers to make these trips more cost-effective (ie, bring in sufficient fees to cover the costs of the driver's time and tying up a vehicle).

Of the 3 sites, the PVTA is the only one to approach economic sustainability over the study period of November 1, 2001, through October 31, 2002 (Figures 1 through 3).

Limitations

The small number of NEMT clients and members of the general population surveyed must temper any confidence in conclusions based on the survey data. In addition, the ability to obtain a representative sample of NEMT clients was affected by clients moving, entering nursing facilities, or with disconnected phone numbers. An analysis of information from client intake forms will provide an opportunity to validate some of these findings but was not feasible at the time this article was prepared.

Discussion

On the basis of the survey data, Transportation for Health appears to be reaching a population that needs transportation services from time to time. This population draws most heavily from those who do not drive themselves, whether or not they have a vehicle. Those who have a vehicle may not feel comfortable driving due to a physical limitation; weather conditions (rain, snow, fog, floods, ice); the nature of the roads; age; or any combination of these reasons. The service is also available to, and used by, those who have their own

vehicle and would ordinarily drive themselves but have occasions when they need an alternative. Having a car does not eliminate the periodic need for alternative transportation services.

Comparing those in the general population who do not drive to those who do, the former are disproportionately women and older and rate their overall health status as fair or poor. The population of NEMT users surveyed closely parallels those who do not drive: they are predominantly women, older, and rate their overall health status as fair or poor, suggesting that the project is reaching the appropriate population.

With respect to satisfaction with services, the 3 NEMT programs appear to be doing a good job as evidenced both by high rates of satisfaction with all facets of their service, the increasing ridership among seniors and other age groups, and the large and increasing proportion of the general population that is aware of their service by virtue of word-of-mouth.

Sustainability is the focus of the third evaluation question. On the basis of the break-even analysis, only PVTA's NEMT service is even approaching sustainability, and that achievement would still require the addition of approximately $40 000 per year. Although all of the projects have increased their Medicaid ridership and therefore increased revenues, they have also increased their unreimbursed expenses. Given the miles covered by these programs, and the time involved in driving due to mountain roads and inclement weather, these deadhead miles and salary expense are major factors in the inability of programs to become self-sustaining.

As noted earlier, there are additional factors that increase the difficulty of economically breaking even. Although definitive statements await the analysis of the intake data and input from the health care provider community, the nature of the client population and their health problems increase some of the NEMT unreimbursed expenses.

Although PVTA has a higher proportion of deadhead miles, primarily due to its 5-county service area, it may be in a stronger position to cover some of the shortfall in NEMT revenue for the following reasons: (1) PVTA's NEMT clients pay for service up front, saving administrative costs associated with billing and collections; (2) the PVTA population has a younger Medicaid clientele that may access more locally based health care services (primary care versus specialty care) and may lend itself more readily to scheduling multiple clients for each trip (analysis of client intake data will provide additional insights into the role of the client in sustainability); and (3) PVTA is much larger, is a formal transit authority, and may therefore be in a better situation to cross-subsidize various efforts.

Table 5. Percent of Total Costs, November 2001 to October 2002*

Provider	Salaries and Benefits (%)	Vehicle Expenses (%)	Indirect Expenses (%)
PVTA	74.3	13.5	12.2
PCSC	52.2	31.8	16.0
SLSMC	64.7	17.3	18.0

* Source: Providers' estimates from the Center for Business and Economic Research (Marshall University) for the period of November 2001 to October 2002. PVTA indicates Potomac Valley Transit Authority; PCSC, Preston County Senior Citizens; SLSMC, Senior Life Services of Morgan County.

Conclusions

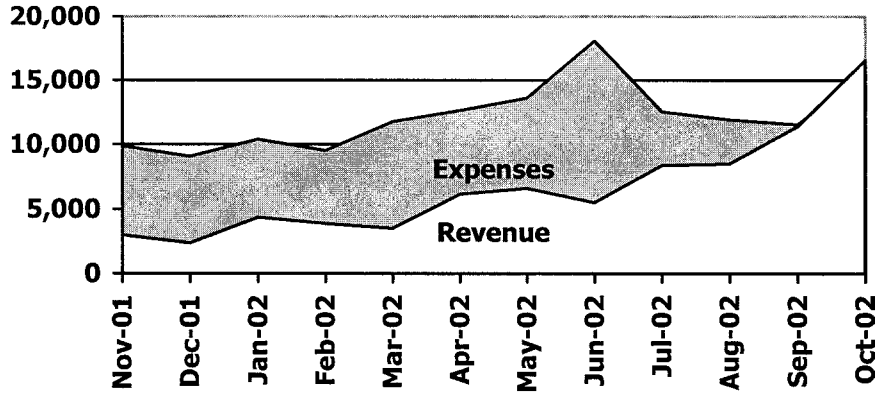
West Virginia is a challenging demographic, geographic, and economic environment for NEMT. The need for service is great due to a population that is "aging in place" and that suffers disproportionately from chronic illness. The mountainous terrain and the secondary roads make driving a challenge and having a reliable vehicle a requirement, particularly during inclement weather. West Virginia is a poor state, and the growth in NEMT expenditures has made NEMT a target during the current Medicaid crisis. Each of these factors helps explain both the increasing need for NEMT and the difficulties in providing the service in an economically sustainable fashion.

The West Virginia Transportation for Health Program has demonstrated 3 rural community models for the delivery of NEMT services. Each of the 3 programs is built on an existing service base: a senior services center, a joint senior center/transit program, and a rural multicounty transit authority.

Two of these 3 programs successfully added NEMT as a new service and moved beyond their traditional client base to reach populations in need of NEMT. The PCSC's Buckwheat Express had an existing NEMT program that it expanded for the project. In all 3 programs, the client population was satisfied with the service. Awareness of the specific NEMT service was high in each of the communities served.

One of the major challenges that must be addressed to provide NEMT services for rural communities in an efficient and cost-effective manner is the development of regional systems to support patient transportation between homes in rural areas and tertiary care systems. Part of the success of these programs has been their willingness to work together (ie, to share information, successful activities, and problems they have experienced). The PVTA and the SLSMC, specifically, have

Figure 2. Potomac Valley Transit Authority (PVTA) Revenue and Expenses.



coordinated efforts to provide NEMT to county residents outside their service areas. The extent of these activities is limited because of funding and staffing constraints. Site coordinators have been invited to give presentations on the program to in-state audiences and nationally to educate other would-be NEMT providers about the challenges that await them and to share their experiences. Other states have experimented with transportation brokers/administrative managers (Note 6) and capitated transport systems as a way of making maximal use of existing service providers in a cost-effective way.

A second challenge is funding. Currently Medicaid is a major funding source for NEMT, although the Medicare population is the primary beneficiary. Transportation is a service supported by the Older Americans Act (OAA), which funds services and programs for older people through public and private agencies, such as senior centers and area agencies on aging. However, transportation services that are limited to seniors may also be limited to select locations and, further, OAA funding cannot support the NEMT demand. In addition, limited funding is also a major factor that inhibits regional collaboration in support of NEMT.

Providing and financing NEMT is a growing problem for rural states with many small communities characterized by geographic isolation and poverty like West Virginia. Transportation for Health has demonstrated that programs can be built to serve the NEMT needs of rural communities. However, without some form of external subsidy, such as that provided by the 21st Century Fund for this program or provided by federal and state governments for public transportation systems nationally, these projects are not able to cover

Figure 3. Preston County Senior Citizens (PCSC) Revenue and Expenses.

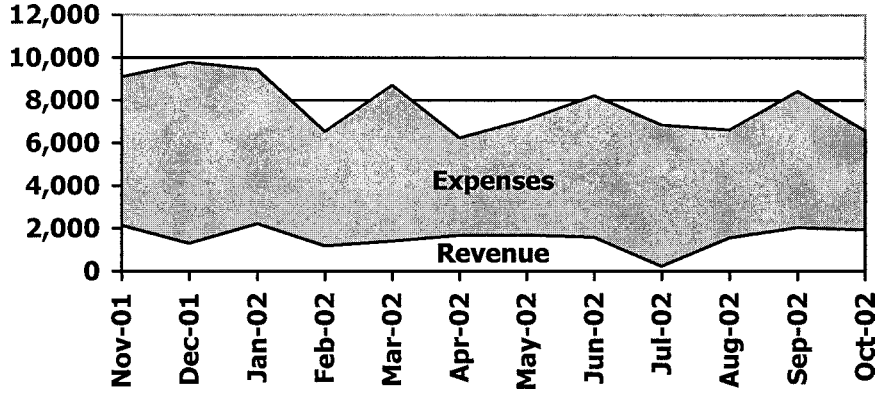
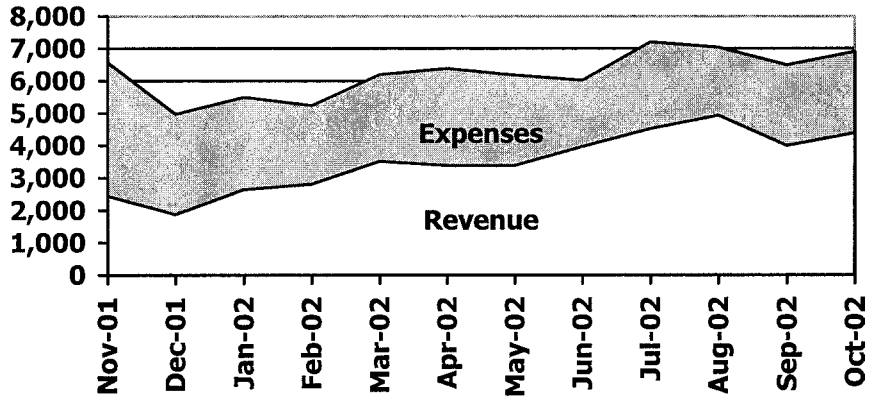


Figure 4. Senior Life Services of Morgan County (SLSMC) Revenue and Expenses.



their costs. In addition, the amount of the subsidy required may be affected by whether or not regional transportation systems, serving to lessen the amount of out-of-service area transportation required, can be developed.

The authors agree with the Community Transportation Association of America[13] that covering NEMT services is a logical extension for Medicare. However, that expansion must be informed by more research to better understand some very complex, and potentially very costly, issues including, but not limited to, (1) How is the service delivered (traditional fixed-route or demand-response versus hybrid service, curb-to-curb, door-to-door, or door-through-door service)? (2) Who delivers the service? (3) Who can use the service? (4) For what purpose can the service be used?

Getting from here to there in rural America just is not as simple as catching a bus.

Notes

1. Fixed-route transit service includes any services in which vehicles run along an established path at preset times. Typically, fixed-route service is characterized by printed schedules or timetables and designated bus or rail stops where passengers board and disembark.
2. Demand-response transit services, referred to as "dial-a-ride" services, are transit services in which individual passengers can request transportation from 1 specific location to another specific location at a certain time. These services do not follow a fixed route, but rather travel throughout the community transporting passengers according to their specific requests. They usually, but not always, require advance reservations.
3. A deviated fixed route operates along a fixed route and keeps to a timetable, but the vehicle can spontaneously deviate from the route to go to a specific location. Once the pick-up or drop-off is made, the vehicle goes back to the place along the route that remains.
4. Door-to-door service is a form of paratransit service that includes passenger assistance between the vehicle and the door of his or her home or other destination. This is a higher level of service than curb-to-curb, yet not as specialized as "door-through-door" service (where the driver actually provides assistance within the origin or destination).
5. Deadhead refers to hours/miles traveled by revenue vehicles when not in revenue service. This includes miles traveled to and from storage facilities, fuel stops, and other nonrevenue service mileage. Hours/miles back to the base station after delivering the last client are deadhead hours/miles.
6. Brokerage refers to a method of providing transportation where riders are matched with appropriate transportation providers through a central trip request and administrative facility.

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Smile Alabama! Initiative: Interim Results From a Program to Increase Children's Access to Dental Care

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ABSTRACT: *Alabama faced an oral health crisis, with decreasing dental provider participation and increasing enrollment of Medicaid-eligible children. In response, the Smile Alabama! initiative was designed to improve oral health care services for Medicaid-eligible children by increasing the number of participating dentists by 15% and the number of children receiving dental care annually by 5% by January 31, 2004. The initiative is composed of 4 specific components: claims processing, dental reimbursement, provider education and recruitment, and recipient education. Specific interventions were implemented for each component. From fiscal year 1999 to fiscal year 2002, enrollment of targeted Medicaid children increased 32.7%. During this same period, the number of participating dental providers in the Alabama Medicaid dental program increased by 127 providers, a 38.7% increase. The number of children receiving dental services increased from 82 600 in fiscal year 1999 to 130 208 in fiscal year 2002, a 57.1% total increase, with a 4.8% increase in the annual dental visit rate. The experience suggests that access to oral health care services can be improved through a multidimensional, strategically planned dental outreach initiative in spite of dramatic increases in Medicaid enrollment.*

Problems with access to oral health care services have been identified for several years by the Alabama Medicaid Agency, but most notably with the release of *Oral Health in America: A Report of the Surgeon General*,[1] and the nation as a whole has taken notice. Many people in America lack access to oral health care services. It is important to differentiate access from utilization. For purposes of this article and the *Smile Alabama!* initiative, access means the ability to obtain oral health care services when needed and should not be confused with utilization, defined as the actual use of dental services. *Oral Health in America* found that dental care utilization was influenced by a number of factors, including education level, income, sex, race/ethnicity, place of residence, geographic region, and insurance status. It is important to understand that not every person with private dental insurance achieves 100% use of dental services.[1(pp 79-82)]

This article describes the approach taken by the Alabama Medicaid Agency to improve access to oral health care services and to improve awareness of the importance of good oral health for all of Alabama's citizens. The initiative combined the support of public and private sources and the matching grants program of the Robert Wood Johnson Foundation's (RWJF) 21st Century Challenge Fund, a component of the Southern Rural Access Program (SRAP). The SRAP approved funding for this program for a 3-year period beginning February 1, 2001. Contributions from public and private partners, RWJF, and federal matches have provided $1 million during the 3-year grant period. The ultimate goal of this program is to enable full access to oral health care services for Medicaid-eligible children in Alabama.

More than 400 000 children under age 21 are eligible for dental services through the Alabama Medicaid Dental Program (Dental Program).[2] Five years ago, the state Medicaid Agency recognized that increases in Medicaid enrollment resulting in additional children

The *Smile Alabama!* initiative is a collaborative effort made possible by the Robert Wood Johnson Foundation's 21st Century Challenge Fund, a component of the Southern Rural Access Program matching grants program and public-private partners. The authors further acknowledge the Alabama legislature; governor's office; Alabama Medicaid Agency's commissioner, Mike Lewis; agency staff; and task force and coalition members for their strong support of all dental program activities and of the *Smile Alabama!* initiative in particular, which has resulted in more than 50 000 additional children receiving dental care in the past 2 years. For further information, contact: Mary Greene-McIntyre, MD, MPH, Associate Medical Director, Alabama Medicaid Agency, 501 Dexter Ave, P.O. Box 5624, Montgomery, AL 36103-5624; e-mail mmcintyre@medicaid.state.al.us.

Table 1. Alabama Dental Partner Workgroup Member Organizations/Agencies

Dental Partner Workgroup
Governor's Office
Office of Children's Affairs
Alabama Medicaid Agency
Alabama Department of Public Health
Children's Rehabilitation Services
Alabama Department of Education
Alabama Dental Association
Alabama Dental Society
Alabama Department of Human Resources
Children's Health Systems
University of Alabama School of Dentistry
Alabama Hospital Association
Blue Cross and Blue Shield of Alabama
Alabama State Medical Association
Alabama Academy of Family Physicians
Alabama Academy of Pediatrics
Alabama Arise
Alabama Primary Health Care Association

eligible for dental services and decreasing dental provider participation had combined to create a dental access crisis. As recently as 1999, only 26% of children enrolled in Alabama Medicaid received any dental service.[3] Many Medicaid-enrolled dentists had stopped providing care to Medicaid-eligible children, whereas new provider enrollment had decreased. Although the agency felt many factors contributed to this loss of participating dental providers, the lack of a systematic rate increase in more than 15 years was viewed as a critical factor.

To identify all issues contributing to the lack of access, the agency sought assistance from the dental community. The agency, with the assistance of the Alabama Dental Association (ALDA), convened the Alabama Dental Task Force (Task Force) in January 1998. The task force consisted of 9 dentists, both Medicaid and non-Medicaid providers, generalists, and specialists. The task force identified several major issues facing the dental program. Changes implemented by the agency within the first 12 months of the task force's formation included

- Simplification of the prior authorization process
- Addition of dental procedures previously not covered
- Expanded coverage for dental sealants
- Targeted rate increase for specific codes
- Clarification of program benefits and limits

In March 2000, the Dental Partner Workgroup, a multidisciplinary panel incorporating members with additional views, was formed to address the issue of access to dental care. The workgroup was composed of members from agencies and organizations considered potential stakeholders (Table 1). Also in March 2000, a survey was sent to 174 Medicaid-participating providers, and 35% responded.[4] This was a single mail-out with follow-up calls made to any provider indicating identifying information. Three questions were asked: (1) What method(s) do you prefer for continuing education? (2) Which issues are of greatest concern/interest to you as a Medicaid provider? (3) Which issues are of greatest concern/interest to you in terms of educating your patients? The number 1 response to question (2) was "low reimbursement rate," followed by "resolving problems with claims processing," whereas "understanding why claims are denied" was ranked third. The number 1 ranked response to question (3) was "keeping appointments," followed by "Medicaid benefit limitations/when patient is responsible" and "knowing who to call for help with Medicaid eligibility."

The Dental Partner Workgroup was provided with the survey results and developed a strategic plan to improve access to oral health services for Medicaid-eligible children in Alabama. The workgroup developed the *Smile Alabama!* initiative and expanded its focus beyond Medicaid to address the oral health needs of all children in Alabama. Although recognizing that the problem is even more severe in rural Alabama, the Workgroup's efforts established access to dental care for all of Alabama's children as a priority issue for the state. Alabama is a predominantly rural state, with only 22 of the state's 67 counties considered urban by Metropolitan Statistical Area (MSA) designation. The Medicaid Agency thus decided to implement a statewide initiative emphasizing counties with 1 or no Medicaid-participating dental provider for the initial focus of *Smile Alabama!* (The initiative was officially launched in October 2000, with the dental rate increase and the outreach components of the initiative implemented in February 2001. The majority of the system changes and simplification of claims processing occurred before the actual implementation of the initiative, although ongoing changes are part of the initiative.)

The severity of the problem of availability of dentists in rural Alabama is illustrated by the fact that in 1999, 19 of the state's 67 counties had 1 or no Medicaid-participating dental provider.[3] All 19 of these counties were considered rural and were the initial focus of the initiative. All 19 had populations less than 100 000; 18 had populations less than 50 000, and 14 had populations less than 25 000.[5]

A second expanded dental survey in August 2000, the ALDA Member Survey,[6] was sent to 1335 members of the ALDA through the association's newsletter,

ALDA News. There was a 27% response rate, with 364 surveys returned. Survey questions assessed whether higher reimbursements or other program changes would be needed before dentists would participate in Medicaid or accept additional Medicaid children.

The results revealed that more than half of respondents indicated that dental rates would need to be increased by "50% or more" for them to consider accepting Medicaid children and confirmed issues identified in the March 2000 survey and by the task force. Over 40% of the dentists surveyed indicated that additional issues would need to be addressed before they would be willing to accept Medicaid children. These included "patient compliance issues" and "resolving problems with claims/understanding why claims are denied."

A third survey conducted by the Alabama Department of Public Health (ADPH) in 2000 revealed that only 11% of the dentists surveyed were accepting new Medicaid patients. Low fees were the most significant factor for dentists not to take Medicaid patients, followed by broken appointments, billing difficulties, and slow reimbursement.[7]

Based on findings from the surveys, the workgroup, the task force, and the Medicaid Agency collaborated to develop a 4-component strategic plan with interventions to address each problem area identified. The 4 components of *Smile Alabama!* are (1) claims processing, (2) dental reimbursement, (3) provider outreach, and (4) patient outreach (Table 2). Medicaid claims data were later analyzed to determine the program's effect.

Target Populations

The initiative targeted 3 populations: Medicaid children and their caregivers, practicing dentists, and stakeholder or partner associations and groups. All children enrolled in Medicaid in Alabama served as the primary target population for patient education and outreach efforts. The provider target population consisted of all general, pediatric, and oral surgeons licensed in Alabama. Three groups of dentists were identified for specific interventions: nonenrolled dentists, dentists with minimal Medicaid participation, and dentists who were significant Medicaid providers. Counties with either 1 or no Medicaid-enrolled participating dentist were identified and targeted for initial one-on-one visits with any nonenrolled dentists. The initial counties identified and targeted were all rural, non-MSA counties.

A number of partner groups were identified as the third target group, including maternity care coordinators, Head Start, family practitioners, obstetricians, and elementary school nurses.

Table 2. Alabama Medicaid Dental Outreach Plan Approved by the Dental Partner Workgroup in March 2000

Claims Processing Changes
To increase the consistency of the Medicaid claim submission format with that of other payers.
To provide adequate provider training and continued technical support for claims submission.
To maintain an effective and efficient claims processing system.
To provide timely responses to provider inquiries and assist in claims resolution.
Dental Reimbursement
Increase rates to 100% of Blue Cross and Blue Shield rates. Implement an annual rate review and necessary adjustments.
Provider Outreach
To encourage and support appropriate utilization of dental services.
To increase the number of patients accessing appropriate dental services.
To increase the number of providers who accept Medicaid patients.
To increase the number of providers who participate in early education of Medicaid-eligible dental patients.
Recipient Outreach
To increase the number of Medicaid recipients who make and keep appointments.
To increase the number of Medicaid recipients who know what to expect when visiting a dental office and what is expected of them (rights and duties).
To increase the number of Medicaid recipients who are compliant with the usual policies and procedures followed in a dental office.
To increase the number of Medicaid recipients who practice basic preventive at-home dental care, with emphasis on the very young child.

Demographics

According to data from the US Census Bureau for 2000, there were 4.4 million residents in Alabama, with approximately 1.4 million children under the age of 21. Based on the Alabama Census 2000, 71% of these children were White, 26% African-American, and 1.7% Hispanic. Thirty percent of children under age 19 and 56% of children under age 6 are Medicaid-eligible. Alabama is considered predominately a rural state, with only 11 of its 67 counties with populations greater than 100 000; 56 have populations less than 100 000, 43 have less than 50 000, and 26 have less than 25 000.[5]

Description of Interventions

Interventions were designed and goals established for each of the 4 components of the *Smile Alabama!*

Table 3. Initial Timeline and Activities for Alabama Medicaid Agency's Dental Outreach Plan

Activity	Completion Date
Establish commitment of governor and commissioner on recruitment plan, timeline, legislative involvement, and rate issue	2/18/00
Develop a script for telephone contacts with dental offices to establish a time for a face-to-face visit/survey	2/18/00
Hold meeting with interested parties to discuss potential recruiting methods, available resources	2/22/00
Resolve outstanding claim submission issues	3/10/00
Meet with dental task force	3/10/00
Conduct dental visits/survey	3/31/00
Joint resolution of state legislature and endorsement of children's affairs, health department, governor's office, dental association	3/31/00
Obtain/create database of Alabama dentists	3/31/00
Approval of governor's letter	3/31/00
Approval of dental rate increase (Rate increase dependent on funding)	3/31/00
Develop provider educational/recruitment material (incorporate suggestions/ feedback from children's affairs, governor's office, health department, dental association, dental task force, and dental survey)	4/3/00
Approval of provider educational/recruitment material	4/7/00
Develop components of follow-up procedure and process	4/7/00
Dental rate increase	4/10/00
Distribute governor's letter, campaign kick-off	4/10/00
Begin aggressive follow-up (coordination with children's affairs, health department, dental association)	Ongoing

initiative. The Medicaid Agency drafted and the workgroup approved an initial timeline identifying activities and responsibilities (Table 3). The initiative anticipated a statewide needs assessment, strategy and plan development, materials development including message design, provider support, and evaluation of the plan.

Concurrently, efforts were instituted to meet the program's goals. A call for proposals issued by the National Governors Association (NGA) led to Alabama's inclusion in the first NGA Policy Academy held in Charleston, South Carolina, in December 2000. The Medicaid Agency was named as lead agency by the governor and worked with the governor's office to determine the members of the Alabama NGA Oral Health Policy Team, representing 11 groups and agencies (Table 4). The policy team meets quarterly to refine the state strategic plan for oral health. The Medicaid strategic plan, developed by the workgroup, was expanded into a state strategic plan to address oral health access for all of the state's children. Medicaid's logo, *Smile Alabama!*, and the tag line "Healthy Smiles, Healthy Children" were incorporated into a statewide campaign to build oral health awareness.

Next, the workgroup was expanded, becoming the Oral Health Coalition of Alabama (OHCA), and it now acts in an advisory capacity to the Oral Health Policy Team. OHCA comprises 40 member organizations, associations, agencies, and groups. All members of the policy team are members of OHCA. The 3 advisory groups meet quarterly to review progress made toward achieving state and Medicaid strategic plan timelines and goals. Administrative support for these groups is provided by the Medicaid Agency.

Component 1: Claims Processing Simplification. Claims processing was the first component addressed because changes could be accomplished with existing funding while the agency pursued support and funding for the additional components. This component was identified on the 2 surveys conducted by the agency and ADPH in provider complaints and input from the members of the task force. Implementation of a new claims submission system in October 1999 provided an opportunity to simplify the process for dental providers. The agency also contacted other insurers in an attempt to standardize the claims submission process. Medicaid's fiscal agent was directed by the Medicaid commissioner to call all enrolled dentists and attempt to schedule face-to-face visits to identify problems they were experiencing and to assist in resolving any claims issues. Agency staff and the fiscal agent drafted a script for the calls. Advantages of electronic filing, such as improved time between claim submission and payment, were highlighted. Quick-reference guides and simplified claims submission instructions were provided. In fiscal year 1999, almost 40% of dentists submitted paper claims, compared with less than 20% in fiscal 2002. Since the institution of the new claims system, the average filing days (date of service to claim receipt) has decreased from 32.17 to 18.18 days, and the average adjudication time (days from receipt to final processing) is less than 8 days.[8] The Alabama Medicaid Provider Manual was also changed to more clearly define coverage and program limitations, and the agency adopted the American Dental Association's code set, Current Dental Terminology (CDT). The use of Medicaid-specific codes was discontinued and all American Dental Association approved dental claim forms were accepted.

Component 2: Dental Rate Increase. The second component, dental reimbursement, was addressed by

first building awareness of the problem. A fact sheet was developed and approved by the Dental Partner Workgroup, leading to a joint resolution by the state legislature in April 2000. The agency committed $6.5 million for dental rate increases beginning in October 2000, an anticipated average increase of 60% from the 1999 dental rates.[9] The percentage increase was based on the results of the August 2000 ALDA member survey and numerous meetings held with dentists and the associations that indicated that Medicaid dental rates did not cover office overhead costs averaging between 55% to 65% of dentists' total office revenues. An earlier targeted rate increase of 10%, implemented in January 1999, had resulted in no increase in participating Medicaid providers. (The Medicaid Agency paid 54.7% of billed dental charges in fiscal year 1999.) In fiscal year 2000, 20 participating dentists either disenrolled or stopped providing care to Medicaid-eligible children, and the dental utilization rate decreased from 26% in fiscal year 1999 to 25.6% in fiscal year 2000. During this same time 10 000 additional children became eligible for dental services, indicating worsening access. On October 1, 2000, reimbursement rates were increased to 100% of the average 2000 regional rates for Blue Cross and Blue Shield of Alabama (BCBS) for all but 9 procedure codes. These 9 codes were set at 70% of the BCBS rates, pending the implementation of needed system audits. On October 31, 2000, the program became officially known as the *Smile Alabama!* initiative. The governor issued a press release stating, "This program is critical to the overall health of children, and I encourage dental providers throughout the state to participate in this worthwhile endeavor."

Component 3: Provider Outreach and Education. The third component of the dental outreach plan is provider outreach and education, and it focuses on activities and materials that support dentists who enroll in the Medicaid Dental Program. The surveys conducted in 2000 revealed that dentists were concerned about patient education, especially the importance of keeping appointments.[4] Missed appointments had also been identified by members of the Alabama Dental Task Force as a factor in their decision to participate (or not to participate) in the dental program. The task force suggested that dental case management be used as a tool to encourage provider participation and improve the missed appointment rate for Medicaid patients. The Medicaid Agency made case management available to the state's dentists as part of medically-at-risk targeted case management, operating under its primary care case management program known as Patient 1st. Dental targeted case management was instituted in January 2001, with dentists and primary medical providers encouraged to make referrals for patients needing additional education or support in areas such as keeping appointments, compliance with treatment protocols, and appropriate behavior in the office.

Table 4. Alabama National Governors Association (NGA) Oral Health Policy Team

NGA Oral Health Policy Team
Alabama Dental Association
Alabama Department of Public Health
Alabama Medicaid Agency
Alabama Primary Health Care Association
Child Health Insurance Program
Governor's Office
Office of Primary Care and Rural Health
University of Alabama at Birmingham Dental School
A private practice dentist
Health Care Financing Administration (now Centers for Medicare and Medicaid Services)—Regional Office
Legislature

Interventions defined in the initial dental outreach plan under *Smile Alabama!* for provider outreach and education included statewide dental workshops, attendance at professional association meetings, release of a dental newsletter, development of materials for provider support, use of dental outreach specialists to provide face-to-face visits for recruitment and retention of dentists, and creation of dental ambassadors (described below). All of these interventions have been implemented.

Statewide dental workshops have been held 3 times since the institution of the dental outreach initiative. Workshops that address Medicaid Dental Program policy and billing issues are presented in counties across the state for dentists and their office staff. A dental consultant assists the agency by attending dental district association meetings to answer questions related to enrollment in the program and program policy. Agency staff attend association meetings for the Alabama Academy of Family Practice, ALDA, Alabama Dental Society, and others. The *Dental Messenger* is published bimonthly by the agency, providing program updates and information. Posters, postcards, patient contracts, fee schedules, and patient videos represent samples of materials developed for providers. Most materials developed for providers are available on the agency's web site. Dental outreach specialists provide information to dentists throughout the state on dental program policy, enrollment, and reimbursement rates. Dental Ambassadors are participating providers who have agreed to assist the agency in the areas of (1) provider

relations, by helping sustain enrollment and recruitment of dentists; and (2) public relations, by giving newspaper and on-camera interviews.

The first Alabama Dental Summit, *Finding the Solution to the Problem: Dental Access for Alabama's Children*, was held in December 2001. The summit utilized national speakers and breakout groups to build awareness of Alabama's oral health needs and further strengthen commitment to the state's oral health strategic plan. The summit served as a forum to further define the strategies addressed by components 3 (provider outreach and education) and 4 (consumer and patient education).[10]

Component 4: Consumer and Patient Education. The fourth component of the dental outreach initiative is consumer and patient education. Although identified as the final component in the agency's strategic plan, consumer and patient education is certainly no less important than any other. The patient education component involves the provision of materials for use by providers and others as well as direct-to-consumer education. All parents and caregivers in the state are targeted to increase awareness of the importance of good oral health, with a special focus on the parents and caregivers of Medicaid-eligible children. A statewide oral health awareness and education campaign focuses on the importance of early care, keeping dental appointments, and taking only children scheduled for the dental appointment to the office. Radio and television announcements were broadcast statewide for 1 year. The Medicaid Agency is negotiating to continue these announcements and is exploring the addition of billboard announcements for areas poorly penetrated by television and radio. An oral health video was distributed and continues to be available to dentists, primary medical providers, and all secondary target groups. The video further strengthens messages on the importance of dental care to overall health, the importance of keeping dental appointments, and basic preventive home care for the very young child. Materials developed and distributed include posters, postcards, brochures, a rights and duties sheet, and various promotional items for use by the dentists and at health fairs and other meetings emphasizing the importance of oral health to total health and well-being of the child. Additional materials are under development, which will expand the patient education component and help coordinate community support activities as the agency participates in meetings and training sessions for community-based workers. These activities should increase awareness of dental-related issues and lay the groundwork for sustainability after grant funding ends. Also, initial steps have been taken to emphasize early childhood education. The agency's dental outreach specialists are laying the groundwork with visits to HeadStart locations and school nurses across the state. Materials under development for teachers include storybooks and a lesson kit. An obstetrician/prenatal packet is under development to encourage earlier education of expectant women. During the mother's third and fourth prenatal visit, maternity care coordinators now are required to distribute the *Smile Alabama!* brochure titled *Taking Care of Baby's Teeth* and to emphasize the importance of care of the baby's gum and teeth. A dental health component was also added into a new parenting kit endorsed by the governor and distributed to all new mothers in the state.

State mail-out packets have been assembled and distributed to other states that have requested information on the *Smile Alabama!* initiative and is available in limited quantities to states wishing to implement similar programs.

Outcomes

When the SRAP approved funding beginning in February 2001, the 2 primary objectives of the *Smile Alabama!* initiative were defined as (1) increase the number of dental providers participating in the Medicaid program by 15% during the 3-year grant, and (2) increase the number of children receiving dental care annually by at least 5%. Participating dentists are defined as those enrolled as Medicaid providers and who are actually caring for Medicaid children, as determined by their receipt of Medicaid reimbursement. Changes in the number of children receiving care were determined based on the annual dental visit rate, which is the number of eligible children receiving any dental service (minus children under the age of 1) divided by the total of individuals eligible for dental services (minus children under 1) multiplied by 100 (Note 1). A final evaluation of the initiative will be performed at the end of the grant period. An interim evaluation is presented in this article (at the time of this writing, 1 year remained in the 3-year grant approved by the SRAP 21st Century Challenge Fund).

In addition to the evaluation of the primary goals stated above, the Medicaid Agency reviewed utilization in a number of other areas. The number of patients receiving care has been determined per provider and per county, with a breakdown by age and racial group. This information is being used to refine the agency's outreach efforts. The types of services received, preventive versus restorative, are monitored with a goal to drive utilization to earlier ages with more preventive and less restorative services. By quarterly monitoring of the number of dentists characterized as enrolled or

participating (as well as of significant Medicaid providers, who are those providing services to at least 100 unduplicated recipients), the agency will be able to assess how outreach efforts should be modified. Enrolled but nonparticipating providers, as well as low-volume providers, are now being targeted to determine if additional information or assistance can result in changes in their level of participation. Significant providers receive newsletters, with a goal of the agency being to reach all enrolled dental providers on at least a quarterly basis. As a result of increasing utilization, the expenditures in the dental program are rapidly increasing. The increase in expenditures, however, is not only the result of the rate increase but is also directly related to the increase in number of providers and number of patients seen.

Baseline Data. Fiscal year 1999 data were used as the baseline. This period includes claims submitted for services performed between October 1, 1999, and September 30, 2000. The governor officially launched *Smile Alabama!* in October 2000 with the dental rate increase. The claims processing component had been addressed earlier in the year, and the other 2 components of the initiative, dental provider and patient outreach, were instituted in February 2001, with the official award of funding from the RWJF's 21st Century Challenge Fund, a component of the SRAP.

In fiscal 1999, 82 600 of 317 214 Medicaid children eligible for dental services received care. The corresponding annual dental visit rate for fiscal year 1999 using Alabama Medicaid claims data was 26%. Of the 82 600 children seen, 96% received preventive services and 37% received restorative services. Preventive services for the purpose of this initiative were defined as services billed for American Dental Association procedure codes D1110 through D1351. Restorative services were defined as services billed for procedure codes D2000 through D2999.

The number of providers enrolled in the dental program was also determined by counting their state license numbers. After a cleanup of the agency's provider files, which removed dentists known to have moved out of state or known to not be in practice in the year, 434 dentists were identified as enrolled in the program in fiscal year 1999. The number of participating dental providers (those paid for any service to a Medicaid-eligible child) was 328, with 150 considered significant providers (significant providers are those seeing more than 100 unduplicated Medicaid-eligible children). The total dental expenditure for fiscal year 1999 was $11.6 million.

For fiscal year 2002, 130 208 of the 420 946 patients eligible for dental services received care. Of children receiving care, 96% received preventive and 43% received restorative services. Since fiscal year 1999, more than 100 000 additional children have become eligible for dental services, a 32.7% increase. The number of children receiving dental services increased from 82 600 in fiscal year 1999 to 130 208 in fiscal year 2002, a 57.1% total increase, with a corresponding 4.8% increase in the annual dental visit rate. Figure 1 shows at a glance what has happened with the number of children seen per month and the number of claims filed per month by dental providers. Approximately 10 000 children received dental care in January 1997, with almost 12 000 individual claims paid for the same month, an average of 1.2 claims per child. In comparison, in October 2002 over 25 000 children received dental care with 35 000 individual claims filed that same month, an average of 1.4 claims per child. The need for additional dental providers is driven not just by the need to increase utilization by those already eligible but to keep up with the growth resulting from the increased numbers of those eligible.

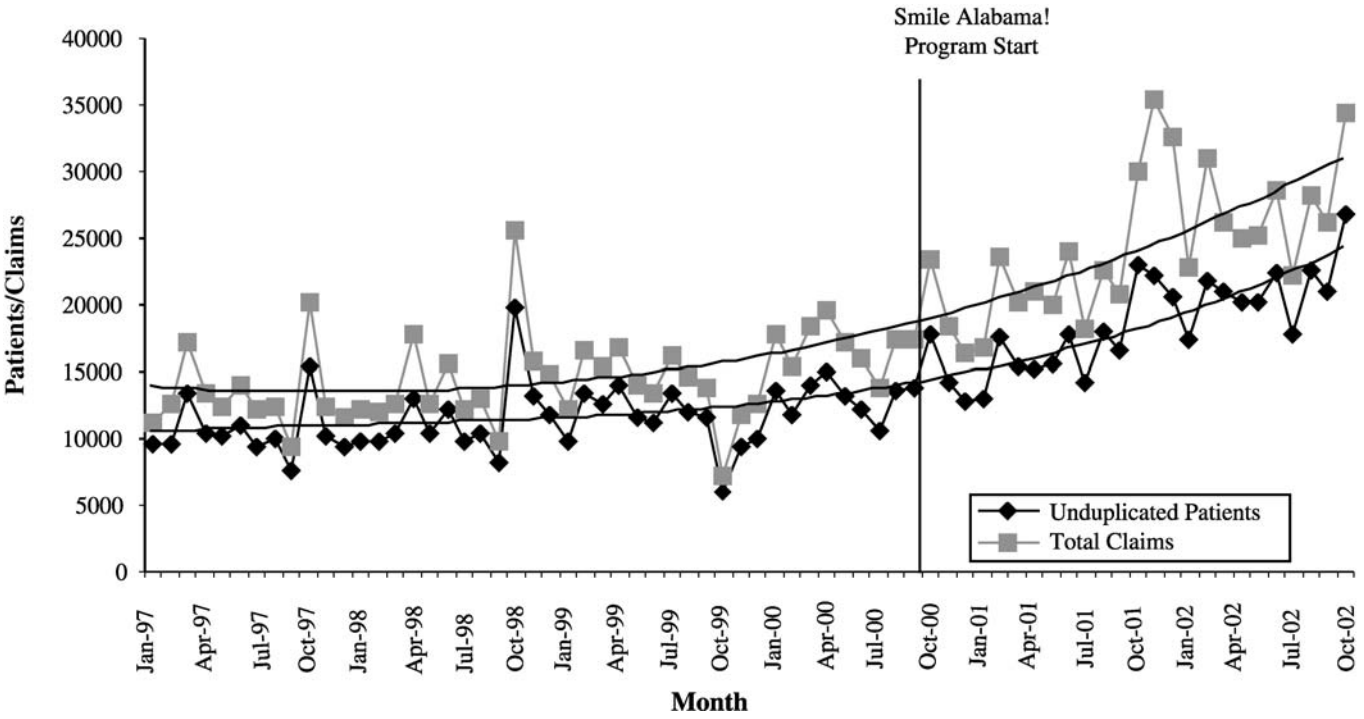
In fiscal year 2002, 579 dentists were enrolled in Alabama Medicaid and 455 were participating providers, representing a 38.7% increase in participating providers in 2 years. The number of participating dental providers in the Medicaid Dental Program increased by 127 providers. There were 175 significant providers for fiscal 2002, a 16.6% increase from the fiscal 1999 baseline. Dental expenditures for care provided in fiscal 2002 were $38.8 million and were 84.5% of billed charges. Because dental providers may submit claims up to 1 year after care is rendered, these expenditures represent partial-year figures for the year.

Another indication of the success of the initiative is the reduction in the number of counties with 1 or no Medicaid-participating dentist from the 19 counties in fiscal year 1999 to 10 counties in 2002. These 10 counties (Cleburne, Conecuh, Coosa, Crenshaw, Fayette, Geneva, Greene, Lawrence, Lowndes, and Winston) all have populations less than 50 000. Of interest, although these counties have either 1 or no providers practicing in the county, 8 of the 10 countries now have utilization rates higher than the state average. Since the program was designed to be evaluated in totality and was not designed as a true research project, it is not possible to separately evaluate individual components of the program. A provider survey will be completed in the final quarter of the program to assess providers' opinions of the Medicaid program.

Discussion

Experience to date suggests that access to oral health services can be improved for Medicaid-eligible children if a multidimensional program is implemented.

Number of Recipients and Claims by Paid Month.



Note: Services are quantified as the total claims in units and as the actual number of individuals receiving dental services in any given month.

Evaluation and possible modification to the strategies implemented is vital to the continued success of the program. The ability to sustain the interventions is key to continued success and will depend on the ability of the state to support continued growth in the program. By incorporating comments and suggestions from providers, consumers, and other stakeholders, additional strategies are planned and will be implemented to address the initiative's focus areas. As the initiative strengthens its emphasis on prevention of disease by focusing on education of the parent/caregivers and the providers of prenatal services, the agency anticipates that rising expenditures can be curtailed. Information on appropriate home dental care, including bottles in bed, cleaning teeth as they erupt, and seeking earlier care by a dentist, has been included in the parenting kits distributed to all new parents. Oral health education has been incorporated as a mandatory component of maternity care coordinators' education of expectant women. Better coordination in efforts to identify and access available dental services is under way with HeadStart. The success of prenatal and early childhood focus in reducing the need for expensive restorative services will be determined by the change in the service mix between restorative and preventive care. Additional objectives will be chosen at the end of the 3-year grant period. Also, the Medicaid agency is reviewing utilization to ensure that the increase in expenditures is consistent with improved care to more children.

Sustainability. The sustainability of the majority of the components of the *Smile Alabama!* initiative has been insured by changes in the Medicaid Agency's organizational structure. Steps were taken in planning the program to ensure that strategies would be continued. Provider and recipient outreach and education are vital. Although the dental outreach specialists hired under contract are important, agency reorganization in January 2001 created a separate outreach unit, which will allow the functions of the outreach specialists to continue if separate funding cannot be continued for these positions. Outreach staff are trained on dental program issues and participate in dental workshops. Training will be intensified as the end of the grant

period approaches. Monthly meetings have been established between the fiscal agent and dental program staff, and routine reports monitor for possible claims problems. The only intervention area where sustainability may be problematic is that of additional increases in dental rates. Dental expenditures more than tripled in the first 2 years of the initiative, increasing from $11.6 million in 1999 to $38.8 million in 2002. The ability to support further rate increases is questionable in light of budget problems occurring in the state, which are consistent with the budget experiences of most states.

Reproducibility. Experience suggests that the *Smile Alabama!* dental outreach initiative can be reproduced by other states. Because reimbursement rates in Alabama were less than 70% of other insurers in the state, the agency's rate increase was seen as an essential first step in the initiative. The dental rate increase served as an enabler for the agency as it sought to bring stakeholders to the table to develop the strategies for the initiative. However, components of the initiative that would assist providers in getting faster payment for services and reduce administrative hassles typically associated with the Medicaid program can be instituted even without an increase in rates. Interventions aimed at simplifying claims submission and increasing education can result in some increase in patient access, if not on the scale seen from the inclusion of all 4 components of the initiative.

Notes

1. Differences in the calculation of the annual dental visit rate from the Centers for Medicare and Medicaid Services CMS 416 Report (formerly HCFA 416) have been noted. All calculations within this article are based on data obtained from the Alabama Medicaid Agency's *MSRE138 Report* of actual eligibles and claims data obtained from the agency's decision support system (DSS). A review of the CMS 416 report indicates what appears to be an overcount of total eligibles in block 1. This number appears to more accurately represent a sum of eligibles, and it is likely that some eligibles may be counted in more than 1 age group as a result of the Early Periodic Screening, Diagnosis and Treatment periodicity schedule.

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Lessons Learned in Phase I of the Southern Rural Access Program

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ABSTRACT: *The Robert Wood Johnson Foundation's Southern Rural Access Program has been an important investment of philanthropic funds to augment resources and improve health care access in underserved rural communities. The program's first phase has taught important lessons about building capacity in rural health care. This article uses a variety of data to document the program's major accomplishments and most significant challenges to date. The program's revolving loan fund efforts are promising. The program has also played a catalytic role in stimulating rural health network development in the South and has helped stimulate partnerships with Southern philanthropies and multiple local, state, and federal agencies. Challenges have included the broad geographic and programmatic focus of the initiative as well as changing and often difficult state policy environments. Additional challenges include maintaining interagency coordination over time and managing staff and lead agency turnover. Overall, the experience suggests that a concentrated regional approach has merit.*

> Execution Trumps Strategy: At the end of the day, what matters is the strength and usefulness of what has been built, not how elegant was the blueprint. (Stephen Schroeder, 2002, President's message, *Robert Wood Johnson Foundation 2001 Annual Report*)[1]

Foundations craft programs using a combination of science and art. Foundation staff attempt to understand what has been tried before, assess the literature for evidence of what works best, talk with experts, and assess the policy environment for trends. As was noted in the overview article for this special issue on the Southern Rural Access Program (SRAP) that foundation staff also frequently structure new programs to include interventions and strategies found useful and effective in prior philanthropic initiatives. They also often allow flexibility in the program design so that grantees can use foundation "venture capital" to develop promising innovative approaches. All of this was done in the development of the SRAP. Those involved with philanthropy recognize, however, that no matter how elegant a program's strategy is in design, there is much to be learned from a hard look back at the program after it has been run. Experience is a powerful teacher.

Foundations often attempt to capture the wisdom of experience by structuring grant programs in phases. This provides an opportunity to look at a program in a thoughtful and structured way and make midcourse adjustments in the program if needed. SRAP was structured in phases for this reason. The goal of this article is to review the lessons of the SRAP's first phase. We summarize the program's major accomplishments and candidly discuss the most significant challenges faced by the program and its grantees. Presenting a balanced picture of the successes and shortcomings of SRAP is important if the field of rural health is to learn from this program's investments and experiences.

Several sources of "data" are used here to extract these lessons. This includes program information obtained through the program logic models and periodic reports that were submitted to the SRAP's national program office (NPO) and the program's evaluation team. It includes additional information gathered from the grantees by the NPO to document their funding partnerships with Southern philanthropies and local, state, and federal agencies. We include information from an independent assessment of the program commissioned by the foundation in 2001. This article takes a broad look at the experiences of this complex program to complement the other more finely focused articles of this journal issue.

Our thanks go to Sandra Rauchut, Jeannie Nye, and Crystal Hull of the Penn State College of Medicine for their considerable efforts on behalf of the Southern Rural Access Program grantees. Special thanks go out to the individuals in the 8 states associated with the program for their dedication to making a difference. For further information, contact: Michael Beachler, Penn State College of Medicine, 600 Centerview Dr, Suite 5301, Hershey, PA 17033-0855.

Accomplishments and Successes

Initiative Implementation by Grantees and New Partners. All 8 states succeeded overall in their SRAP Phase I initiatives. As concluded by the independent assessment of the program, "in general, implementation progress at this stage in the program is consistent with what we would expect for a program of this magnitude and complexity."[2] Lead agencies proved committed to the program, demonstrating considerable leadership in implementing their states' ambitious initiatives. Lead agencies' collaborating organizations within their states proved equally dedicated and effective. The assessment team observed numerous examples of exemplary and exciting program components carried out with commitment. A truly gratifying outcome of the program has been the many new partnerships created among organizations that had not previously worked together but found through their SRAP collaborations that they shared passions in rural health development.

Productivity of Loan Funds. The loan fund initiatives created in 5 states proved to be productive and highly leveraged, and they are serving as important models for other states. As of November 2002, the 5 operational loan funds had closed 71 loans, which together are making $24 785 112 available to providers in rural communities of the Southeast.[3] The contribution of these programs will continue to grow, as over half of the allotted "seed capital" has yet to be utilized by loan funds. Programs are currently processing several million dollars in new loans. SRAP loan funds have been used by grantees to leverage nearly an additional $5 million in matching funds from philanthropic, state, federal, and loan fund intermediary sources.

Two models of loan funds have evolved in grantees' efforts: those led by health agencies such as offices of rural health and Area Health Education Centers, and those led by community development financial institutions (CDFI) whose mission is rural economic development. A significant degree of information sharing through grantee meetings, site visits, and conference calls is occurring between these 2 models. This has the exciting potential of bringing the rural economic development and rural health worlds closer together. The CDFI models are bringing their stronger knowledge of the banking industry and their greater experience in loan monitoring and risk management of loan funds, whereas the health agencies contribute by sharing their greater knowledge of the health care system.

Catalytic Role Stimulating Rural Health Networks in the Southeast. Available information indicates that as of 1997 there were only 5 multicounty rural networks in the 8 states of the SRAP, 3 of which were in West Virginia. As of November 2001, grantees reported 41 networks, of which 23 received funding and/or technical assistance from agencies associated with the program. The program has served as a catalyst for first-time state funding of networks in Arkansas and Georgia; new philanthropic investments in Arkansas, Georgia, Louisiana, and West Virginia; and major state-funded technical assistance for networks in Georgia.[4-6] A number of new networks have used modest start-up capital from the Robert Wood Johnson Foundation (RWJF) and successfully secured first-time federal support from the Health Resources and Services Administration's (HRSA) Rural Health Network, Rural Health Outreach, and Community Access programs. In 2002, as a statement of the expertise and capacity in rural health networks built over the past few years, HRSA tapped the Georgia Health Policy Center to provide technical assistance for its Rural Health Network and Delta State Rural Development Network programs.

Promising and Practical Recruitment and Retention Efforts. All 8 states carried out rural practitioner recruitment and retention initiatives through the SRAP. Each of the states has launched a practice management assistance service to help providers increase efficiency and improve their reimbursement for services. Six grantees—Arkansas, Alabama, Louisiana, South Carolina, East Texas, and Louisiana—have established regional recruiters to bolster underserved communities' ability to attract providers. Early evidence is that these efforts are productive and well received by both providers and rural community leaders.[7,8] Their long-term effects on rural practitioner numbers cannot yet be known.

Two particularly innovate projects deserve note. West Virginia's Recruitable Communities project, headed by Kenneth Shannon of the University of West Virginia, provides assistance to community teams of business, economic development, health, and recreation leaders to "diagnose" and then develop their communities' recruitment potential.[9] South Carolina established a novel regional locum tenens program, which provides partially subsidized "visiting physician" coverage to rural practitioners who otherwise would have difficulty leaving town for continuing medical education or vacations. Three of South Carolina's family practice residency programs provide coverage.

Stimulation of Partnerships With Multiple Local, State, and Federal Agencies. To broaden their impact, many foundations, particularly RWJF, structure their programs to promote partnerships with public sector agencies. The scale of a program will be limited without partnerships with public and private agencies. The

SRAP has been successful in stimulating partnerships with local, state, and federal governments. At the federal level, partnerships—often in the form of joint investments—have been made with the Office of Rural Health Policy, Bureau of Health Professions, Bureau of Primary Health Care, Department of Agriculture, Appalachian Regional Commission, the Department of the Treasury's Certified Development Financial Institute program, and the Medicaid program. Through the fall of 2001, we documented 42 such funding partnerships. Some of the investments have been large, such as Georgia's $2.7 million investment of tobacco settlement resources in a rural health network development program, whereas others have been small. All partnerships attest to the program's broad acceptance and to the perceived value of the work and directions of grantees and their partners.

Stimulation of Partnerships With Philanthropic Organizations. Partnerships among foundations are a value more often preached than practiced. Barriers include foundations' incompatible missions, inability to share credit, timing issues related to when a partnership is proposed, and an insufficient internal reward structure for these partnerships.[10] An added barrier is that Southeastern foundations have fewer assets than other regions of the country, and most have emphasized urban investments.[11]

Despite the challenges, SRAP initiatives have stimulated several very productive partnerships among philanthropies. In 1997, national program office staff developed a dollar-for-dollar funding partnership with the Claude Worthington Benedum Foundation for all of West Virginia's project. Five of the 8 states have developed originally unplanned funding partnerships with philanthropies for discrete projects within the 4 original SRAP core components. Partnerships among philanthropies were an explicit goal of the matching grants component of the program, the 21st Century Challenge Fund. To date, 16 grants have been awarded for over $2.26 million involving partnerships among 14 philanthropies and 15 other funding partners, which leveraged an additional $3.8 million. Four of the more interesting and innovative projects—*Smile Alabama!*, Access Georgia, and the West Virginia transportation demonstration and evaluation initiative—are profiled in this special issue.[12-14]

Key in facilitating these philanthropic partnerships was the RWJF's involvement of Southeastern grant makers even before the SRAP program was authorized by the foundation's trustees. The appointment of 2 prominent Southern philanthropic leaders to the program's advisory committee also helped. The flexibility built into the 21st Century Challenge Fund component also provided opportunities for collaborations with local philanthropies.

Challenges

Like all programs, the SRAP experienced its share of challenges and disappointments. These also provide valuable lessons.

Ambitious Objectives Not Always Met. When they began their work, grantees identified measurable implementation and outcome objectives for each of their projects' core elements (rural health leaders, recruitment and retention, rural health networks, and revolving loan fund). Over time, information from progress reports showed that grantees met many, but not all, of their objectives. Collectively, grantees completed three quarters of their 537 implementation objectives and two thirds of their 298 outcome objectives. Highest outcome objective completion rates were for recruitment and retention (71%) and leadership initiatives (69%), and lower for networking (57%), loan funds (52%), and "miscellaneous" initiatives (55%). There was also state-to-state variation in the percentage of outcome objectives completed, ranging from 45% to 86%. Unmet objectives occurred for a variety of reasons, including overly ambitious planned scope of projects, aggressive timelines, staff hiring delays and turnover, plans and objectives being abandoned when interim experiences suggested new and better directions for programs, and states' shifting environments that stymied initiatives that otherwise could have succeeded.

Program Scale Small Relative to the Access Problems Facing States. The grantees have worked hard to leverage additional resources from local, state, federal, and philanthropic sources and have on balance made considerable progress. The consensus, however, is that the initiatives remain relatively small while geographically and programmatically dispersed. The likelihood is low that these demonstration-type programs alone will change the complexion of statewide trends in primary care access and infrastructure capacity, especially given the large roles that insurance coverage, state and federal budgets, employment, and the general economic environment play in access.

The problem of program scale is certainly not unique to the SRAP. The problems that foundations, states, and the federal government seek to alleviate are typically so large that true progress demands concentrated efforts.[1] To meet this challenge of scale, the Foundation opted in its January 2002 reauthorization of the SRAP to focus Phase II efforts in more geographically concentrated areas. The hope is that by clustering

or layering all interventions (leaders, networks, recruitment and retention, etc) in fewer, more well-circumscribed communities, more significant, measurable, and sustainable changes can be realized.

Variable and Shifting Policy Environments in States. Grant programs often serve to inform and stimulate states' policies.[15-17] The first phase of the SRAP was designed to stimulate action at both community and state levels. Only 1 of the 8 lead agencies is a public state agency, but 6 others have a statewide presence and are interested in informing state health policy. All 8 SRAP grantees include key state health agencies as partners and have state agency/policy maker representation within their stakeholder groups. All 8 projects have also created some type of funding partnership that blends state and RWJF funds.

In some states the timing of SRAP has been good, as states have made important investments or other policy efforts designed to improve access and build capacity in rural underserved areas. The availability of resources from the tobacco settlement has been particularly beneficial in a few states. Arkansas, Georgia, Mississippi, West Virginia, and (in the past year) Louisiana have benefited from new state investments that support the core program elements. In other states, the environment for new state investments and policy changes has not been as helpful. Those states with challenging state health policy environments have had a difficult time developing programs at the community level. Grant programs cannot be successful catalysts without a supportive state policy environment.

Maintaining Interagency Collaboration. The SRAP, like other RWJF programs, required grantees to organize a consortium of stakeholders or a board of directors to provide overall project guidance. The stakeholders group was to be composed of a broad set of rural health-invested agencies and individuals to select the project's lead agency/grantee, craft the overall project strategy and interventions, and serve as an ongoing advisory body. In the early phases of the program, the stakeholders' consortia generally worked smoothly and proved to be important sounding boards and decision-making bodies for selecting agencies to lead their states' efforts. Early on, stakeholder groups also played helpful roles in selecting program strategies and interventions.

Over time, however, a number of grantees were challenged to maintain meaningful participation by their stakeholder groups. This particularly affected agencies that were not participating as funded subcontractors of SRAP initiatives. Interagency coordination has and will continue to erode in some states unless grantees find new ways to revitalize the coalition. The loss of an active stakeholders group makes it more difficult to develop a strong, broad strategy for continuation funding beyond the life of the SRAP.

Lead Agency and Staff Turnover. Grantees have generally been able to attract highly qualified, enthusiastic, and dedicated staff to work for their programs; maintaining these staff has not always been possible. "Soft money" programs—within which the future is always uncertain—are prone to high staff turnover. Grant programs are often opportunities for professionals looking to build experience and demonstrate their abilities as a step up to other positions of greater responsibility. In 4 of 8 SRAP states, the current director of the state office of rural health held a prior position directly associated with another aspect of SRAP.

As of early 2003, only half of the 8 grantees were continuing with their original program directors hired in 1998; 2 lead agencies are already led by their third project director. States with staff hiring delays and high staff turnover in their lead agencies and subcontractors have had greater difficulty implementing their initiatives.

A particular challenge occurred when the lead agency in Alabama had to be changed. The original lead agency/grantee was the West Alabama Health Services/Family Health Care of Alabama, a Section 330–funded community health center serving about 18 counties in rural Alabama. In April 2001, the federal Bureau of Primary Health Care withdrew its funding of about $6.1 million per year to this center for a variety of reasons. In May 2001, the foundation also terminated its grant funding when the organization was no longer able to carry out its leadership responsibilities to the SRAP. Fortunately, the stakeholders' board in Alabama moved quickly to designate a new agency, the Alabama Primary Health Care Association, to lead the project.

This situation also highlights the fragility of the safety net/rural health infrastructure in rural America. Ironically, one of West Alabama Health Services/Family Health Care of Alabama's most significant problems was in the practice management/financial management arena. For example, the agency was unable to secure a Medicare billing number and fell behind by at least $1.6 million in its billing and collection of Medicare payments.[18]

Discussions with federal Bureau of Primary Health Care staff indicate that many urban and rural community health centers face challenges in the practice management arena. In June 2001, national program office and foundation staff agreed that each SRAP state would have at least 1 grant-funded practice management project so that some capacity would exist to work with primary care and other providers. Given the frailty of the rural and urban safety net providers in this

country, the federal government may be well advised to invest more in practice management. This is particularly true given the Bush administration's plans to double the capacity of community health centers in this country by adding new centers or expanding the capacity of existing centers in 1200 communities by the end of 2006.

Limited Scale of Rural Health Leaders Component. The rural health leaders component of SRAP was designed to develop a cadre of health profession students committed to becoming leaders in primary care in rural underserved areas. The program provided grantees with substantial flexibility in this area. Grantees could target initiatives anywhere along the training continuum, from high school graduates to the completion of medical residency programs, and could address any of the primary care–oriented health disciplines. States could also opt to target underrepresented minorities to address the racial-ethnic imbalances in their health workforce. In retrospect, this program component probably offered too much latitude. Some states have developed solid efforts, such as the underrepresented minority pipeline effort described by Rackley, Wheat, and Garner[19] in this special issue. As a whole, however, the rural health leaders' efforts had fewer common features (and thus less to share with one another) than other program components; they also were of smaller scale, and many sites did not engage key medical school and other health professional school leaders in significant ways. Lack of recent new federal and state investments in primary care health professional pipeline programs has severely limited states' ability to use SRAP resources as leverage dollars to develop interventions of significant scale. The relatively small size of RWJF grants available for these rural health leaders' efforts have also contributed to the relatively smaller scale of the SRAP leaders' efforts. As these 8 states historically have had significant problems in creating a viable primary care pipeline, these trends are troubling.

Implications for Future Philanthropic and Public Initiatives

The SRAP remains an important work in progress. The first phase of the program ended in April 2002 and demonstrated progress sufficient for the foundation's trustees to reauthorize the program through 2006 with an additional $18.9 million. This will allow the program to continue contributing to health resource access in the rural Southeast and provide its still-new initiatives time to mature and build sustainability.

A distinguishing feature of this program has been its targeting of a specific underserved geographic region of the country. Federal policy makers have recently shown interest in regional approaches to addressing the special needs of rural areas. In 2001, Congress funded the Delta Regional Authority and Denali Commission as regional investments focusing on economic and community development, but also including some resources for building the rural health infrastructure. (SRAP grantees in Alabama, Arkansas, Louisiana, and Mississippi—all Delta Regional Authority states—are working closely with the new federal effort administered by the federal Office of Rural Health Policy.) Rural advocates are proposing similar regional efforts in underserved rural areas in the Great Plains and the Southeast's Black Belt region.

Experience has shown us that a concentrated regional approach to longstanding problems holds promise, whether in developing rural economies or rural health infrastructure. Our experience has been that a regional approach increases the depth and speed of learning across funded sites and fosters cross-adoption of efforts. The next 3 years of SRAP funding will reveal whether this regional momentum can be maintained, and the following 10 years will reveal whether real and substantial health and access changes have been realized.

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