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**DEVELOPING RURAL HEALTH NETWORKS UNDER
THE EACH/RPCH PROGRAM:**

**INTERIM REPORT OF THE EVALUATION
OF THE ESSENTIAL ACCESS COMMUNITY HOSPITAL/
RURAL PRIMARY CARE HOSPITAL PROGRAM**

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EXECUTIVE SUMMARY

Hospitals located in rural America have been under tremendous stress, threatening the survival of many and generating much policy concern. A wide range of factors confront rural hospitals, including low utilization, uneconomic scale, aging or outmoded equipment, changes in medical practice, demographic shifts, patient preferences for high-tech urban hospitals, difficulties in physician recruitment or retention, and management weakness. Over 200 rural hospitals closed during 1980 to 1988, and many more are at financial risk. Although most closures have befallen facilities that are geographically close to alternative hospitals, some closures have occurred in more isolated areas. Further, concern about reduced access to care from closure extends beyond access to hospital care; rural hospitals are a key to attracting and retaining community physicians, and closures raise the issue of increased travel for emergency care. These problems suggest that a different form of health care institution, better adapted to today's rural environment, might better serve residents' needs in areas where full-service hospitals are no longer viable.

The Omnibus Budget Reconciliation Act of 1989 enacted a new program designed to address the needs of small rural communities. A decentralized initiative administered by the Health Care Financing Administration's (HCFA) Office of Research and Demonstrations, has three key components. The first provides for Medicare recognition of a new type of limited-service facility, a Rural Primary Care Hospital (RPCH). By reducing service and staffing requirements for RPCHs, the model sought to improve the financial viability of very small hospitals and thus ensure the continued availability of primary care, emergency, and limited acute care services.

A second component emphasized network development in rural areas with the requirement that newly created RPCHs be formally linked in a network to a larger supporting Essential Access Community Hospital (EACH). The ties to EACHs were intended to not only strengthen operations and quality, they were widely seen as a means of undoing the historic fragmentation of health services in which neighboring hospitals compete rather than mutually support a rural health care system.

The EACH/RPCH program's third component involves significant state planning. EACHs, RPCHs, and rural health networks are to be initially designated by states in accordance with a state planning effort for rural areas.

On the national level, the EACH program both sets requirements for RPCHs, EACHs, and networks, and provides grants to states and hospitals to develop and implement the program. The program began at the end of September 1991 with the award of grants to seven states: California, Colorado, Kansas, New York, North Carolina, South Dakota, and West Virginia. Additional grants were awarded in September 1992--awards to the states for both years totaled \$3.7 million. Five states received "Type A" grants--grants for implementation--while two (Colorado and New York) received "Type B" grants--grants for program planning. The two Type B states subsequently received Type A awards in 1992. Two rounds of grants, available to prospective EACHs and RPCHs in Type A states, resulted in \$13.3 million in awards to 31 EACHs and 38 RPCHs (excluding hospitals formally withdrawing after award).

METHODOLOGY

This report documents the initial development of the EACH program between October 1991 and December 1992. It is based on qualitative and quantitative analysis of three major data sources: (1)

background information and progress reports completed by fiscal year 1991 grantees, (2) secondary data from computerized files, and (3) site visits by evaluation team members to state agencies and hospitals. In the first area, the background information and progress reports provided information for 1991 grantees on facility staffing and services, the health service environment, transfer patterns and ties between EACHs and RPDHs, program activities, financial status, and accomplishments and problems. The fact that hospitals dropped out of the program, closed, were placed on administrative hold by HCFA, or chose not complete progress reports meant that we received reports from only half of the 51 hospitals receiving grants in 1991.

The site visits discussed in this report were made to all seven participating states during November and December 1992, and included each state agency and one or two participating networks in each state. In all, we visited seven states, eight EACH and ten RPDH grantees, and one "member" hospital that did not receive a grant. Approximately one quarter of grantee hospitals were visited, a sample that was selected with the advice of state program directors who suggested that these facilities and networks were among those most seriously considering conversion to the EACH/RPDH model. These hospitals comprise eight networks, two in Kansas and one in each of the other states. Secondary data from computerized files were used to develop a baseline statistical profile of the financial, utilization, and service area characteristics of grantees.

Implementing the EACH/RPDH program has generated a complex policy debate and required a planning effort that operates on three separate levels: (1) policy and technical assistance development on the national level, (2) multi-dimensional planning and operational effort in each state, and (3) a similar effort at the hospital level. The remainder of this summary discusses developments on these three levels.

PROGRAM DEVELOPMENT AT THE NATIONAL LEVEL

EACH program development at the national level is conditioned by the unanticipated long delay in issuing final regulations. States and hospitals have had grants for almost 18 months, without the exact specification of conditions of participation and reimbursement. As might be expected, the delay has generated a great deal of uncertainty and in some instances a loss of momentum at the state and local levels.

This problem has been greatly compounded by the considerable disagreement about the character of the program and the extent of flexibility needed to adapt to local conditions. Draft regulations issued in October 1991 were widely perceived by the states and hospitals to be inflexible and overly restrictive. Objections focused on the 72-hour limit on length of stay, the limited number of beds, criteria for EACH designation, and reimbursement rules.

Many of the more restrictive conditions were written into the law, and HCFA disagreed with the states about the extent to which it could or should offer waivers or exemptions. As a result, legislation liberalizing key program requirements was introduced in 1992 with the support of the seven grantee states. It was passed as part of an end-of-session tax bill, vetoed by then-President Bush, and reintroduced in the new Congress. All participants believe that the ultimate disposition of program rules and legislation will significantly affect the attractiveness of the program to local hospitals and communities. The debate turns on the issue of the role a RPDH should play in the health system.

The debate on the nature of the EACH program has had several effects, not the least of which is the development of close communication between the seven states. They have drafted a joint position paper and met periodically to share perceptions of and ideas about the program. This communication has been further strengthened through technical support activities organized by the Alpha Center of Washington D.C., under a grant from the Robert Wood Johnson Foundation.

PROGRAM DEVELOPMENT AT THE STATE LEVEL

Designed as a joint federal-state initiative, the EACH program has been evolving in distinct directions in the seven states. This diversity is caused, in part, by different policy environments, and it has been encouraged by the absence of a definitive statement of program objectives and parameters by the federal government. Over time, some of the initial differences have converged: all states now emphasize network development as the most important aspect of the program; most states have increased outreach and technical assistance; more states have emphasized the integration and improvement of emergency medical services (EMS).

Momentum has slowed in most states either because of project staffing difficulties or the absence of final program requirements. State respondents report being somewhat discouraged by the struggle over the shape of the EACH program. Nevertheless, given the widespread interest in how the program will evolve, we can draw five conclusions from the limited experience to date.

States Have Made Uneven Progress

Despite the delays and confusion associated with program startup at the national level, the states have remained active in developing their programs. Advisory councils have been retained and expanded, new implementation groups have developed, and technical assistance has increased. All states made progress in developing model protocols, specifying criteria for participation, drafting new legislation, and/or reviewing regulations. New networks and additional RPCH grantees have received both state recognition and federal funding.

Progress and activity, however, has been uneven. With additional foundation support, Kansas has been a leader in developing policy and procedures. Its early work on feasibility and model agreements is being adapted by other states. However, network development has been limited despite the large number of grantees, and the absence of national regulations has slowed activity and detracted from the appeal of the program. In contrast, North Carolina, which has the second largest program, has been equally active but focuses more strongly on outreach and network assistance. There is little sense of "waiting for Washington." Other programs demonstrate lower levels of activity and/or success. The lack of staffing has held down development in Colorado. California has had difficulty qualifying its networks for federal funding, sees a very limited future for the program under the proposed regulations, and generally is waiting until a final program emerges before moving forward. As with Kansas, New York has been very active in state policy development, but only one of its networks has qualified for federal funding.

Given the complexity of some state health regulations, the lack of significant regulatory barriers in most states is noteworthy. That is, there have been debates in some states over whether RPCHs require a new licensure category, but in general, the new program has required neither significant new legislation nor extensive redrafting of regulations. In several states, RPCHs have already been

accommodated, usually as a new category under existing licensure statutes and, in one or two cases, through granting of waivers from specific conditions.

In sum, by the end of 1992, after more than a year of funding for implementation, the federal government still lacked a finalized set of regulations, and the groundwork for a program was being developed but was not yet complete in any state. At the time of our visit only four or five states had a network likely to be ready to go when the final regulations are announced. By and large, states were still in the process of shifting their focus from program design and policy issues to implementation issues, outreach, and technical assistance.

State-Level Program Development Takes Time and Diverse Approaches

The implementation process takes time, particularly for the outreach needed to identify, develop, and support local EACH/RPCH networks. Moreover, most states moved slowly on policy and design issues. This slowness is partly due to these states being the first to enter the program; as such, they had no working EACH program models to draw on in designing their program. Yet struggles with implementation issues have also generated the positive effect of improved communication and trust between potentially contentious interested parties.

The states' approaches to implementation differ in several ways. For instance, Colorado and South Dakota have focused planning efforts on a relatively self-selected advisory council whose members are already largely committed to the program. In contrast, Kansas, New York, California, and West Virginia have more consciously used representative statewide panels of interested parties. North Carolina has thus far chosen not to use a state-level group process. Although there is still not enough experience to indicate the best approach, we note that the approach in each state has been less a conscious decision than the outgrowth of local conditions.

The implementation experience to date also suggests that the time, effort, and approach to state-level planning and early implementation differs significantly. The development and implementation process is determined largely by the regulatory structure and traditions, policy environment, and rural conditions unique to each state. It is quite possible that experience will show that giving the Type B grants through which states receive funding for planning before they recruit networks for a Type A grant is an effective model for future expansion.

The Program Has Been a Catalyst for Development of Broader Network Concepts

Respondents in most states indicated that a major contribution of the program was its role as a catalyst for developing the broader concepts of rural health networks beyond EACH/RPCH itself. This notion of broader rural provider networks has several variations, that include (1) adding "member" hospitals to otherwise grant funded networks, (2) designating hospital networks not eligible for or funded by the federal program, and (3) encouraging the addition of nonhospital providers to designated networks. The energy and level of interest in improving the viability of local institutions through networks--that is, cooperation rather than competition--is perhaps the most salient feature of the states' experience with the EACH program.

These possibilities for network development and the planning structures fostered by the EACH program are the reasons for suggestions from a few respondents that the most fruitful approach would be to "set aside" the formal EACH program and proceed with a more flexible approach. The

predominant view, however, is that the EACH/RPCH concept will evolve as only one of several models for communities that are striving to ensure local access to quality care.

States Find Network Development Difficult

Despite the positive response to networks, every state reported that the development process proved to be more difficult than envisioned. Overriding problems include the amount of staff time required to encourage network development and the demands on staff expertise for a general reconfiguration of RPCH grantee hospitals. Most states indicated that the pace of local network development was constrained by limited staff resources, and two respondents suggested that hospital grant funds spent on capital projects would probably have been better spent on network or RPCH staffing.

States found that networks need considerable support and that technical assistance, which responds to a wide variety of local conditions, cannot be delivered as a package. Another complicating factor is that although the program emphasizes protocols and linkages between hospitals, the real authority determining admissions and transfers is the local physician who may or may not favor the network effort. States also noted that the federal criteria for EACHs are restrictive and disrupt existing informal networks that cross state boundaries or tie rural to urban facilities. Finally, states have reported that in many ways hospitals and their communities are having to repeat the state-level efforts to build consensus, develop trust, and negotiate. Project directors all reported having held numerous presentations and meetings with local hospital boards to explain and support the program. However, all respondents reported being acutely aware of the fine line between supporting local network development and avoiding the perception of the state government "selling" the program.

Hospital Commitment to RPCH Conversion Under the Draft Regulations Is Weak

State officials all reported limited enthusiasm for the RPCH model as currently proposed. Grantee hospitals are expected to make a good faith effort toward EACH/RPCH transition, but are under no obligation to ultimately implement the program. Officials in the seven states have indicated that no more than 10 hospitals are seriously considering conversion under the proposed structure. Respondents believed that relaxing some of the conditions, as in the legislative proposal, would make the program more attractive, but the impact of any such action on the number of conversions is hard to predict. For most physicians and many administrators, neither downsizing nor the length-of-stay restrictions are popular; some states have been surprised by the level of local resistance, which has required considerable high-level support to continue participation thus far.

LOCAL-LEVEL PLANNING AND IMPLEMENTATION

As expected, RPCH grantees are small, poorly utilized, and financially stressed. Many have already been limiting their service capacity. Site visits to hospitals, together with progress reports, suggest that several important characteristics affect planning and implementation:

- Because most of the 1991 EACH and RPCH grantees were not closely linked prior to the program, building meaningful networks under the program will be a significant challenge.

- Most of the RPCH buildings we saw, while serviceable, are older and require some capital investment to become modern, attractive centers for health service delivery.
- While nearly all of the RPCH grantees we visited had some empty space, only two looked like large, empty hospitals; the others had leased or used much of the space from declining inpatient volume to provide other health services. If true programwide, cost savings from better use of space under the program appear likely but may not be as high as one might imagine given low inpatient utilization.
- Although the RPCH grantees are small hospitals with low staffing levels (an average of 3.3 primary care practitioners) and low inpatient utilization (mean average daily census of 8), a significant proportion of the 1991 grantees provided some surgery and/or obstetrical services at the start of the program. Some of these grantees will have to significantly scale down their inpatient care if they seek RPCH certification. Also note, however, that the average daily census of 8 was above the six-bed limit provided for by the legislation, but within the effective 12-bed limit when swing beds are included.
- RPCH grantee counties tend to be slightly disadvantaged in terms of lower population density and socioeconomic status relative to other nonmetropolitan areas. This indicates that the program is generally providing support to areas that are believed to be at greater risk for reduced access to care.

In addition to these findings, it is clear that the factors influencing interest in program participation and implementation vary from hospital to hospital.

Financial Stress Is a Critical, but Not the Only, Impetus for RPCH Conversion

RPCH grantee hospitals are either experiencing substantial losses or are closed. Between 1988 and 1990, the mean loss on patient care for RPCH grantees was -31 percent, double the rate for comparison hospitals. Both outpatient and inpatient use was very low. A common finding in these hospitals was the sense that their current situation was untenable. In small institutions and small communities, nothing "averages out," so that any one component of a hospital can become a critical factor. In some hospitals, financial reserves were being rapidly depleted while in others, the critical factor was that tax bases or other subsidies were stagnant or declining; one-fourth of grantees reported serious debt burdens. Moreover, the difficulty of retaining physicians and other staff often left the hospital vulnerable to a sudden departure, which would both disrupt operation and dramatically depress patient revenue. Critical functions, particularly 24-hour emergency room coverage, were difficult to maintain. Over one-fourth of all the 1991 RPCH grantees reported some quality of care concern on their list of problems. These difficulties had already forced some grantees to restrict inpatient surgery and obstetrical care, or to close altogether. Some respondents felt that since the hospital was effectively operating as a RPCH, the program should be actively explored. Although most hospital grantees hoped RPCH designation would improve their financial status, most had not analyzed their financial condition and the impact of the program in detail to determine if their current situation would substantially improve.

Not All Current EACH Grantees Will Financially Benefit from SCH Status

EACH grantees differ from one another in their motivation for participation and in how they perceive the benefits of the program. Though program participation EACHs can be paid under Medicare as sole community hospitals (SCH), a status having two primary potential benefits--the option of payment based on historic costs and continuation of capital pass through reimbursement. However, only one of the eight prospective EACHs we visited thought it would substantially benefit from obtaining SCH status. The others were already so designated, or they were benefiting from the current diagnosis-related group system. Another hospital, however, expected to substantially benefit from the SCH capital payment provisions. Note, however, that these provisions benefit only SCHs classified as "high cost." Others knew of hospitals that hoped to become EACHs in order to gain SCH status but were having difficulty finding a willing RPDH partner. Two or three EACH grantees hoped to significantly improve their market share as a result of the program; others saw more general benefits in terms of image as a regional leader. In general, most EACH grantees saw the program as important primarily as a means of improving the availability and quality of care in the region, and hoped that any benefits to them individually would help defray the future costs of their involvement.

Challenges to Building EACH/RPDH Networks Are Formidable

Many of the EACH/RPDH networks have attempted to move forward, despite uncertainty about the final program requirements. However, building networks where there have been few ties is proving to be a formidable task. The challenges includes the time-consuming process of establishing trust, synchronizing members' priorities, overcoming medical staff and transfer issues, working through community differences, and orienting staff in the EACH toward the importance of primary care and community-based services in smaller communities. By far the most difficult and fundamental reported challenge was building trust. Developments that threatened the trust-building process included administrative turnover, decisions by one member without consulting other members, wrangling over contracts, and poor communication between the EACH and RPDH medical staff.

Physicians Play a Critical Role

Although the EACH/RPDH draft regulations call for explicit agreements between hospitals, it is physicians who admit and discharge, authorize transfers, and supervise medical care. Ultimately, physician attitudes will determine the acceptability and shape the operation of EACH/RPDH networks. In all but one of the facilities we visited--those facilities judged to be the farthest along--physicians were either supporters of the concept or at the minimum, not active opponents. However, most physicians and chiefs of nursing interviewed were strongly opposed to the absolute 72-hour limit. EACH/RPDH relationships are sometimes complicated, we learned, by the fact that referral patterns prior to the program were not to the EACH, so that trust must be built among clinicians as well as administrators.

Distinctive RPDH Models Are Being Developed

Mirroring the national and state-level debate about the appropriate role of RPDHs, communities are developing models that vary according to the relative importance of factors in the hospital's future mission: inpatient care, a 24-hour emergency room, ambulatory care, and long-term care. Many communities are considering one of two models. First, "mini hospitals" hope to sustain their present

role in the region's health care delivery (this was the most popular model among the eight presently open hospitals we visited). Except for limited census, case-mix, and length of stay, the organization of care will not be radically restructured. Network ties with the EACH, however, will improve the availability of specialty care, supervision, and quality. Second, "primary care centers" emphasize ambulatory primary care. They do not see their inpatient beds used extensively and do not wish to offer extensive emergency services. In emphasis, they will resemble a rural health clinic. Other hospitals are following neither model, but plan to restructure to emphasize different possible RPCH components including extended hours of primary care, increased use of mid-level practitioners, urgent care, and home health.

Competitive Relationships Help Shape Networks

The average distance between the EACH and RPCH grantees is 44 miles; for 32 percent of the pairs, it is 60 miles or more. In many cases, there are hospitals not in the network that are located close to the network hospitals. These hospitals were sometimes potential EACHs, but had been "skipped" over in favor of a more distant EACH partner due to a history of competition.

Network Development Requires Different Strategies

The EACH-RPCH networks are diverse in formality and process at this early stage of the program. Some are highly structured, with a formal council and salaried network coordinator. Others are informal, developed with numerous meetings between administrators. The networks we visited varied in whether leadership was exercised by the EACH or RPCH grantee. Some networks rely heavily on an outside facilitator, to dispel the impression that the EACH dominates the arrangement; in others, the member hospital administrators work directly together. At this stage, one model does not appear to be notably superior to other approaches. The highly idiosyncratic nature of the structure and process of network development reinforces the observation of state personnel that each network must be developed according to its own set of unique conditions.

I. INTRODUCTION

The Essential Access Community Hospital (EACH) program was established by the Omnibus Budget Reconciliation Act of 1989 (OBRA-89) to assist states and hospitals in maintaining access to health care in rural areas. Funded through a series of grants from the Health Care Financing Administration (HCFA), the program began in September 1991. Since final regulations for the program were not issued until May 1993, up to now participants have been developing implementation plans in an uncertain environment. The draft regulations for the program were issued in 1991, but were widely criticized by participating states and hospitals. There has been considerable public controversy about what a rural primary care hospital (RPCH) should be and what the appropriate goals for the program should be (Lutz 1992, American Hospital Association 1992). Legislation amending the program was introduced and vetoed in 1992 and has been reintroduced this year. Despite this considerable uncertainty, the participants have made progress in initiating state programs.

This report summarizes the early implementation experience of the participants for the first 15 months of the program and draws lessons for future implementation when the structure of the program is clarified. Intended as an independent piece, the report builds upon analyses already submitted under the evaluation contract¹. These analyses are referred to for background purposes when appropriate. The remainder of this chapter documents the evolution of the EACH program at the national level, and summarizes the evaluation methodology and data sources. Chapter II presents changes in states' approaches over the first year of the program. Chapter III profiles grantee hospitals, the development of local networks, and the potential for conversion to RPCHs. Chapters

¹Suzanne Felt and George Wright. "Diversity in States' Early Implementation of the EACH Program" (October 1992). Suzanne Felt, Stephen Sweetland and George Wright, "Background Information Reported by EACH and PCH Grantees" (July 1992). Reports to the Health Care Financing Administration under Contract 500-87-0028 (16) to Mathematica Policy Research.

II and III also include a summary of the lessons from implementation to date at the state and local levels, respectively.

A. EVOLUTION OF THE NATIONAL PROGRAM

The EACH program consists of two main components:

1. A permanent operating program that establishes the rural primary care hospital (RPCH) as a new type of health care facility and the essential access community hospital (EACH) as a new hospital category
2. A grant program that supports the efforts of states and hospitals in developing and implementing the model according to federal guidelines and state needs.

HCFA's Office of Research and Demonstrations manages the program, which is being planned by and implemented in seven states: California, Colorado, Kansas, New York, North Carolina, South Dakota, and West Virginia. In this section, we summarize the program goals and requirements, describe the participants, and review the development of policy for the EACH program.

1. Program Goals and Requirements

The goals of the EACH program were neither clearly delineated in the statute nor discussed in the conference report that accompanied the statute. In the absence of formal articulation of congressional intent, program goals may be inferred from several sources: (1) summary statements by HCFA in the documents to solicit the evaluation contract and program applications of states and hospitals, (2) statements of a congressional staff member who was instrumental in developing the legislation that authorized the EACH program, and (3) the specific legislative requirements that governed program participation and the purposes for which the grants could be used.

HCFA's summary statements suggest that the primary goal of the program is to help maintain access to care in rural communities. For example, the solicitation for the program evaluation contract states:

The EACH Program is designed to offer assistance to States in assuring the availability of primary care, emergency services, and limited acute inpatient services in areas where it is no longer feasible to maintain full-service hospitals. To accomplish this, the program establishes the Rural Primary Care Hospital (RPCH) as a new type of health care facility and the EACH as a new hospital category.

The EACH/RPCH grant application also requires the rural health care plans of the states to specifically address the goal of improving access to hospital and other health services for rural residents.

In a 1990 workshop sponsored by the federal Office of Rural Health Policy, David Abernethy, professional staff member to the Health Subcommittee of the House Ways and Means Committee, stated that Congress intends that the EACH program be a mechanism through which small rural hospitals can reduce excess capacity by eliminating acute care beds, thus earning the designation of RPCH and receiving program benefits (Alpha Center 1991). At the same time, he emphasized that the EACH program is not meant to force hospitals to convert to RPCHs and establish networks, but rather to promote cooperation among entities at the local, state, and federal levels--the politics of conversion determined first at the local and state levels.

More specific goals of the program can be inferred from the participation requirements for states and hospitals, and how they are to use their grant funds:

- ***Establish Rural Health Networks and Enhance Communications Among Network Members.*** The rural health care plans of the states must call for creating one or more rural health networks, and both state and hospital grants may be used to support the development of those networks. Networks must enhance or develop communications systems, and state and hospital grant funds may be used to support these efforts.
- ***Enhance Emergency and Other Transportation Services.*** The rural health care plans of the states must call for enhancing these services. Both state and hospital grant funds may be used to enhance and support emergency transportation systems.
- ***Develop Regionalized Systems for Delivering Health Care Services.*** States must assure HCFA that they have developed or are developing a rural health care plan that, among other things, promotes the regionalization of rural health services in the state.

- ***Ensure Equitable Payment for the Medicare Services Provided by EACHs and RPOCHs.*** Implicit in the legislation is the recognition that the cost structure for EACHs and RPOCHs may change as a result of program participation. The legislation does not suggest an intent to guarantee the solvency of participating facilities.

In contrast to the law's silence on program goals, OBRA-89 very specifically established requirements and incentives for program participation (summarized in Tables I.1 and I.2). Under the program, rural hospitals that convert to designated RPOCHs are offered some regulatory relief and financial incentives from Medicare. To comply with the RPOCH requirements, a rural hospital must agree to limit its services within federal and state parameters. It also must participate in a rural health network that includes a designated EACH.

2. Participating States and Grant Cycles

A key feature of the EACH program is the state's role in the process of program development and implementation. To participate, states must have been selected to receive EACH program grants, must have developed or must be developing a rural health care plan in consultation with the hospital association of the state and rural hospitals in the state, and must designate (or be in the process of designating) rural nonprofit or public hospitals within the state as EACHs and RPOCHs. Before EACHs and RPOCHs may be designated by HCFA, the state must approve the facilities' applications for designation and assure HCFA that the plans of the facilities that receive EACH/RPOCH grants are consistent with the state's rural health care plan. While states may designate only EACHs and RPOCHs that meet federal eligibility requirements, they may add their own requirements as well. The grant funds provided to states by the program may be used to carry out the program and to develop and support communications and emergency transportation systems.

HCFA subsequently defined Type A and Type B states. States that applied in fiscal year (FY) 1991 for Type A state grants would already have identified specific networks and would be ready to implement their programs. Type B awardees would use their grants for developing rural health care plans, identifying networks, and considering the program's applicability to their states. HCFA

TABLE I.1

RURAL PRIMARY CARE HOSPITAL (RPCH)
FACILITY REQUIREMENTS

Criteria for Designating Facilities^a

- Be located in a rural area (an area outside a metropolitan statistical area) or in an urban county whose geographic area is substantially larger than the average area for urban counties and whose hospital service area is similar to the service area of hospitals located in rural areas (OBRA-90)
- Comply with Medicare hospital conditions of participation at the time it applies or have been closed for not more than one year prior to the application date for RPCH designation (OBRA-90)
- Participate in the network's communication and data sharing system

Service Criteria^b

- "Make available" 24-hour emergency care
- Agree to cease providing inpatient care, except as specified below:
 - Not more than 6 inpatient beds
 - Temporary inpatient care for periods of 72 hours or less (unless a longer stay is required because transfer to a hospital is precluded due to inclement weather or other emergency conditions) to patients who require stabilization before discharge or transfer to hospital
- May maintain swing beds
- Have a physician, physician's assistant, or nurse practitioner available to provide services, routine diagnostic services (including clinical lab services), and to dispense drugs and biologicals in compliance with state and federal law

Linkages and Referral Relationship Criteria^c

- Enter into agreements with EACH for the referral and transfer of patients
- Agree to participate in the network's communication system including electronic sharing of patient data, telemetry, and medical records if the network operates such a system

Personnel/Staffing Criteria

- Meets staffing requirements of other rural hospitals, except for the following:
 - Need not meet standards for hours or days of operation, as long as it meets requirement to provide 24-hour emergency care
-

TABLE I.1 (*continued*)

-
- May furnish the services of a dietician, pharmacist, laboratory technician, medical technologist, or radiological technologist on a part-time, off-site basis
 - May allow a physician's assistant or nurse practitioner to provide required inpatient care subject to oversight by a physician

Medicare Reimbursement

- Inpatient RPCH services will be covered under Medicare Part A and defined the same as inpatient services delivered in a hospital. Payment will be made only if a physician certifies that services had to be furnished immediately on an inpatient basis.
 - For first 12-month cost reporting period: a per diem payment to be made based on the reasonable costs of the facility
 - Later periods: payments will be the per diem payment amount for the preceding 12-month cost-reporting period, increased by the PPS update factor for rural hospitals
 - On or after January 1, 1993, a prospective payment system to be used for inpatient RPCH services
- Outpatient RPCH services will be covered under Medicare Part B, for services defined as hospital outpatient services
 - Before 1993, facilities may elect either of two payment methods:
 - (1) a cost-based facility service fee with reasonable charges for professional services billed separately
 - (2) an all-inclusive rate combining both the professional and facility service components
 - By January 1, 1993, a prospective payment system for outpatient RPCH services is to be developed

SOURCE: OBRA-89, except as noted.

^aOBRA-90 contained amendments to OBRA-89 that included RPCH eligibility for hospitals that closed within a one year period prior to the application date for RPCH designation and urban hospitals located in a county whose geographic area is substantially larger than the average area for urban counties and whose hospital service area is similar to the service area of hospitals located in rural areas.

^bThe Secretary has authority to waive the 6-bed, 72-hour service limits.

^cApplies to RPCHs that are members of a rural health network. The Secretary may also designate up to 15 RPCHs outside grantee states that would not meet rural health network requirements as defined in the law.

TABLE I.2
ESSENTIAL ACCESS COMMUNITY HOSPITAL (EACH)
FACILITY REQUIREMENTS

Criteria for Designating Facilities

- Located in a rural area
- Located more than 35 miles from any hospital that is designated as an EACH, classified as a rural referral center, or located in an urban area but meets the criteria for classification as a regional referral center; or meets other geographic criteria imposed by the state and approved by the Secretary of Health and Human Services
- Have at least 75 inpatient beds or be located more than 35 miles from any other hospital (the Secretary may waive these restrictions)
- Agree to provide emergency and medical backup services to RPCHs in its rural health network and staff privileges to RPCH physicians
- Accept patients transferred from RPCHs
- Agree to receive data from and transmit data to RPCHs
- Meet any other requirements imposed by the state with the approval of the Secretary

Medicare Reimbursement

- Hospitals designated as EACHs by the Secretary will be treated as "sole community hospitals" for payment purposes.
 - If the Secretary determines that an EACH incurs increases in reasonable costs during a cost-reporting period and will incur increases in subsequent periods because it became a member of a rural health network, the hospital's target payment amount will be increased to account for the increased costs.
-

SOURCE: OBRA-89.

awarded a total of \$1.99 million in grants to five Type A states--California, Kansas, North Carolina, South Dakota, and West Virginia--and to two Type B states--Colorado and New York.

In fiscal year 1992, the seven states had an opportunity to apply for additional grant funding and were subsequently awarded a total of \$1.75 million to continue program development. Type B states (in which no facilities could receive grants the first year) also had an opportunity to forward facility applications for funding consideration. A total of seven new networks were funded in the Type B states (six in Colorado and one in New York).

3. Participating Hospitals

In addition to establishing the EACH program as a permanent alternative service delivery model for eligible rural hospitals, OBRA-89 provided for grants to facilities of up to \$200,000 to support their conversion to EACHs, RPCHs, or members of a rural health network. In FY 1991, HCFA awarded grants to 31 potential RPCHs and 20 potential EACHs (comprising 20 rural health networks). Six of the RPCH awardees, all in Kansas, refused their grants, but to date no network has discontinued participation.²

In FY 1992, grant funding of up to the \$200,000 maximum was available to new EACH and RPCH applicants in the participating states. Eleven new networks received funding, and one existing network added a new member who was funded, for a total of 24 new, funded network members under the program. In addition, the 1991 grantees could receive supplemental funding up to a two-year total funding of \$200,000. In all, participating rural hospitals were awarded a total of \$13.3 million in grants during FY 1991 and 1992.

Where we refer to "participants" in the program, we mean facilities that were awarded a federal grant in fiscal year 1991 or 1992 and, in the case of 1991 grantees, spent some of the grant money.

²The final status of a few networks is in doubt. Two networks have been placed on administrative hold (that is, they may not spend grant funds) because the eligibility of one of the grantees for the program is in question. Two RPCH grantees currently in the program are closed hospitals planning to reopen as RPCHs, and one other was closed for several months during 1992.

By this definition, 32 RPCH grantees and 25 EACH grantees are now participating in the program. This definition excludes 6 EACH and 6 RPCH grantees that have chosen not to spend the funding.³ (These hospitals have retained the option to participate through their grant award period.) Our definition also excludes some hospitals that are designated as "member" or "supporting" hospitals by the seven state EACH/RPCH programs. These are not in the federal program because they are ineligible to be an EACH or RPCH or were denied federal funding because their application was deemed unacceptable by the grant review panel. While federally funded participants are the main focus of the evaluation, participants outside the federal program can play an important role and will be discussed in the context of the state programs. When considering those who are participating, it is important to recognize that not all will convert to EACHs or RPCHs--applicants were not asked to commit to converting to EACHs and RPCHs as a condition for being awarded a grant. The number and characteristics of those that ultimately do convert will be an important issue for the evaluation as the program is implemented.

4. Policy Development

Pursuant to the law, HCFA issued proposed program regulations for public comment on October 25, 1991 (*Federal Register*, p. 55382). The draft regulations closely followed the legislation establishing the EACH program. However, they elicited many concerns from providers and state policymakers. Because the five Type A states had to identify interested hospitals and plan their programs before even the draft regulations had been issued, they had invested considerable time and effort before receiving their grants. States report that, despite language in the grant application package outlining the legislated requirements, they believed that the program would eventually have greater flexibility and thus would be more attractive and more broadly applicable to small rural

³Generally, the decision not to spend grant funds seems to have stemmed from mistrust of the program, the perception that it may have hidden requirements, and the uncertainty surrounding the final shape of the program.

hospitals. Although the Type B states did not have to identify specific hospitals for the program, they were also primarily interested in a broader program.

In response to the draft regulations, the program states sent a joint letter to HCFA specifying their common concerns. The states described five issues as critical to the program:

1. ***Definition of a Rural Primary Care Hospital.*** The states objected to language in the proposed regulations that envisioned RPCHs as entities that would provide inpatient care only when needed on a "temporary and immediate" basis. They argued that since RPCHs are restricted by the six-bed and 72-hour limits, they should not be further restricted in the type of care they provide.
2. ***Flexibility Issues.*** While the states agreed with the intent of the program to downsize acute care capacity and limit inpatient services, they proposed to allow an average of six acute patients instead of setting a strict maximum of six acute care beds, and requested that states be allowed to use Peer Review Organization (PRO) concurrent review or their own systems to grant exceptions to the 72-hour limit on lengths of stay.
3. ***Swing Beds.*** The states proposed that swing beds not be limited in RPCHs except by current capacity and availability of appropriate staffing. (The draft regulation had limited total acute care plus swing beds to 12.)
4. ***Lower of Costs or Charges.*** The states argued that the statutory requirement that "reasonable costs" be the basis for RPCH reimbursement should not be interpreted as the lower of costs or charges (which in some RPCH areas are below costs).
5. ***Grant Repayment.*** The states explained that many hospitals were interpreting RPCH payment language in the proposed rule to mean they would essentially be required to pay back Medicare twice for the grant funds, first in the cost base year and then, long-term in their per diems. To avoid this problem, they stated that it is essential for ongoing operating costs and costs associated with capital projects undertaken with grant funds to be interpreted as allowable costs for inclusion in subsequent payment rates.

In addition to sending a letter to HCFA, the states sought legislation to alter the program requirements because many of their key concerns could not be addressed without legislative change. The legislation (contained within H.R. 11, a \$27 billion tax and urban aid bill) was passed just prior to Congress' adjournment but was vetoed by President Bush due to concerns not related to the EACH/RPCH program. The EACH/RPCH legislative amendments were reintroduced with the same

language when Congress reconvened (H.R.21). The bill's provisions were first included and then excluded from the budget legislation in the summer of 1993. Action on the bill is still pending. As introduced, the bill would make the following significant changes:

- Rather than impose a 72-hour length-of-stay limitation on all inpatient care at RPCHs (except in emergencies), require that each patient's physician certify that the patient may reasonably be expected to be discharged or transferred to another hospital within 72 hours of admission, and require that the average length of stay at a RPCH be 72 or fewer hours
- Allow urban hospitals to be designated as EACHs
- Allow hospitals in states adjoining the participating states to participate in networks of the states receiving grants
- Allow RPCHs to retain more beds for extended care services
- Generally prohibit RPCHs from providing surgery or any other service requiring the use of general anesthesia
- Allow two additional states to participate in the program

The implications of an absence of final program requirements (both final regulations and a decision on legislative amendments) are twofold: (1) facilities that want to become designated RPCHs and EACHs cannot do so until final regulations are in place and a process is established for them to become certified, and (2) states are unable to finalize their policies, since they need to be consistent with federal requirements. The uncertainty about final program requirements has also influenced grant spending and local planning, as discussed in Chapter II. However, the wide variation in progress from one grantee to the next suggests that progress was possible, even in the face of uncertainty.

5. The Robert Wood Johnson Foundation Technical Resource Center

In summer 1992, the Robert Wood Johnson Foundation, with HCFA's support, awarded a grant to the Alpha Center to serve as a technical resource center for the EACH/RPCH program. The Center's objectives are:

- To facilitate interaction and communication among the project directors of the EACH program such that information, ideas, and methods are shared and techniques are transferred from site to site
- To provide technical assistance on the organization of rural health networks and the development of EACH and RPCH facilities

To meet these objectives, the Center has conducted two workshops for state and federal officials responsible for implementing the program, and it plans to conduct additional workshops and consultations. A newsletter is also being developed, and technical monographs are planned to address areas such as hospital reimbursement, financial modeling, and organizational development. Coupled with the joint efforts by the seven grantee states to encourage new authorizing legislation, the Alpha Center meetings have continued to facilitate considerable interchange among the seven states.

B. METHODOLOGY AND DATA SOURCES

This report draws on a wide variety of primary and secondary data sources. Much of the statistical data described here will form the baseline profile of participating hospitals. However, the core of data are drawn from detailed interviews with state and hospital personnel. This section summarizes our three data sources: (1) facility progress reports completed by grantees, (2) site visits by evaluation team members to state agencies and hospitals, and (3) secondary data drawn from computerized files. A concluding section discusses the comparison cohort that was drawn to identify underlying trends in small rural hospitals.

1. Progress Reports

States and hospitals participating in the EACH program have been asked to complete periodic forms reporting on their use of grant funds, grant-funded activities, and changes in hospital operations potentially related to the EACH program. The forms were designed to: (1) track the progress of grantees in implementing the program, and (2) provide operational and environmental information needed for the evaluation. At the state level, all seven grantees filled out two forms covering six-

month intervals (October 1991 through March 1992, and April 1992 through October 1992). The reports asked for brief narratives of project progress, problems, and spending. Closed category questions covered aspects of the policy, health services, and economic environments in each state.⁴

EACH and RPCH grantees followed a slightly different procedure. Each institution was asked to fill out a background report covering services, staffing, outpatient and inpatient operations, financial status, character of their service areas, and relationships with local physicians and other providers. EACH and RPCH grantees were asked to describe their relationship with each other prior to the grant.⁵ Given the late start of the program in all hospitals, respondents were to describe their background situation as of December 31, 1991 and were asked to fill out only one report on program activities and expenditures as of the end of the first year, September 30, 1992.

The number of hospitals completing these progress reports was limited by two factors shown in Table I.3. First, the 24 hospitals receiving grants starting in the second year of the program did not complete the reports. This includes facilities in Colorado and New York, as well as new grantees in the other participating states. We therefore do not yet have data on some of the facilities most interested in the EACH/RPCH model. Second, half of the original hospitals are not currently participating. As described in Section A.3 (p. I-8), these facilities dropped out because of closure, ineligibility of the EACH, outright withdrawal, or a decision not to participate and to spend none of the awarded grant funds. Of the 31 potential RPCHs originally awarded grants, full monitoring reports are available for only 14. Kansas' original 17 RPCH grantees account for half of the difference between the 31 original RPCH grantees and the 14 completed reports.

Also not completing the progress reports are hospitals that are participating, sometimes quite actively, as network members without grants or members of unfunded state program networks;

⁴Copies of the progress reports and collection procedures are available in Felt and Wright (December 1991).

⁵The background report form, procedures and results are described in Felt, Sweetland, and Wright (1992).

TABLE I.3
SUMMARY OF GRANTEES AND RESPONSES TO BACKGROUND
AND FIRST-YEAR PROGRESS REPORTS

	EACH Grantees	RPCH Grantees	Total Networks
Total Number of Grantees	31	44	32
Total First Awarded in FY 1992	11	13	11
Total First Awarded in FY 1991	20	31	21
Facilities Excluded From Progress Report Tabulations:			
Facilities closed	-	3	
Facilities withdrawing	-	6	
Facilities not spending grants	6	6	
Nonresponse	2	2	
Tabulated Responses to Progress Reports ^{a,b}	12	14	16
Tabulated Responses to Background Reports ^c	17	21	21

^aTwo of the closed hospitals responded but were excluded from tabulations (except expenditure tabulations) because of large amounts of missing data. A fourth hospital that closed, which also withdrew from the program, is included under "facilities withdrawing."

^bOne other hospital, placed on administrative hold because its EACH hospital was found to be ineligible, responded to the monitoring reports and was included in tabulations. As a result, one more network was included in FY1991 than there are EACHs.

^cWe received two additional responses. One was too late to be included in the tabulations, and one was missing most data.

hospitals do not have to receive grants to become an EACH or RPCH or participate in the program. California, New York, and Kansas have networks participating in state planning that were either judged ineligible for the federal program or were not successful in the competitive bidding process. In addition, several participating states have designated "member hospitals," a category that does not have federal status.

2. Site Visits

To assess the development and implementation of the EACH programs on the state and local levels, two rounds of site visits were conducted in 1992. The first were a series of one-day interviews in seven state capitals during March and April. The schedules were tailored to each state program but always included interviews with the state's program director, key state program staff, a hospital association representative, and at least one other key individual from outside the government.⁶ The second round of site visits occurred during November and December 1992. For each state, those interviewed previously were reinterviewed, and there was an interview with at least one EACH/RPCH network in each state. These latter visits allowed one day at every hospital and covered eight networks (two in Kansas) consisting of 10 RPCHs, 8 EACHs, and one nongrant network member. The hospitals visited are described in more detail in Chapter III, Section A.⁷

Note that the networks for site visits were a purposive sample selected with the help of the states' program directors. Since the number of hospitals significantly involved in considering RPCH conversion on the local level is currently quite limited, we sought to maximize our understanding of the process by selecting the networks where RPCH conversion was deemed most likely. The data drawn from site visits therefore reflect an atypical situation where facility characteristics and the work of individuals were judged by state personnel to be most conducive to the RPCH model.

⁶The methodology and results of the first round of site visits are reported in Felt and Wright (1992).

⁷Site visit protocols and interview guides are available in Moscovice, Felt, and Wright (1992).

3. Secondary Data

To supplement the detailed primary data collected from a subset of grantee hospitals, the evaluation will develop a statistical profile of all EACH program grantee hospitals, facilities participating in Montana's Medical Assistance Facility (MAF) demonstration,⁸ and a comparison cohort of similar small facilities (described in the following section). The focus of these profiles will be RPCHs, rather than the larger EACH facilities. Statistical data will characterize the hospitals, their patients, their service areas, and their relative role in delivering health care. For this interim report, profiles are limited to information from three data sets:

- *Medicare Cost Reports, 1987-1989.* These data are drawn from the HCRIS (Hospital Cost Report Information System - H180 Extract), and provide information on patient volume, service mix, and hospital financial status.
- *Market Area File, 1988-1989.* This file is created by HCFA, using MEDPAR hospital discharge records for all Medicare patients. The Market Area File enumerates each hospital's discharges by patients' home zip code and was used to define hospital service areas as well as to calculate the percent of Medicare inpatients from those areas that were discharged from the RPCH grantees, MAFs, and comparison hospitals.
- *Area Resource File, 1992.* This dataset provides a convenient source for selected county characteristics drawn largely from 1990 census data. It was supplemented by data on income and poverty drawn directly from the 1990 census.

Appendix A explains how hospital service areas were defined and how market shares were calculated based on Market Area File data. To this core of data we will subsequently add hospital-specific information from the American Hospital Association and HCFA administrative files. Data on the service areas and counties of RPCH grantees was presented in an earlier report (Felt and Wright 1992) and is updated in Appendix B.

⁸Montana is conducting a demonstration (under HCFA Medicare waivers) of limited service hospitals that are very similar to the RPCH model. Some of the rules for participation are less stringent than currently proposed for the EACH program (e.g., a 96- rather than a 72-hour limitation on length of stay and no formal requirements for a particular EACH-type network). Nevertheless, the hospitals will operate in a very similar fashion, and an assessment of their experience will be added into the EACH program evaluation. For details, see Gaumer, Gabay, and Geller (1992).

4. Comparison Cohort

The evaluation has identified a cohort of 80 small rural hospitals that will act as a standard against which the experience of RPCH grantees will be compared. Rather than simply using all rural hospitals for comparison, we have taken into account factors such as average number of inpatients per day, location, and isolation to select two comparison hospitals for each RPCH grantee. Appendix C lists the comparison sites, describes the selection process, and compares the two groups for a key set of characteristics covering the size, operations, and community profile of the hospitals.

II. STATE PLANNING AND IMPLEMENTATION

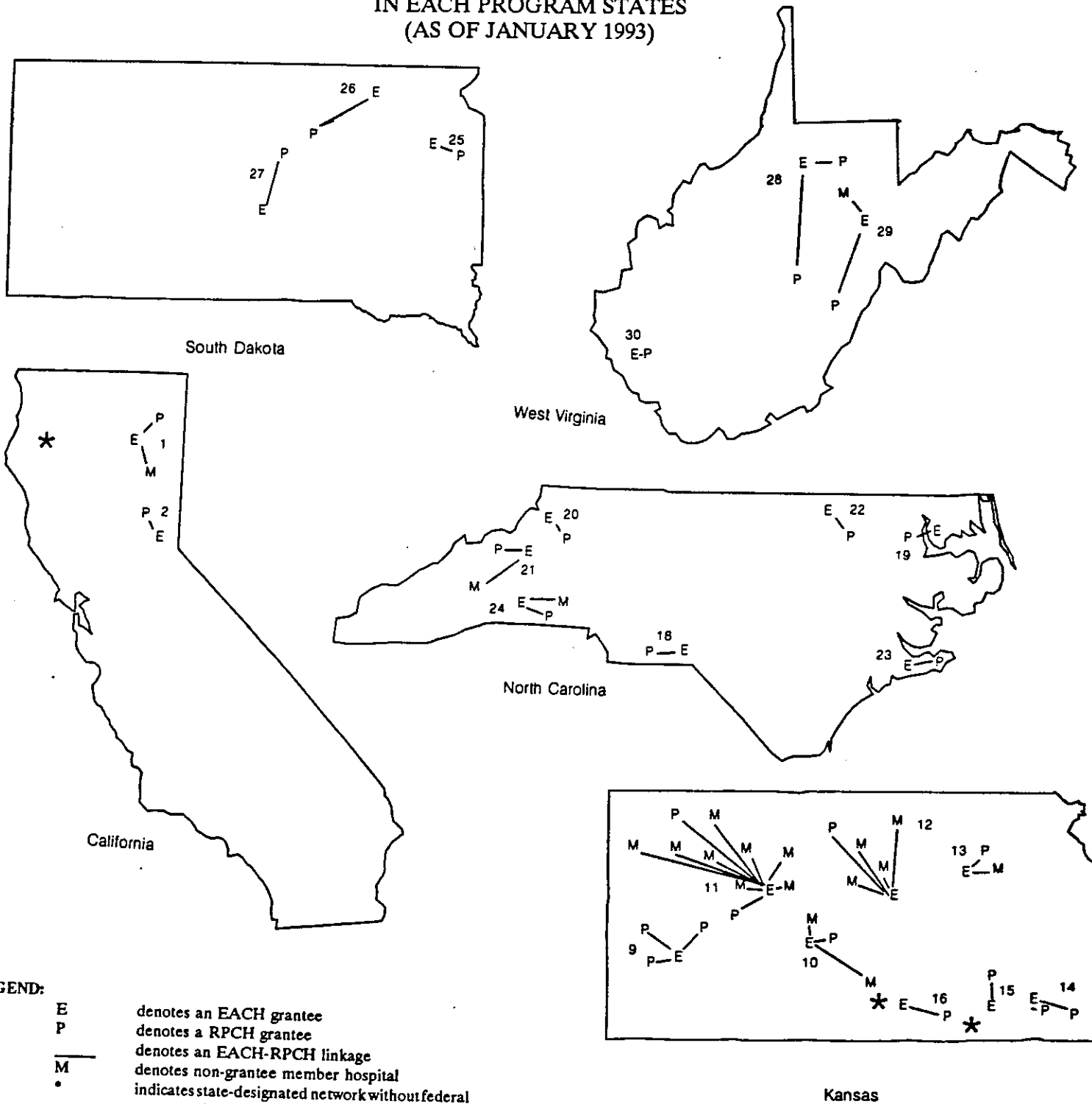
The EACH program, designed as a joint federal-state initiative, has been evolving in distinctive directions in the seven states. From the start, most participating states planned to adapt the federal model to their own needs, such that the diversity of approaches was already clear in the spring of 1992.⁹ Since then, there has been increased cooperation and interchange among the seven states. More importantly, the passage of time has allowed states, which initially emphasized different aspects of implementation, to address a wider set of issues. As a result, there has been some convergence among states' activities; nevertheless, the different traditions, geographies, policy environments, and responses to the uncertainty surrounding the final program regulations continue to foster the evolution of distinctive programs. In this chapter we first review the states' program structures and EACH/RPCH networks. Separate sections summarize the similarities and differences in the states' goals and implementation, program activities and factors affecting the first year's experience, and the use of grants. The concluding section assesses the overall progress of the program at the state level.

A. SUMMARY OF STATE PROGRAMS

The seven grantee states differ significantly in the size and complexity of their programs. The designated networks receiving EACH implementation grants are illustrated in the maps in Figure II.1 and listed in the accompanying key. The E and P letters indicate the network ties between the EACH and RPCH facilities, and the M letters indicate "member" hospitals recognized by the state but not by the EACH program. An asterisk indicates the approximate location of state-recognized networks not funded by the federal EACH program. The formal designation of networks, however,

⁹As reported in Suzanne Felt and George Wright, "Diversity in States' Early Implementation of the EACH Program." Report to the Health Care Financing Administration under Contract 500-87-0028 (16). Washington D.C.: Mathematica Policy Research, July 1992. This chapter draws on the earlier report but summarizes developments as of the end of 1992.

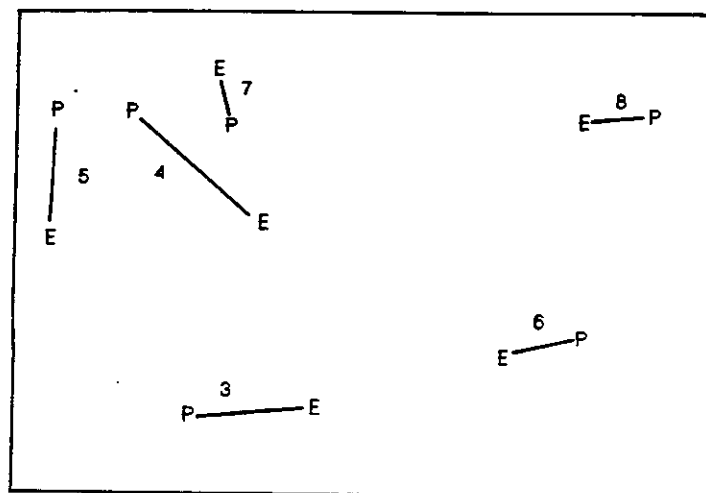
FIGURE II.1
LOCATION OF GRANTEE NETWORKS
IN EACH PROGRAM STATES
(AS OF JANUARY 1993)



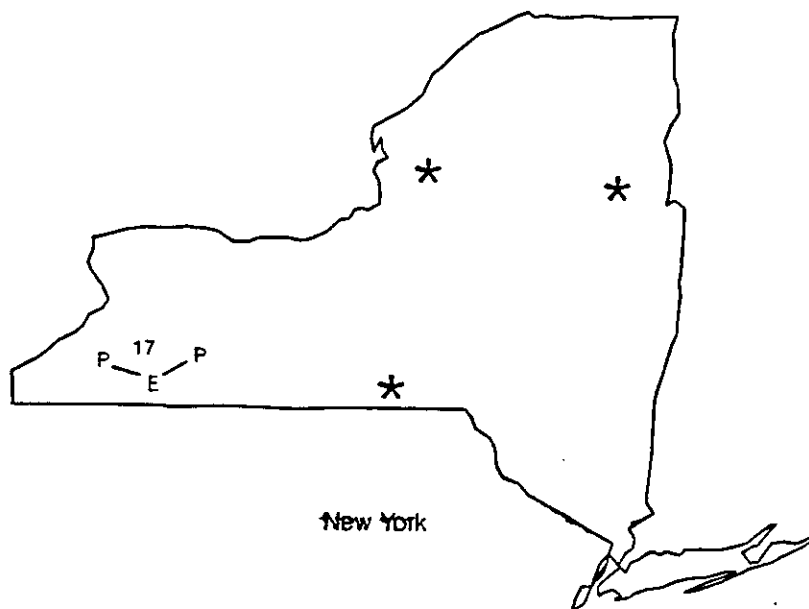
LEGEND:

- E denotes an EACH grantee
- P denotes a RPCH grantee
- M denotes an EACH-RPCH linkage
- denotes non-grantee member hospital
- indicates state-designated network without federal grant or with a federal grant that has been placed "on-hold" pending technical amendments or inclusion of a new EACH.
- Numbers refer to networks listed in the accompanying key.

FIGURE II.1 (continued)



Colorado



New York

LEGEND:

- E denotes an EACH grantee
- P denotes a RPCH grantee
- denotes an EACH-RPCH linkage
- M denotes non-grantee member hospital
- indicates state-designated network without federal grant or with a federal grant that has been placed "on-hold" pending technical amendments or inclusion of a new EACH.
- Numbers refer to networks listed in the accompanying key.

FIGURE II.1 (continued)

KEY TO FEDERALLY FUNDED EACH-RPCH NETWORKS
(January 1993)

State	Network Code	Hospital Code	Hospital Name	Location
CA	1	E P M	Mayers Memorial Hospital Surprise Valley Hospital Indian Valley Hospital District	Fall River Mills Cedarville Greenville
	2	E P	Tahoe Forest Hospital Sierra Valley Community Hospital	Truckee Loyalton
CO	3	E P	San Luis Valley Regional Medical Center St. Joseph Hospital	Alamosa Del Norte
	4	E P	Valley View Hospital Pioneers Hospital	Glenwood Springs Meeker
	5	E P	St. Mary's Hospital Rangely District Hospital	Grand Junction Rangely
	6	E P	Arkansas Valley Regional Medical Center Weisbrod Memorial Hospital	La Junta Eads
	7	E P	Routt Memorial Hospital Kremmling Memorial Hospital	Steamboat Springs Kremmling
	8	E P	Sterling Regional Medical Center Haxtun Hospital District	Sterling Haxtun
KS	9	E P P P	St. Catherine Hospital Kearney County Hospital Lane County Hospital Wichita County Hospital	Garden City Lakin Dighton Leoti
	10	E P M M	Central Kansas Medical Center Ellinwood District Hospital Clara Barton Hospital St. Francis Regional Medical Center	Great Bend Ellinwood Hoisington Wichita
	11	E P P M M M M M M M	Hays Medical Center Grisell Memorial Hospital Rawlins County Hospital Plainville Rural Hospital Decatur County Hospital Graham County Hospital Trego County Hospital Northwest Kansas Regional Medical Center Citizens Medical Center Sheridan County Hospital	Hays Ransom Atwood Plainville Oberlin Hill City Wakeeney Goodland Colby Hoxie
	12	E P M M M M	Asbury-Salina Regional Medical Center Jewell County Hospital Republic County Hospital Mitchell County Hospital Lincoln County Hospital Ottawa County Hospital	Salina Mankato Bellville Beloit Lincoln Minneapolis
	13	E P	Memorial Hospital Association Dechairo Hospital	Manhattan Westmoreland

FIGURE II.1 (continued)

State	Network Code	Hospital Code	Hospital Name	Location
	14	E P P	Labette County Medical Center Oswego Memorial Hospital Baxter Memorial Hospital	Parsons Oswego Baxter Springs
	15	E P	Mercy Hospitals of Kansas Wilson County Hospital	Independence Neodesha
	16	E P	William Newton Memorial Hospital Cedar Vale Community Hospital	Winfield Cedar Vale
NY	17	E P P	Olean General Hospital Cuba Memorial Hospital Salamanca Hospital District Authority	Olean Cuba Salamanca
NC	18	E P	Richmond Memorial Hospital Anson County Hospital	Rockingham Wadesboro
	19	E P	Chowan Hospital Bertie Memorial Hospital	Edenton Windsor
	20	E P	Watauga Hospital Blowing Rock Hospital	Boone Blowing Rock
	21	E P M	Spruce Pine Hospital Burnsville Hospital Memorial Mission Hospital	Spruce Pine Burnsville Asheville
	22	E P	Halifax Memorial Hospital Our Community Hospital	Roanoke Rapids Scotland Neck
	23	E P	Cartaret General Hospital Sea Level Hospital	Morehead City Sealevel
	24	E P M	Rutherford Hospital Crawley Memorial Hospital Cleveland Memorial Hospital	Rutherfordton Boiling Springs Shelby
SD	25	E P	Prairie Lakes Health Care Center Deuel County Memorial Hospital	Watertown Clear Lake
	26	E P	St. Luke's Midland Regional Medical Center Holy Infant Hospital	Aberdeen Hoven
	27	E P	St. Mary's Healthcare Center Gettysburg Medical Center	Pierre Gettysburg
WV	28	E P P	United Hospital Center Grafton City Hospital Webster County Memorial Hospital	Clarksburg Grafton Webster Springs
	29	E P M	Davis Memorial Hospital Pocahontas Memorial Hospital Broadbudd Hospital	Elkins Marlinton Philippi
	30	E P	Logan General Hospital Guyan Valley Hospital	Logan Logan

E = EACH grantee = RPCH grantee M = Member Hospital, not an EACH or RPCH grantee

does not always indicate the scope of a state's program, which, in the context of the maps in Figure II-1, can be summarized as follows.

- *California* has centered planning around a formal Technical Advisory Committee that represents key interests at the state level and deals with the state's unique Alternative Rural Hospital Model (ARHM), as well as the EACH program. The state designated three networks and required that RPCHs be already participating in the state's ARHM program. Two of the three networks had established cooperative relationships. The asterisk indicates a RPCH grantee that is an active participant in the program, but whose designated EACH was found ineligible by HCFA.
- *Colorado* received an initial Type B planning grant so that its six networks were funded for the first time during the second year. Program development centered on a relatively informal task force that has focused on implementing the program rather than creating alternative network models. All of the RPCH grantees appear to be ideal candidates in terms of size and current operations, but progress has been hampered by turnover of hospital administrators and lack of staff at the state level.
- *Kansas* has the largest program and has centered on an active Technical Advisory Group. The state has pioneered pilot protocols, surveys, and financial feasibility studies, in addition to developing alternatives to the EACH/RPCH model. The program has two state-recognized networks in addition to the eight receiving grants and a total of 20 grant-funded hospitals. Most of the networks, however, have little or no activity. The exception is a four-hospital network in the Southwest, which is concentrating not so much on the EACH/RPCH program as it is on developing multi-hospital cooperation.
- *North Carolina* has the second-largest program, with seven funded networks. The program administered by a well-established office of rural health with a full-time outreach staff and unlike other states has not formed a state-level advisory council. It has at least three networks committed to the program. Two of the RPCH grantees are currently closed for inpatient services and, unlike most other facilities, are developing their ambulatory services or expanding care for the elderly and are not focusing on the inpatient characteristics of the model.
- *New York* is developing its program in conjunction with a wider state effort to foster rural networks. Much like in California, a formal, broadly representative advisory body has spent considerable energy developing the EACH program in the context of the state initiative. Outreach to hospitals has been limited. In switching from a Type B to a Type A grant for its second year, only one of the state's four networks was awarded a federal implementation grant. One of the RPCH grantees in this network currently is closed as an acute hospital and is committed to conversion. The state continues to work with the other networks as well.
- *South Dakota* operates three networks, one of which has a hospital that is seriously considering conversion to a RPCH. The state Office of Rural Health has a limited

staff and an advisory board that meets quarterly. The program has recently broadened its focus from EACH implementation to general network development.

- *West Virginia* from the start has seen the program in the context of a statewide effort at health reform. The state has used consultants extensively and developed a unique, formal process of network designation. It has three funded networks; 2 networks contain RPCHs that are long distances from the EACH, and a third network consists of an EACH and RPCH in the same town. One network currently is under active development using outside consultants to develop plans and protocols.

B. STATE GOALS AND IMPLEMENTATION STRATEGY

In interviews, state officials described objectives that were broader than simply planning implementation of the EACH program. In some states, the program has been the catalyst for wider efforts; in others, the EACH program has been fit into an existing reform agenda. This wider set of objectives has been one reason most states have remained active despite the lack of final federal regulations. Four common goals were often discussed: (1) improving access to care by overcoming the traditional fragmentation of health services and building networks; (2) maintaining access to quality care in rural areas with financially distressed hospitals by implementing the RPCH model; (3) improving emergency medical services in network areas; and (4) increasing the efficiency of care by eliminating duplication of clinical and support services and lowering costs for small providers. These commonly expressed goals were not, however, given the same priority by the different states.

Overcoming the traditional fragmentation of health services at the local level was cited as a critical outcome of the EACH program. States believed the current fragmentation of local services has weakened the systems to the disadvantage of residents, who in some grantee areas are of low income status and/or are considerably far from alternative health resources. Indeed, over the year, state officials have tended to increasingly stress the importance of network development beyond the confines of the EACH/RPCH program. Development of network models therefore has continued despite the lack of EACH program regulations.

Overcoming service fragmentation is an ambitious goal, since the fragmentation of local systems often is rooted in historical, political, and cultural traditions. For example, in one grantee state two neighboring counties, each with its own hospital and health care resources, have never cooperated along any dimension because one is Democratic- and the other Republican-controlled. Within individual geographic areas, a pecking order -- larger hospital, smaller hospital, and clinic -- sometimes exists, in which each entity fiercely maintains its independence for fear of losing its autonomy by entering into a cooperative relationship. Moreover, within a single type of service -- such as ambulance service -- multiple units may coexist within a small geographic area with virtually no coordination because individual unit affiliation is a source of competitive pride. Those interviewed saw the EACH program as a tool for encouraging cooperation within the health care system beginning with hospital-to-hospital cooperation, and they agreed that providers other than hospitals in the network areas ultimately should be included in the networks. In every state except Colorado and North Carolina, the program has been a catalyst or involved in broader state-level planning for rural health reform.

Maintaining access to quality care in areas that contain financially distressed hospitals -- including efforts to retain primary care providers -- is an ambitious goal. Indeed, the goals of access to care and quality present some tension, requiring that state policymakers identify and reconcile requirements that they believe are critical to ensuring high-quality care, against those that might cause physicians, boards or administrators to withdraw from the EACH program, thus threatening access. As a group, those we interviewed were not committed solely to rescuing rural hospitals in their present form, but also were not primarily interested in reducing excess bed capacity. They believed change was necessary and inevitable for the RPCH grantees, but hoped that the RPCH model could be modified to encourage wider participation. States and respondents within states disagreed on the emphasis they placed on the goal of ensuring access to primary care in the participating communities. The importance of preserving local hospitals for emergencies, community vitality and long-term care

also was stressed. States reported that the process of reaching agreement over the requirements and characteristics of the RPCH was difficult and even contentious. Over the year, it has become increasingly clear that regardless of whether states come to an agreement about the characteristics and role of a RPCH, their plans will have to conform to final federal program regulations. Since these promise to be more restrictive than any respondent thought desirable, there apparently has been less discussion of balancing the goals of access and quality.

Improving emergency medical services (EMS) in network areas is a goal that largely responds to specific EMS needs for personnel training, better equipment (such as communications equipment), and improved coordination. Those interviewed identified these needs based on deficiencies in rural emergency services and the EMS implications of the EACH/RPCH model. For example, West Virginia and Kansas officials said the lack of a fully staffed emergency room at the RPCH made it necessary to have a stronger EMS to maintain quality care. Addressing the lack of coordination between services and with local hospitals was seen in most states as a key advantage of local networks.

Increasing the efficiency of care is an important goal underlying the emphasis on network development. State officials have consistently emphasized the fragmentation of services as an impediment to improved care. More recently, some respondents have noticed the implications of efficiency for the financial survival of small hospitals. Officials mentioned duplication of services, low utilization of resources, and redundant high costs as consequences of historically fragmented systems and strong traditions of independence. Having RPCHs drop seldom-utilized inpatient surgery and obstetric services is one example of improving efficiency; increased outreach services with specialized clinics or teleradiology to small facilities is another. More broadly, respondents hoped that linking hospitals beyond the basic requirements of the EACH/RPCH model, such as sharing EACH and RPCH staff or moving physicians' offices into a hospital (thus sharing ancillary and administrative services), would allow more efficient use of resources.

The priority placed on these goals differs among states and has been changing. While most state authorities have viewed the EACH program in a larger context of rural reform, there was a perceptible shift in state goals in the seven months between the first and second rounds of site visits. State officials were paying less attention to the formal structure of the EACH program and increasingly emphasized the advantages of fostering network development. This change was the result of: (1) the frustration with the many delays in the final regulations, (2) the discouragement over unpopular requirements, and (3) the fact that the broader concept of networks addressed all four of the frequently stated objectives.

The shift in emphasis is most evident in Kansas, which has assumed a leadership role and, with foundation as well as federal funding, has been the first state to develop model protocols, do financial feasibility studies of the RPCH model, assess community and physician reaction using interviews and focus groups, and write a detailed description of a RPCH model. However, in the summer of 1992, the Kansas Technical Advisory Group (TAG) halted its monthly meetings for a reassessment and spun off a "Network Council," which meets quarterly, to implement the EACH program. The original TAG has continued to meet but has focused on creating an "Integrated Model," which is envisioned as eventually encompassing an entire series of network models moving from loose to highly integrated and inclusive arrangements. Similar to a model developed independently by New York, communities will be able to start with a model closest to their objectives. Respondents in the state differed on the degree to which goals have shifted. One spoke of "setting aside" the EACH program, others disagreed, but questioned whether the EACH/RPCH model should be the top priority of the state program. Although significant funding from a private foundation allows Kansas to develop more than one separate program, South Dakota, New York, and West Virginia have emphasized the larger network context of the program. Of the seven states, North Carolina and Colorado are perhaps the two most focused on implementing the EACH program rather than developing alternative network models.

C. PROGRAM ACTIVITIES AND FACTORS AFFECTING THEIR DEVELOPMENT

States have been implementing very different programs in response to the major program goals. During the program's first 15 months, most states undertook a combination of activities that can be broadly categorized as follows:

- *Model Development.* Specifying the services that RPCHs may offer and the configuration of networks -- for example, whether and how nonhospital providers should be included, and the types of ties necessary for quality assurance and emergency activities.
- *Network Designation.* Specifying a designation process to ensure that potential RPCH facilities plan their conversion in ways that lead to success.
- *Regulatory Adjustment.* Reviewing and adjusting state laws, regulations, and policies to accommodate the program or enhance its incentives.
- *Network Development/Technical Assistance.* Helping participating hospitals develop and implement their plans for network and RPCH conversion.
- *Organizational Development.* Structuring and staffing the program.
- *EMS Improvement.* Planning activities to ensure that the networks' emergency medical systems are upgraded.

Table II.1 shows the states' major emphasis on each of these activities during the first 15 months of the program (although most states devoted some effort to many of the categories listed). The variation in the focus of implementation activities in the states has decreased somewhat as states have added activities over time. For example, South Dakota initially emphasized implementing the EACH/RPCH program as part of an overall rural health plan and an effort to encourage rural networks.

States continue to differ on points of emphasis such that what one state considers critical is less of a priority elsewhere. For example, while North Carolina's staff of the Office of Rural Health and Resources Development has spent considerable time working with 1991 and 1992 grantees to develop viable networks, Kansas did not employ a project director with the time for outreach efforts until early 1993. Similarly, the California program does not emphasize EMS improvements, which are a

TABLE II.1

THE MAJOR EMPHASIS OF STATES IN
IMPLEMENTING THE EACH PROGRAM

	California	Colorado	Kansas	New York	North Carolina	South Dakota	West Virginia
Model Development		✓	✓	✓			
Network Designation	✓		✓	✓		✓	✓
Regulatory Adjustment		✓		✓	✓		✓
Network Development/Technical Assistance	✓	✓			✓	✓	
Organizational Development			✓			✓	✓
EMS Improvements			✓			✓	✓

NOTE: The check marks above indicate the major emphasis of each state, not the level of effort. States with more check marks therefore have not necessarily put forth greater effort than those with fewer check marks.

high priority in West Virginia and Kansas. Several of the states that have not focused on regulatory adjustments have been sensitive to the potential need for removing legal barriers to implementation, but have found nothing major so far.

The timing of program activities also has led to different initial implementation activities; some states are planning to turn their attention to other program activities, either by design or necessity. As mentioned, EMS improvements are a major planned activity in most states, although only two states so far have devoted significant attention to these efforts. Also, the level of effort devoted to network development/technical assistance definitely shifted as local hospitals started to get involved. Kansas is beginning this activity in a major way now that it has a full-time coordinator and has developed a consultant register. In light of these differences in planned activities and timing, seven distinct sets of efforts have emerged:

- *California* has focused on helping the grantee sites address the technical aspects of the program. The limited licensure (RPCH) component of the program requires less attention than in other states because the state and all of the RPCH grantees have implemented a state Alternative Rural Hospital Model (the ARHM). Activity has been limited in the second half of 1992.
- *Colorado* has been working toward developing a state EACH/RPCH model, holding periodic meetings of its task force, in which hospitals have become a major voice. The task force's general criteria for RPCHs and EACHs were submitted to the state Office of Licensure and Standards, which has drafted state regulations for licensure and certification. It used the Type B planning grant to support consultants to help the six networks develop their own applications. Only one of the networks, however, has started much activity. Lack of staff until recently has limited outreach.
- *Kansas* is led by a unique troika of the state health department, the board of emergency medicine, and the hospital association. It has developed a unique state program model that is less and more restrictive than HCFA's proposed regulations in different respects. A technical advisory group meets monthly and is a forum for considering an overhaul of state laws and regulations. To implement the EACH program, a Network Council composed of representatives of each network has been created and is similar to Colorado's task force in composition. The emphasis on statewide model development has not been matched to date with an outreach effort to networks. A program coordinator was hired in early 1993.
- *New York* has developed proposed network guidelines and requirements that provide a basic structure for EACH/RPCH networks within the context of other

network options. The state began planning changes in regulatory and financial policies to enhance program incentives. To encourage local-level planning for EACH/RPCH and other networks, the state channeled funds from a pre-existing state grant program to selected areas that would consider the applicability of the EACH/RPCH model. Due to a reported misunderstanding of the grant process, New York placed little emphasis on assisting networks with their federal grant applications. Only one was accepted by HCFA's review panel.

- *North Carolina* has increased on-site technical assistance to grantee network sites and has facilitated some network implementation. As an interim measure prior to a federal designation process, the state has helped two grantees plan for designation as free-standing Rural Health Clinics. The state also has established a committee to revise the state's outdated hospital licensure requirements which has been reviewing the requirements line by line. State staff have continued to work on developing new networks, including a successful new grantee.
- *South Dakota* initially focused more on implementing the program as established in federal law. Activities have included overseeing the grant work plans of facilities to ensure that project milestones are met in a timely manner. The state also has developed an electronic mail system that connects the grantees with each other and the state EMS agency. More recently, the state Office of Rural Health has been attempting to integrate the program into state-sponsored health programs and use the EACH program to help develop a wider application of networks.
- *West Virginia* has developed a required designation process for the EACH and RPCH hospitals and networks that includes a community needs assessment and a financial feasibility study (which are further specified by the state) prior to final designation. The state has also passed a "bed-banking" law to encourage RPCH participation by exempting RPCHs from certificate-of-need requirements for two years from conversion. The law thus makes it feasible for them to convert back to community hospitals during the first two years at their option.

Note that although Type A states -- California, Kansas, North Carolina, South Dakota, and West Virginia -- were expected to be prepared to implement the EACH program in the first program year and Type B states -- Colorado and New York -- were expected to be further behind in developing their programs, there is no significant difference in their activities. Indeed, Type B states had some advantage in that local hospitals had a clearer picture of the program they were becoming involved in than those originally identified by the Type A states. Kansas, in particular, has had a significant level of non-participation by initial 1991 grantees.

As described in our earlier report, all of the states saw their programs as an outgrowth of the process used to develop their initial applications; those with active task forces continued with them

more than those that did not. (Felt and Wright 1992). In many respects, state EACH programs predate the award of a HCFA grant. The following sections review state activities in the six major areas and discuss the specific factors that tend to affect the level and extent of activity.

1. Program Planning and Model Development

A notable feature of state program development has been the initial commitment to design a version of the EACH program that suited the state's needs. To some degree, this proved to be a powerful mechanism for involving state advisory councils and task forces. Many respondents emphasized the importance of local involvement in gaining acceptance and offsetting the suspicion accorded a new program from Washington, D.C. The initial burst of enthusiasm and creativity increasingly confronted the reality of proposed federal regulations that contained very little flexibility. As a result, state planning efforts changed emphasis in the sense that the states talked less of developing a distinctive model and more of the EACH program as one element of a broader effort to restructure rural health care.

In the initial stages, four states established a planning process that set out to create state-specific models of EACHs, RPCHs, and networks. In particular, the substantial effort in Kansas has been primarily a planning process, one that is built around its Technical Advisory Group. To varying degrees, all states were engaged in the dual process of defining the type of limited service hospital and support network that was sustainable and desired by local communities and providers, and establishing the requirements and restrictions that should be placed on operations. Three states did not have an extensive planning process for the RPCH program, but only South Dakota could be characterized as implementing the EACH program primarily as designed by the HCFA regulations, rather than rethinking the model. Having extensive recent experience in developing state initiatives for rural hospitals, North Carolina and California have not engaged heavily in a planning effort.

Reflecting a desire for greater state-level autonomy, some states have decided on or are planning even greater restrictions than the national draft regulations. For example, the Kansas RPCH

licensure standards forbid all inpatient surgery; West Virginia is requiring needs assessments and financial feasibility studies from networks; Colorado is adding EMS training standards for RPCH nursing personnel; and California is requiring that all RPCHs first achieve ARHM status and have (for financial viability) a distinct skilled nursing facility.

Most, but not all, states considered the EACH program one component of a larger effort to restructure rural healthcare delivery. New York and California, in particular, have worked to integrate the EACH program into existing rural policymaking. In most of the other states, the program increasingly has been the spark for a larger effort, as in West Virginia, where the network model is being considered for all rural hospitals. South Dakota is attempting to integrate the EACH program into Health 2000, a strategic plan for the state's Department of Health, which incorporates hospital downsizing, local service integration, and networking.

The Kansas Technical Advisory Group has even more distinctly shifted attention to the development of what it calls the "Integrated Health Service Model," which seeks to coordinate a minimum set of health services at the community level to foster access and continuity while helping communities make conscious choices about supporting cost-effective care. Considerable effort has gone into articulating this model, with a goal of developing a series of possible structures from which communities can choose. The EACH program is to be one of these models.

The major exceptions to rural planning efforts are Colorado and North Carolina. State officials were adamant that the concept of a written rural health plan violated a strong tradition of local autonomy; in Colorado, it was termed "a bad idea." The rather informal EACH planning process was a principal statewide health-planning initiative in Colorado. North Carolina adopted a case-by-case approach to planning.

Seeing the EACH program as a component of a larger effort has been an important factor in some states in keeping activity going during the wait for program regulations. Differences in character among the states relate to their very different environments. New York, and to a lesser

extent West Virginia, have a tradition of significant state involvement and have taken a more regulatory approach to the EACH program. New York and California initially set out to fit the program into a well-established planning process. North Carolina did not feel such a need and therefore fit the program into a well-established state support and outreach effort. Kansas, South Dakota, and Colorado had little of this planning background and developed the EACH program largely with a clean slate. This background continues in the reluctance of Colorado and initially South Dakota to become involved, and in the inclusive policymaking process adopted by Kansas, which has actively engaged in rural health planning and is considering restoring certificate-of-need regulation.

2. Network Designation

The process of designating networks of EACHs and RPCHs has involved two elements, establishing a process for state-level designation and an outreach effort to identify and recruit local hospitals. Of the two, establishing formal criteria for RPCHs with an application process was clearly less important than the effort to develop hospitals' interest in the program. West Virginia stands out with a process requiring a locally funded needs assessment, a financial feasibility assessment, and an application for designation. New York is developing a process that includes having networks submit an operational plan to the state prior to designation, and California requires any RPCH to already be designated an ARHM. By requiring that RPCHs already be designated as ARHMs, California is restricting the program to hospitals that have already been identified as good candidates for limited service status and have done some internal and public evaluation of the consequences of conversion. Other states, however, followed a fairly informal process.

A primary reason for the lack of a complex designation process in four of the seven states is a dearth of hospitals interested in the RPCH model. As a result, careful attention to the identification and designation of networks has been critical to the planning and implementation process. Indeed, a common theme among respondents was that establishing rural hospital networks was at least as

important as setting up RPCHs. Most state officials interviewed doubted whether many hospitals in their state would accept RPCH status as the new hospital category was specified in the draft regulations, but thought the network concept was nonetheless worth pursuing.

The degree to which state programs have been oriented toward planning on a state level versus fostering the development of RPCHs on the local level has differed widely. All states reported program information dissemination and technical assistance to those hospitals applying for EACH grants. Indeed, some 20 new potential RPCHs were identified and applied for the second round of grant funding. Nevertheless, in the first 18 months of operation, state-to-state differences in the relative emphasis on developing local networks versus planning statewide policy were substantial.

- West Virginia and Kansas have devoted staff and consultant time primarily to the state-level planning process. While lists of consultants were made available to local hospitals, retaining and paying for services were the responsibilities of individual hospitals.
- In West Virginia one of the statewide policy issues discussed has been whether RPCHs will be classified as hospitals. If they are hospitals, they would need to have their rates reviewed by the state's cost review authority or seek a waiver on a case-by-case basis. The alternatives would be to enact special legislation to exempt them from review or to classify them as something other than a hospital.
- New York's emphasis also has been statewide planning. Major issues have included how to include RPCHs in the state's all-payer hospital reimbursement system, what requirements should be placed on rural health networks to ensure quality of care, and what incentives or seed money should be offered to encourage rural health network development including but not limited to the EACH/RPCH model.
- Colorado's program had a more local focus. Potential RPCHs and EACHs have comprised most of the advisory group members, and the state paid for most of the work of local consultants in developing grant applications from six networks.
- North Carolina, with a strong office of rural health, did not use consultants, but sent state employees on multiple visits to each network's member hospitals and provided individually tailored data.
- California, which had already developed an alternative hospital model, and South Dakota, which focused more on implementation than on planning, are two other states that reportedly spent most of their early activities on recruiting the development of local networks. Activity to date in both these states, however, has been limited.

The degree to which networks emerged from local initiatives or were first identified and/or recruited differed among the states. Most states echoed South Dakota's program administrators, who stressed that any attempts of the state to "sell" the EACH program to local communities would be met with suspicion and prove counterproductive. However, targeted provision of information and assistance in thinking through the implication of the program were common and appeared generally acceptable to the local communities. In particular, South Dakota, North Carolina, and West Virginia analyzed financial and utilization data to identify hospitals most likely to benefit from converting to a RPCH and targeted them to receive detailed information about the program. North Carolina spent considerable staff time to help develop the application of a new network for the second round of grants. Some states played an active role in finding EACH/RPCH partners, particularly when "natural" networks were disallowed by the statute.

In fostering local networks, most states did not expect that the process of network development would take so long or require such a large commitment of expertise. The diversity of local hospitals and communities requires a large range of skills, with a particular need for community organization and what more than one state offered recipient termed extensive "hand holding."

3. Regulatory Adjustment

All states report reviewing licensure laws and certification requirements, and most are planning to include RPCHs under existing provisions for acute-care hospitals. In exploring the requirements for implementing the EACH/RPCH model, states have encountered a wide variety of issues requiring significant attention. These are illustrated in Table II.2, which lists major program activities or issues reported by the states. Note that the process of identifying issues and developing an appropriate policy takes time. The process is also iterative in the sense that states revisit issues. For example, West Virginia has been reconsidering the issue of legislating a new licensure category, a step which could improve reimbursement. Examples of state issues with regulatory review include:

TABLE II.2

STATE-LEVEL PLANNING AND IMPLEMENTATION ISSUES
OF PARTICULAR CONCERN IN DIFFERENT STATES

	California	Colorado	Kansas	New York	North Carolina	South Dakota	West Virginia
1. Integration into state regulations							
Certificate-of-need issues			✓				
Extensive review of regulations				✓			
New legislation required			✓	✓		✓	
Licensure status of RPCHs				✓			✓
2. Finance Issues							
Financial viability of RPCHs			✓				✓
Long-term care units and Medicaid	✓						
Financing networks or states under rate review				✓			✓
3. Development of EMS Component							
Conflict over EMS vs. RPCH standards		✓					
EMS and RPCH coordination							
Local training and system development							
Telecommunications							
4. Network Health Personnel							
Recruiting							
Developing cross-training							
EACH/RPCH joint medical staff							
5. Foster Local Networks							
On-site technical assistance							
Identification of new networks							

- North Carolina's review found that existing licensure standards were outdated and badly needed an overhaul. A committee to develop new standards has been established, but its mandate, which is much broader than the EACH program, will take several years to complete and is not primarily supported by its EACH grant.
- California reported only a limited regulatory review, in light of its recent experience in developing the state's Alternative Rural Hospital Model.
- Kansas is the only state to date that has passed new legislation to give the new RPCH entity legal status (and prevent possible antitrust problems), but the law does not set out detailed conditions. A similar approach has been used in draft legislation for South Dakota.
- New York is facing a potentially time-consuming process of regulatory adjustment because its hospital licensure requirements are substantially more stringent than either Medicare's certification requirements or the expected RPCH certification requirements. Therefore, to license the RPCHs, the state division responsible for hospital standards and surveillance must review the hospital regulations and RPCH program, decide what changes they believe can be made and still ensure quality of care, and the decisions have to proceed through the state regulatory process.

In general, states with strict certificate-of-need laws report more complex issues in selecting licensure status for RPCHs. However, those that adopt Medicare's certification standards for licensure provisions will have relatively few modifications to make to state statutes, once Medicare's final regulations are published. As a result, despite the complexity of state regulatory environments, regulatory changes have not been a major focus.

The process that states have used to review their regulatory structures differed. Kansas engaged the services of legal consultants to write an extensive report to its technical advisory group. In Colorado, the models emerging from its advisory group were forwarded to the Health Facilities Division of the Department of Health; the division drafted all regulatory changes required in the model, and faced the task of arbitrating unresolved planning differences among participants. Similarly, in West Virginia, a key staff member from the division of licensure/certification was a major participant from the beginning of the planning process.

4. Local Network Support

Type A grantee states started the program with sets of participating hospitals, most of which were also receiving grants. Although this might suggest that the principal task of the state would be to foster the development of the networks, in practice, most hospitals agreed to participate without much local discussion and with the expectation that the regulations would allow considerable flexibility on conditions of participation. This now seems not to be the case, and much of the outreach activities of both type A and B states have been in helping to encourage initial grantees to continue to participate. More recently, a few of the states moved to support the development of networks whose member hospitals are more committed to the program.

Following the outreach strategy discussed in Section 2, North Carolina offers technical support from the staff of the Office of Rural Health, which has focused on three networks. The issues range from staffing to smoothing relations among hospitals when mistrust arises. In particular, the state has helped two RPCH communities explore the possibility of establishing Rural Health Clinics. Kansas has supported financial feasibility studies and extensive focus group interviews for individual RPCH grantees. These activities, however, were more to assess the feasibility of the program than to help individual hospitals. More concretely, the state had its implementation work group designate a roster of consultants, rather than attempt network development outreach as a state function. West Virginia and Colorado have adopted a similar approach. Overall, however, the process of active network development has been delayed pending HCFA's issuance of regulations.

5. Organizational Development

States have had to organize their programs to undertake the wide variety of tasks outlined in Table II.1 -- a considerable challenge given the diversity of responsibilities. The fact that states have differed in their emphasis on organizational development and evolved with different structures reflect two important factors affecting program organization. First, states' organizational structures were largely an outgrowth of the process used to develop their original EACH program proposals. The

state agencies, multi-organizational task forces, and consultants who wrote and were involved in the discussions leading to the proposal continued to carry out the program. Indeed, all of the states described a seamless process between proposal and initial program development.¹⁰

The second common factor in states' organizational development is that the structure has reflected the program emphasis. A high level of effort on model development, for example, requires input from a diverse advisory panel; stressing outreach entails a tighter implementation-centered organization. Table II.3 suggests a simple two-dimensional typology for roughly characterizing the program organization of the seven states. On one dimension, states differ in the use of advisory councils or task forces from: 1) highly structured bodies carefully selected to represent diverse views, 2) informal groups dominated by the grantee hospitals and focused on implementing a program acceptable to the membership, and 3) a council which meets infrequently or (in the case of North Carolina) no council at all. The second dimension is the degree to which the state agency is the focal point of leadership and expertise. State roles vary from a predominant role, where other entities are consulted, but do not exercise independent leadership, to the situation of Kansas where the Kansas Hospital Association is a co-leader of the project. Note that in the states categorized as having significant involvement of the hospital associations, respondents all noted the importance of the EACH program in breaking down a traditionally antagonistic or distant relationship between the state and the hospital association.

On these dimensions in Table II.3, California, New York, and West Virginia form a cluster of states that are most government-centered with a formal, appointed advisory council. North Carolina, with most activity centered in the Office of Rural Health, is in a different position in the degree of confidence and trust placed by stakeholders in this long-established office. We have given two designations for Kansas to indicate that its organization has changed. As the original Technical Advisory Group has moved on to consider other models for reforming rural health care, guidance for

¹⁰The organization of state program implementation is discussed extensively in Felt and Wright, 1992, Chapter III.

TABLE II.3
 TYPOLOGY OF STATE PROGRAM ORGANIZATIONS

Relative Leadership Role of State Government and Hospital Association	Use of Advisory Councils		
	Structured Representative Council	Council Centered on Hospital Grantees	Small or No Role of Council
Primary Reliance on State Government	California	Colorado	North Carolina South Dakota
Strong Support and Involvement of Hospital Association	New York West Virginia		
Leadership Role of Hospital Association	Kansas-1	Kansas-2	

the implementation of the EACH program was devolved to a new body composed of hospital grantee representatives -- an organization similar to that of Colorado's EACH Task Force. Indeed, if the Colorado Hospital Association had retained its originally anticipated level of involvement in the program, the Kansas and Colorado programs would have similar structures. We can expect that when Washington decides on the final structure of the EACH program, changes, such as evident in Kansas, will occur elsewhere.

The most significant issue states have reported with organizational development has been in staffing the key position of program director. Clearly, leadership is critical for a program seeking major changes in service delivery. In the early phases, programs had strong leadership from senior-level experienced managers. Three of the seven states (New York, California, and North Carolina) assigned a permanent director from existing senior staff; the other four sought to hire a new director. South Dakota could not find an appropriate candidate and, after some delay, reassigned a more junior administrator to the position. Colorado's Department of Health had virtually no spare staff and was therefore disappointed with the significant bureaucratic delays it experienced in filling the position with a hire that lasted only three months. A permanent director was hired only in February, 1993. The Kansas program also has operated without a full-time project director until recently.

Have these difficulties significantly affected state programs? In Kansas, the shared leadership with the Kansas Hospital Association lightened the burden, but left few resources for working directly with grantee hospitals. Colorado believes its efforts definitely have been delayed. In general, the lack of a director or a full-time coordinator hampered state-level activities less than outreach efforts. The latter require continuous attention and high levels of expertise. Note, however, that the delays in issuing national regulations have lessened any impact of state-level delays.

6. EMS System Improvement

Both the authorizing legislation and the grant announcement highlighted the development of rural emergency medical services as a responsibility of state grantees. As discussed in the previous chapter, virtually all respondents mentioned the shortcomings of EMS in rural areas and particularly stressed the historic lack of coordination among jurisdictions or between hospitals and EMS units. In North Carolina, Colorado, and New York, EACH programs overlapped with specific state-sponsored efforts to improve cooperation and upgrade equipment. Several state applications, notably West Virginia, included the purchase of communication equipment.

In general, however, action on EMS issues was not an immediate priority relative to developing state models and identifying network members. Three states, California, North Carolina, and Colorado, reported they hadn't yet significantly tackled the EMS problem. California was concerned that its advisory council had yet to include EMS representatives. The relative lack of attention appears to be a matter more of the timing of activities than of overall program priorities. West Virginia's EMS Division has already planned for construction of a communications tower, as well as establishment of an EMS training program in one of the network areas.

Improving the EMS system in the context of the EACH program may prove difficult in some states. In Colorado, the integration of EMS into the RPCH model was the single most contentious issue addressed by the state-level advisory council. The problem was whether RPCH nursing staff should be required to have the same level of EMS certification as EMS personnel. Other respondents indicated that some local hospitals had poor coordination with EMS units, which would inevitably be a difficult part of building local networks.

D. FACTORS AFFECTING IMPLEMENTATION

What accounts for the variety of approaches taken by the different states? During the site visits, respondents pointed to several factors that can be grouped into four major influences: (1) differences in rural geography that condition program potential and urgency for the state, (2) significant

differences in the traditional policy environments, such as the level of government regulation, and current health policy developments, (3) the level of involvement of the state hospital association or the availability of additional sources of funding, and (4) differences in state responses to the delays in putting the national program in place such that in some states more than others there was a distinct loss of momentum. Note that one factor that appears unimportant is the type of EACH grant. Although two states had Type B planning rather than Type A implementation grants, this did not appear to influence the early evolution of the EACH program significantly. In principal, more time was available for the Type B states--New York and Colorado--to work with individual hospitals and to help them develop detailed proposals for HCFA grants proposals. However, the variation among the states in developing local networks appears related to other factors. In part, the delay in final program regulations and the availability of the second round of grants have meant that A and B states were engaged in similar interactions with hospitals, and were similarly concerned with state-level model development.

1. Rural Demography and Program Potential

The very different demographic characteristics of rural areas in the states may influence how the program is perceived. Several of the more densely populated states--New York, West Virginia and North Carolina--viewed the EACH program as one of many initiatives necessary to restructure rural hospitals and health care. However, in Kansas, Colorado, and South Dakota--states with lower population density and many more small, struggling hospitals--the program was more often described (at least in initial interviews) as "the only game in town," the only vehicle on the horizon to help ensure the survival of numerous institutions. In these states there was initially less a tendency to view the program as a component of a broader health reform effort, and more an interest in finding ways to make it work.¹¹ However, concern that the program restrictions would make it unacceptable to

¹¹ Although Kansas, in particular, has been active in articulating alternative models, the effort has sought to develop the network concept with a focus on how to save and improve rural hospitals. In
(continued...)

local communities has been expressed repeatedly with some urgency by all states. Moreover, as national interest in health reform has expanded, there has been generally less a tendency to view the EACH-RPCH program in isolation.

2. Organization of Health Policy

States clearly brought to the EACH program very different levels of experience and organization, factors which influenced their initial implementation activities. Generalizations, however, are difficult. These differences are reflected in the different degrees to which the EACH program became part of a larger state health planning and reform effort, devoted significant attention to regulatory issues, or adopted a strong role in outreach and technical assistance.

State Role in Rural Health. Two states with the most experience in active rural health planning or assistance are California and North Carolina, respectively. (North Carolina sees its active role not as planning but service to rural communities.) These states' experience in rural health allowed them to focus less on developing a state-specific EACH program and more on fostering local networks. New York State also has a strong tradition of active health planning. More importantly, it had several years of experience in addressing rural health issues through a Rural Health Council. As noted in the previous section, the New York EACH program was developed simultaneously with a council-directed plan for broad-based networks with multiple models of provider cooperation. In contrast, the western states of South Dakota, Colorado, and Kansas have more limited experience with planning and technical assistance.

Prominence of Regulatory Issues. States with stronger regulatory traditions faced more complex tasks of integrating the new EACH program, and respondents reported more effort in developing and

¹¹(...continued)

contrast, New York has an ongoing small grants program to encourage more general applications of the network concept, which includes primary care providers and emergency medical services. West Virginia has taken the EACH network concept and been actively exploring the possibility of developing a statewide system of networks for all rural hospitals (e.g. Rosenberg and Associates, 1993).

writing new regulations and licensure laws. This was particularly true of New York State. States that have retained their Certificate of Need (CON) programs do face additional complexities. In West Virginia, for example, a key issue has been allowing hospitals to try conversion, with the option of converting back to an acute-care hospital within two years without facing an arduous CON process. West Virginia also is notable for its more structured network designation process. It will, in fact, be important to see whether over time this more structured approach proves a worthwhile model. Does a structured approach better ensure that hospitals perform the kinds of planning and community interaction that lead to stronger RPHs and rural health networks?

State Role in Outreach and Technical Assistance. In all seven states, rural communities are characterized by long traditions of fragmented local service delivery and a sense of intense local pride and independence. All state respondents emphasized the sensitivity of local communities to the appearance of an imposed government solution and the necessity of structuring state government into a facilitating or supporting role. Moreover, in most states the relationship between the hospitals and state health department as regulator has an adversarial element.

Given this background, the difference among states on the emphasis and form they placed on outreach and technical assistance was related to existing state relations with hospitals. North Carolina's long-established Office of Rural Health is unique among the seven states in the trust accorded it by small communities and their hospitals. The EACH program was therefore added to the functions of an existing traveling technical advisory staff, which have been accepted as consultants and initially as important participants in the grantee networks. Their acceptance is clearly due to a combination of trust by the facilities and evident staff expertise. A similar, but more limited, role is played by the Colorado Department of Health's EMS division. Their existing function of advising local communities has been expanded to help advise networks trying to incorporate and upgrade EMS components.

Most of the grantee states, however, do not have an established outreach function and have tried to fill this role using a combination of consultants, hospital association cooperation, and staff development by creation or hiring of an EACH program coordinator. Four states (Kansas, Colorado, New York, and West Virginia) have developed or are developing rosters of local consultants from which local hospitals can select. Colorado has helped pay for their use out of its state grant. Other states ask hospitals to pay for expert advice from their own grant or other resources. In sum, it appears that a state with an established tradition of working with local hospitals has a distinct advantage in terms of both trust and expertise in initiating the EACH program.

3. Private Sector Involvement

The degree to which nongovernmental entities helped initiate and carry out the EACH program differed significantly. At one extreme, North Carolina's Office of Rural Health is well-established and highly regarded with little apparent need for a strong role of the state hospital association. California's office has a similar structure. In contrast, Kansas in the past barely had any government focus for rural concerns, so the project has relied heavily on the support of the Kansas Hospital Association and outside consultants. The Kansas program is unique among the seven states in the active coleadership of state government and the hospital association, with the latter funding program related activities, particularly the Technical Advisory Group with the support of a local foundation. In its initial phases, Colorado had the active participation of the state hospital association, but the latter's involvement has by all reports diminished to the point that the program is carried on by the state.

In some but not all states, respondents commented on the importance of the hospital association in addressing the suspicions of providers about a program's being promoted by a state bureaucracy with a tradition of adversarial regulatory relations with hospitals. South Dakota is a particularly striking case of a key hospital association role in outreach efforts designed to allay local mistrust.

The degree to which turf appeared to be an issue differed among the states. For example, in one state, traditional suspicion between hospitals and primary care providers (in particular, community health centers) was significant enough to cause complaint when the latter group was not represented on the advisory group. Respondents in all states noted that physicians at the state level and the state medical society were not opposed to the program, but were also not strongly involved. Individual local physicians, however, were reported to consider RPOCH conversion to be far more problematic (see Chapter III, section C.3.a).

4. Response to Uncertainty

All respondents emphasized the difficulties caused by what they perceived to be pervasive uncertainty about the future shape of the EACH program. The fact that the final regulations have not yet been issued, and related congressional legislation has not passed have clearly slowed network development. Although outreach and technical assistance was occurring in all states in the first year, these efforts have been devoted primarily to identifying potential networks, assisting them with grant applications, and starting the process of local network development. Respondents felt that real decision making on conversions to RPOCH status would be delayed until after the final regulations were issued and future reimbursement policy was clarified.

The uncertainty felt by local hospital administrators was shared at the state level and covered not only key EACH program characteristics--such as eligibility criteria, operating rules, and future reimbursement systems--but also the features of the grants themselves (the treatment of grants under cost-based reimbursement and eligibility criteria). In conversations with respondents, the uncertainty was cited for hampering state policy development and slowing local-level development.

In the area of policy development, several factors led states to develop their own versions of the EACH program: (1) the fact that the program was viewed as new and experimental, (2) the HCFA grant application requirement that grantees be engaged in rural health planning, (3) the lack of explicitly articulated program goals, (4) the language contained in the implementing legislation which

led some grantees to believe that there would be flexibility in the criteria for designating RPDHs and EADHs. In short, the uncertainty about the future shape of the EADH program encouraged a sense of "tabula rasa." Most state respondents described the RPDH model as a scaled-down hospital, one that concentrates its inpatient care on relatively simple conditions that do not require complex equipment. They rejected the notion that the program should focus on closing excess hospital bed capacity. State officials were concerned about the viability of a program that was perceived by hospitals and physicians as basically a Rural Health Clinic with infirmary beds that can be used only on an emergency basis. These and other differences have led to a good deal of debate on the national, state and local levels.

Over the course of the first year, the evident disagreement about the basic structure of a limited-service hospital was beginning to dampen planning and implementation efforts. As we reported in our previous report (Felt and Wright 1992), several respondents wondered whether all of their efforts would be for nought, undercut, in their view, by federal requirements mandating a limited-service hospital that differs significantly from what had emerged at the state level. This feeling was even stronger in December among a minority of respondents who felt that the energy for rural health reform had been lost in debate and concern over the uncertainties surrounding the final regulations. To some extent, state efforts have been diverted from implementing the program to debating the EADH program structure at the national level. States organized into a group that has met regularly, developed a joint policy statement about the program regulations, and attended several meetings in Washington--efforts that have sought to change the regulations or encourage congressional action.

E. STATE USE OF GRANTS

As passed by Congress, the EADH program authorizes grants to state governments that are intended to cover a wide range of activities associated with planning, outreach and program development. The seven states received a total of \$1.7 million in grants for FY 1991 and a second allocation for the following fiscal year totaling \$3.75 million. Table II.4 displays the allocations and

TABLE II.4

ANALYSIS OF EXPENDITURES BY STATE
FY 1991 EACH GRANT

	Total First Year Grant (000's)	Total Spent (000's)	Percent Spent	Percentage of Composition of Expenditures							
				Salary	Travel	Equipment	Supplies	Contracts	Other Direct	Indirect Expenses	Total Expenditures
California	\$155.4	\$47.6	30.6%	95.7%	4.3%	-	-	-	-	-	100.0%
Colorado	241.7	123.9	51.3	44.5	7.6	7.0	2.4	21.1	1.9	15.6	100.0
Kansas	288.5	64.7	22.4	-	-	3.5	-	82.7	6.4	7.4	100.0
New York	300.0	170.5	56.8	61.3	2.8	4.5	1.3	-	0.1	29.9	100.0
North Carolina	375.0	270.0	72.0	4.5	7.1	37.2	0.5	25.2	25.4	-	100.0
South Dakota	137.7	105.5	76.6	31.8	2.9	6.6	35.1	7.7	8.4	7.4	100.0
West Virginia	256.0	252.1	98.5	8.1	1.5	*	0.1	88.1	0.1	2.0	100.0
Total	1,754.3	1,033.9	58.9	26.2	4.1	12.2	1.4	39.3	8.2	8.5	100.0

* = Less than .05%

reported expenditure of grants for the first year. As with any new program, delays in start up and implementation meant that by the end of the first year, states spent only 58.9 percent of the year-one awards. The large differences in patterns among the states reflect different levels of activity, different outside funding, and different state priorities as discussed earlier in this chapter.

Of the seven states, California has spent the least grant money and North Carolina the most. In part, this reflects the fact that (1) California, intending to rely heavily on its existing Alternative Rural Hospital Model (ARHM), submitted one of the two smallest grant requests, (2) activity was slowed by the sharp fiscal crisis the state is experiencing, and (3) it has adopted a wait-and-see approach to the federal program. In particular, requirements for state agencies to complete state-mandated reports were suspended, a measure that slowed completion of the ARHM model and state rural health plan. Lack of progress on the policy context of the program coupled with lack of national EACH regulations, left limited scope for program development.

The initial high level of activity in Kansas contrasts with the fact that the state spent only 22 percent of its grant. Much of Kansas's Technical Advisory Group activity has been independently funded, with over 80 percent of the Kansas expenditures devoted to supporting consultants. The slowdown in program development at the national level and lack of a project staff paid for by the grant kept expenditures low.

In contrast to California and Kansas, four other states (New York, North Carolina, South Dakota, and West Virginia) made active use of their grant funding, which was almost completely spent in the case of West Virginia. As illustrated in Table II.4, these active states used their grant funds in very different patterns. New York and South Dakota paid for project staff. Despite delays at the national level, both states pursued active development in conjunction with developing program guidelines and a state rural health plan. (Colorado also would have had an expenditure profile similar to these two states, but encountered significant staffing difficulties and therefore spent only half of its grant.) In contrast, North Carolina largely contributed staff time, but used the funds for purposes

as diverse as purchasing computing equipment and software, printing brochures for a local network, and funding physician recruiting for specific RPDHs. West Virginia spent over 88 percent of its grants on contracts -- \$88 thousand for expert consultants and \$120 thousand to fund EMS development and communications equipment.

How important is this grant money to the development of the EACH program? Would it be a necessary component of an expanded program? Although the grants were used for widely diverse purposes, respondents in nearly all states emphasized their critical nature. Two states said they would have worked toward network development or participated without the grants, but that the grants raised the priority level of the program and related issues, and was important in speeding what would otherwise have been a much slower process. All except one state government (South Dakota) reported an overall budget contraction during 1992. Health programs, and rural health in particular, tended to do better. All states reported that their contributions to the EACH/RPDH program remained constant or were increased. Respondents explained that with state budgets particularly tight, resources for new initiatives were extremely limited. The availability of flexible federal planning funds was an important incentive for state government participation. Without these grants, it is unlikely that states would have funded the wide range of planning activities.

F. ASSESSMENT OF STATES' PROGRESS

In interviews, state officials uniformly expressed frustration with the delays in developing and announcing program rules, and with what they regarded as overly rigid regulations. One respondent concluded based on the first year's experience, "The concept is wonderful, but the execution is bad. It's a neat idea that would facilitate and foster networking, but it has turned into something you try and get around." The lack of final rules and details on reimbursement clearly made it difficult to actively promote the program to local communities and foster network development. In some cases, these factors combined to slow the momentum of the program between the spring and winter of 1992, notably in California, but also in West Virginia and Kansas.

Nevertheless, national, state, foundation and private sector funding have combined in the seven grantee states to foster considerable activity and debate that has attracted national interest. Five general conclusions can be drawn from the limited experience to date and are discussed in the following sections:

- Even with the uncertainties, a lot has been accomplished, and few contentious difficulties with adapting state regulatory structures have been encountered so far.
- The process of state program development takes time and must be tailored to each state's prior experience and policy environment.
- For many, the attraction of the EACH/RPCH program lies in its introduction to the concept of mutually supporting provider networks.
- Despite the broad interest in network development, the process of fostering local hospital networks is more difficult than states initially projected.
- The current structure of the EACH/RPCH program has attracted few hospitals committed to RPCH conversion.

1. Much Has Been Accomplished and Few Major Regulatory Barriers Have Emerged

Despite the delays and confusion in the start-up of the national program, much has been accomplished by the states. Advisory councils have been retained, expanded and new implementation groups developed. Substantial progress was reported by all states in developing model protocols, specifying criteria for participation, drafting new legislation, and reviewing regulations. Some 33 networks have been designated and funded. Moreover, states have begun sharing information, model protocols, plans, and agreements. The Robert Wood Johnson Foundation's Technical Advisory Center has furthered the dissemination.

Given the complexity of health regulations, the lack of significant regulatory barriers is notable. That is, there have been debates in some states over whether RPCHs required new licensure category, but for the most part, the new program has not required new state legislation or extensive redrafting of regulations. New York has been the major exception, encountering significant regulatory barriers and drafting new legislation. West Virginia and South Dakota have debated to

a lesser extent how to accommodate RPCHs in their licensing requirements and/or rate review processes. Otherwise, RPCHs have been accommodated as a new category under existing licensure statutes and, in one or two cases, granted waivers from specific conditions.

Progress and activity, however, has been uneven among the states. Kansas, with its additional foundation support, clearly has been a leader in state-level policy and procedures. Its early work on feasibility and model agreements are being reviewed and adopted by other states. There has, however, been limited network development in the state, which reports that the lack of desired national regulations slowed activity and the program's appeal. As the second-largest program, North Carolina has been equally active, but with a different focus on outreach and network assistance. There is little sense of "waiting for Washington." Other programs have had less activity or success. The lack of staffing dragged initial development in Colorado. California has had difficulty qualifying potential networks for federal funding, does not see much future under the proposed regulations, and is waiting until a final program emerges before moving forward. New York has been very active but only one network has qualified for federal funding.

In sum, by the end of 1992, after more than a year of funding for implementation, the federal government still lacked a finalized set of regulations and there were few networks ready to go as soon as the final regulations are announced. By and large, states are still in the process of shifting focus from program design and policy issues to outreach and technical assistance.

2. State-Level Program Development Takes Time and Diverse Approaches

Implementation clearly takes time, particularly for the outreach effort needed to identify, recruit, and support local EACH/RPCH networks. Moreover, most states moved slowly on policy and design issues. It is not clear how much time new states would save if they were reacting to established regulations, model protocols, and examples of participating hospitals and did not reconsider the entire EACH/RPCH model. Respondents noted that one function of the laborious process some states

have followed has been to foster communication and increase a trust level among potentially contentious stakeholders, a critical and perhaps indispensable element in some settings.

A clear difference among the states, however, has been the degree to which they followed one of three approaches: 1) focus planning efforts on a relatively self-selective advisory council whose members already are largely committed to the program (e.g., Colorado and South Dakota), 2) use state-wide panels that are more representative of interested parties (Kansas, New York, California, and West Virginia), or 3) deemphasize task forces in favor of active administrative action to make the necessary changes. Although the current level of experience is insufficient to indicate the best approach, we note that the states' particular approaches have been less a conscious decision than the outgrowth of local conditions.

The states' program implementation experience to date also suggests that the time and effort required for state-level participation can be expected to differ significantly. Their regulatory structure and traditions, policy environment, and rural conditions combine to require a highly individualized process tailored to each state. It is quite possible that experience will show that the Type B grants, in which states were given support for planning activities prior to recruiting network participants, is an effective model for any future expansion.

3. The Program Encouraged Development of Broader Network Concepts

Respondents in every state indicated that a major contribution of the program was its role as a catalyst for developing the wider concept of rural health networks. With the exception of Colorado and North Carolina, the other states have been pushing this broader agenda. This broader notion of rural provider networks covers a wide spectrum. The most limited variant adds supporting or member hospitals to otherwise grant-funded networks. Other states are designating and, in the case of New York, financially supporting hospital networks not eligible or funded by the federal program. Also, states are encouraging the addition of multi-county EMS systems and other non-hospital providers to designated networks. The energy and interest level of improving the viability of local

institutions by cooperation in the place of competition is the most salient feature of the states' experience with the EACH program.

Both West Virginia and New York have developed legislative proposals involving widespread application of network models. In West Virginia, for example, the state's Health Care Planning Commission submitted a health reform proposal in December 1992 that emphasized the reorganization of health care into "community care networks" (CCN), a concept developed concurrently with the state's EACH/RPCH program (Wellever, 1993). Unlike the EACH initiative, the emphasis on hospitals is abandoned in favor of a community perspective, but similar to the EACH program's structure, networks of providers are to be fostered by locally-based planning supported with small grants and technical assistance. CCN's are proposed for both rural and urban areas and a goal proposed under which all health care services would be integrated into networks by 1997.

In New York, a broad-based network program has been designed that includes the federal EACH/RPCH model as one choice of network type. This program builds on New York's experience in implementing a less structured grant program for network development. To qualify as a network in the new program, an applicant group must provide primary care, acute care, and emergency services within the network, and must meet other network requirements that are still being finalized.¹² In return, they are eligible to receive planning grant funding from the state of up to \$50,000, then an initial start-up grant of up to \$500,000, followed by an administrative grant of \$200,000 for the first year with reduced funding for administration in subsequent years. Relief from certain regulatory requirements is also planned, with more tightly integrated networks receiving more financial and regulatory incentives.

These possibilities and the planning structures fostered by the EACH program is one reason that a few respondents have suggested that the most fruitful approach would be to set aside the formal

¹²Draft network requirements are presented in New York State Department of Health Office of Rural Health, New York State and Rural Health Council "Proposed Rural Health Network Guidelines and Requirements," June 1992.

EACH program and proceed with a more flexible approach. The prevalent view, however, is that the EACH/RPCH concept will evolve as only one of several models available to communities that are striving to assure local access to quality care.

4. States Have Found Network Development Difficult

As beneficial as networks may be, every state reported that the process of fostering their development was more difficult than expected. An overriding problem is the amount of staff time required to encourage a network and the demands on expertise to help plan a general reconfiguration of RPCH grantee hospitals. Most states indicated that the pace of local network development was constrained by limited staff resources. Two respondents suggested that hospital grant funds spent on capital projects probably would have been better spent on project staffing.

States have found that local networks need considerable support and that technical assistance, which responds to a wide variety of local conditions, cannot be delivered as a standardized package. There also is considerable local resistance to the RPCH concept. Indeed, although the program emphasizes protocols and linkages between hospitals, the real authority determining admissions and transfers is the local physician. Neither downsizing nor the length of stay restrictions are popular for most physicians and many administrators. Some states have been surprised by the level of local resistance. Project Directors all report numerous presentations and meetings with local hospital boards. All respondents reported being acutely aware of the fine line between supporting local network development and avoiding the perception of the state "selling" the program.

5. Low Level of Hospital Commitment to RPCH Conversion

Finally, state-level officials all report limited enthusiasm for the RPCH model as currently proposed. Grantee hospitals are required to make a good faith effort, but are under no obligation to actually implement the EACH/RPCH program. All told, as of early 1993, officials in the seven states indicated that no more than 10 hospitals are seriously considering conversion under the

presently proposed structure. Respondents thought relaxing some of the conditions, as in the legislative proposal, would make the program more attractive. Still, the impact on the number of conversions would be difficult to predict.

Implementation of the EACH/ RPCH program has stirred a complex policy debate and planning effort that has been operating on three levels -- policy debate and technical assistance development at the national level, multi-dimensional planning and operational effort on the state level, and similar efforts at the hospital level. In many ways, hospitals and their communities are having to repeat the state-level efforts to build consensus, develop trust, and negotiate a number of agreements. The next chapter examines experience at the local level.

III. LOCAL-LEVEL PLANNING AND IMPLEMENTATION

The objective of the national and state EACH/RPCH efforts discussed in the last two chapters is to shape and facilitate change at the local level. This first look at local-level planning and implementation answers several major questions in four topic areas:

1. **Characteristics.** What are the characteristics of the facilities and communities in the national program? How do the current RPCH grantees differ from other very small rural hospitals that did not apply for RPCH grants?
2. **Networks.** What types of networks are the grantees forming? What progress has been made so far? What challenges are the networks facing?
3. **RPCHs.** What are the RPCH grantees' current plans regarding their future under the program? Have they made progress in converting to a RPCH? What are the major issues they face in deciding to convert?
4. **Grant Expenditures.** What types of items have been bought with grant funds? How important do the grants seem to be in conversion decisions? Do the grants appear to be covering conversion and network costs?

To address these questions, we used data from three major types of sources that varied in scope of information provided:

1. **Data Files** (facility cost reports, the Area Resource File, census data, and Medicare claims). These provided information on finances, bed size, utilization, and community characteristics for 1991 and 1992 grantees.
2. **Facility Background Information and Monitoring Reports.** This source provided more detailed, self-reported data on facility structure, operations, community environment, pre-program environment and problems, grant expenditures, and program activities, for all 1991 grantees.¹³
3. **Site Visits.** The visits provided detailed information on facility histories, progress, and plans through interviews and review of site-specific documentation at eight selected networks (see Chapter I for a review of the selection process) consisting

¹³A limited comparison of means between the cost report data for both 1991 and 1992 grantees and the self-reported data for 1991 grantees showed the two data sets produced similar findings, increasing our comfort with using these data sets as complements to each other in this chapter.

of eight EACH and ten RPCH grantees and one network member hospital (not a grantee).

In this chapter, we present the picture of the program that was created by integrating the findings from the three data sources. We describe hospitals and communities, and the structure and development of rural health networks. We also document the progress RPCH grantees have made in planning for conversion and conclude with an analysis of grant expenditures.

A. CHARACTERISTICS OF HOSPITALS AND COMMUNITIES IN THE PROGRAM

Will participation in the program enable RPCH grantees to improve their financial viability, strengthen their structure, and streamline their operations? Understanding how these changes may occur is a key to the question of why hospitals and networks are succeeding or failing as viable entities under the program and will enable us suggest appropriate policy changes. In this section, we describe several key aspects of the grantees' viability, structure, and operations at the start of the program, as well as the major problems they see as threats to their survival. We also describe their environment, that is, the types of communities that will be affected by any program-related changes. In addition, we describe the EACH grantees and their preprogram ties to the RPCH grantees. These characteristics of the EACH grantees help to (1) explain variations in their support role to the RPCH and (2) partly examine how many are seeking financial benefits from Medicare's sole community hospital (SCH) status.

1. RPCH Grantees and Their Communities

In general, the RPCH grantees exhibit financial difficulties and operational characteristics (such as low staffing levels) that one would expect in small rural hospitals considering a conversion. Similarly, their communities tend to be slightly disadvantaged relative to other rural areas in terms of population density and economic status. However, these features vary substantially from state to state and hospital to hospital.

a. Viability of the RPCHs on Entering the Program¹⁴

Financial status and inpatient utilization measures are strongly related to risk of rural hospital closure (see, for example, GAO 1990, and ProPAC 1991). On each type of utilization and financial measure we reviewed, the RPCH grantees were doing poorly on entry to the program.

Utilization. Not surprisingly, utilization at the RPCH grantees was very low. An average of only eight inpatients were in the hospital each day from 1988 to 1990. Further, RPCH grantees captured an average of only 37 percent of their Medicare market for inpatient care, slightly less than the 42 percent share of comparison hospitals (Appendix A). The low figures likely reflect both patient choices to go elsewhere and a need for services not provided at the RPCH grantees or comparison hospitals. Outpatient and emergency utilization were also low, with an average of 12 visits per day and 4 visits per day, respectively, during this period. Although RPCH grantees and comparison hospitals were chosen for having similar inpatient utilization, the RPCH grantees had markedly lower outpatient utilization (15 outpatient and emergency visits per day) than the comparison group (24 outpatient and emergency visits per day).

Financial Status. The average RPCH grantee experienced serious financial losses on its operations during the 1988-1990 period. An increase in the mean percent loss indicates declining financial status. By 1990, the average operating margin¹⁵ for the group reached -31 percent. That was about double the percent loss of the comparison small, rural hospitals with a mean of -16 percent, and also double the 15 percent loss of rural hospitals with fewer than 50 beds nationwide (American Hospital Association 1993). From our site visits to the case study grantees, we learned that these hospitals have survived so far either by drawing on reserves they accumulated when they

¹⁴These data on financial status and utilization are from Medicare cost reports for periods beginning during fiscal years 1988-1990. Market share data are calculated from Medicare claims data on the Market Area File for 1988-1989.

¹⁵Calculated as net patient revenue minus operating costs divided by net patient revenue. This slightly underestimates a "true" operating margin because some operating costs are included whose corresponding revenues are not included. The HCRIS file does not allow us to correct this minor problem.

were profitable, or by generating non-operating revenue such as local government tax-financed support subsidies from religious orders, gifts, and local foundation support. Despite the bleak financial statistics, 36 percent of the 1991 grantees self-reported some improvement in financial status over the prior year. Three, however, had been closed for some period during 1991.

On average, the RPCH grantees were more costly per inpatient day than the comparison group (mean values were \$1,687 and \$1,117 respectively). This is apparently not the result of lower inpatient utilization, since RPCH and comparison hospitals were similar on this measure. However, it could reflect in part less efficient use of ancillary services due to lower outpatient utilization.

b. Structure and Operations

We must understand how the RPCH grantees change their structure and operations in response to the program before we can understand why hospitals and networks do or do not stabilize and take hold under the program. Key aspects of the grantees' structure and operations include physical structure, space utilization, and services provided; ownership; and staffing.

Physical Structure, Space Utilization, and Services Provided. Statistics indicating low hospital utilization may suggest images of old, large, empty buildings. Most of the ten case study grantees were housed in older buildings (typically built in the 1950s, with some renovation or addition in the 1970s) that needed modernization or capital improvements.¹⁶ However, the grantees varied substantially in their overall physical structure and space utilization.

In particular, three of the ten 1991 and 1992 grantees we visited, including one closed hospital, appeared to have a great deal of underutilized space upon beginning their EACH/RPCH projects. Four others had some empty rooms, but were using or leasing much of their space.¹⁷ For example, one grantee was a three-story, relatively large brick hospital built in 1952 to house 106 inpatient beds.

¹⁶However, one of the two closed hospital grantees was housed in a building built in the late 1970s, which had additional capital investment in the late 1980s.

¹⁷One grantee we visited was crowded; lack of space was a major problem. This was an atypical grantee in many other respects as well.

With the decline of inpatient care in the 1980s, this facility did not diversify its services or try to fill the growing empty space as its inpatient census declined. In contrast, another grantee we visited had closed its inpatient services and was using its somewhat smaller building much more fully by operating a 40-bed inpatient alcohol treatment service, cooperating with the EACH grantee in operating a rural health clinic on-site, leasing space to an area physician and to a physical therapy group, providing an outpatient alcoholism clinic, and running a child abuse prevention and intervention program. While there was some unused space, this was largely under construction in preparation for the grantee's vision of itself as a RPCH. Thus, cost savings from better use of space under the program are possible, but will not likely result in large savings.

The types and variety of services offered at the grantees help explain why the large, empty hospital picture is often not a true one. According to 1990 Medicare cost reports, the RPCH grantees had an average inpatient bed capacity of 23 acute care hospital beds.¹⁸ Recent self-reported data from the 1991 grantees indicates in January 1992 they also maintained an average of six skilled nursing beds, four intermediate care beds, and five "other" long-term care beds, making long-term care one of the most common non-acute care services.¹⁹

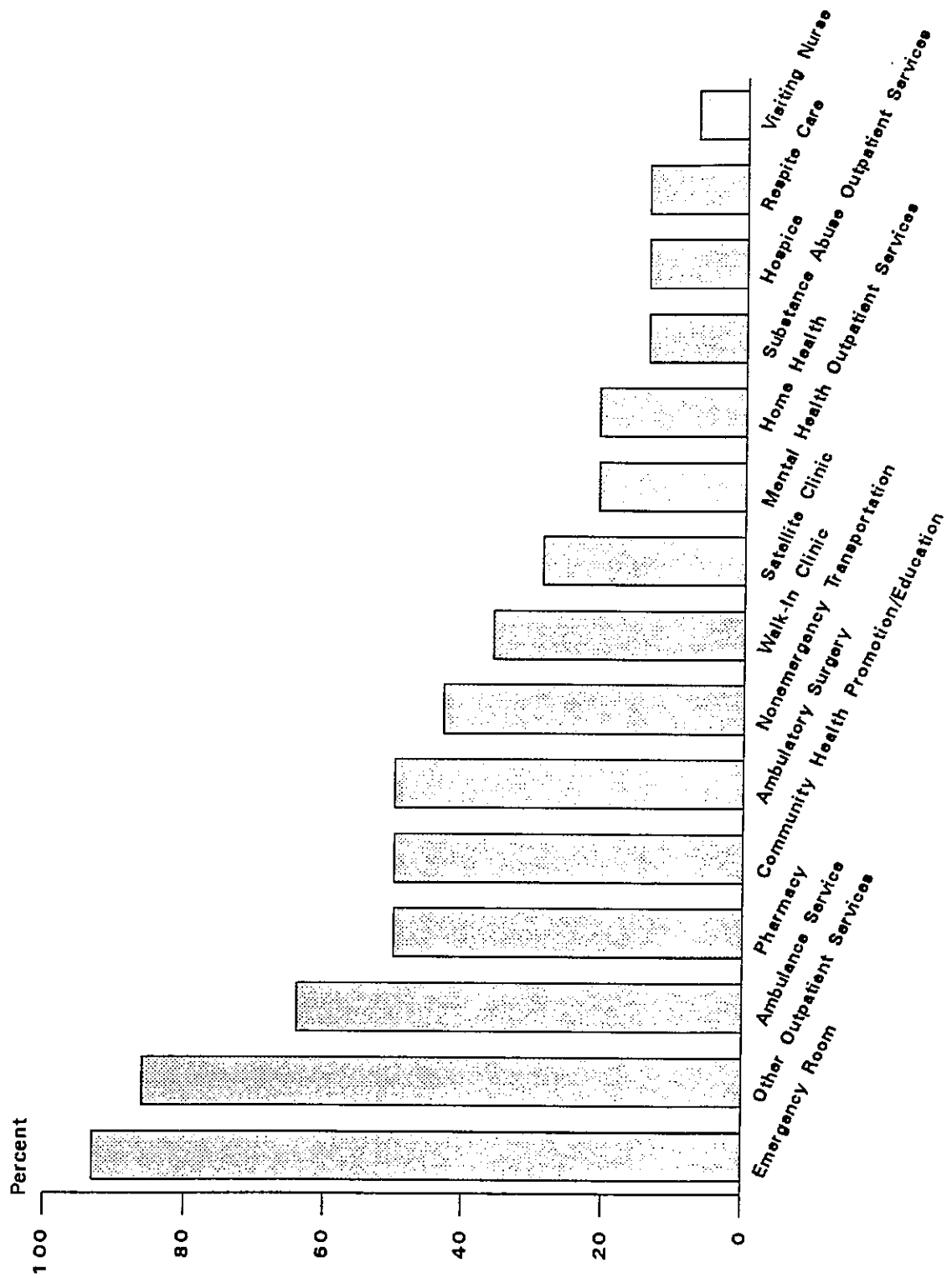
The diversity in services offered by the 1991 RPCH grantees at the start of the program goes beyond acute care and long-term care, as Figure III.1 shows. For example, 21 percent provided home health service, 29 percent operated a satellite clinic, and 21 percent offered mental health outpatient services. While there is considerable room for more diversity in services, as a group the RPCH grantees have been providing more than the traditional inpatient services.

Since the very name "primary care hospital" suggests an increased focus on primary care, we examined how our case study grantees varied in delivering these services. Several had no organized

¹⁸Cost reporting periods begin during federal fiscal year 1990.

¹⁹Forty-three percent of the 1991 RPCH grantees had long-term care beds in the hospital; an even greater percentage--64 percent--had swing beds.

FIGURE III.1
NONACUTE CARE SERVICES PROVIDED
BY RPCH GRANTEES



outpatient department; some primary care services were being provided through the emergency room, and some through physician offices located elsewhere. Four had a federally designated Rural Health Clinic on site, but in two of the four cases, the clinic was supervised by a separate corporate entity (one was free-standing, and one was a satellite of the EACH). For some grantees, becoming a RPCH may mean offering and managing primary care as a new service.

Ownership and Management. The RPCH grantees are about evenly split between public and private nonprofit ownership.²⁰ Accordingly, government appropriations (primarily local government or hospital district funds) were an important source of support for 1991 grantees, with hospitals receiving support averaging \$233,740. More than half of the 1991 grantees reported receiving some such public funds.²¹ Parent or management companies are involved in managing eight of the 1991 RPCH grantees, and in all but one case they were described as active or very active in the pre-application discussions about the program.

Staffing. As expected, the 1991 RPCH grantees' medical staff was mainly composed of primary care practitioners. On average, the RPCH grantees had 3.3 primary care practitioners (2.6 primary care physicians and .7 mid-level practitioner) providing services at the hospital. Nearly all the hospitals (91 percent) had at least one general or family practitioner, and about half (48 percent) had a nurse practitioner, nurse midwife, or physician assistant. In addition, about a quarter (5 grantees) had an internist, obstetrician/gynecologist, general surgeon, or other practitioner providing primary care. Thirty-eight percent were actively recruiting a general or family practitioner (only a scattering of other types of physician recruitment was reported), while nearly half reported at least one active medical staff physician within five years of retiring.

²⁰One RPCH grantee is a private for-profit hospital. So far, it has chosen not to spend its grant funds. Because the law prohibits for-profit hospitals from participation, HCFA is in the process of rescinding the grant to this facility.

²¹Public financial support is not, of course, the only important source of nonpatient revenues for the group. In one of the case study grantees, for example, we found that support from a local private foundation was critical, in another significant but declining subsidies from a religious order.

A significant number of grantees report obstetrical services and/or surgical services or staffing. Twenty-nine percent of the RPOCH grantees had a primary care practitioner who was delivering babies at the hospital. Nearly a quarter reported a general surgeon on their active medical staff, with 29 percent reporting a general surgeon providing services on a regular basis to the hospital less than once per week.

Physicians were frequently used on a contract basis. Nearly half reported using contract physicians regularly. The types of physicians used most often were emergency room physicians, family or general practitioners, pathologists, and radiologists (each with four grantees reporting contracts). In several RPOCH grantees we visited, the cost of emergency room contract physicians was viewed as a serious problem, totaling \$425,000 annually in one hospital.

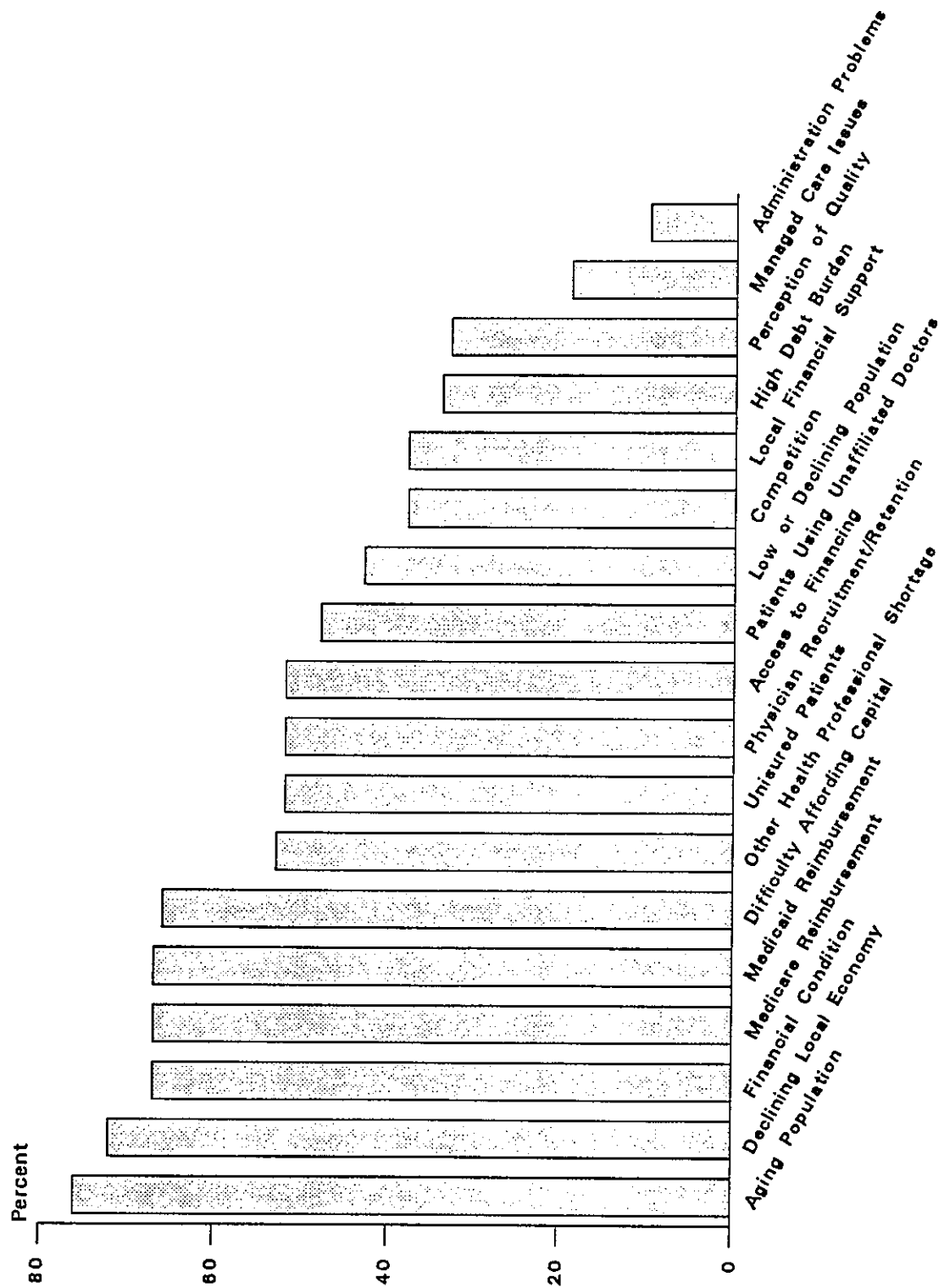
c. Major Problems Faced by RPOCH Grantees

While the critical problems for grantees in our case study hospitals varied from site to site, the common theme is a sense of vulnerability and extreme risk. The sources of such serious concern at our case study hospitals included:

- Knowledge that a single outlier case or an unanticipated capital expense (such as a malfunctioning of the facility's aged boiler) could force closure
- Lack of feasibility of continued or increased tax subsidies in the current local political environment
- Maximum use of the hospital's line of credit
- Continuing disagreements between the hospital administrator and the hospital's only physician

While these were the most immediate, critical problems for the hospitals we visited, the well-known problems facing rural hospitals also plague the grantees in varying degrees and combinations. Figure III.2 shows the percent of 1991 grantees citing each type of problem as serious or very serious at the

FIGURE III.2
 TYPES OF PROBLEMS CITED AS
 SERIOUS BY RPCH GRANTEES



start of the program. This variety of risks and stresses illustrates the magnitude of the challenge potential RPCHs face in attempting to stabilize their financial condition and improve their chances of survival as a health care facility.

d. Community Demographic, Socioeconomic, and Health Services Characteristics

Understanding the environments in which the program is being implemented is crucial for assessing three factors: the replicability of the program to other states, the impacts of the program, and the effectiveness of specific implementation approaches. For instance, if RPCH grantees have atypical service areas in terms of their population, economic characteristics, or health care characteristics, their experience may be a less relevant guide for an expanded program.

Community Demographic and Socioeconomic Environments. HCFA appears to have provided RPCH grants to areas that may be somewhat more vulnerable to the adverse impacts of hospital closures on access to care.²² For example, the EACH program is located in areas whose characteristics are thought to be less attractive to physicians: a lower population density (15 persons per square mile versus 23 persons in other rural areas), slower population growth since 1980 (1 percent versus 5 percent), and a greater proportion of the population below poverty (19 percent versus 16 percent). Moreover, the high proportion of low-income persons in these areas may make RPCH grantee counties more vulnerable to a reduction in services if alternatives are not readily available. Although these tendencies are slight-to-moderate rather than pronounced, the differences are consistent with the goal of the EACH program to maintain access to health care in rural areas.

Health Services Environments. The average reported distance from 1991 RPCH grantees to the next nearest hospital is 25 miles, and the average travel time was 31 minutes.²³ Five of the

²²We previously reported similar findings in our July report for the 1991 RPCH grantees. Here, we update the findings to include new 1992 RPCH grantee counties. Because the findings were similar, we only summarize them here. Appendix B contains updated tables and graphs displaying our analysis.

²³This section is based on the background reports collected from the 1991 grantees, except where otherwise indicated.

RPCH grantees (24 percent) were 35 or more miles from the next nearest hospital; one-third were 15 or fewer miles from an alternative facility. In one-third of the service areas, grantees estimated that more than 75 percent of hospitalized patients had been discharged from another hospital the previous year.²⁴ Grantees attributed this to two problems common to most small rural hospitals--a desire to obtain services not provided at the RPCH and patients' preference for larger hospitals with more technology and/or specialists. Among the other reasons cited were (1) a preference for non-local physicians, (2) perceived quality of care, (3) physician turnover, (4) less attractive buildings, and (5) a damaged hospital reputation. Over half (57 percent) of the RPCH grantees reported that those patients who receive inpatient care elsewhere most often go to the EACH grantee. On the other hand, more than 40 percent ranked the EACH third, fourth, or fifth among the alternative hospitals of choice for residents of the service area.

In a few areas, hospitals bypassed closer facilities when choosing an EACH because of a history of competition (see Section B below). The availability of other hospital alternatives is also evident from Area Resource File statistics on the acute care bed supply in 1991 and 1992 RPCH grantee counties. As a group, RPCH grantee counties have substantially more acute care beds per 1,000 population than other rural areas. The aggregate acute care bed supply of 5.2 per 1,000 population implies 1,123 "excess" acute care beds in the RPCH counties program-wide relative to the U.S. norm for rural areas.²⁵ Thus, the locations in which the EACH program is being implemented appear consistent with the goal to reduce the excess supply of acute care beds.

²⁴This is supported by our analysis of Medicare claims data. For one quarter of the RPCH grantees, at least 74 percent of Medicare inpatients living in the service area went to another hospital during the period 1988 to 1989.

²⁵We derive this rough estimate by calculating the difference between 5.2 beds per 1,000 and the nonmetropolitan U.S. average of 3.8 beds per 1,000 (a difference equal to 1.4 per 1,000) and multiplying it by the total population of the RPCH grantee counties in thousands (802,292). Two factors make this number a rough rather than a precise estimate. First, we have no way to accurately measure the need for hospitalization, which may be greater in the RPCH counties. Second, the supply of beds in rural areas nationwide may be too high a standard of comparison, since rural hospital occupancy rates nationwide are quite low.

Primary care providers other than the hospital exist in a majority of areas. Fifty-two percent of respondents reported having a primary care clinic in their service area that was not co-located with the hospital, while only 20 percent reported in their first year monitoring report having a "satellite" clinic. An average of 4.2 primary care physicians practiced in the service area, which is noticeably higher than the average of 2.6 primary care physicians who provided services in the hospital. Fourteen percent of the 1991 grantees had a mid-level practitioner practicing in the service area but not providing care at the hospital.

Substantial turnover of primary care physicians at the RPCH grantees supports an expectation that they have not been attractive practice locations. About one-quarter of the RPCH grantees reported that one of their primary care physicians had left the service area. Nearly half reported at least one active physician who was within 5 years of retiring, and one-fifth actually lost one of their primary care physicians to retirement during 1991. In contrast, 14 percent of the grantees reported that a new primary care physician began practicing in their area in 1991, and one reported that five specialists had begun to practice there.

2. EACH Grantees

Reviewing the basic characteristics of the EACH grantees--in terms of their structure and operations, financial status, and historic ties to the RPCH--provides a foundation for understanding their role in the EACH/RPCH networks discussed later in this chapter.²⁶

a. Structure and Operations

While the 1991 EACH grantees are generally large rural hospitals capable of providing a wide variety of support services to the RPCH grantees, they vary substantially in size and services. The average grantee staffed a total of 150 beds at the end of fiscal year 1991; however, over half of the EACH respondents staffed fewer than 100 acute care beds, while 12 percent staffed more than 250.

²⁶This section is based on background reports collected from the 1991 EACH grantees.

These total bed figures often included long-term care beds, nursery beds, swing beds, or other special care beds, as well as acute care beds (the mean number of acute care beds was 118).

The medical staff of the average EACH consisted of 44 active physicians and 14 consulting or courtesy physicians who frequently provide services at the hospital. The types of specialty physicians on the active medical staff of the EACH grantees are listed by frequency in Table III.1. In general, the EACH grantees provide secondary services, not tertiary care. As a result, two networks have included a third, larger tertiary hospital to provide additional clinical support to the network. A third is expanding its new teleradiology capability to a tertiary hospital.

Since transfer patterns may change with implementation of EACH/RPCH networks, we reviewed these patterns at the start of the program. We found that many of the EACH and RPCH grantees had close transfer relationships with other hospitals. On average, the RPCH grantee ranked third in the list of hospitals that most frequently sent transfers to the EACH grantee; this is at least partly due to the RPCH grantees low volume of patients relative to other sending hospitals. Conversely, during fiscal 1991, RPCH grantees transferred an average of 23 patients to the EACH but 40 patients to other hospitals. Increases in patient transfers to the EACH do not seem likely to have a major impact on utilization of the EACH: patient transfers to the EACH grantees were low relative to the EACH total admissions. The average grantee received 103 patients, or about 2 percent of total admissions, from the RPCH grantee and other hospitals.²⁷

b. Reported Financial Status

At the start of the program, all of the EACH grantees described their present financial condition as about the same as or improved from the year before. The first-year progress report asked the same question, and the findings were similar--the EACH grantees report they have remained stable or improved their financial status.

²⁷These figures are not precise, since about half of the EACH respondents had to estimate their transfer data.

TABLE III.1
ACTIVE PHYSICIANS ON EACH
GRANTEES' MEDICAL STAFF

Primary Specialty	Percent With At Least One	Mean Number of Physicians
General/Family Practice	100	9
Internal Medicine	100	5
General Surgery	100	3
Radiology	94	3
OB/GYN	94	3
Ophthalmology	88	2
Pathology	88	2
Pediatrics	88	2
Orthopedics	88	2
Urology	77	1
Emergency Medicine	65	3
Otorhinolaryngology (ENT)	65	1
Anesthesiology	65	1
Psychiatry	47	1
Other	47	1
Cardiology	29	1
Hematology/Oncology	29	< .5
Cardiovascular/Thoracic Surgery	24	1
Dermatology	24	< .5
Neurology	24	< .5
Pulmonary Medicine	24	< .5
Neurosurgery	18	< .5
Gastroenterology	18	< .5
Rheumatology	6	< .5
Endocrinology	6	< .5

While the financial trend appears to be stable or improved, two grantees we visited were facing significant financial challenges. One EACH grantee had bought the other (failing) hospital in its town last summer. When its more stringent utilization review practices were applied to the patient cases formerly admitted to the competitor, inpatient utilization and revenue was much lower than anticipated, creating large and unexpected operating losses. Another small EACH, with an average daily census of 25 patients, was experiencing a modest financial upturn after a long period of financial difficulties and near-bankruptcy.

We also examined the extent to which Medicare's sole community hospital (SCH) status (a benefit of EACH designation) would likely improve the EACH grantees' financial status. On one hand, at the start of the program 75 percent of the 1991 EACH grantees expected at least some benefit from the program due to improved Medicare payment. State officials indicated that SCH status was a factor in some EACH grantees' decisions to participate.

On the other hand, five of the 12 EACH grantees that expected financial benefit have not spent grant funds to date and therefore as yet are only tangentially tied to the EACH program. Of the eight EACH grantees we visited, three were already designated SCHs and would receive no direct Medicare financial benefit as a result of EACH designation. Three others had concluded that SCH status would not benefit them. These hospitals were designated Rural Referral Centers or had their Medicare wage index reclassified as "other urban," a change that has improved their profitability on Medicare patients. Only two were anticipating a financial benefit from obtaining SCH status; one had estimated a substantial benefit in operating revenue, and the other anticipated that the major benefit would come from special treatment under the capital PPS rules due to SCH status.

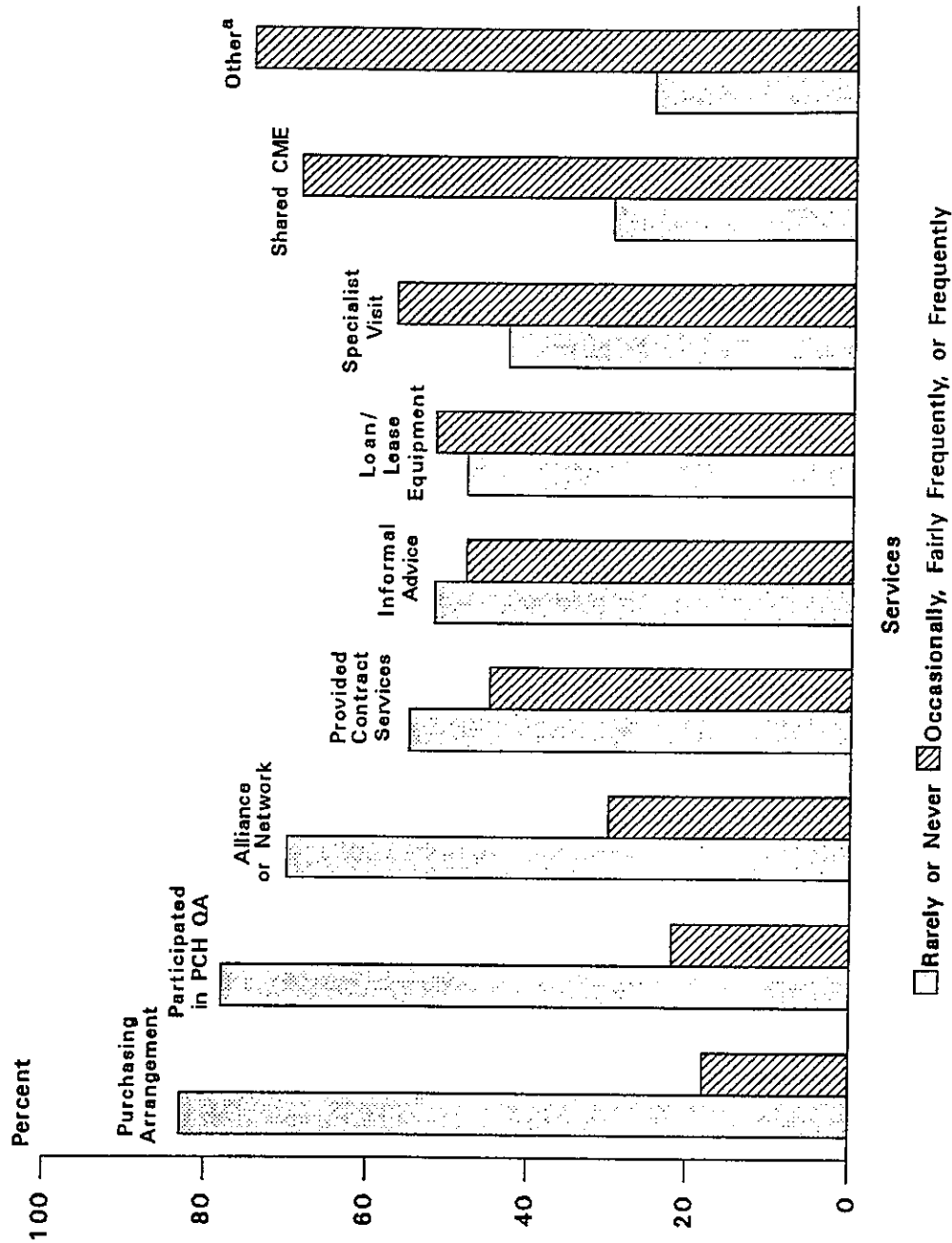
c. Ties to the RPCH

To examine how much EACH and RPCH grantees will be changing past behaviors as they implement networks, we asked them about pre-program ties, and found EACH and RPCH grantees had generally not been closely linked prior to forming their network. In about a third of the EACH/RPCH pairs, the EACH grantee reported working with the RPCH grantee in only one (or none) of the following areas: purchasing, quality assurance, some form of alliance or network, contract services, informal advice, equipment loans or leases, visiting specialists, and continuing medical education. On the other hand, about one-third appeared closely linked, with the EACH grantee providing five or more of these services to the RPCH grantee at least occasionally. Figure III.3 shows the frequency with which various activities were provided by the 1991 EACH grantees prior to the program (according to the EACH grantees).

Our case study networks reflect these varying degrees of linkage, although they appear to be more closely tied to their RPCH grantees than others in the program. Three of the eight EACHs we visited had a history of tight linkages with the RPCH grantees prior to the program:

- One had begun networking with the EACH and other area providers in 1970; the EACH/RPCH linkage was a natural extension of continuing network efforts.
- A second, building on earlier, less formal cooperation with the RPCH grantees, had previously attempted to create a formal network governance structure with the two RPCH grantees. This attempt was abandoned due to legal obstacles (liability issues). The EACH/RPCH network under development is another attempt to reap the benefits from a network without creating a formal corporate structure.
- In the third case, the EACH and RPCH grantees had been joined in a hospital system, and the current EACH grantee administrator had managed the RPCH grantee. When the RPCH grantee closed, the community blamed the EACH grantee. The past strong relationship in this area is in fact an obstacle to the network.

FIGURE III.3
SERVICES EACH PROVIDED TO RPCH GRANTEES
PRIOR TO PROGRAM



^a Four of the twelve EACHs tabulated responded to the "Other" category. Of those, three listed specific services: 1) RPCH business office study, 2) specialty services at the EACH, and 3) daily courier service.

Four of the other EACH grantees we visited had routine clinical ties to the RPCH grantee through medical staff relationships, but had not had significant administrative or formal ties. One had not had any significant previous ties with the RPCH grantee. Two EACHs noted that in fact ties to the RPCH and other small rural hospitals had been declining due to the heavy work load of staff physicians and salaried technical personnel.

B. STRUCTURE AND DEVELOPMENT OF RURAL HEALTH NETWORKS

Many of the EACH/RPCH networks have attempted to move forward despite uncertainty about the final program requirements for EACH and RPCH designation. However, building networks where there previously have been few ties is a formidable task. The challenges include the time-consuming process of establishing trust, synchronizing members' priorities, overcoming medical staff and transfer issues, working through past community differences, and sometimes orienting staff in the EACH or tertiary support hospital towards the nature of primary care in smaller communities and the need for networking. Nevertheless, some networks in the program--which vary in their structure, process, and purpose--have been able to develop and begin to implement plans to share information, staff, and services that should help maintain access to quality care in the RPCH communities.

1. Network Formation

Program networks were formed by hospitals that hoped to qualify for grants under the EACH/RPCH Program and were interested in exploring potential benefits of the program. Many of these networks are informal or superficial in structure, and lack long-term commitment among members. Taking the next step to form more meaningful, potentially long-lasting networks is very difficult. In this section, we discuss first how and why program networks were formed, then focus on what we learned about how some of the case-study networks were formed.

The 1991 grantee networks varied in how they were formed: six stemmed from state information/presentations, four evolved from an existing relationship, three were initiated by the

RPCH, and two were initiated by the EACH.²⁸ The role of state information/presentations is not surprising, since the grantee states went to considerable lengths to encourage network formation through large-group meetings, more targeted information sessions with likely candidates, and often multiple follow-up calls and contacts with the potential network administrators.²⁹

RPCH grantees' reasons for forming a network with the EACH grantee rather than another facility fell into four categories of responses:

1. The location or eligibility of the EACH, and/or its willingness to participate (for example, the EACH was either "convenient," was the only eligible hospital in the area, or was in close proximity and willing to participate) (9);
2. An existing formalized relationship of some type, such as an alliance or consortium (3);
3. An existing relationship of some type (a transfer relationship or simply a "working relationship") but without mention of formal ties (5); and
4. The RPCH considered then chose the EACH over other alternatives (for example, "based on their response to our plan request," or because the EACH's interest as well as location provided the best opportunity to participate) (3).

The two most frequent reasons EACH grantees reported forming the networks were the desire to continue (5) or enhance (5) access to care for RPCH area residents, and the desire to assist the RPCH facility itself (8). Fewer EACH respondents (6) reported that benefits to themselves such as increased referrals or revenue were a primary reason for forming the network. Many EACH grantees reported more than one reason, and so were counted in several of the following other categories:

- To obtain revenue, competitive advantage, or economic advantage (4). Three of these respondents cited grant funds, increased referrals, economic advantage for the county from service consolidation, and/or financial benefits of EACH reimbursement due to a high proportion of Medicare patients. One stated that a primary reason it participated was to increase its market share in the RPCH grantee's area relative to a competitor.

²⁸These counts are from the first-year monitoring reports for EACH grantees.

²⁹This is further discussed in our July report on states' early implementation of the program (Felt and Wright 1992).

- To improve quality of care in the RPCHs, or for RPCH area residents (3).
- To further the EACH's mission (3). The missions at these hospitals were to be a regional medical center, to provide for the medically underserved, and to respond to surrounding community needs and changes in the health care environment.
- To eliminate duplication of services (2).
- To share resources/staff/technology (2).

The potential for EACHs to obtain increased revenue beyond the grant funds under the program deserves more explanation. An automatic benefit from becoming a certified EACH is the option of cost-based reimbursement under Medicare as a sole community hospital (SCH). EACHs with relatively high costs will benefit directly since their 1982 or 1987 costs will form the basis of Medicare payment depending on which base year is most advantageous. In addition, SCH status allows, in certain circumstances, Medicare to pay for capital costs on a pass-through basis, rather than as part of the PPS rate. EACHs with recent large capital projects would therefore also benefit. While not a guaranteed benefit of participation, EACHs may also benefit from increased revenue from all payers through increased referrals and transfers from the RPCH or physicians associated with the RPCH. In theory, stronger ties with RPCH physicians will lead to patients receiving care at the EACH who previously would have received care at other hospitals.

Competitive forces were important in network formation. We learned from our site visits that in forming their networks, RPCH grantees had sometimes "skipped" over a facility that was geographically closer, and/or on the surface seemed at least equally suitable to be an EACH, because of a history of competition or a sense that the hospital was "predatory" in nature. For example, one RPCH grantee administrator reported obtaining a confidential copy of a board meeting agenda from a large hospital that wanted to join with his facility in an EACH/RPCH network; the agenda outlined a series of goals that called for progressing from an EACH/RPCH network at step one to taking over the RPCH at step four. Not surprisingly, the administrator decided to join with another potential EACH. The result of these "skips" is that the networks that are formed may be more likely to persist

because they do not have to overcome a history of mistrust, but such networks may not create the type of regional system that a health planner might expect. Alternatively, such networks may not persist because they do not make sense geographically.

In the areas we visited, the tasks and issues identified for network formation and development were different from those related to RPCH conversion. As a result, the two types of activities were often not proceeding in tandem. In several instances network development was progressing, at the same time RPCH planning was largely delayed pending final regulations. For example, one network had employed a full-time coordinator to examine current patterns of service delivery and areas where the network members and communities could benefit by working together. However, little attention had been given to RPCH conversion. A similar situation was found in another network, which had developed fairly extensive plans for the network but had not yet seriously visited the issue of RPCH conversion. In a third area that was progressing in planning its network, one of the RPCH grantees was actively working towards conversion to an RPCH, but the other was not. In a fourth, however, the reverse was true--the EACH was assisting the RPCH grantee in assessing how and whether to convert to an RPCH, while network plans had not yet been developed.

Two lessons are worth noting from our site visits on the formation of networks that are attempting to meet the spirit of the network concept:

- In the early stages, a facilitator who is independent from the member facilities often plays an important, even critical role in shaping the network. This has been a fairly time-intensive role, played by state staff or a consultant.
- Network formation and conversion to RPCHs and EACHs are viewed in most places as separate activities, and are generally proceeding on different tracks. Several networks we visited were making some progress, whereas the uncertainties about the program generally had delayed much attention to RPCH conversion.

2. Types of Networks

Program networks tend to be two-member, hospital-focused networks with an average of 44 road miles between the EACH and RPCH grantee. To date, they have tended to be informal in their structure, and generally have not yet developed a strong sense of purpose or long-term commitment. However, there is substantial variation among networks in their structure, process, and purpose; these variations are described below since they may ultimately be associated with networks' success. Note that the characteristics of networks described here are initial characteristics; network structure, process, and purpose are all dynamic elements which may change over the life of the program.

a. Structure

Network structures are the framework within which networks can accomplish their goals. Structural characteristics include distance between members, number and types of members, and the formality of structure.

Distance Between Members. The average distance between the EACH and RPCH grantees is 44 road miles,³⁰ and for 32 percent of the EACH/RPCH pairs the distance was 60 miles or more.³¹ However, in some cases the grantees are quite proximate. Twenty-nine percent of RPCH grantees were 20 miles or less from the EACH. In the extreme, one network's EACH and RPCH grantees are in the same town.

Number of RPCH Grantees and Number and Types of Other Members. Most of the grantee networks now in the program (21 of 30) have one EACH, one RPCH, and no other members. The experience of networks that have more members now is of special interest, however, since most state program staff were hoping to encourage expansion of the networks to other members in the future. Current exceptions to the one-EACH, one-RPCH, no-member norm include the following:

³⁰Note that this distance is considerably greater than the 25-mile average distance of 1991 RPCH grantees to the nearest neighboring hospital.

³¹In discussing distance, it is most natural to talk in terms of EACH/RPCH pairs rather than networks, since a network may have one RPCH nearby and another quite distant from it.

- The federally funded network in New York includes an EACH and two RPCH grantees, and ten other health care organizations or interests in the region. These include long-term care, EMS, physicians, community residents, the health department, the county social services department, and the Health Systems Agency of Western New York. The three hospitals have been the core for planning the network at its earliest stages. This network began development with state funds under New York's Network Development Program prior to receiving a federal grant. (Chapter II, page 39 briefly discussed this state program).
- Two networks in North Carolina have an additional member hospital that is not an EACH or RPCH grantee. In one case, the network was denied funding in 1991 because the hospital that was proposed to be an EACH grantee was just short of meeting the mileage requirement for distance from a Rural Referral Center; to obtain 1992 funding, the network added a third hospital, eligible for EACH status.³² In a second North Carolina network, an urban tertiary hospital is a third member of the network, and will be providing much of the administrative support one would normally expect from an EACH grantee.³³
- Kansas has several multi-hospital networks, only one of which was actively planning development in early 1993.

Formality of the Network. Networks are defined in the legislation and draft regulations by the types of facilities that must be members, by the types of agreements that must be in place, and the services that must be made available to the RPCH community. As long as a network meets these membership and functional requirements, no particular network structure is encouraged or imposed. As a result, we found the networks we visited, which were the networks states had cited as farthest along in their progress, were split between informal and more formal network structures:

- Three were operating through as-needed informal communications between key personnel.
- Five were more formal, with either periodic meetings of all of the network members and a designated network coordinator, or with a formal network board with committees and a plan for leadership and decision making.

³²According to state staff, the hospital added as an EACH grantee has been quite active and the arrangement is working well.

³³The EACH grantee is not in a position to provide such support, in part because it is also a small rural hospital, and has experienced severe financial difficulties itself.

In the three informal networks, the reasons for not implementing a more formal network included the long distance between the EACH and RPCH, anti-EACH community sentiment in the RPCH community, and a decision to wait for final regulations before network structure is discussed.

b. Process

The process characteristics of a network describe *how* network business is accomplished. The important process characteristics of leadership, the network decision-making process, and the day-to-day mechanism for coordinating network activities are discussed below.

Leadership. Leadership was viewed by states as a key variable determining networks' progress. The networks we visited varied in strength and location of leadership. While it is not clear that the current location of leadership in the EACH or RPCH makes a difference, it is clear that commitment to developing the network is essential in its early stages. In some areas, administrative turnover diminished leadership ability, and this was viewed as a major setback.

We characterized initial leadership as strong in six of the eight networks we visited. In fact, many of the networks we visited were operating with informal communications, but informality does not necessarily mean lack of strong leadership. For example, in each of two networks the network leader was a vice president at the EACH. In one, she worked to build trust among network members and other potential RPCH sites, relying on a gradual process of confidence-building. In the other, she had initially organized meetings with potentially interested small hospitals in the region, managed the bid process to obtain a nationally-known consultant to perform community needs assessment and feasibility studies for the network, and worked with the consultant and RPCH grantee administrators to develop a viable plan for moving forward (involving the conversion of one grantee to a RPCH and making different types of strategic changes at the other).

The location of the initial leadership also varied:

- Several networks were led by a high-level manager at the EACH.

- In one network, the RPCH grantee administrator provided the initial leadership for the network. Because his hospital had to close, he was motivated to create the network so the hospital could reopen as a viable health service provider.
- In another network, leadership was provided by a high-level manager at a third member of the network (an urban tertiary hospital) at the request of the RPCH grantee county commissioners. This took place after a state staff member acted as a catalyst to set up the network.

Although most networks are still in their earliest planning and development stages, one network's plans illustrate that the location of initial and long-term leadership may appropriately differ. In this example, although the RPCH grantee administrator provided the initial leadership, all involved agreed that network functions should be centered at the EACH due to its greater administrative and service capabilities, and that the network board chair position should rotate annually among the "senior administrative representatives" from the three network hospitals (now the administrators).

In the course of our discussions with state staff, as well as on one of our case study network visits, the issue of how much leadership is enough and how much is too much arose. An example was given of two networks (neither federally funded), one of which has had problems because of a pushy, opinionated hospital administrator trying to dominate the network plans, and the other, which had problems because there was no leadership, despite numerous potential network members. While we did not see either problem in our case study networks, one key EACH respondent was concerned about the time it took to build consensus among network members, and wondered whether stronger leadership would be appropriate or be perceived as domineering. The network went to the length of using an outside consultant to facilitate meetings to ensure neutrality.

Day-to-Day Network Coordination. Four of our case study networks had decided to employ a network coordinator (other than a high-level person at the EACH or RPCH grantee). Three had hired a coordinator, and a fourth had determined it would hire someone but the individual had not yet been selected. The other networks we visited either had designated a coordinator at the EACH or RPCH (or in one case at both), or network activities were being planned informally between the

EACH and RPCH administrators. It will be important to monitor network experience under these different coordination models.

One issue is where the day-to-day EACH coordinator should fit in the EACH's organizational hierarchy. Senior level involvement at the EACH seems to work best at least at this early stage of the program. Where the coordinator was a member of the senior administrative team at the EACH (such as a vice president), coordination seemed to work well from both the EACH and RPCH perspective. Also, in the network where the EACH coordinator is at a lower level, but a senior level person is also involved, coordination was cited as effective. In two networks where the day-to-day coordinators were at a lower level and there was less involvement among senior staff, the RPCH respondents felt coordination was less effective, since the coordinator did not have the power to make most decisions or motivate others at the EACH, creating delays.

c. Purpose

EACH and RPCH grantees formed their networks with broad goals in mind (for example, to help maintain access to care in the RPCH area or to further the EACH's mission as a regional hospital). Clearly, a planning phase is needed to develop strategies to meet these goals. The breadth of initial goals and uncertainty about the final shape of the program are likely reasons many of the network activities reported in facility first-year progress reports were interactions with other network members and/or consultants. Because the progress report data does not reveal well how far the networks have progressed, we summarized the first-year network activities and plans of each of the case study networks in Table III.2. Based on the experiences of the study networks and progress report data, some of the more common accomplishments during the first year were:

- Establishing and convening network boards, councils, or advisory groups
- Planning or beginning to extend continuing education from EACH to RPCH staff (this was not as common among our case study hospitals as it was in other program networks)

TABLE III.2

MAJOR FIRST-YEAR ACTIVITIES
IN CASE STUDY NETWORKS

Activities	Networks			
	1	2	3	4
Quality Assurance	<ul style="list-style-type: none"> • Peer review for RPCH • Administrative consulting to assist RPCH with state inspector and PRO "hassles" 	<ul style="list-style-type: none"> • Developing QA plan to integrate RPCH into EACH QA system 	<ul style="list-style-type: none"> • QA program developed to track RPCH transfers 	
Physician/Staff Recruitment or Coverage	<ul style="list-style-type: none"> • Relief staffing for RPCH lab techs • Locum tenums coverage arranged • Physician recruited to RPCH 			
Communications/Computers	<ul style="list-style-type: none"> • Teleradiology 		<ul style="list-style-type: none"> • Fax machines in ERs at both EACH and RPCH 	
Financial Assistance or Gifts	<ul style="list-style-type: none"> • Older ambulance given to RPCH by EACH • Equipment provided by EACH for new physician recruit in RPCH 		<ul style="list-style-type: none"> • Group purchasing discounts made available to RPCH 	
Establishing and Convening Network			<ul style="list-style-type: none"> • Established network planning board • Designation of and meetings of EACH and RPCH coordinators 	<ul style="list-style-type: none"> • Meetings between network coordinator and RPCH CEOs
Negotiating Agreements and Contracts			<ul style="list-style-type: none"> • Transfer agreement signed • Contracts negotiated for EACH provision of dietary consultation and radiology to RPCH • Drafted preliminary network agreement 	<ul style="list-style-type: none"> • Specified, competed, and awarded contract for network planning study
Planning Future Joint Efforts	<ul style="list-style-type: none"> • Greater personnel and management sharing • Involve other hospitals in the network 	<ul style="list-style-type: none"> • Joint efforts at EMS planning • Will start a network board in 1993 that includes non-hospital members 		<ul style="list-style-type: none"> • Developed workplan with next steps to implementation, key people, and timelines
Other	<ul style="list-style-type: none"> • Continuing medical education by EACH • Joint meetings of administrative and medical staff 			

TABLE III.2 (continued)

Activities	Networks			
	5	6	7	8 ^a
Physician/Staff Recruitment or Coverage			<ul style="list-style-type: none"> • Extensive physician recruiting for RPCH • Recruiting other RPCH staff to prepare for reopening 	
Communications/Computers	<ul style="list-style-type: none"> • Teleradiology • Exploring other telemedicine 		<ul style="list-style-type: none"> • Selected computer system compatible for all network members 	
Financial Assistance or Gifts			<ul style="list-style-type: none"> • Much staff time donated by tertiary support hospital to plan for reopening RPCH 	
Establishing and Convening Network	<ul style="list-style-type: none"> • Established network council and met monthly • Established network community advisory council • Hired full-time network coordinator 	<ul style="list-style-type: none"> • Established network including 13 member healthcare organizations • Set up network structure--committees, rotating chair, decision-making rules 	<ul style="list-style-type: none"> • Hired former county manager as RPCH business manager • EACH periodically talks to RPCH and other providers to keep network idea alive 	
Negotiating Agreements and Contracts			<ul style="list-style-type: none"> • Negotiated contract between county and support (tertiary) hospital network member to reopen RPCH 	
Planning Future Joint Efforts	<ul style="list-style-type: none"> • Surveyed members on EMS needs • Developed matrix of existing services to identify areas for cooperation 	<ul style="list-style-type: none"> • Developed operational plans for formal network including efforts to improve EMS, create a non-emergency transportation system, improve telecommunications links, provide privileges to physicians, recruit staff, and conduct community outreach 	<ul style="list-style-type: none"> • Extensive links planned between RPCH and support hospital in areas such as QA, billing system, recruitment, and other administrative functions; EACH will provide mainly clinical rather than administrative support 	<ul style="list-style-type: none"> • Plans to develop transfer agreements and protocols, and explore interactive video concept and teleradiology
Other	<ul style="list-style-type: none"> • Joint community education 		<ul style="list-style-type: none"> • Completed (minor) physical improvements to RPCH 	

^aThis network, while enthusiastic about networking, planned to wait for final regulations and the RPCH's decision to participate before beginning formal network activities.

- Providing or arranging coverage for RPCH physicians or staff
- Discussing ideas for future activity, especially in the area of staff sharing and EMS improvements
- Establishing teleradiology or exploring other efforts to speed or increase the volume of communications between EACH and RPCH

As Table III.2 shows, the aggressiveness with which the EACH and RPCH grantees are pursuing networks varies. Note that our case study networks were selected to be those farthest along (either in terms of network activities, RPCH conversion activities, or both). Therefore, the table probably reflects more progress and planning than would be true for the program as a whole.³⁴

3. Challenges

Participants were asked to list things that had helped and hindered their progress to date. The list of hindrances outnumbered the facilitating factors by three to one for the 1991 RPCH grantees and by five to one for the EACH grantees. Five major challenges are discussed, based on both progress reports and site visits: establishing trust, synchronizing priorities, integrating medical staff, orienting EACH or support hospital staff toward primary care in smaller communities, and bridging community differences.

a. Establishing Trust

By far the most difficult and fundamental challenge in forming new networks was establishing trust among members who had previously had little contact with each other. We heard often and from many sources that this trust-building process takes time, and most often involved developing personal rapport between administrators.

³⁴The items in Table III.2 were developed from site visit reports such that the categories listed were developed after-the-fact rather than systematically explored with a survey. Therefore, network activities listed should be interpreted as indicative but not necessarily complete. For example, two networks are listed as implementing teleradiology, however, other networks may have done so as well but not told us about it because they did not consider teleradiology a major network activity.

The events or actions that had slowed or threatened the trust-building process were:

- *Administrative Turnover at the RPCH Grantee.* One of the RPCH grantees we visited has had five administrators since the start of the project. This was also cited by state staff as a problem at networks not selected for case studies.
- *Poor Communication Early on between EACH and RPCH Medical Staff.* At an early meeting, the RPCH medical staff sensed that the EACH medical staff were skeptical of their competence, and thus were reluctant to even consider working with the EACH.
- *Working to Include Additional Network Members with Different Agendas.* One network includes two non-RPCH members who have disrupted network progress due to their different agendas. In another, including EMS representatives has made progress difficult because of conflicts between EMS and hospital representatives (even within the same hospital).
- *Doubts about the Motives of the EACH.* Although we did not see this in our case study networks--which were those that had made the most progress--the sense by RPCH grantees that their EACHs were motivated by a desire to take them over was a factor inhibiting the progress of some program networks, according to state staff.
- *Decision-Making by One Member without Consultation on Matters Affecting Others.* This concerned cancelling an agreement with a physician who had been recruited to the RPCH area, but whom the member found unreliable and summarily dismissed.
- *Presenting Contract Changes as More Minor Than They Were upon Greater Scrutiny.* The problem was not so much the proposed changes as the perception that they were presented in an underhanded manner.

In the last two examples, the network recovered from these problems because (1) there had been over a year of fairly intensive negotiations prior to these problems, so that with persuasion they could be viewed as aberrations rather than the norm, and (2) the state program director flew in and met with the involved parties to help facilitate getting back on track. Most of the other networks in the examples are still struggling with these challenges.

In two of the networks we visited, trust had already been built through previous efforts to work together. This greatly facilitated network planning.

- One began in 1970 to meet monthly with 16 small rural hospitals in the region, incorporated the group, then merged with another council. The program network was formed more recently by a subset of the hospitals in the council, using a federal Rural Health Care Transition grant. Participation in the EACH/RPCH program is strengthening that network and expanding its activities.
- Another had previously made a serious attempt to incorporate a network entity that included the EACH and two RPCH grantees, but abandoned this after examining the regulatory barriers and potential legal liability issues at that time. Also, the EACH and one of the RPCH grantees had used a federal Rural Outreach Grant to jointly create and operate a primary care clinic at the RPCH grantee.

b. Synchronizing Priorities

In some networks the RPCH grantee would like the EACH grantee to do more or do it faster, and in others the EACH grantee is somewhat frustrated by slowness or lack of leadership at the RPCH. These difficulties can be broadly considered as grantee priorities that are not synchronized.

In most cases, at the time the network was formed the RPCH grantee's motivation was to find a way to survive as a small hospital or to reopen as a new type of facility--the network was viewed as a means to do that. Where the RPCH would like the EACH grantee to do more or do it faster, the RPCH grantee views assistance from the EACH as important or essential to its hopes for surviving. The EACH, while it may be interested in participating with the RPCH, is not engaged in a struggle for survival (with one exception we know of) and therefore may not have the same sense of urgency in assisting the RPCH grantee.

For example, in one network, the EACH grantee's CEO fully supports the network, and believes it is vital to the EACH's future. However, according to the RPCH, lower-level staff at the EACH who are crucial to work out implementation plans have not viewed the project with the same priority. This may be due in part to major operational changes being undertaken at the EACH. One key EACH staff member acknowledged that human resources are hard to come by and an important issue for the network--the issue of "who will do what" to implement the network was difficult and becoming more important.

In other cases, however, staff at the EACH grantee were somewhat frustrated with slowness or lack of cooperation at the RPCH grantee. This is variously attributed to difficulties in trust-building due to frequent changes in administrators, improved financial status at the RPCH grantee (reducing its interest in the program), lack of leadership at the RPCH grantee, and RPCH grantees' attention to facility-specific issues at the expense of networking. In another case, the EACH grantee used an external facilitator rather than an employee as a key player to shape the network, to avoid the impression of dominating network development. However, key EACH respondents had become frustrated by the very slow progress from numerous meetings between network hospital administrators.

c. Integrating Medical Staff

Our network site visits, in conjunction with our discussions with state staff, pointed to the importance of medical staff preferences and cooperation in networking--particularly in the RPCH grantees, but also in the EACH grantees. In six of the ten EACH/RPCH pairs we visited, the RPCH grantee physicians already worked routinely with the EACH grantee physicians (at least through routine transfers, and in one case by attending each others' medical staff meetings) and there were no medical staff problems. In three pairs, however, medical staff issues have been an important difficulty in implementing the network. Also, problems with individual transfer cases have been an irritant to several network relationships.

In the most severe case, the RPCH grantee is staffed by physician assistants (PAs) who are supervised by physicians located 70 miles away, not at the EACH grantee. The RPCH grantee PAs admit and discharge patients, with the supervising physicians initially visiting the patient within 24 hours, then again every 48 hours. The PAs strongly objected to changing their supervision to the EACH physicians, believing that if the change were made, they would not be permitted to maintain

their current scope of practice. Problems in receiving permission to transfer two cases to the EACH grantee, after a transfer agreement was signed, exacerbated the problem.³⁵

In three other instances where the EACH and RPCH have not previously had close ties, the RPCH appears vulnerable to losing a physician. In one case, a physician is strongly opposed to participation in the program. If it implements the network and converts to a RPCH, this RPCH grantee may lose that physician. A second RPCH grantee only has one physician, who has previously had stronger clinical ties to another (non-EACH) facility. Following a recent incident regarding a patient transfer, a physician on the EACH staff accused the RPCH grantee of "dumping" and the involved RPCH physician declared he would no longer refer cardiology patients to the EACH. In the third facility, there has been almost no prior relationship with the EACH grantee, and the hospital's one physician and administrator reportedly disagree on many basic issues including program participation. In two of these cases, the RPCH physician was new, so that the problem of staff turnover for program implementation is not limited to hospital administrators.

In a fifth EACH/RPCH pair where medical staff issues were not generally a problem, a transfer agreement was hoped for as a mechanism for receiving "automatic" permission to transfer to the EACH when appropriate. A recent dispute over a transfer case had irritated the RPCH grantee at the time of our site visit, although the network relationship as a whole was quite strong and not likely to suffer.

d. Orienting EACH or Support Hospital Staff Toward Primary Care in Smaller Communities

This issue arose in three networks. EACH or support hospital staff at the department level who had not previously had contact with small rural communities or entities like the RPCH grantees reportedly did not understand at first why the project is important and why a different style of service provision may be appropriate at a RPCH. This has slowed progress and/or made network planning

³⁵Since our site visit, we have heard that these problems were resolved.

more difficult in these networks. One of the EACH or support hospitals involved has taken steps to educate the staff by bringing in selected speakers on network-related topics.

e. Bridging Community Differences

In one network we visited and in others we learned about from state staff, the historical, cultural, and political differences between EACH and RPCH counties made it difficult to create ties between the facilities. For example, the differences between the EACH and RPCH counties of one network were described as stemming from a historic high school basketball rivalry, different positions taken during the Civil War, and blame assigned to the EACH county for closure of the RPCH facility. Members agreed that these differences were significant and suggested an informal and loose network structure as opposed to a more prescribed arrangement. In another pair of grantee counties (not in our case studies), the schism was attributed to partisan politics--Republican control in one county and Democratic control in the other. In addition to some problems among existing program networks, rivalries between communities (as well as facilities) was a factor resulting in EACH/RPCH pairings that on a map appear less than ideal.

4. Fragility of the New Networks

We found the program networks to be fragile and unstable. Although our goal was to visit those networks that had made the most progress and were most likely to become designated EACHs and RPCHs, state staff were very uncomfortable in making firm predictions. We appreciated their uncertainty after learning of several instances in our case study group of sudden turns in the network relationships. In one network, physicians who were not supportive of the EACH/RPCH linkage became supportive when they were visited by a physician from the state Office of Rural Health who is also affiliated with a nearby medical school. In another network, the unexpected retirement of the RPCH's senior physician, who opposed the program, opened the door for the RPCH grantee to move

toward conversion. In other cases, however, sudden turnover of administrators or key local advocates or perceived breaches of trust set back network development.

C. LIMITED PROGRESS IN RPCH GRANTEE PLANNING FOR CONVERSION

RPCH grantees generally have not progressed much toward becoming designated RPCHs. Instead, their activities to date generally have been of five major types: (1) network development, (2) communications systems procurement, (3) EMS enhancements, (4) other equipment purchases or capital enhancements, and (5) community education.³⁶ Table III.3 provides some examples of each of the first four types of activities from 1991 grantees' progress reports.

1. Likelihood of Conversion

A few RPCH grantees will likely apply for RPCH certification as soon as a certification process is in place, however a majority are much less certain about their intention to become a certified RPCH. Given the current program, 36 percent (5) of the fourteen 1991 RPCH grantees who were spending grant funds said there was a high probability or near certainty that they would become a certified RPCH over the next two years. Half gave this option a 50-50 probability, while two grantees reported a low or near zero probability of conversion. Five others were not spending grant funds and reported a low probability of conversion.

Although all of the 1991 grantees who are spending grant funds have negative operating margins, which on average are severe, the grantees who report they are likely to convert to RPCHs under the current program are those with the lowest average daily census, as shown in Table III.4. We believe that these decisions are likely to change, however, since between the time the progress report was completed and the time of our site visit (approximately a month), one grantee that reported low

³⁶The progress report question asked RPCH grantees to list (1) the major activities undertaken as part of the EACH/RPCH program, whether or not they were funded by the grant, and (2) what other steps the facility had taken towards becoming a designated RPCH. Community education efforts were described in general terms, such as multiple speaking engagements in the community. Few specific activities were ascribed to this general area.

TABLE III.3
EXAMPLES OF ACTIVITIES UNDERTAKEN
BY RPCH GRANTEES

Networking
Frequent communication with EACH coordinator to discuss progress, plan future activity, and identify roles
Medical records department merged with EACH grantee
Chose members for Advisory Board for network and held first meeting
Purchased computers and printers to form networking capabilities with the EACH for medical records, transfers, lab, pharmacy, etc.
Hired consultant to determine the best way to integrate services (such as director of nursing, medical records, EMS, lab, and x-ray) in the network
Began forming a committee to plan EACH-RPCH activities
Network planning study by consultant nearly complete
Communications Systems
Purchased computer hardware and software, fax machines, and copiers (many grantees)
Selected and installed a management information system to improve ability to track patient data and accounts and improved insurance claims submission
Telenetwork system established between physician office, medical records department, and nurses station
Purchased and installed a cardiac monitor with viewing interpretations between RPCH and EACH
Considered a share patient data system with EACH
Began process of upgrading computer system to automate medical records
EMS Enhancements
New ambulance fully equipped to accommodate paramedic use
Books and tuition provided for students taking EMS classes
Increased the size of the EMS team and updated ambulance supplies
Cellular phones installed in two ambulances to provide faster communication between ambulance and hospital
Added an ambulance (five grantees), purchased ambulance communications equipment (e.g., radios) and/or patient care equipment (e.g., I.V. pump) (many grantees)

TABLE III.3 (continued)

Other Equipment Purchases or Capital Enhancements	
Phone and fax lines installed	Anesthesia machine
ER Table	Cell-dyn analyzer (lab)
Portable X-ray machine	Coagulation machine (lab)
Pulse oximeter	Colonoscope
Other	
QA - EACH/RPCH coordinators and RPCH medical records supervisor preparing quality assurance program for possible state model for EACH/RPCH networks, with special emphasis on transfer and discharge planning issues.	
Outpatient clinic - outpatient clinic established in an unused portion of the hospital. Physician recruited and supported for first year.	
Recruitment of primary care physicians.	
Operations planning - business manager hired, staffing plan developed, staff candidates screened and interviewed, purchasing procedures established, business and clerical supplies specified, waste removal preparations made.	

NOTE: These were selected from 1991 RPCH grantee progress reports to show the types of efforts underway. This is not a complete list, and generally reports activities that were more fully explained by the facilities.

TABLE III.4
SELECTED CHARACTERISTICS OF RPCH GRANTEES
BY PROBABILITY OF CONVERSION

Self-Reported Probability of Conversion to RPCH Within Two Years	Number of Responding Grantees	Mean Beds Available	Mean Average Daily Census	Mean Operating Margin ^a
High	5	14	2.7	-27.5%
Moderate	7	24	6.8	-27.1%
Low	2	23	4.6	-23.8%
Not Spending Grant Funds ^b	5	31	14.3	-10.4%

SOURCE: Probability of conversion is self-reported through facility first-year monitoring reports (October 1992). Data on characteristics are from hospital cost reports for their cost reporting period beginning during fiscal year 1990.

^aOperating margin is calculated (net patient revenue - operating costs)/net patient revenue.

^bOne hospital that has since closed was excluded from these figures because it was atypical, with an operating margin of -86.7 percent.

probability of conversion thought his facility might be the first RPCH in the nation once a certification process was established. (The results of the grant-funded planning study had persuaded him of the program's advantages.)

2. Different Local Models of a RPCH

Mirroring the national and state-level debate about what role a RPCH should play, localities are developing different models that vary according to the relative importance of inpatient care, a 24-hour emergency room, ambulatory care, and long term care to the hospital's future mission. Communities are considering at least two distinctive models. First, "mini hospitals" hope to keep filling their present role in the region's health care delivery. This was the most popular model among RPCH grantees we visited. Except for limited census, case-mix, and length of stay, the organization of care will not be radically restructured. Network ties with the EACH, however, are hoped to improve the availability of specialty care, supervision of mid-level practitioners, and quality assurance.

A second model, "the primary care center," emphasizes ambulatory primary care. Primary care centers do not see their inpatient beds used extensively and do not wish to offer extensive emergency services. They will resemble a rural health clinic in emphasis.

Other RPCH grantees are not adopting either of these models but vary in the type of facility they hope to be in the future (whether or not they decide to formally convert to a RPCH) according to several key dimensions:

- ***Importance of Inpatient Care to Hospital's Future Mission.*** Most current grantees view continued provision of inpatient care for less complex diagnoses as an important and appropriate function--hence their concern regarding the stringency of length-of-stay and bed limitations under the current program. However, one grantee we visited (a closed hospital) was not interested in using inpatient beds as a RPCH unless required.
- ***Importance of Maintaining a 24-hour Emergency Room.*** Most grantees planned to retain their emergency room service at least at its current level (43 percent of the 1991 grantees planned to use the program to expand this service). The two closed hospitals we visited that planned to reopen as RPCHs did not plan to provide full

ER care; however, both hoped to be open extended hours. One grantee was struggling with how much ER service to provide.

- ***Degree of Re-focusing on Outpatient Services.*** Almost all grantees (93 percent) report planning some expansion of their outpatient services, for example through equipment purchases or adding visiting physician specialists. However, only two of those we visited had developed major plans to focus on outpatient care and expand primary care services to the community by bringing some area physicians' practices into the facility, both physically and financially, and recruiting other primary care and mid-level practitioners.
- ***Degree of Focus on Long-Term Care or Services to Elderly.*** A few grantees we visited already were heavily focused on long-term care, and planned to continue this focus as a RPCH--in their view the RPCH would allow them to continue providing health services to their long-term care populations and would support the viability of their long-term care services. Two we visited also are expanding these services: one planned to construct an assisted living facility and one planned to add five long-term care beds and offer adult day care. We are also aware that one grantee we did not visit has been working for several years to make structural and other changes needed to reopen as a senior services center, with multiple levels of long-term care and other health services for the elderly.

It appears that the RPCHs that emerge under the program will vary in their services and mission. This may reflect varying community needs and the flexibility of the program, however it also will make drawing conclusions about RPCH viability and program impact more difficult.

3. Conversion Issues in Case Study Networks

The RPCH grantees we visited generally had not been very active in planning or moving toward conversion, an expected finding given their uncertainty about whether or not to convert to a RPCH. However, for many of these facilities, conversion may be a relatively simple process. That is, a majority already are operating essentially as limited-service hospitals and believe they would need only to make a few policy changes to comply with RPCH requirements. The major issues involved in conversion for these facilities and for the few that are planning major operational changes are: (1) uncertainty about final program requirements and reimbursement, (2) community and board sensitivities, and (3) medical staff issues.

a. Uncertainty about Final Program Requirements

The lack of federal regulations and uncertainty about the limits that would be imposed by final regulations were cited as a problem for many EACH and RPCH respondents.³⁷ In our case study networks, the concerns, which most often focused on the 72-hour limit on length of stay, and to a lesser degree on the acute-care bed limit of six, stemmed from (1) physician opposition, at least in part due to the belief that the facility could safely and effectively continue to provide more inpatient care than the limits imply and that such continuation is in the best interest of the community, and (2) desire to remain a "full service" hospital.³⁸ As noted above, however, we found that the two closed hospitals we visited would like to reopen as soon as possible as RPCHs, regardless of the final requirements. A few other hospitals would also likely seek RPCH designation regardless of the final requirements.

Physician opposition to the 72-hour length of stay requirement was due primarily to their position that many patients who could continue to be treated at the RPCH grantee, as they are now, would have to go elsewhere for inpatient care. Generally, clinical personnel argued that the length of stay was difficult to estimate on admission, that transfer for uncomplicated but convalescing patients would be unwise, that discharge planning for low-income elderly can at times be difficult, and that isolation imposed delays that a rigid limit did not recognize. In particular, if a patient is admitted in the afternoon and has specimens drawn, there can be significant delays in delivering the specimens as a result of courier service schedules. Inclement weather exacerbates the problem; in two of the RPCH grantees visited, the roads to the EACH had been closed at some point during the previous week.

We found the desire to be a hospital and not a "band-aid station" or "rural health clinic with beds" to be very strong among a majority of the grantees we visited. While some were willing to give

³⁷More specifically, 6 of 11 RPCH respondents who listed some difficulties in implementing their program activities listed this as a problem; 8 of 11 EACH respondents did so.

³⁸Some nurses and physician assistants we interviewed were also opposed to the utilization limits, sometimes more vehemently than the physicians.

up some of their current inpatient utilization and beds to improve their financial status, at the time of our visits they indicated strong resistance to agreeing to the 72-hour length-of-stay requirement because they believed this would result in most of their patients being admitted elsewhere. This went beyond concern about physician opposition; they felt the rule threatened the facility's sense of identity--these facilities were not, or not yet, willing to re-think their basic mission.

b. Community and Board Sensitivities

The grantees we visited had varying experiences with communicating the program to their board and the public, and this was viewed as an important issue for the future. The difficult experiences with public communication were as follows:

- A RPCH coordinator had talked to local civic groups about the program but stopped these discussions because he found it difficult to explain the program to the satisfaction of the audiences.
- A local newspaper article on the program (not discussed with the hospital in advance) portrayed the program as transforming the hospital into a band-aid station, which seriously jeopardized local support and necessitated a publicity effort by the hospital administrator for damage control.
- Community focus groups in two grantee communities (both in the same network and conducted by the same consultant) found that participants favored the concept but opposed the program due to its restrictions.

On the positive side, a RPCH grantee in one state was required to implement a broad-based fund raising drive to receive matching grant funds from the state. The drive was believed to have worked well to educate the community about the plans to reopen the local hospital as a RPCH. The program was likely viewed more favorably since the RPCH grantee is currently a closed hospital--no access to inpatient care was being sacrificed to convert.

Board support for the program was viewed as critical, and the RPCH grantee administrators we interviewed often referred to changes their boards would and would not support. Because board members often are leaders in the community who are not health care experts, board support and

community support may be related. The varying experiences with board involvement can be summarized as follows:

- In one area, the board was not much involved during the first year while a feasibility study was underway; once the feasibility and options for becoming a RPCH were outlined by a consultant, the consultant was asked (as a neutral party) to present the information to the board to obtain its support.
- In the two grantees that were closed hospitals, the boards were very supportive of the program as a way to provide as much health care as feasible to the community.
- In several grantees, community advisory councils and joint EACH/RPCH boards were very committed to the broad benefits of networking--and were less committed to the narrower EACH/RPCH concept.

c. Medical Staff Issues

Grantees' medical staff, whether physician(s) or mid-level practitioners or both, are the lifeblood of the facilities; their willingness to support conversion is generally viewed as necessary to proceed. The major medical staff issues we identified from our site visits were scope of practice issues and recruiting issues. Convenience was a third issue. One physician we interviewed said it would be feasible to continue to provide primary care at the RPCH, but it would no longer be convenient; since most of her patients would be at the EACH, she would likely move.

Scope of Practice Issues. In a few cases, the process of conversion to a RPCH combined with distance or requirements imposed by the EACH has the potential to significantly limit the scope of practice of RPCH medical staff members. Scope of practice issues were the strongest concern in the grantee we visited that was staffed by physician assistants (PAs). The PAs believed that conversion to a RPCH (which implied a change in their physician supervision to the EACH physicians) meant they would not be able to maintain their current scope of practice because of the more conservative views of EACH physicians on mid-level practitioners. Scope of practice issues also arise in relation to the 72-hour limit in the RPCH grantees that would be significantly reducing their inpatient volume through conversion. Although EACHs must grant RPCH physicians privileges under the proposed

regulations, it is impractical for some of the RPCH physicians to be active medical staff members at the EACHs due to the distance between facilities. Although courtesy privileges would be available, they would not often be used. In such cases, the potential for effectively reducing practitioners' scope of practice is an issue.

Recruiting Issues. Several RPCH grantees view recruiting new primary care practitioners as key to establishing a viable RPCH. In these areas, the existing community physicians reportedly were extremely busy and supported recruiting additional practitioners to the area. Each of these three RPCH grantees was hoping to recruit a mix of new physicians and mid-level practitioners. In one of these areas, the community board has decided that the grantee will not open as a RPCH until at least one new physician is recruited. Two other physicians in that area have agreed that immediately upon arrival of another physician, they will dissolve their practice and become employees of the RPCH. Two of the three areas had not begun serious recruitment efforts yet at the time of our site visit; the third had been trying but had not yet been successful.

D. ANALYSIS OF GRANT EXPENDITURES

The participating 1991 EACH and RPCH grantees spent a total of \$2.17 million in federal grant funds--30 percent of the total awarded to these facilities for the first year. The average EACH and RPCH grantee that spent any grant money spent just over half of its grant funds in the first year. However, six RPCH and six EACH grantees in a total of eight networks have so far chosen not to spend any of their funds. A majority of the funds that were spent bought communication systems, emergency transportation systems, and other equipment--primarily capital expenses. These categories accounted for 61 and 75 percent of RPCH and EACH grant expenditures, respectively. The purchases ranged from items that filled basic needs of the facility or community (predominant) to high-technology investments, such as an interactive video project to allow diagnosis of patients from a remote location through special microphone and video equipment. The grants were viewed as more important to participation by the RPCH grantees than by the EACH grantees we visited. However,

the respondents said that the ongoing payment incentives offered by Medicare and the operational requirements will be more critical than the grants in their decision on conversion to a RPCH. Without quantitative analysis, conversion costs--viewed as conversion to a facility that meets the requirements of the program--appear low since most grantees are now operating almost like a RPCH. The conversion costs for the few facilities that are making major changes to their operations--converting in the spirit of the program or reopening--appear far higher in terms of planning costs (staff or consultant time), capital costs, and recruiting costs.

1. Types of Expenditures

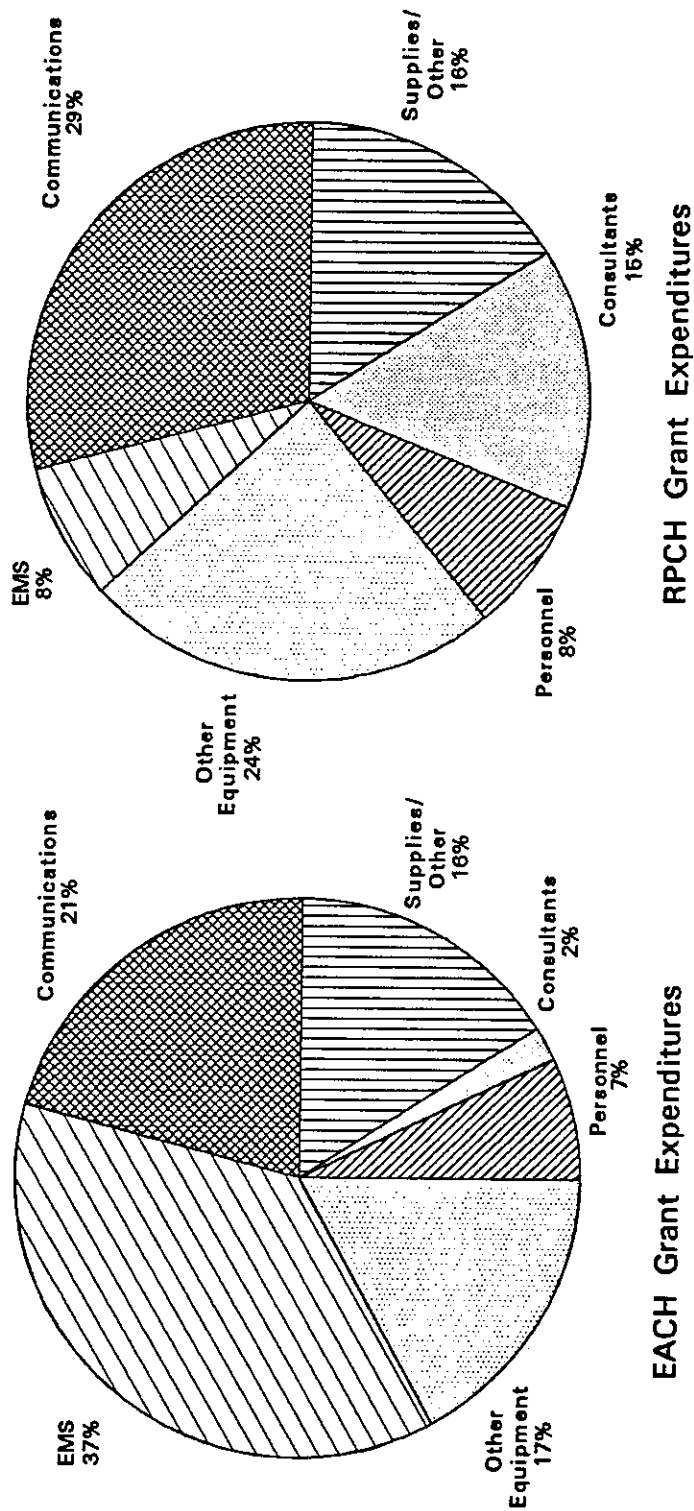
So far, the 1991 grantees have spent most of their grant funds on equipment and capital improvements relating to communications systems, EMS, or other projects. This was true for both EACH and RPCH grantees, as shown in Figure III.4, although EACH grantees tended to spend more on emergency transportation systems and less on subcontracts or consultants than RPCH grantees. Based on our site visits, much of the grant spending did not appear directly related to facility plans for conversion or program participation. We believe this was mainly due to: (1) the difficulties these facilities were having in affording the general improvements they needed, (2) the fact that most grantees had not begun thinking about conversion or networking prior to developing their grant application, and (3) the grantees' uncertainty about the program requirements and therefore their likelihood of participating as a RPCH or EACH.

2. Role of the Grants in Network Development and RPCH Conversion

In several of our case study networks, the grants appeared to play an important indirect role in network development and RPCH likelihood of conversion, even though their direct role in funding program-related activities was less clear. The reasons for their importance to RPCH grantees were:

- The grant gave hospitals a reason to meet, and in some cases to talk to EMS personnel; it broke down some barriers and started communication.

FIGURE III.4
FY 1992 EACH/RPCH GRANT EXPENDITURES



\$830,902 in total EACH expenditures
\$1,338,994 in total RPCH expenditures

- Without the grant, the grantee would not have funded a study of its future options --a study that has convinced the administrator that major re-focusing toward outpatient services is the solution to its long-term financial problems.
- Without the grant, the grantee would not have been able to fund planning for the expansion of its long-term care services--a shift it considers essential to its future viability.
- The grant gave the grantee community more leverage in negotiating with an urban tertiary hospital to reopen and manage the facility as a RPCH.
- The grant "got them started" spending money on development.

EACH grantees varied more in their assessment of the importance of the grant to their participation. For one with SCH status that had not been involved in other network efforts, it was an important factor. Another noted that although it would have participated without the grant, the grant raised the priority of network issues. Several were interested primarily for mission-related reasons, and the grant was not viewed as very important. Finally, one, although it appreciated the grant, viewed SCH status as the critical variable.

3. Conversion and Network Costs

The issue of conversion and network costs is greatly complicated by the wide variation in grantees' interpretations of the meaning of conversion and networking. Also, conversion costs will vary depending on the condition of the current RPCH facility and whether it is now open or closed.

a. RPCH Conversion Costs

As noted above, several grantees we visited are now essentially operating as RPCHs. They do not believe much change will be needed to comply with program requirements (if they decide to seek certification). The costs for RPCH grantees that are making substantial changes will vary according to the availability of suitable space in their facility and the types of changes they believe are needed to create a viable RPCH. Three examples outline the types of variation in costs.

One RPCH grantee we visited (a closed hospital) had an unusually modern, small facility (built in the late 1970s and improved since then), and so made only minor physical changes designed to improve the attractiveness and efficiency of the RPCH. For example, an existing room was creatively decorated and appropriately furnished as a pediatric waiting room, in hopes of attracting a family practitioner or other physician with an interest in pediatrics (as well as attracting families, and segregating small children from waiting adult patients). The staff time needed to plan reopening of the hospital as a clinic³⁹ was substantial, with tasks including negotiating for management of the clinic; recruiting physicians; negotiating with area physicians to dissolve their practice and become employed by the new facility; lining up service contracts (for example, for hazardous waste disposal); finding staff of all types; and selecting and installing an information system. The staff costs of these operational planning tasks were not as great as they might have been because the tertiary facility who will be managing the RPCH used its existing personnel department, operational planning staff, and other internal resources.

A second RPCH grantee is a large, older facility that is contemplating major changes to increase its outpatient services and reorganize staffing of the emergency room to avoid the currently crippling costs of ER contract coverage. Implicit in its plans are substantial recruiting and negotiation costs, since the changes would include employing local physicians at the facility; recruiting new physicians and mid-level practitioners; possibly providing home health services; and employing three paramedics. Also, the consultant who has been developing the plans will need to be retained beyond her current agreement. Structural and governance issues are very uncertain; the network participants are hopeful that the old building can be used in the near term with some modifications, but there may be a question as to its ownership if the governance and/or mission of the hospital changes (since it is now a county-owned facility). Operational planning costs are likely to be less than in the previous example

³⁹The hospital will be reopening as a clinic as an interim step to RPCH designation.

because the current plans call for retaining hospital staff and many of the existing contracts and systems could probably be retained.

A third grantee, if it decides to convert to a RPCH, will not incur much cost at all. In addition to treating less complex inpatient cases (the operating room was only used 28 times last year for inpatient surgery), this facility offers extensive primary care services through an on-site clinic staffed by three faculty and several residents from the University of Buffalo, in addition to 31 long-term care beds. It is considering the RPCH as a strategic option rather than a last resort--its finances appear stable relative to the other RPCH grantees.

b. Networking Costs

Networking costs will vary by the type of network--most network costs to date have been low, generally because network structures have been loose and their functions not well-defined. However, some networks have found they need a coordinator to plan and manage network operations (discussed above), and three EACH grantees expressed some concern about the future costliness or availability of staff resources that may be involved in maintaining the network.

Some EACH/RPCH communications linkage projects are underway, and will affect network costs. Network-related communications efforts (not all complete) included teleradiology, compatible computers, a two-way interactive video system, and a cardiac monitor with viewing and interpretation between RPCH and EACH. One network we visited was reviewing the telecommunications options available to it for feasibility and cost, and was finding it difficult to get reliable information on the potential usefulness as well as cost of the more high-tech options (such as those requiring fiberoptic cables).

E. ASSESSMENT OF LOCAL-LEVEL PROGRESS

Program-wide, local-level progress toward implementing networks and converting to RPCHs and EACHs has been fairly slow and uneven. There is substantial enthusiasm at both local and state levels about the potential that networks have to strengthen service delivery systems and improve quality. However, it is proving difficult to implement networks when preprogram ties between the member hospitals have been minimal. RPCH grantees generally have not made much progress toward conversion and have tended to spend grant funds primarily on capital (as have the EACH grantees). Nevertheless, some networks have demonstrated that significant progress is possible even under uncertain program conditions.

The chapter began with a summary of topic areas and the questions that our analysis of local-level activity was designed to answer. This section will summarize our findings for each topic area.

1. Characteristics

RPCH grantees fared poorly in general on measures of utilization and financial status at the start of the program. Relative to small, rural comparison hospitals, their operating margins were twice as low, and both inpatient and outpatient utilization were low, with their average daily census at 8 patients. Common to the case study hospitals was the sense that the current situation is untenable, although the critical and immediate problems--such as expected reductions of tax or other external funding, maintaining a 24-hour emergency room, and reaching the maximum on the hospital's line of credit--varied.

Two other conclusions are noteworthy. First, the RPCH grantees did not all fit the picture of a large, empty hospital, leading us to conclude that while some savings may be accrued from better space utilization under the program, these savings are not likely to be dramatic. Second, we found that RPCH grantee counties were slightly disadvantaged in terms of population growth and percent of the population below poverty relative to other rural counties, suggesting that grants have been

given to areas that are somewhat more vulnerable to loss of physicians and reduced access to care in the event of closure.

EACH grantees were generally large secondary hospitals, which reported solid and improved financial status over the prior year. Neither sole community hospital status nor the grants were major enticements into the program for the EACH grantees we visited, although we heard from state staff that they were important in some of the EACHs' decisions. But for the most part, EACHs tended to participate for mission-related reasons (to be a "regional" hospital) or to improve operating revenue or competitive advantage.

2. Networks

Many of the EACH and RPCH grantees have attempted to move forward in network development, but those with few prior administrative or clinical ties have found it difficult. They face several challenges, but the first and foremost is building trust among members. Grantees found this to be an extremely time-consuming task. Other challenges were synchronizing priorities among members, developing relationships between medical staff, orienting the EACH or support hospital staff toward primary care in smaller communities, and bridging community differences.

Despite the challenges, some networks we visited had made considerable progress, having developed projects and plans in the areas of quality assurance, physician recruitment or coverage, communications or computers, staff sharing, and continuing medical education. In addition, some had negotiated contracts, and decided on a network structure and process for the future. However, the new networks appear fragile and unstable, with several sudden turns in network relationships during the first year.

The networks were formed, in part, on the basis of the history of competition in the area: some potential EACHs were "skipped" by RPCH grantees who reviewed the nearby facilities as "predatory." The kinds of networks being formed are generally two-hospital networks, although a few have additional hospital or non-hospital members, and more plan to bring in additional facilities in the

coming year. Networks varied in leadership, coordination structure, and style--that is, the formality with which they operate. Three conclusions that emerged from studying network formation and characteristics were (1) a facilitator who is independent of the member facilities often plays an important, even critical, role in shaping the network, (2) network progress seems smoother when substantial high-level attention is given to the program in the EACH, and (3) attention to building relationships among clinical staff of the EACH and RPCH, as well as administrative staff, is important.

3. RPCHs

RPCH grantees generally have not made much progress in planning for conversion to a designated RPCH. For most, the decision to convert has been postponed pending guidance through legislation and final regulations, and will depend heavily on how much flexibility is offered. Although 36 percent of the 1991 grantees said there was a high probability or certainty that they would seek RPCH designation, we learned that attitudes toward the program are highly volatile. Thus, the number and timing of conversions is difficult to predict, although we found only three networks with RPCH grantees likely to seek designation as soon as a final federal designation process is in place.

RPCH grantees differed in their vision of the future. A popular model (or vision) of the RPCH was the "mini-hospital," which would essentially improve the financial status of the facility without major changes in organization or services. Many hospitals we visited were essentially operating under this model already. A second model, the "primary care center," was attractive to one closed hospital we visited. Under this model, the facility would neither use inpatient beds unless required nor directly provide emergency services. Other hospitals were planning to restructure in varying ways, shifting their service emphasis to outpatient services or services to the elderly, and sometimes relocating physician practices to the facility to improve use of ancillary services. The major issues confronting RPCH grantees considering conversion were (1) uncertainty about final program requirements, (2) community and board sensitivities, and (3) medical staff issues, such as recruiting.

4. Grant Expenditures

The 1991 EACH and RPCH grantees spent \$2.17 million in grant funds (30 percent of awarded funds) in the first year. A majority of these funds was spent on capital--communication systems, emergency transportation systems, and other equipment. Most items were relatively basic rather than high-tech in character.

Based on our site visits, much of the grant spending did not appear directly related to facility plans for conversion or program participation. We attributed this to (1) the difficulties RPCH grantees were having in affording general improvements they needed to stay open, (2) the fact that most grantees had not begun thinking about conversion or networking prior to developing their grant applications, and (3) the grantees' uncertainty about the program requirements and therefore their likelihood of participating as a RPCH or EACH. The grants were clearly less important to EACH than to RPCH grantees.

Despite the general absence of a direct relationship between grants and program participation, the grants appeared to play an important indirect role in network development and likelihood of RPCH conversion. For example, one RPCH grantee would not otherwise have funded a planning study that ultimately convinced him that the hospital needed to shift its focus to outpatient services. In several areas, the grant gave the area facilities a reason to begin to talk and overcome past barriers and lack of coordination.

Conversion costs for RPCH grantees adopting the "mini-hospital" model do not appear significant. For those making major changes, the costs appear higher, but will vary based on the types of changes, the condition of the current RPCH facility, and whether it is open or closed. Most network costs to date have been low, since networks were primarily planning rather than implementing ongoing projects.

REFERENCES

- Alpha Center. "Alternative Models for Delivering Essential Health Care Services in Rural Areas: Summary Report of an Invitational Workshop." Washington D.C. January 1991.
- American Hospital Association. "AHA Annual Survey of Hospitals." Personal communication. Chicago: AHA, April 1993.
- American Hospital Association. *Guide to the Health Care Field*. Chicago, IL. 1991.
- American Hospital Association. "Rule Revisions Could Help Broaden Scope of Rural Project: States." *American Hospital Association News*. April 27, 1992.
- Felt, Suzanne, Stephen Sweetland, and George Wright. "Background Information Reported by EACH and PCH Grantees." Washington, DC: Mathematica Policy Research, April 1992.
- Felt, Suzanne, and George Wright. "Diversity in States' Early Implementation of the EACH Program." Washington, DC: Mathematica Policy Research, July 1992.
- _____. "Monitoring Design Report." Washington, DC: Mathematica Policy Research, December 1991.
- Gaumer, Gary, Mary Gabay, and Jack Geller. "The Montana Medical Assistance Facility Demonstration Evaluation: Implementation Case Study." Cambridge, MA: Abt Associates, 1992.
- General Accounting Office. *Rural Hospitals: Federal Leadership and Targeted Programs Needed*. GAO/HRD-90-67, June 1990.
- General Accounting Office. *Rural Hospitals: Factors That Affect Task of Closure*. GAO/HRD-90-134, June 1990.
- "Health Care Reform: A West Virginia Community Care Networks Model." Report for the West Virginia Office of Community & Rural Health Services, Charleston, WV, March 1993.
- Lutz, Sandy. "A Rough Ride During Rural Test Drive." *Modern HealthCare*. May 4, 1992, pp. 24-27.
- Moscovice, Ira, Suzanne Felt, and George Wright. "Site Visit Protocols." Washington, DC: Mathematica Policy Research, February 1992.
- Prospective Payment Assessment Commission (ProPAC). *Medicare and the American Health Care System: Report to The Congress*. Washington DC, June 1991.
- Wellever, Anthony, L. "Health Care Reform in West Virginia: Community Care Networks". Paper delivered at the National Rural Health Association annual meeting, Kansas City MO, May 1993.

APPENDIX A

RPCH GRANTEE SERVICE AREA AND MARKET SHARE METHODOLOGY

The analysis of the role and impact of RPDHs on their local communities requires a definition of market service areas for both grantee and comparison hospitals. This was done using the zip code of origin of Medicare inpatients. The procedures and assumptions are described in this appendix. We define the primary service areas of the RPDHs and comparison hospitals in our sample as the set of zip codes from which the top 65 percent of a hospital's total Medicare discharges originate.¹ These zip codes will constitute the base of our sampling frame for service area analyses. Below, we describe the steps taken to identify these zip codes and the methods used to ensure that each service area represents a reasonably large number of a hospital's Medicare discharges originating from a well-defined geographic area. Table A-1 provides a summary of this process and gives the number of zip codes identified through each step.

Using HCFA's Hospital Market Area Files, we first identified all zip codes that contributed at least one Medicare discharge to our sample of 119 hospitals in either 1989 or 1990.² We then combined the two files and calculated the total number of discharges for each zip code during the two-year period.³ In defining primary service areas, we excluded "stray" zip codes which were of

¹The construction of market areas involves an irreducible element of arbitrary cutoff points. Previous research on market areas for rural areas indicates that 65 percent total share entails a geographic area of medium extent. Shifting the cutoff for including zip codes up to 75 percent of all discharges (as required by the eligibility criteria for designation as a Sole Community Hospital) significantly widens the area and reduces the calculated market share. This is particularly true of very small facilities. For extensive discussions of market share calculation for rural hospitals see three reports published by the Prospective Payment Assessment Commission (ProPAC). George Wright, *Small Isolated Rural Hospitals: Alternative Criteria for Identification in Comparison with Current Sole Community Hospitals*. Technical Report E-87-11 July 1988; George Wright and Felice Marlor, *Alternative Hospital Market Area Definitions*. Technical Report E-90-02. March, 1990; and George Wright, Felice Marlor and James Robbins, *Sole Community Hospitals, Market Share and Market Area*. Report under Contract T-47540316 (Task 15). Washington D.C.: Systemetrics Inc., April 1990.

²Due to missing data, we used service areas defined by hospital administration staff for two hospitals.

³Using the 1989 and 1990 files, we combined two years of discharge data to ensure that each hospital's primary service area remains stable over time. Each record on the Hospital Market Area File contains the number of annual Medicare discharges for a unique hospital/zip code combination.

little consequence to a hospitals' total discharges. To do this, we removed from our file any zip code that met both of the following criteria:

- location in a different "three digit" zip code area than a hospital's top discharge zip code⁴, and
- contribution of only one discharge during 1989-1990 to the hospital.

We then grouped the remaining zip codes by hospital, ranked them by the number of Medicare discharges for each hospital, and selected only those representing the top 65 percent of each hospital's discharges.

Although any definition of a primary service area can be somewhat arbitrary, our 65 percent definition appears to be a reasonable for our sample of hospitals. For most facilities, a small number of zip codes accounted for at least 65 percent of total discharges (see Table A.2). The remaining 35 percent came from a much larger number of scattered zip codes--each contributing a much smaller number of discharges.

We generated frequency distribution tables to ensure that the composition of the service areas across hospitals was not overly sensitive to small changes in our definition. We also verified that all of the zip codes in our definition contributed a substantial number of discharges to their associated hospitals. For a selected group of hospitals in North Carolina, Kansas, and West Virginia, we used zip code and town maps to verify that we could capture a reasonable number of discharges in a fairly well-defined geographic area. When we attempted to broaden our definition well beyond the 65 percent cutoff (80 percent or higher), we created a much more diffuse geographic area in which large numbers of individual zip codes contribute only small numbers of discharges.

⁴"Three-digit" areas are sets of zip codes grouped geographically according to the first three numbers of the zip code. In most cases, a hospital is located in its own top discharge zip code.

TABLE A-1
SELECTION PROCESS FOR SERVICE AREA ZIP CODES

SELECTION PROCESS STEPS	NUMBER OF ZIP CODES IDENTIFIED
1. Select zip codes accounting for at least one Medicare discharge in 1989 or 1990 for sample hospitals.	4,378
2. Remove stray zip codes outside the primary "three-digit" zip code area that account for only one hospital discharge in 1989-1990.	2,371
3. Sort remaining zip codes by hospital, rank by Medicare discharges, and select zip codes contributing the top 65 percent of 1989-1990 discharges.	268

Note: "Three-digit" areas are sets of zip codes grouped geographically according to the first three numbers of the zip code. In most cases, a hospital is located in the primary zip code that defines the "three-digit" zip code.

TABLE A.2
DISTRIBUTION OF SMALL RURAL HOSPITALS BY
NUMBER OF ZIP CODES IN SERVICE AREA

State	Number of Zip Codes in the Service Area ^a					
	RPCHs/MAFs			Comparison Hospitals		
	1 or 2	3	4 or More	1 or 2	3	4 or more
California	1	2	0	6	0	0
Colorado	6	0	0	11	0	1
Kansas	10	1	1	21	3	0
Montana	2	1	0	6	0	0
New York	0	1	1	1	2	1
North Carolina	4	1	1	6	3	3
South Dakota	3	0	0	4	2	0
West Virginia	3	0	1	1	1	6
Totals^b	29	6	4	56	11	11

^aService area defined as those zip codes contributing to the top 65 percent of Medicare discharges.

^bAmong all RPCHs/MAFs, the mean number of zip codes in a service area was 1.97 with a standard deviation of 1.44. Among comparison hospitals, the mean number of zip codes was 2.44 with a standard deviation of 1.96.

APPENDIX B
CHARACTERISTICS OF RPCH
GRANTEE COUNTIES

This appendix updates the differences between RPCH grantee counties and all other rural counties, and the state-to-state variations in rural populations, economies, and acute care bed supply. The figures presented here now include both 1991 and 1992 RPCH grantee counties. Most of the findings remained the same when 1992 grantees were added. HCFA appears to have provided RPCH grants to areas that may be slightly more vulnerable to the adverse impacts of hospital closures on access to care (Table B.1). For example, the EACH program is located in areas whose characteristics are thought to be less attractive to physicians (that is, a lower population density, slower population growth, and a poorer population). Moreover, the higher proportion of low-income persons in these areas may make RPCH grantee counties more vulnerable to a reduction in services if alternatives are not readily available. Although these tendencies are slight-to-moderate rather than pronounced, the differences are consistent with the goal of the EACH program to maintain access to health care in rural areas. The most striking differences are that the grantee counties contained a slightly higher percentage of residents below the poverty level (19 percent versus 16 percent in other areas) and exhibited slower population growth after 1980 (0.1 percent versus 5 percent).

Finally, as a group RPCH grantee counties have slightly more acute care beds per 1,000 population than the comparison rural areas. The aggregate acute-care bed supply of 5.2 per 1,000 population implies 1,123 "excess" acute care beds program wise relative to the U.S. norm for rural areas.¹ Thus, the locations in which the EACH program is being implemented also seem to be consistent with the goal to reduce the excess supply of acute-care beds.

¹We derive this rough estimate by calculating the difference between 5.2 beds per 1,000 and the nonmetropolitan U.S. average of 3.8 beds per 1,000 (difference equal to 1.4 per 1,000) and multiplying it by the total population of the RPCH grantee counties in thousands (802,292). Note that two factors make this number a rough rather than a precise estimate. First, we have no way to measure the need for hospitalization accurately which may be greater in the RPCH counties than elsewhere. Second, the supply of beds in rural areas nationwide may be too high a standard of comparison, since rural hospital occupancy rates nationwide are quite low.

TABLE B.1

**THE EACH PROGRAM ENVIRONMENT:
COMPARISONS WITH THE RURAL UNITED STATES**

	Nonmetropolitan United States ^a	Nonmetropolitan Areas of EACH Program States as a Group ^b	All RPDH Grantee Counties ^b
Population Characteristics (1990)			
Population per square mile	23.0	23.4	14.6
Race/Ethnicity (percent of total population)			
White	88.4	86.2	86.5
African-American	9.4	9.2	11.4
Hispanic origin	2.7	4.7	1.9
Age (percent of total population)			
65 or older	14.8	14.3	14.4
75 or older	6.4	6.1	6.2
No high school diploma (percent of population age 25 or older)	29.8	29.5	30.5
Economic Characteristics			
Percentage Change in Population, 1980-1990	+3.6	+5.1	+1
Poverty Status (1989)			
Percent below poverty	15.7	15.9	18.9
Percent below poverty age 65+	16.1	16.4	17.1
Percentage point change in poverty rate 1979-1989	-.1	+.5	-.3
Acute Care Bed Supply			
Short-Term Community Hospital Beds per 1,000 Population	3.8	3.8	4.5

^aThe population counts and age breakdowns for the nonmetropolitan U.S. are from 1990 Census data in the Area Resource File. The population growth rate is slightly understated by reclassification of a few counties as MSAs. Race/ethnicity, education, and poverty characteristics for the nonmetropolitan United States are from the Current Population Survey (CPS) for 1990, except for education, which was for 1989, since 1990 data were not yet available. CPS sources included Bureau of the Census, *Poverty in the United States: 1990* (P-60, No. 175), *Measuring the Effect of Benefits and Taxes on Income and Poverty: 1989* (P-60, No. 169-RD), *Characteristics of the Population Below the Poverty Level: 1979* (P-60, No. 130), and *Educational Attainment in the United States: March 1989 and 1988*. Acute care bed supply was calculated from 1988 bed-supply data from the American Hospital Association survey data summarized in the Area Resource File.

^bState and county Census data for 1990 were provided by state data centers and were supplemented by the 1991 Area Resource File (beds to calculate bed supply, and land area to calculate population density). Averages for the seven states and all RPDH counties are weighted by population.

Most of the population and economic characteristics we studied varied dramatically among the EACH program states--differences that may prove important in program implementation and impact. For example, a question for the evaluation is whether and how the program can be implemented in areas with a low population density and/or declining economy in a way that responds to and counteracts those problems. As shown in Figures B.1 through B.4 below, the differences among the program states were larger than the differences between the RPCH grantee counties and other rural areas of those specific states.

For each key indicator, the variations for nonmetropolitan areas can be summarized as follows:

- ***Population Density.*** (Figure B.1) The rural population densities of South Dakota and Colorado are less than seven persons per square mile--less than one-third the aggregate 23 persons per square mile across all the program states. In contrast, North Carolina's rural population density of 78 persons per square mile is more than three times the aggregate figure, and West Virginia's density of 55 persons is nearly two and a half times the aggregate figure.
- ***Racial/Ethnic Composition.*** In contrast to the largely white population of the other rural areas and RPCH grantee counties, North Carolina's program population includes four RPCH grantee counties that have a high percentage of African-American residents (averaging 45 percent).²
- ***Education.*** The rural populations of the majority of program states are better educated than rural populations nationwide; fewer than 25 percent of residents over age 25 lack a high school diploma, compared with 30 percent nationally. However, rural residents in North Carolina and West Virginia are less educated; 36 and 38 percent of their rural populations, respectively, do not have a high school diploma. In West Virginia's RPCH grantee counties, the figure climbs to 44 percent.
- ***Proportion of Elderly Residents.*** The rural populations of most program states contain about the same proportion or fewer elderly than the rural population nationwide. However, the proportion of elderly in the RPCH grantee counties of South Dakota and Kansas is somewhat higher--21 and 19 percent, respectively.
- ***Poverty Rate.*** (Available for 1991 grantees only--Figure B.3) The rural poverty rates of the states and of the RPCH grantee counties varied substantially. The rural poverty rate of New York was lowest--13 percent--and West Virginia's was highest, at 22 percent.
- ***Change in Poverty Rate, 1980-1990.*** (Available for 1991 grantees only.) Interestingly, two of the states whose 1990 rural poverty rates were relatively high (North Carolina and South

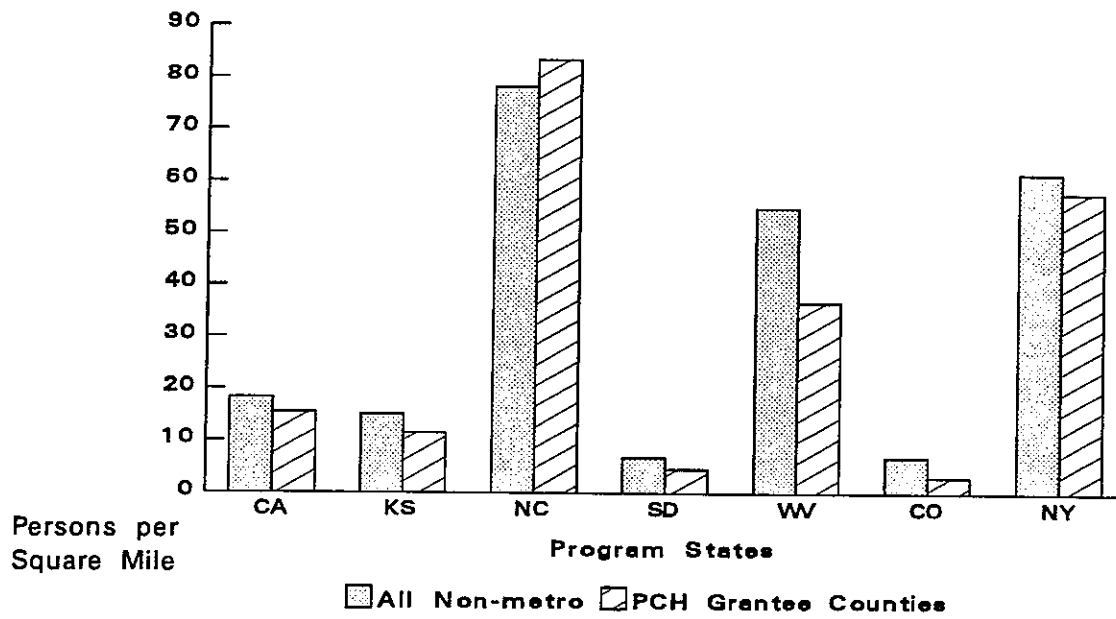
²The proportion of African-Americans in North Carolina's RPCH grantee counties as a group is similar to the proportion in its other rural counties.

Dakota) had lower (improved) poverty rates than in 1980. In these two states, the rate declined (improved) even more in the RPCH grantee counties. Conversely, in the states whose rural poverty rates increased (worsened) between 1980 and 1990 (California, Kansas, West Virginia), the increase was greater in RPCH grantee counties.

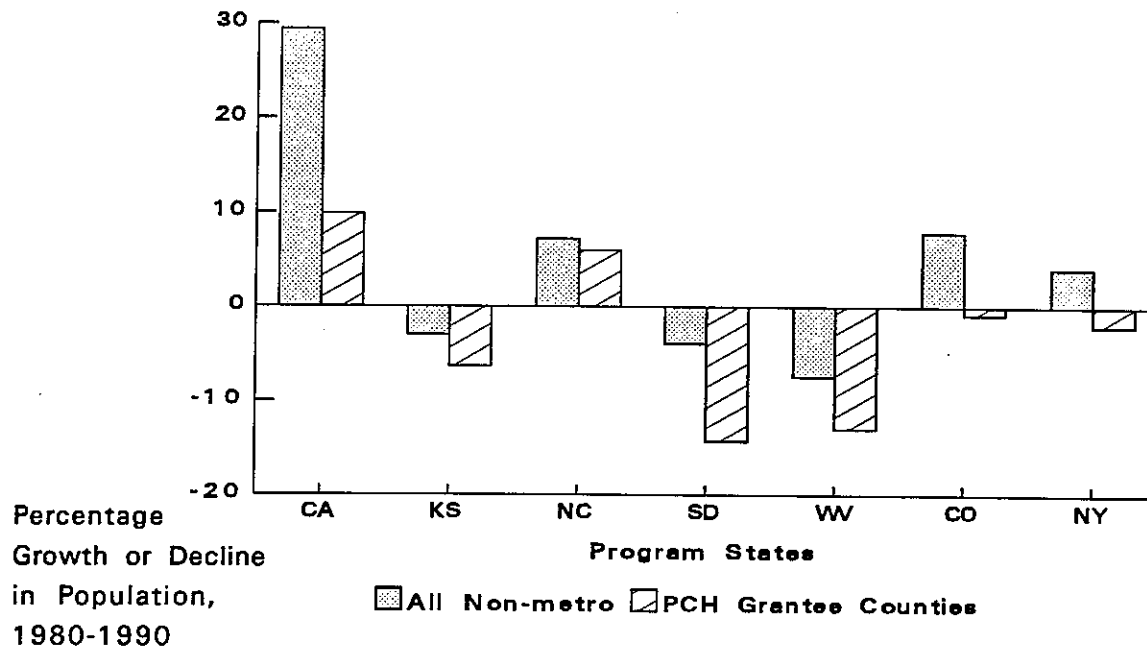
- **Population Growth.** (Figure B.2) The rural population of four program states (California, North Carolina, Colorado, and New York) grew between 1980 and 1990, while the rural population of three states (Kansas, South Dakota, and West Virginia) declined. For those states that experienced a decline, the declines in the RPCH grantee counties were more severe. For example, RPCH grantee counties in Kansas lost 6 percent of their population, more than double the loss rate of the state's total rural area.
- **Acute-Care Bed Supply.** (Figure B.4) The acute care bed supply per 1,000 population in Kansas, South Dakota, and Colorado is more than double the U.S. rural figure of 3.8--whereas the supply in California, North Carolina, and New York is near or below the U.S. figure.³

³Note that Kansas and South Dakota, whose bed supplies are relatively high, also have a higher-than-usual elderly population, partially offsetting the extent to which these states have an "oversupply" of beds. Also note that the figures for Kansas may be influenced by the fact that the participation of that state's hospitals in the swing bed program is usually high. Hospitals with swing beds may be less likely to close those beds even if they are rarely used for acute-care purposes.

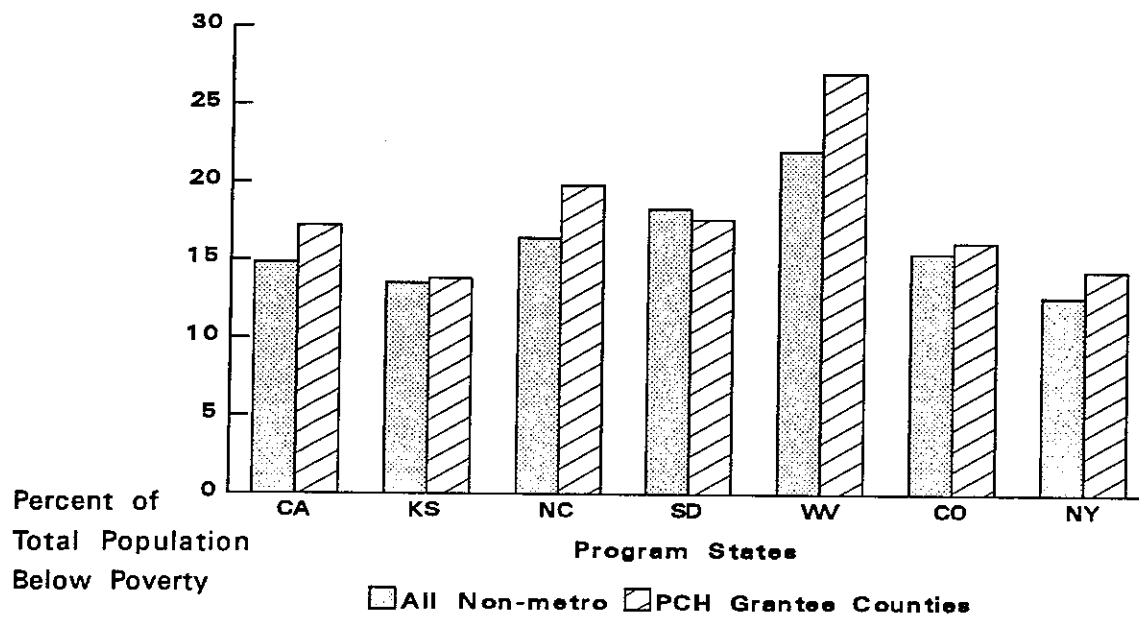
**FIGURE B.1
STATE-TO-STATE VARIATIONS
IN POPULATION DENSITY**



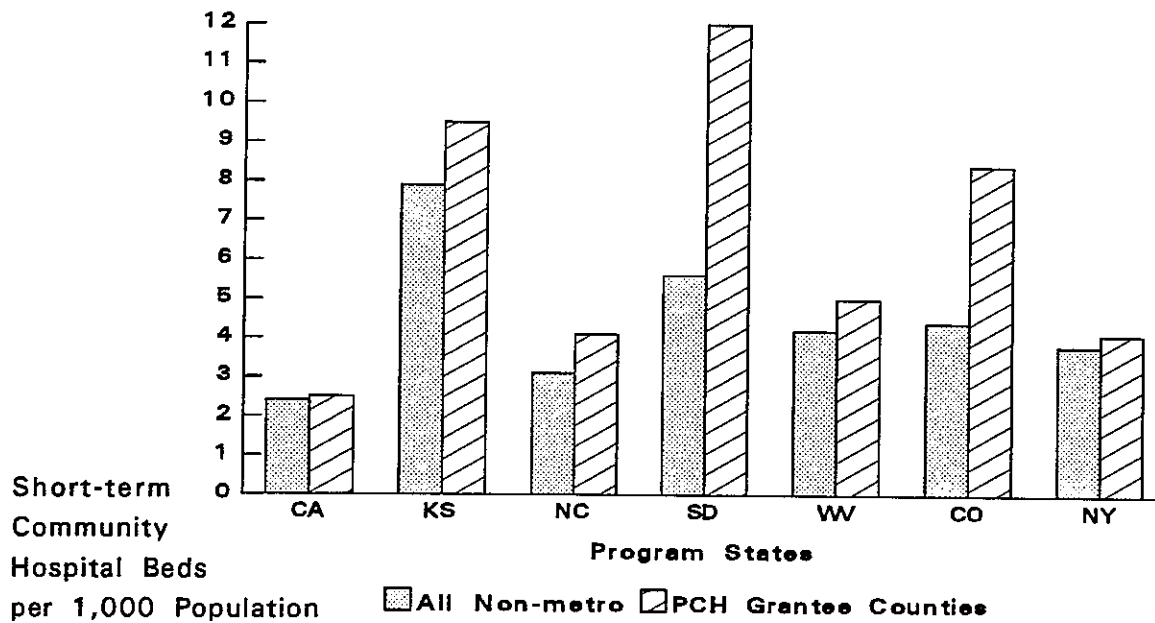
**FIGURE B.2
STATE-TO-STATE VARIATIONS
IN POPULATION GROWTH**



**FIGURE B.3
STATE-TO-STATE VARIATIONS
IN POVERTY RATE**



**FIGURE B.4
STATE-TO-STATE VARIATIONS
IN ACUTE CARE BED SUPPLY**



APPENDIX C
COMPARISON COHORT SELECTION PROCESS
AND CHARACTERISTICS

For every RPCH grantee, we selected two comparison hospitals that were matched as closely as possible on average inpatient census and location based on data from the American Hospital Association's *Guide to the Health Care Field* (1991). A close match on average inpatient census was considered essential. Therefore, we broadened our area of review until a close match was found, even though we had to choose hospitals in neighboring states in some cases. If a hospital was a close match on average inpatient census, we looked for geographic or market area factors that would make it unique. For example, if the potential match hospital was located next to a medium size city or a very large hospital (unlike the RPCH grantee), we did not consider it further. Likewise, if the RPCH grantee was in the mountains, we looked for two comparison hospitals in the mountains.¹ The RPCH grantees and comparison hospitals we chose are listed in Table C.1.

How well does the comparison cohort mirror the RPCH grantees? Table C.2 compares the two groups for a key set of characteristics covering the size, operations, and community profile of the hospitals. Overall, although there are no significant differences in the average daily census of grantee and comparison hospitals, the two groups do differ on other measures of size and scale. Comparison hospitals have more beds, significantly more Medicare inpatient days, and significantly fewer Medicaid days. Comparison hospitals also have more inpatient visits, lower costs per patient day, and significantly higher (lower negative) total patient operating margins. These differential traits, which suggest why RPCH grantees have been willing to consider converting to a limited services model, were described in Chapter III.

¹The process was judgmental, but carefully considered. For example, if one of the comparison hospitals chosen for a RPCH grantee had several more inpatients on the average day, we chose the second to have several fewer.

TABLE C.1
COMPARISON HOSPITALS FOR RPCH GRANTEES
AND MONTANA MEDICAL ASSISTANCE FACILITIES
10/12/92

Grantees and Comparison Hospitals by Location
Provider Number
(Average Daily Census)

RPCH Grantees	Comparison #1	Comparison #2
CALIFORNIA		
Surprise Valley Community Hospital Cedarville 050676 (.61)	Indian Valley Hospital District Greenville 050433 (1.9)	Modoc Medical Center Alturas 050430 (4.9)
Sierra Valley Community Hospital Loyalton 050355 (.62)	Pershing General Hospital Lovelock, NV 290011 (1.0)	Seneca District Hospital Chester 050333 (3.3)
Southern Humboldt Community Hospital Garberville 050482 (5.2)	Eastern Plumas District Hospital Portola 050566 (7.0)	Plumas District Hospital Quincy 050148 (7.9)
COLORADO		
St. Joseph Hospital Del Norte 060072 (11.0)	Heart of the Rockies Regional Medical Center Salida 060050 (16.0)	Southeast Colorado Hospital Springfield 060085 (9.8)
Pioneers Hospital Meeker 060041 (6.2)	Conejos County Hospital La Jara 060060 (6.4)	Clagett Memorial Hospital Rifle 060042 (5.5)
Rangely District Hospital Rangely 060073 (7.0)	Memorial Hospital Craig 060046 (8.5)	Gunnison Valley Hospital Gunnison 060070 (5.2)
Weisbrod Memorial County Hospital Eads 060047 (0.9)	Garden County Hospital Oshkosh, NE 280097 (3.0)	Yuma District Hospital Yuma 060056 (3.9)

Comparison Hospitals for RPCH Grantees (continued)

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RPCH Grantees	Comparison #1	Comparison #2
COLORADO (continued)		
Haxtun Hospital District Haxtun 060058 (8.1)	Ogallala Community Hospital Ogallala, NE 280089 (8.0)	Melissa Memorial Hospital Holyoke 060038 (6.0)
Kremmling Memorial Hospital Kremmling 060090 (1.7)	South Lincoln Medical Center Kemmerer, WY 530017 (2.0)	Star Valley Hospital Afton, WY 530023 (5.0)
KANSAS		
Cedar Vale Community Hospital **Cedar Vale 170108 (8.0)	Beaver Counter Memorial Hospital Beaver, OK 370082 (4.0)	Harper County Community Hospital Buffalo, OK 370108 (5.0)
Kearny County Hospital Lakin 170100 (5.2)	Stevens County Hospital Hugoton 170089 (4.9)	Satana District Hospital Satanta 170139 (5.7)
Wichita County Hospital Leoti 170174 (7.8)	Hodgeman County Health Center Jetmore 170090 (7.3)	Meade District Hospital Meade 170055 (8.1)
Lane County Hospital Dighton 170108 (2.8)	Ashland District Hospital Ashland 170050 (1.0)	Comanche County Hospital Coldwater 170036 (3.0)
Ellinwood District Hospital Ellinwood 170062 (5.2)	Salem Hospital Hillsboro 170026 (7.0)	Plainville Rural Hospital District No. One Plainville 170092 (4.9)
Rawlins County Hospital Atwood 170069 (5.4)	Cheyenne County Hospital St. Francis 170064 (5.4)	Sheridan County Hospital Hoxie 170063 (5.6)
Grisell Memorial Hospital Ransom 170121 (3.2)	Greeley County Hospital Tribune 170082 (3.5)	Ness County Hospital District Ness City 170066 (3.0)

Comparison Hospitals for RPCH Grantees (continued)

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RPCH Grantees	Comparison #1	Comparison #2
KANSAS (continued)		
Attica Hospital District Attica 170170 (3.0)	Alfalfa County Hospital Cherokee, OK 370110 (3.9)	Sumner County Hospital District One Caldwell 170152 (4.2)
Jewell County Hospital Mankato 170168 (1.8)	Pawnee County Memorial Hospital Pawnee City, NE 280073 (3.0)	Harlan County Hospital Alma, NE 280102 (5.0)
Dechairo Hospital Westmoreland 170044 (3.9)	Anderson County Hospital Garnett 170035 (5.0)	Franklin County Memorial Hospital Franklin, NE 280056 (6.0)
Oswego City Hospital Oswego 170159 (5.0)	Sedan City Hospital Sedan 170160 (7.3)	Fairfax Memorial Hospital Fairfax, OK 370133 (5.0)
Wilson County Hospital Neodesha 170073 (11.0)	Fredonia Norton Memorial City Hospital Fredonia 170018 (11.0)	Crawford County Hospital District No. 1 Girard 170098 (14.0)
MONTANA		
Garfield County MAF Ekalaka old: 270042 new: 271227 (Closed 6/30/88)	Broadwater Health Center Townsend 270006	
Dahl Memorial MAF Jordan old: 270070 new: 271226 (Closed 6/1/86)	Granite County Memorial Hospital Philipsburg 270047	
McCone Hospital (MAF) McCone old: 270043 new: 271225	Mountainview Memorial Hospital White Sulphur Springs 270068	
Roosevelt Memorial Hospital ***Culbertson old: 270067 new: N/A	Ruby Valley Hospital Sheridan 270059	

Comparison Hospitals for RPCH Grantees (continued)

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RPCH Grantees	Comparison #1	Comparison #2
MONTANA (continued)		
	Sweet Grass Community Hospital Big Timber 270030	
Prairie Community Hospital (MAF) Terry old: 271228 new: 270071	Liberty County Hospital Chester 270027	
NEW YORK		
**Cuba Memorial Hospital Cuba 330039 (14.0)	Union City Memorial Hospital Union City, PA 390040 (13.0)	Montrose General Hospital Montrose, PA 390249 (12.0)
**Salamanca Hospital District Salamanca 330174 (17.0)	Troy Community Hospital Troy, PA 390213 (21.0)	Jersey Shore Hospital Jersey Shore, PA 390106 (17.0)
NORTH CAROLINA		
Anson County Hospital Wadesboro 340084 (25.0)	Hamlet Hospital Hamlet 340106 (27.0)	Montgomery Memorial Hospital Troy 340063 (25.0)
Bertie Memorial Hospital Windsor 340101 (9.5)	Hoots Memorial Hospital Yadkinville 340006 (15.0)	Highlands-Cashiers Hospital Highlands 340146 (15.0)
Blowing Rock Hospital **Blowing Rock 340045 (22.0)	Charles A. Cannon Jr. Memorial Hospital Banner Elk 340005 (20.0)	Sloop Memorial Hospital Crossnore 340080 (20.0)
Our Community Hospital Scotland Neck 340122 (12.0)	Washington County Hospital Plymouth 340112 (19.0)	Martin General Hospital Williamston 340133 (20.0)
Sea Level Hospital Sealevel 340076 (6.7)	Hampton General Hospital Varnville, SC 420072 (13.0)	Lee County Memorial Hospital Bishopville, SC 420028 (14.0)

Comparison Hospitals for RPCH Grantees (continued)

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RPCH Grantees	Comparison #1	Comparison #2
NORTH CAROLINA (continued)		
Crawley Memorial Hospital Boiling Springs 340104 (47.0)	St. Luke's Hospital Columbus 340018 (44.0)	Transylvania Community Hospital Brevard 340088 (48.0)
SOUTH DAKOTA		
Deuel County Memorial Hospital Clear Lake 430065 (2.1)	De Smet Memorial Hospital De Smet 430024 (3.6)	Madison Hospital Madison, MN 240143 (3.8)
Holy Infant Hospital Hoven 430060 (3.2)	Faulk County Memorial Hospital Faulkton 430025 (4.4)	Eureka Community Hospital Eureka 430062 (5.2)
Gettysburg Memorial Hospital Gettysburg 430042 (4.4)	Estelline Community Hospital Estelline 430088 (4.9)	Divine Providence Hospital Ivanhoe, MN 240184 (5.2)
WEST VIRGINIA		
Grafton City Hospital Grafton 510020 (8.6)	Calhoun General Hospital Grantsville 510063 (8.1)	Braxton County Memorial Hospital Gassaway 510084 (11.0)
Webster County Memorial Webster Springs 510025 (7.1)	Bath County Community Hospital Hot Springs, VA 490099 (9.9)	Richwood Area Medical Center Richwood 510016 (11.0)
Pocahontas Memorial Hospital Marlington 510043 (14.0)	Preston Memorial Hospital Kingwood 510005 (17.0)	Man Appalachian Regional Hospital Man 510035 (17.0)
Guyan Valley Hospital Logan 510004 (11.0)	Boone Memorial Hospital Madison 510015 (15.0)	Morgan County Appalachian Regional Hospital West Liberty, KY 180125 (16.0)

NOTE: **New RPCH
***New MAF

TABLE C.2
SIMILARITY OF RPCH GRANTEES AND
COMPARISON HOSPITALS

	All PCH Grantees (N = 37) ^a	All Comparison Hospitals (N = 77) ^a
Population Characteristics		
Population per square mile in home county, 1990	27.0 (39.9)	25.1 (44.4)
Percent change in population 1980 - 1990 in home county	-4.4 (11.0)	-3.2 (10.6)
Per capita income in home county, 1989	\$14,243 (3,071)	\$14,234 (3,016)
Percent change in per capita income 1979 - 89 in home county	91.0 (34.1)	85.2 (30.0)
Hospital Volume (Average 1988 - 90)		
Total acute plus LTC beds	24.6 ^b (13.1)	35.7 (20.5)
Total acute beds	22.9 ^b (12.5)	31.3 (18.5)
Average daily census (hospital)	7.8 (8.5)	9.7 (8.6)
Average Medicare hospital daily census	2.7 ^c (2.7)	4.8 (3.9)
Average Medicaid hospital and LTC daily census	10.2 ^c (13.6)	3.9 (6.6)
Outpatient visits per day	15.9 (15.7)	23.9 (21.8)
Market Share (1988-1989)		
Percent of Medicare inpatients in the service area discharged from the RPCH or comparison hospital	36.8% (14.3)	42.3% (12.9)
Financial Status (1990)		
Hospital cost per patient day	\$1,686 (2,575)	\$1,117 (894)
Cost per outpatient visit	\$98 (90)	\$110 (82)
Operating margin on patient care	-0.31 ^c (0.32)	-0.16 (0.19)

SOURCES: Most tabulations by Center for Health Services Research, University of Minnesota from the Area Resources File for September 1991 and Medicare Cost Reports (Hospital Cost Report Information System) for fiscal years starting in 1988, 1989 and 1990 (PPS V-VII). Market share calculation by Mathematica Policy Research from claims data from the 1989 and 1990 Market Area File for Medicare discharges.

^aRPCH grantees exclude 3 hospitals with missing data, but include three MAF hospitals in Montana. The comparison hospitals include six Montana hospitals.

^{b,c}Indicates significant difference in t-statistics at the .05 or .01 level, respectively. Standard deviations indicated in parentheses.