

An Evaluation of Subsidized Rural Primary Care Programs: II. The Environmental Contexts

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Abstract: The placement of subsidized primary care programs in rural communities has been an important aspect of national health policy over the last decade. Using survey and secondary data from programs in over 700 counties in the United States, it was found that while about one-fourth of all counties with some rural populations have been affected by these programs, certain environmental factors are associated with more or less likelihood of placement. High levels of need and low levels of health care resources

are positively associated with the presence of a program. States with health policy climates supportive of reimbursement and broader staffing of primary care programs also contained programs in a higher proportion of their rural counties. The effects of decreased federal funding, increased state responsibility, and the precarious market conditions for primary care programs are discussed with emphasis on the mechanisms for developing favorable climates for these programs. (*Am J Public Health* 1983; 73:406-413.)

Introduction

Recent evaluations of subsidized rural primary care programs have provided disturbing evidence of lagging utilization, persistent dependency on external subsidies to meet costs, and high provider turnover.^{1,2} Many factors affecting the success of these programs have been examined but only recently have the environments in which they have been placed and must function been given systematic attention.^{3,4} Community factors have played a role in the placement of federal programs through measures such as the Index of Medical Underservice (IMU) and the criteria for designation of a locality as a Critical Health Manpower Shortage Area (CHMSA) or Migrant Impact Area. These measures of underservice have been criticized as being of limited value in determining the actual need for health care resources in a particular community or in predicting whether a community is more or less likely to be targeted for and receive program funds.^{5,6}

Rural communities vary widely with respect to many socio-demographic, health, and economic resource variables. Yet, in most primary care initiatives focusing on rural

areas, these variables are treated as statistically uniform entities. The range of program outcomes observed in these initiatives may well be influenced by the characteristics of the environments encountered. However, little is known about the nature and outcome of the interaction between programs and their environmental contexts.

The Health Services Research Center of the University of North Carolina (UNC) at Chapel Hill has undertaken a national evaluation* of the various initiatives for developing and sustaining subsidized rural primary care programs.⁷ Among the issues addressed in this evaluation are three fundamental questions concerning such programs and their environments:

1. What environmental factors are associated with the presence of subsidized rural primary care programs?
2. What characteristics of the organizations delivering that care vary according to different environmental factors?
3. What impact do the environmental factors have on the success of rural programs measured by stability, access, and consumer satisfaction?

This paper will address the first question through an analysis of a national sample of subsidized primary care programs located in rural areas. The remaining two questions will be examined in future, related work.

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A Taxonomy of Environmental Contexts

Rural primary care programs encounter three distinct levels of environments: 1) the local community environment; 2) the proximal health care resources environment; and 3) the external health policy environment.

The local community environment refers to the characteristics of the community in which a primary care program is located and the population targeted for service in that community. Three aspects seem particularly salient:

1. The geography and settlement patterns of the population;
2. The demography and socioeconomic structure of the community particularly as it reflects its health care needs;
3. The social, economic, and political characteristics of the community.

The proximal health care resources environment is composed of the potentially conflicting and/or complementary health care delivery system elements available within the community itself or in other nearby communities. These environmental aspects include: other sources of primary care such as practitioners or clinics; hospitals; specialists for referral; and nonmedical health-related services.

The external health policy environment consists of those extra-community aspects that influence the delivery of health care at the local level through legal requirements (e.g., licensing laws for new health professionals), governmental activity (state or regional primary care offices, AHECs, and categorical screening and treatment programs), financing mechanisms (Medicaid rules, Medicare fee differentials, and state financing programs for special groups), and other organizations operating in the health field (primary care associations, professional societies, and advocacy groups).

At each of these three levels, specific environmental factors can act as either constraints or facilitators to the operation of a primary care delivery program. By analyzing the extent to which program location is associated with specific environmental characteristics, it is possible to provide information relevant to:

- determining the extent to which subsidized rural primary care programs are being developed in communities consistent with the policy objectives of rural health initiatives;
- determining the extent to which subsidized rural primary care programs are being placed in communities in need of medical services;
- determining the extent to which subsidized rural programs are being placed in communities with a limited capacity to pay for medical services either directly or through third-party mechanisms of private or government health insurance.

Methods

The Universe of Programs

This analysis of the environmental contexts of rural primary care programs is part of a comprehensive four-phase

national evaluation project. Programs have been identified and examined through mail and phone interviews, site visits, and using secondary data. The analysis discussed here has been performed on programs surveyed in the first phase of the project (Tier I) that involved an inventory of subsidized rural primary care programs.⁸

The descriptive inventory covered as many programs in the United States as could be reached and was developed from information obtained in the fall of 1979 by the US Department of Health and Human Services (DHHS) (known then as the Department of Health, Education, and Welfare) via a questionnaire sent to all known rural primary care programs under a contract with the Bureau of Social Science Research of Washington, DC. The survey instrument was developed by the UNC group conjointly with staff of DHHS and of the Robert Wood Johnson Foundation. The methods used in contacting the programs, the content of the questionnaire, the conditions for qualification in the study, and the representativeness of the respondents are described elsewhere.⁷

Of 985 programs in the contiguous United States that responded to the questionnaire, 627 were found to meet the qualifications of rurality, some form of external support, continuity, and content of services.

Data Sources

Each of the 627 qualifying programs completed a questionnaire asking for basic information concerning their operation including: site names and addresses, community characteristics, staffing, funding, ownership, operation, and governance. The responses provided the information for the publication of a *Directory of Rural Primary Care Programs*⁷ and the selection of further study samples for the National Evaluation of Rural Primary Care Programs. The addresses for the principal site of each program and up to three additional sites, if the program had more than one delivery site, were collected.

The Area Resource File (ARF) maintained by the US Department of Health and Human Services⁹ and other county level data served as the major sources of secondary information concerning the local community environment and the health resources environment for this evaluation. County level descriptive data may, however, provide a misleading representation of the context of a given subsidized rural primary care program; the heterogeneity of sociodemographic characteristics within certain rural counties has received considerable comment in the literature.¹⁰ Data for smaller areas are not available on a consistent basis, however. County-level data have been used previously in research on the penetration of clinics and programs in rural areas and provide considerable insight into the range of community characteristics affecting programs.^{3,11,12}

Health policy environment measures were adapted from the work of other researchers. These include: Medicaid differentials in coverage of populations and mode of payment,^{13,14} regulations affecting the practice and reimbursement of physicians' assistants and nurse practitioners,¹⁵ and service-conditional medical student loan programs.¹⁶ Each county in a state with a given health policy environment

TABLE 1—Distribution of Rural Primary Care Programs and Rural Populations in Nine Census Regions

Census Region	Rural Programs		Regional Subtotal ()	Non-Urban* Population		Regional Subtotal ()
	N	%		(1000s)	%	
New England	36	5.7		2,796	5.2	
Mid-Atlantic	70	11.2	(16.9)	6,810	12.7	(17.9)
East North Central	57	9.1		10,187	19.0	
West North Central	50	8.0	(17.1)	5,927	11.1	(30.1)
South Atlantic	160	25.5		11,167	20.8	
East South Central	80	12.8		5,815	10.8	
West South Central	36	5.7	(44.0)	5,276	9.8	(41.4)
Mountain	66	10.5		2,222	4.1	
Pacific**	72	11.5	(2.0)	3,431	6.4	(10.5)
	627	100.0	100.0	53,631	100.0	100.0

*Source¹⁷

**Excludes Alaska and Hawaii

characteristic was coded according to the values indicated for that state.

Program Penetration Rate

The differential in the location of programs by various environmental factors was calculated using program penetration rates (PPR), a measure similar to that used by the Department of Health and Human Services to examine program placement success. The overall PPR is the percentage of all counties with some rural population (as defined by the Census Bureau as persons living in a place with 2,500 or fewer population) that have one or more subsidized primary care programs. Differential penetration rates were derived for groups of counties categorized by the environmental context variables. The use of a broad definition of rural counties allowed for the inclusion of the greatest number of qualifying programs. However, the definition also ignores the question of health care "need"; this was done because of widely differing definitions of need used by sponsoring agencies.

Use of the program penetration rate in this study has certain limitations that suggest caution in the interpretation of the findings. Because of non-response to the survey, the numerators used in program penetration rates were reduced. Although our analysis of nonrespondents did not indicate any particular tendency for programs in certain areas to be more likely to fail to respond, the absence of bias has by no means been proven. Further, the denominator includes many counties which, although they contain some rural residents, would never be considered as appropriate for the placement of a subsidized rural primary care program. Thus, the program penetration rates reported below should tend to be low and therefore conservative estimates of the true penetration rates of appropriate counties.

Another, and perhaps the most serious, limitation to the interpretation of the analysis is the cross-sectional nature of the study. This poses many different problems in the interpretation of the data because of the nature of the programs studied and the difficulties in interpreting the direction of

observed relationships. Programs included in this analysis are, by definition, survivors in that they are still operating. We present no information on programs which were placed in a given rural area but then failed. Therefore, although it is attractive to ascribe differences in penetration rates to considerations in program placement, it is possible that certain community characteristics are associated with an increased likelihood of program viability and survivorship which would tend to inflate the penetration rate in communities with those characteristics.

Results

The 627 qualifying programs reported that they delivered services at 1,078 sites in 705 different counties in 1979. Four hundred twenty-seven (68.1 per cent) of the programs operated a single site while 200 (31.9 per cent) operated more than one site. Almost two-thirds of the multi-site programs operated either two or three sites (34 and 30.5 per cent, respectively).

The distributions of rural primary care programs and the non-urban populations by US Census Region are compared in Table 1. The Mountain and Pacific states should have half the number of programs if programs were distributed according to the size of rural populations. Conversely, the North Central states have slightly more than half of their "fair share" with the Northeast and South close to the expected distribution.

For all counties in the contiguous 48 United States with some rural population, the overall penetration rate is 23.1 per cent (705 of 3,051). This represents the penetration of programs into the largest possible number of counties disregarding need, isolation, and maximum population.

Local Environment

Community Size and Isolation—One method of classifying counties by size and isolation is the Human Resource Profile County Codes (HRPC).¹⁶ These 10 codes have been

TABLE 2—Program Penetration Rates of Counties with Some Rural Populations as Defined by US Census by Human Resource Profile County Codes

Code	Type of County	Counties with Programs	All Counties	Per Cent Program Penetration Rate
00	Large metropolitan core > 1,000,000 population	7	34	20.6
01	Large metropolitan fringe > 1,000,000 population	14	131	10.7
02	Medium metropolitan 250,000–999,999 residents	63	258	24.4
03	Lesser metropolitan 50,000–249,999 residents	39	185	21.1
04	Non-metro, urbanized, adjacent to SMSA, > 20,000 urban residents	53	172	30.8
05	Non-metro, urbanized, not adjacent to SMSA, > 20,000 urban residents	46	147	31.3
06	Non-metro, adjacent to SMSA < 20,000 but > 2,500 urban residents	124	553	22.4
07	Non-metro, not adjacent to SMSA 2,500 ≤ urban population < 20,000	149	722	20.6
08	Non-metro, adjacent to SMSA population < 2,500 urban residents	64	240	26.7
09	Non-metro, not adjacent with < 2,500 urban residents	146	609	24.0
	Total	705	3051	23.1

developed by the US Office of Management and Budget and consider the size of non-metropolitan counties as well as the proportion of urban residents within them and their proximity to metropolitan counties. Table 2 shows the various program penetration rates for the HRPC categories; rates are highest in the larger non-metropolitan counties and lowest in the largest metropolitan counties. Over two-thirds (483 of 705) of the programs are in the four categories containing the least populous, most rural counties although the penetration rates are lower than for more populous counties.

*Demographic and Socioeconomic Need Indicators—*Comparative penetration rates for counties categorized by per capita income in 1975 and per cent minority population are presented in Table 3. These data suggest that program placement is related to both the income of a county and its racial homogeneity. There is a clear trend for programs to be located in rural counties with lower per capita income. A county with a per capita income of less than \$3,000 is three

times as likely to have a program as is a county with a per capita income exceeding \$5,000 (Program Penetration Rate of 33 per cent versus 11 per cent). Low income counties are also more likely to have a program where the combined Black, Hispanic, and American Indian populations constitute less than 10 per cent or more than 50 per cent of the total population. Except for the poorest counties, with 50 per cent or more of the population from ethnic minorities, minority-dominant counties have about the same likelihood of program placement as do predominantly White, Anglo communities with a similar income profile.

Counties with sizeable, but not dominant, racial or ethnic minority populations exhibit a lesser likelihood of having a subsidized primary care program. This is most apparent in counties with lower per capita income and minority populations between 20 and 30 per cent of the total. Table 4 further illustrates this trend by showing that while counties with this ethnic profile constitute a relatively large

TABLE 3—Program Penetration Rates of All Counties with Some Rural Population by Per Cent Minority Population and per Capita Income (N=705)

Per Cent Minority* Population (1975)	Per Capita Income (1975)						Total
	0–\$3000	\$3001– 3500	\$3501– 4000	\$4001– 4500	\$4501– 5000	Over \$5000	
0–10% #	42/124	89/257	114/475	99/503	54/332	22/221	420/1912
PPR	33.9%	34.6	24.0	19.7	16.2	10.0	22.0%
10.1–20% #	5/19	14/62	21/97	19/67	17/58	9/54	85/357
PPR	26.3%	22.6	21.6	28.3	29.3	16.6	23.8%
20.2–30% #	5/30	7/64	10/77	13/61	4/27	3/19	42/278
PPR	16.7%	10.9	13.0	21.3	14.8	15.7	15.1%
30.1–50% #	22/94	38/138	20/63	11/41	2/9	1/4	94/349
PPR	23.4%	27.5	31.7	26.8	22.2	25.0	26.9%
50.1–100% #	54/122	6/17	3/13	1/4			64/155
PPR	44.2%	35.3	23.1	25.0			41.2%
TOTAL	128/389	154/538	168/725	143/675	77/426	35/298	705/3051
	32.9%	28.6	23.2	21.8	18.0	11.7	23.0%

*The per cent of Black, Hispanic, and American Indian populations were summed to arrive at this index.

TABLE 4—Distribution of Counties with 1975 Per Capita Incomes Below \$3,500 per Year by Type of Population Composition and Program Penetration Rate

Type of County	Number of Counties with Program Sites	All Counties	Per Cent Program Penetration Rate
Homogeneous			
Minority Dominant*	60	139	43.1
Majority Dominant**	131	381	34.3
Heterogeneous***	91	407	22.3

*More than 50% of Population is Black, Hispanic or American Indian.

**Less than 10% of Population is Black, Hispanic or American Indian.

***More than 10% but less than 50% of the county's population is constituted by Blacks, Hispanics, and American Indians.

proportion of all counties with the lowest per capita incomes, they are relatively less likely to have a program than are more homogenous counties.

While race and income may characterize a community's socioeconomic status, a more direct measure of the effect of health needs on program location may be observed by examining the penetration rates by infant mortality levels of counties (Table 5). A positive relationship between infant mortality and program location is evident. Over 38 per cent of all counties with infant mortality rates (IMR) of 40 or more per 1,000 live births have programs.

Health Care Environment

Penetration rates for counties grouped according to physician-population and general, acute care hospital bed-population ratios are displayed in Tables 6 and 7. The PPR is highest in counties with fewer physicians in 1970, although no linear trend is apparent. There does appear to be a linear relationship between program penetration and hospital beds per capita; counties with fewer or no beds having higher penetration rates.

The federal government has used three indicators of need as guidelines for the placement of health manpower and facilities in many of its programs. These designations are: 1) Health Manpower Shortage Area; 2) Critical Health Manpower Shortage Area; and 3) Medically Underserved Area.

TABLE 6—Program Penetration Rate of Counties by 1977 Physician/Population Ratio

Physicians/100,000 Population	Number of Counties with Programs	All Counties with Some Rural Population	Per Cent Program Penetration Rate
0	43	148	29.1
0.1–19.9	52	172	30.2
20–29.9	76	268	28.4
30–39.9	87	378	23.0
40–49.9	77	382	20.2
50–59.9	56	289	19.4
60–69.9	43	255	16.9
70–79.9	47	207	22.7
80–99.9	73	312	23.4
100 or higher	127	640	23.6
Total	705	3051	23.1

The penetration rates for all three of these groups of counties (whether entirely or partially designated) are higher than the overall 23 per cent. Critical Health Manpower Shortage Area counties have the highest penetration rate, 39.2 per cent, followed by Health Manpower Shortage Area counties with a rate of 33.6 per cent and Medically Underserved Area counties the lowest, with 25 percent.

Health Policy Environment

Several aspects of the health policy environment are associated with variations in Program Penetration Rate. Table 8 shows that the extent of legitimation by states for practicing nurse practitioners (but not physician's assistants) is positively associated with program location. Counties in states where nurse practitioners have a relatively broad extent of legitimation as measured by Kuhn¹⁵ (in a relative ranking of states on 10 subjective aspects of laws relating to nurse practitioners and physician's assistants) are more likely to have a rural primary care program than those counties in states where practice acts are more restrictive. Likewise, where state Medicaid agencies recognize new health practitioners as providers of primary care and pay for their services there are higher program penetration rates (Table 9).

A liberal eligibility policy for Medicaid coverage also appears to be associated with program location (Table 10).

TABLE 5—Program Penetration Rate of Counties by 5-Year Infant Mortality Rate (1972–1977)

Infant Mortality Rate of County per 1000 Live Births	Number of Counties with Programs	All Counties	Per Cent Program Penetration Rate
0–9.9	34	201	16.9
10–19.9	419	1812	23.1
20–29.9	206	879	23.4
30–39.9	35	128	27.3
40 or higher	11	31	35.5
Total	705	3051	23.0

TABLE 7—Program Penetration Rates of Rural Counties by Hospital Bed/Population Ratio (1970)

Bed/Population Ratio (n/1,000)	Number of Counties with Programs	All Counties	Per Cent Program Penetration Rate
0	137	501	22.4
0.01–2.49	100	335	29.8
2.50–3.99	176	756	23.3
4.00–5.99	176	795	22.1
6.00–7.99	67	363	18.5
8.00 or higher	49	301	16.3
Total	705	3051	23.1

TABLE 8—Program Penetration Rates for All Rural Counties by Extent of Legitimation of New Health Practitioners (NHP)

Type of NHP	Extent of Legitimation	Number of Program Counties	All Counties	Per Cent Program Penetration Rate
Nurse Practitioner	Hi ⁺	82	279	29.4
	Med ⁺⁺	244	842	29.0
	Lo ⁺⁺⁺	379	1930	19.6
Physician's Assistant	Hi ⁺	369	1527	24.1
	Med ⁺⁺	158	736	21.5
	Lo ⁺⁺⁺	178	788	22.3

⁺Somewhat broad to very broad legitimation.

⁺⁺Somewhat narrow to intermediate legitimation.

⁺⁺⁺No legislation or very narrow legitimation.

Over one-third of the rural counties located in states where a substantial majority of the poor are eligible for Medicaid as described by Brecher and Foreman¹⁴ contain a subsidized primary care program. Finally, a Medicaid payment policy for clinics on the basis of a "fixed fee" or "negotiated contract" also appears to provide a favorable environment for program development. Rural counties in states with such an arrangement have a penetration rate of 34.7 per cent compared to 20.5 per cent for all other counties. One observer has noted that such arrangements may allow for reimbursement of the broader array of services often delivered by subsidized rural health programs.¹³ The effects of eligibility rules and reimbursement policies taken together suggest that state Medicaid policies are important correlates of program penetration.

The presence of a long-standing state-sponsored service conditional loan provision for medical students may also be a factor involved in facilitating program implementation. Subsidized primary care programs are located in 346 of 1,399 (24.7 per cent) counties in states which had such provisions for medical students before 1972.¹⁶ This suggests that if state policies encouraging the placement of medical personnel in underserved areas had any impact on program initiation and stability, it was slight.

Changes in Program Placement over Time

Although the ability to draw inferences is limited because this analysis only includes programs which survived until they were surveyed in 1979, the placement of subsidized primary care programs in rural communities appears to be a recent phenomenon. Slightly more than 10 per cent of the 627 organizations identified were founded before 1960. These were sponsored, for the most part, by or located within public health departments in the Southeast, hospitals, and group practices which provided the founding dates of their organizations rather than the initial dates of their primary care delivery activities in rural areas. Fifty-six counties were first affected by programs in the 1960s compared with 400 in the period 1975–1979.

Some shifts in program placement emphasis appear to have occurred over the past two decades. Less than 24 per cent of the programs begun in the 1960s were located in rural counties with per capita incomes (measured in 1975) of less than \$3,500. A federal emphasis on identifying more needy communities in the late 1970s⁵ resulted in a much higher proportion of programs being placed in poorer counties; 37 per cent of programs initiated in the period 1975–1979 are located in counties with per capita incomes less than \$3,500

TABLE 9—Program Penetration Rates for All Counties with Some Rural Population by Status of Medicaid Payment Eligibility

Type of NHP	Extent of Legitimation	Number of Program Counties	All Counties	Per Cent Program Penetration Rate
Nurse Practitioner	No payment [*]	293	1512	19.3
	Limited payment ^{**}	168	777	21.6
	Full payment ^{***}	244	762	32.0
Physician's Assistant	No payment [*]	320	1607	19.9
	Limited payment ^{**}	121	564	21.4
	Full payment ^{***}	264	880	30.0

^{*}Either the profession is not recognized or, if recognized, not eligible for payment.

^{**}Limitations on scope of services compensated, or level of payment is lower than for a physician.

^{***}No limitations on scope of services, and compensation at the same level as a physician.

TABLE 10—Program Penetration Rates of Counties by Per Cent of Poor in State Who Are Medicaid Beneficiaries

Per Cent of Poor Who Are Medicaid Beneficiaries (1975)*	Program Counties	All Counties	Per Cent Program Penetration Rate
Less than 25%	221	1003	22.0
25–39%	222	1028	21.6
40–74%	132	650	20.3
75% or more	130	370	35.1
Total	705	3051	23.0

Source¹⁴

as compared to 24 per cent of programs initiated prior to 1970. A similar trend is evident with regard to the rurality of target communities. As of 1970, about 4 per cent of all counties with some rural population had a subsidized primary care program. That penetration rate was fairly uniform across counties regardless of the percentage of population in each county living in an urban place. By 1979, that situation had changed dramatically—the total percentage of affected counties had risen to 23 per cent of all rural counties and counties with less than 30 per cent of their population living in urban places accounted for over 52 per cent of all programs. The penetration rate in 1979 for counties in the most rural category (less than 30 per cent of the population living in an urban place) was 27 per cent compared to 13.2 per cent for counties with 75 per cent or more of the population living in cities and towns.

Discussion

This analysis has examined factors associated with the location of subsidized rural primary care programs in operation in 1979 through a comparison of program penetration rates. The results indicate that federal, state, and private initiatives have made a considerable but selective impact on the placement of primary health care resources in rural areas. The impact has been selective in that programs have avoided racially and ethnically heterogeneous communities while homogenous communities with higher levels of need as reflected by per capita income, infant mortality, and fewer existing health care resources have been successfully targeted and programs developed in them. Program placement appears to occur more often in areas governed by health policies favorable to the use and payment of new health professionals and areas with broader Medicaid benefits for the indigent.

The limitations to the interpretation of the data presented have been discussed, namely, flaws in the calculation of the denominators and numerators of the penetration rates, the use of county-level data, and the cross-sectional nature of the study. Also, while it seems reasonable to assume that the relationships between indicators of community health care “need” and penetration rates are indicative of the activities of program initiatives selectively responding to

high levels of “need”, the direction of the observed association between certain health policy characteristics and penetration rates is less clear. For example, the presence of a large number of subsidized rural primary care programs in a state may have stimulated, rather than resulted from, changes in the health policy environment to favor their survival.¹⁸ Despite the inherent limitations with data of this sort, the results suggest a relationship between a range of environmental variables and the presence of subsidized programs. The nature of that relationship is not entirely known but will be examined closely in other phases of the national evaluation project. The intriguing U-shaped relationship between the percentage minority population of counties and the presence of programs is a surprising finding. Whether this reflects differences in the ability of communities to organize themselves to seek grant support requires further study.¹⁹

These associations between program location and various environmental characteristics have important implications for the evaluation of subsidized rural primary care program success. It is clear that the many rural primary care initiatives have generally been successful in placing their programs where they were most needed, but there still remain many rural communities that are underserved and not likely to acquire medical services in the near future despite a generally accepted surplus of physicians.²⁰

Rushing has demonstrated the relationship of the medical development of a community with its overall economic and social development by illustrating the relationship of income, other professional employment, and physician distribution.¹² Our data confirm that program initiatives have been successful in placing programs in communities where private practices are least likely to develop and grow. For example, almost one-third of all counties with per capita incomes less than \$3,000 a year in 1977 had some subsidized practice operating in their boundaries in 1979. Thus, practices placed in such communities must overcome significant obstacles in achieving stability both in terms of revenues and staff. Without programs specifically targeted to meet the health care needs of these communities, and in the absence of payment and placement policies that help them survive (two characteristics of the current political atmosphere surrounding health and human services programs), the future development of new rural primary care programs or the survival of current ones is a dim prospect.

Finally, although the nonrandom distribution of subsidized primary care programs among American rural counties provide some insight into the intent and success of policy initiatives, the sampled programs collectively demonstrate wide variation in their practice environment. This variability in the context of subsidized rural primary care programs will allow us to determine what characteristics of the organizations delivering care vary according to their contexts and what effect the contexts have on the success of programs measured by their stability, accessibility, and client satisfaction. Empiric answers to these questions should guide policy makers and communities in their choice of the most appropriate kind of programs to meet their particular needs.

Developing federal fiscal policies in the health area,

especially toward the subsidization of health care delivery initiatives, will require a premium on the efficient placement, development, and operation of programs. Communities, providers, and funding organizations must pay greater heed to the makeup of their organizational environment and come to understand its effects on program success if they are to reach the levels of efficiency necessary for survival. This can only be done through a systematic approach, such as that taken in this evaluation, examining multiple levels of the socio-cultural, political, and economic environments and dealing appropriately with each if programs expect to survive in an era of diminished external resources and a political climate that does not favor the subsidization of care.

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