

Safety-Net Institutions Buffer the Impact of Medicaid Managed Care: A Multi-Method Assessment in a Rural State

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Objectives. This project used a long-term, multi-method approach to study the impact of Medicaid managed care.

Methods. Survey techniques measured impacts on individuals, and ethnographic methods assessed effects on safety-net providers in New Mexico.

Results. After the first year of Medicaid managed care, uninsured adults reported less access and use (odds ratio [OR] = 0.46; 95% confidence interval [CI] = 0.34, 0.64) and worse barriers to care (OR = 6.60; 95% CI = 3.95, 11.54) than adults in other insurance categories. Medicaid children experienced greater access and use (OR = 2.11; 95% CI = 1.21, 3.72) and greater communication and satisfaction (OR = 3.64; 95% CI = 1.13, 12.54) than children in other insurance categories; uninsured children encountered greater barriers to care (OR = 6.29; 95% CI = 1.58, 42.21). There were no consistent changes in the major outcome variables over the period of transition to Medicaid managed care. Safety-net institutions experienced marked increases in workload and financial stress, especially in rural areas. Availability of mental health services declined sharply. Providers worked to buffer the impact of Medicaid managed care for patients.

Conclusions. In its first year, Medicaid managed care exerted major effects on safety-net providers but relatively few measurable effects on individuals. This reform did not address the problems of the uninsured. (*Am J Public Health.* 2002;92:598-610)

Most states have implemented programs requiring some or all of their Medicaid recipients to enroll in managed care.¹ While the principal goal of converting Medicaid systems to managed care arrangements has been cost reduction, some states also have expressed an intention to use resources gained from the conversion to expand the number of low-income persons eligible for Medicaid.²⁻⁵

Thus far, the impact of Medicaid managed care on access to care for low-income persons remains unclear. While some states have expanded their Medicaid eligibility criteria over the last few years, Medicaid enrollment lists have contracted in almost half the states.^{6,7} The effects of Medicaid managed care either on overall costs to the states or on coverage of previously uninsured persons are difficult to separate from concurrent developments, such as welfare reform, reductions in employer-paid insurance, and state budget cuts, that influence the number of people eligible for

Medicaid. In particular, welfare reform has severed the link between cash assistance and Medicaid assistance and has adversely affected the ability of legal immigrants to gain Medicaid coverage. Eroding employment-based coverage, rising insurance costs relative to family income, and decreasing capability of providers to cross-subsidize the costs of health care also have contributed to access problems for low-income and uninsured persons.⁸ Although the assignment of a primary care provider offers the potential for improved access for some Medicaid recipients, disruption of previous care-seeking patterns and programmatic barriers may affect overall access, including access for uninsured, low-income persons.⁹

The uncertain future of safety-net institutions under Medicaid managed care has raised wide concern.^{8,10-15} For instance, if community health centers cut services owing to the effects of Medicaid managed care, the

costs of caring for uninsured patients may shift to counties and municipalities. Through reduced reimbursement, Medicaid managed care could hinder the ability of remaining safety-net providers to serve the uninsured.^{8,16}

Such concerns apply especially to rural areas, where several theoretical and practical questions have arisen.¹⁷ States include rural areas in Medicaid managed care for several presumed reasons: cost savings, increased access to services, improved quality, and simplicity of operating one statewide program.^{16,18} Some of the foremost architects of managed care nationally have noted that approximately one third of the US population lives outside of metropolitan areas with populations large enough to support 3 or more managed care organizations in competition. In these settings, the advantages of market competition for cost control, access, and quality assurance may be weakened.¹⁹ Barriers that states encounter with Medicaid managed care in rural areas include an insufficient number of covered lives to make prepayment feasible, limited prior penetration by managed care organizations, limited willingness of managed care organizations to participate in rural areas, and few primary care or specialty providers; such issues have led to the initiation of primary care case management in some rural areas.^{16,20}

Difficulties facing rural providers include unfamiliarity with managed care concepts, inexperience in negotiating payment arrangements, few alternative revenue sources, greater use of mid-level providers whom managed care organizations may not recognize, and inadequate information systems.²¹ On the other hand, the small number of providers in rural areas may lead to an enhanced bargaining position with managed care organizations. Few studies to date have evaluated

the impacts of Medicaid managed care for rural populations or safety-net institutions.²²

OVERVIEW

We have conducted a long-term, multi-method study of Medicaid managed care in New Mexico, a predominantly rural state whose demographic characteristics have led to concerns about managed care as a basis for public policy. In this research, we have used 3 methods to assess the impacts of Medicaid managed care reform at 3 levels of analysis. (1) To study effects on individuals, we have conducted a population-based survey focusing on low-income zip codes in urban and rural counties. (2) A second method uses an ethnographic approach to assess the impacts on safety-net institutions that historically have provided services to low-income patients: community health centers, emergency departments, private practitioners' offices, income support ("welfare") offices, and mental health service providers. (3) To study the effects on population-level indicators in the same geographical areas, a third method traces preventable adverse sentinel events (such as low immunization rates, incidence of cancers that can be prevented by screening, and hospital admissions that are sensitive to outpatient care). Although our research focuses on Medicaid managed care in New Mexico, we have developed our multi-method strategy with the hope that this approach will prove useful in evaluating the effects of various health policy reforms in other geographic areas as well.

Shortly before New Mexico implemented Medicaid managed care, leaders of community health centers approached members of our research team and expressed concern about the projected effects on safety-net institutions. After we received transitional funding from local sources to begin an evaluative study of the program's impacts, we initiated a multi-method research project first in one urban and one rural county, which we report on here. During the second year of the Medicaid managed care program, we received additional funding to expand the survey throughout the state, to conduct in-person interviews for households without telephones, to continue the ethnographic work, and to begin re-

search on preventable sentinel events through secondary databases. These investigations were ongoing at the time of this report.

We have found so far that safety-net institutions have buffered patients from some of the reform's effects, but with greatly increased pressures experienced by staff members at those institutions. However, organizational changes affecting mental health providers have been so extensive that their ability to buffer patients has been constrained.

SETTING

In July 1997, the state of New Mexico instituted mandatory managed care for all Medicaid recipients except for those in nursing homes, those also receiving Medicare, and Native Americans (who could "opt out" of managed care but who otherwise were assigned to managed care organizations). Rather than target the healthier segments of the Medicaid population before enrolling more vulnerable Medicaid recipients into managed care, New Mexico initially sought to enroll its entire Medicaid population, including the seriously mentally ill and developmentally disabled.²³

Transition to Medicaid managed care in New Mexico occurred in both urban and rural counties. In other states, almost all mandatory Medicaid managed care programs were initiated, and have remained, in urban areas; when rural regions were included in these programs, participation was usually voluntary.¹⁸ Unlike in New Mexico, the form of Medicaid managed care most common in rural states is primary care case management, where physicians receive a monthly fee for coordinating patient care but there is no change in basic fee-for-service reimbursement.²⁴

The state government approved 3 managed care organizations to provide physical health services for Medicaid recipients. In addition, the managed care organizations contracted separately with behavioral health organizations to deliver mental health services. These organizations, in turn, contracted with regional care coordinators, thus adding another administrative and financial layer to the Medicaid managed care system. Finally, the coordinators contracted with actual mental health service providers.

Some demographic characteristics convey the setting in which this study has taken place. Between 1996 and 1998, New Mexico ranked third among the 50 states in percentage of population lacking health insurance (22%),²⁵ first in proportion of the population living in poverty (22%),^{26,27} and first in unemployment (6.2%).²⁸ In a population of 1.8 million, approximately 20% held Medicaid coverage.²⁹ Bernalillo County, with a population of 557 000, contains the state's largest city, Albuquerque. Rio Arriba County, covering 5858 square miles, has a population of 41 190. The largest town in Rio Arriba County is Española, with 9700 residents.²⁹

METHODS

Survey Component

Sampling methods. We conducted a population-based, random-digit-dialed telephone survey among English- or Spanish-speaking households in selected low-income zip codes of Bernalillo and Rio Arriba counties during the summer of 1998, approximately 1 year after Medicaid managed care implementation. (In 1997, we had completed a pilot survey in the same 2 counties to pretest the survey methods and to obtain baseline distributions of the major variables.) If a member of the household was covered under Medicaid managed care or was without health insurance, or if the total household income was under \$20 000, interviews were conducted with the person in the household most knowledgeable about health care. To obtain information about children in the household (if any), the interviewee answered questions about the child with the most recent birthday.

Survey instrument and procedures. The survey instrument contained 281 items, selected to assess the effects of Medicaid managed care on access, satisfaction, use, perceived health status, and costs. Most items came from the Community Assessment of Health Plans Survey.³⁰ Separate parts of the survey asked respondents to consider their current experiences and their experiences 1 year before the survey (i.e., before and after Medicaid managed care was implemented). An initial version of the instrument was modified on the basis of focus group input and was pilot tested. This revised instrument was translated

into Spanish and checked by back-translation into English. The survey was conducted with the computer-assisted telephone interviewing system at the University of New Mexico's Institute for Public Policy Survey Research Center. The total projected sample size of 650 was based on an 80% power to detect a 10% difference by insurance category or change over time in pertinent outcomes, with a significance level of .05.

Data analysis. The main study outcomes were access, use, satisfaction with care, provider–patient communication, and barriers to care, both currently and compared with the time before Medicaid managed care. Bivariate comparisons were assessed by χ^2 tests. Principal components factor analysis was conducted to assist in selecting variables to represent the outcomes. The survey item with the highest loading on each factor was selected as the dependent variable representing each outcome in subsequent logistic regression analysis. Insurance status was the major predictor of interest. Other predictor variables included rural vs urban residence; race/ethnicity; and, for adults only, age, sex, and educational level.

For persons whose insurance status remained the same throughout the transition period, experiences before Medicaid managed care were compared with current experiences (improving, worsening, or no change) for each outcome variable. Logistic regression analyses were repeated, with change in outcomes used as the dependent variables. This approach permitted us to assess whether, over the transition to Medicaid managed care, any change in access, use, satisfaction, communication, or barriers occurred within each insurance category.

Ethnographic Component

Ethnography refers to the systematic and in-depth description of cultural and social processes.³¹ In health services research, ethnography can play an important role in examining the effects of policy changes on specific institutions and communities.³² Our project's ethnographic component focused on how Medicaid managed care affected community organizations and health care institutions that historically have served Medicaid and other low-income patients. The

ethnographers' immersion in "local categories, local narratives, and local practices"³³ promoted in-depth understanding of patients' and providers' perspectives about Medicaid managed care. This component also provided qualitative data from safety-net users to complement survey data.

In-depth interviews and field observations. Interviews were conducted by anthropology research assistants at income support ("welfare") offices where clients entered the Medicaid system, community health centers, hospital emergency departments, private practitioners' offices, and mental health institutions. Observation of participants also took place at community meetings and public forums that focused on Medicaid managed care. On-site participation involved two 30-hour periods of contact during the first year, initially at the start of Medicaid managed care and again 9 months later at each of 11 health care sites (6 in Bernalillo County and 5 in Rio Arriba County). Ethnographers conducted 15 to 20 interviews at each site in each of the 2 phases.

At each location, interviewers followed a standard protocol of questions and procedures. A manager was interviewed first, and follow-up interviews were then conducted with staff, professionals, and clients at each site. Three interview guides were tailored for administrators and professional staff, clerical staff, and patients. The researchers at each site also observed interpersonal interactions. These observations focused on the intake and referral processes that involved clients and staff members.

Collection of documents. Documents given to clients were collected at each site. This approach provided information about how formal, written documents described organizational procedures, how public and private organizations conceptualized the care they provided, and how organizational procedures differed before and after Medicaid managed care. Information sent to providers and enrollees from the Medicaid managed care program also was collected.

Data analysis. The ethnographic work provided 3 sources of primary data. These sources included documents collected from sites, field notes taken by observers, and interview notes. Data were analyzed through a

series of iterative readings or codings. Codes included issues such as "formularies," "primary care practitioner assignment," and "referrals," as well as safety-net providers' concerns such as workload, financial impact, and continuity of care. From over 100 codes, frequently occurring codes emerged as key themes. Through joint discussions, the ethnographic team then developed a coded index of topics addressed in the documents, field notes, and interview notes.³⁴ To facilitate data analysis, we used a respected software package, "ATLAS.ti."³⁵ Analyses that emerged from this approach were integrated through triangulation of data—that is, by comparing documents, observations, and interviews to develop a coherent and consistent description of themes, concerns, and meanings that emerged repeatedly.^{36,37}

RESULTS

Survey Component

Response rate. The overall survey response rate was 68% (72% in Rio Arriba County and 65% in Bernalillo County) of those residences at which a contact was made; 599 English-speaking and 71 Spanish-speaking respondents participated.

Respondent characteristics. Table 1 shows the respondents' characteristics. Reflecting the sampling strategy, the sample contained high rates of uninsured persons and Medicaid recipients. The table also demonstrates the movement among insurance categories for the low-income persons surveyed, with 23.9% of adults and 26.7% of children moving among the 3 categories in just 1 year.

Rates of outcome variables. Overall, we found very little change in reported outcomes between baseline and 1 year after Medicaid managed care was implemented, and also little difference between rural and urban residence, with exceptions that we note below. However, we observed major differences in outcomes according to insurance category, both before and after Medicaid managed care and in both counties (Table 2).

Overall, adult Medicaid and Medicare respondents enjoyed the most favorable access to primary care practitioners, while uninsured respondents had markedly less favorable access. Children with Medicaid had access to a

TABLE 1—Sociodemographic Characteristics of Respondents in Survey to Study the Impact of Medicaid Managed Care: New Mexico, 1998

	Total	Urban County (Bernalillo)	Rural County (Rio Arriba)
No. of respondents			
Adults	657	317	340
Children	267	117	150
Median age (adults), y	42	40	46
Females, %	69.7	68.1	71.2
Ethnicity, %			
Non-Hispanic White	28.3	42.4	14.8
Hispanic	51.4	34.3	67.7
Native American	5.5	4.9	6.1
Other	14.8	18.4	11.4
High school graduates (adults), %	70.0	72.2	67.9
Insurance status, %			
Adults			
Medicaid	12.6	11.7	13.5
Uninsured	49.8	55.2	44.7
Other (Medicare, private)	37.6	33.1	41.8
Children			
Medicaid	42.7	49.6	37.3
Uninsured	31.1	34.2	28.7
Other (Medicare, private)	26.2	16.2	34.0
Respondents changing insurance category in 1 year, %			
Adults	23.9	22.4	25.3
Children	26.7	28.2	26.0
Respondents without a primary care provider, %			
Adults			
Total	36.4	41.0	32.0
Medicaid	12.3	12.9	11.9
Uninsured	54.3	57.1	51.1
Other (Medicare, private)	20.1	22.9	18.1
Children			
Total	23.7	24.5	23.0
Medicaid	12.6	9.6	15.7
Uninsured	43.2	45.9	40.5
Other (Medicare, private)	18.7	23.5	17.0

primary care practitioner similar to that of privately insured children and more favorable than that of children in other insurance categories. Uninsured adults and children were much less likely to use care in a doctor's office or clinic than adults in any other insurance group. About half of the uninsured respondents did not seek such care; for uninsured children, the proportion had increased significantly since the initiation of Medicaid managed care. For both adults and children, Medicaid respondents were rela-

tively frequent users of emergency rooms, compared with all other insurance categories. Approximately half of Medicaid adults had done so recently; use did not decrease after Medicaid managed care.

Despite differences in access to and use of primary care providers, there were no differences by insurance category in respondents' satisfaction with how soon they could be seen for a routine visit or sudden illness. No significant changes in satisfaction occurred after Medicaid managed care was begun.

Adult respondents with Medicaid and without insurance tended to perceive greater problems in communication with health care providers. These differences by insurance category were less apparent for children. No consistent improvement or worsening in perceived communication occurred after Medicaid managed care was initiated.

Respondents with Medicaid reported relatively few barriers to care, compared with respondents in other categories, and Medicaid managed care did not affect these barriers significantly. The uninsured and those who changed insurance were more likely than respondents with other types of insurance to consider cost (i.e., of seeing a doctor or dentist and of obtaining a prescription) to be a barrier to care. Transportation emerged as an exception to this pattern, with a greater proportion of Medicaid adults (45% of Medicaid respondents in the rural county) reporting this barrier to care.

Factor analysis. In the factor analysis, 3 factors emerged from the items that assessed outcomes. One factor contained items that assessed either access to or use of care. The item most strongly associated with this factor was the number of doctor's office visits during the preceding year. A second factor contained items that asked about provider-patient communication or satisfaction with care. The item with the highest loading on this factor questioned whether the primary care physician listened carefully to what the patient or parent said. A final factor contained items that elicited barriers to care. The highest-loading item on this factor asked whether the cost of a doctor's office visit had been a reason for not seeing the doctor in the preceding year. These 3 items were used to represent the outcomes of interest in the logistic regressions.

Logistic regression models. Table 3 shows the results of the logistic regression models for current experiences of access and use, communication and satisfaction, and barriers to care of adults and children. For adults, Medicaid coverage did not emerge as a significant predictor of current experiences on any of the measures. Uninsured adults reported less access and use and greater barriers to care than other adults respondents. Considering current experiences, respondents for Medicaid children were more likely to respond fa-

TABLE 2—Access, Use, Satisfaction, Communication Problems, and Barriers to Care for Adults and Children, by Insurance Category^a

	Private	Medicaid	Medicare	No Insurance	Changed Insurance	Other Insurance	Insurance Comparison, P ^b
Adults (n=657)							
No primary care provider							
1 year ago	16.5	8.9	7.5	53.0	26.3	44.4	<.001
Current	15.6 (109)	11.1 (45)	10.0 (40)	56.7 (247)	29.3 (133)	55.6 (9)	<.001
No emergency room visits							
1 year ago	77.6	53.3	67.4	79.7	69.5	80.0	.003
Current	77.6 (116)	57.8 (45)	74.4 (43)	76.6 (261)	72.3 (141)	80.0 (10)	.141
No doctor's office or regular health care clinic visit							
1 year ago	29.2	21.4	16.2	52.1	28.8	40.0	<.001
Current	30.1 (113)	19.0 (42)	18.9 (37)	49.0 (259)	34.5 (139)	40.0 (10)	<.001
Dissatisfied with time required to be seen for routine appointment ^c							
1 year ago	16.4	11.1	17.5	22.8	20.6	11.1	.437
Current	23.1 (104)	6.7 (45)	15.0 (40)	25.6 (219)	25.4 (126)	11.1 (9)	.068
Dissatisfied with time required to be seen for sudden illness ^c							
1 year ago	13.0	11.6	18.2	26.3	20.2	0.0	0.028
Current	15.0 (100)	16.3 (43)	21.2 (33)	27.2 (217)	26.0 (119)	11.1 (9)	0.143
Doctor did not listen carefully							
1 year ago	9.0	16.3	7.3	14.6	12.8	0.0	.498
Current	9.0 (100)	11.6 (43)	7.3 (41)	16.5 (206)	7.2 (125)	16.7 (6)	.123
Language barrier with doctor							
1 year ago	9.8	18.2	2.4	11.1	9.5	0.0	.218
Current	6.9 (102)	20.4 (44)	0.0 (41)	13.8 (217)	8.7 (126)	11.1 (9)	.019
Doctor did not explain things in a way respondent could understand							
1 year ago	7.9	14.0	7.3	11.3	9.0	11.1	.834
Current	4.0 (101)	9.3 (43)	4.9 (41)	9.0 (212)	0.8 (122)	0.0 (9)	.037
Doctor did not show respect							
1 year ago	8.8	11.9	7.3	13.7	8.3	11.1	.615
Current	4.9 (102)	2.4 (42)	2.4 (41)	12.3 (212)	4.2 (120)	0.0 (9)	.015
Doctor did not spend enough time							
1 year ago	8.8	22.7	12.2	26.6	15.6	22.2	.004
Current	10.8 (102)	27.3 (44)	12.2 (41)	25.2 (214)	17.2 (122)	33.3 (9)	.017
Transportation a barrier							
1 year ago	5.4	27.3	14.6	15.0**	16.3	11.1	.018
Current	7.3 (110)	31.8 (44)	12.2 (41)	9.7	17.0 (129)	11.1 (9)	.001
Cost of seeing doctor a barrier							
1 year ago	9.9	11.6	4.9	35.6	26.9	11.1	<.001
Current	8.1 (110)	11.6 (43)	2.4 (41)	36.0 (247)	27.7 (130)	0.0 (9)	<.001
Cost of prescription a barrier							
1 year ago	13.5	18.2	4.9	21.5	27.3	0.0	.007
Current	10.8 (111)	15.9 (44)	7.3 (41)	24.0 (246)	25.8 (128)	0.0 (9)	.003
Cost of seeing dentist a barrier							
1 year ago	28.6	23.8	32.5	52.0	42.6	33.3	<.001
Current	25.0 (112)	31.0 (42)	27.5 (40)	54.0 (248)	47.3 (129)	33.3 (9)	<.001

Continued

TABLE 2—Continued

	Children (n=267)						
No primary care provider							
1 year ago	15.6	18.2	...	34.8	25.0	28.6	.179
Current	15.6 (45)	15.6 (77)	...	47.8 (46)	19.2 (52)	28.6 (7)	<.001
No emergency room visits							
1 year ago	89.1	64.6	...	72.6	73.8	71.4	.059
Current	87.0 (46)	63.4 (82)	...	80.4 (51)	65.6 (61)	85.4 (7)	.018
No doctor's office or regular health care clinic							
1 year ago	21.7	25.6	...	40.8*	32.8	50.0	.179
Current	28.3 (46)	20.7 (82)	...	53.1 (49)	32.8 (58)	50.0 (6)	.003
Dissatisfied with time required to be seen for routine appointment ^c							
1 year ago	16.3	12.2	...	19.6	13.5*	28.6	.666
Current	14.0 (43)	13.4 (82)	...	17.4 (46)	30.8 (52)	57.1 (7)	.009
Dissatisfied with time required to be seen for sudden illness ^c							
1 year ago	9.8	17.5	...	19.0	14.6	28.6	.644
Current	7.3 (41)	20.0 (80)	...	16.7 (42)	18.8 (48)	14.3 (7)	.490
Doctor did not listen carefully							
1 year ago	14.0	6.7	...	20.9	8.2	0.0	.124
Current	9.3 (43)	8.0 (75)	...	11.6 (43)	8.2 (49)	33.3 (6)	.356
Language barrier with doctor							
1 year ago	6.7	11.8	...	15.6	8.2	0.0	.523
Current	6.7 (45)	15.8 (76)	...	15.6 (45)	6.1 (49)	14.3 (7)	.343
Doctor did not explain things in a way respondent could understand							
1 year ago	6.7	8.0	...	6.7	6.0	0.0	.947
Current	2.2 (45)	6.7 (75)	...	4.4 (45)	0.0 (50)	14.3 (7)	.221
Doctor did not show respect							
1 year ago	9.1	5.3	...	15.9	9.8	0.0	.332
Current year	6.8 (44)	5.3 (76)	...	9.1 (44)	2.0 (51)	0.0 (7)	.570
Doctor did not spend enough time							
1 year ago	11.1	7.9**	...	26.7	16.0	28.6	.050
Current	8.9 (45)	19.7 (76)	...	26.7 (45)	18.0 (50)	42.9 (7)	.123
Cost of seeing doctor a barrier							
1 year ago	4.3	4.0	...	22.2	22.2	0.0	.002
Current	4.3 (47)	6.6 (76)	...	20.0 (45)	4.2 (48)	0.0 (6)	.024
Cost of prescription a barrier							
1 year ago	10.6	5.3	...	20.0	4.0	0.0	.037
Current	10.6 (47)	5.3 (75)	...	15.6 (45)	12.0 (50)	0.0 (6)	.365
Cost of seeing dentist a barrier							
1 year ago	27.7	10.8	...	47.8	18.0	16.7	<.001
Current	25.5 (47)	13.5 (74)	...	52.2 (46)	24.0 (50)	16.7 (6)	<.001

^aPercentages are reported; the numbers in parentheses indicate the respondents who remained in the specified insurance category from 1 year ago to currently.

^bFrom χ^2 test for contingency tables.

^cAnswering "1" or "2" on a 5-point Likert-type scale, where response 1 indicated "very dissatisfied" and 5 "very satisfied."

^dMedicare insurance category not applicable for children.

* $P < .05$; ** $P < .01$, for comparison of time periods by McNemar test.

vorably to the access and use measure and to the communication and satisfaction measure than respondents for other children. Respondents for uninsured children were signifi-

cantly more likely to respond that barriers to care were present.

The analysis then examined how each respondent's experience had changed since

Medicaid managed care implementation. There were no significant changes over time among either adults or children with Medicaid (Table 4). Thus, the move to Medicaid

TABLE 3—Relationship of Respondent Characteristics to Measures of Current Health Care Access and Use, Satisfaction and Communication, and Barriers to Care

	Access and Use	Communication and Satisfaction	Barriers to Care
Adults			
Age	1.00 (0.99, 1.01)	1.00 (0.99, 1.02)	0.99 (0.99, 1.01)
Male sex	0.62 (0.45, 0.85)*	0.91 (0.52, 1.62)	0.78 (0.49, 1.21)
Hispanic ethnicity	0.81 (0.60, 1.10)	2.79 (1.58, 5.07)**	1.10 (0.70, 1.71)
Urban resident (Bernalillo County)	1.23 (0.90, 1.67)	1.63 (0.94, 2.83)	0.85 (0.55, 1.29)
High school completed	0.89 (0.64, 1.24)	0.74 (0.36, 1.42)	1.51 (0.89, 2.60)
Medicaid recipient	1.38 (0.82, 2.34)	0.68 (0.28, 1.85)	2.15 (0.87, 4.97)
Uninsured	0.46 (0.34, 0.64)**	0.66 (0.36, 1.16)	6.60 (3.95, 11.54)**
Children			
Hispanic ethnicity	0.98 (0.61, 1.58)	2.67 (1.03, 7.33)*	0.63 (0.23, 1.78)
Urban resident (Bernalillo County)	0.74 (0.46, 1.19)	0.34 (0.12, 0.91)*	0.65 (0.22, 1.77)
Medicaid recipient	2.11 (1.21, 3.72)**	3.64 (1.13, 12.54)*	1.65 (0.34, 11.90)
Uninsured	0.73 (0.40, 1.36)	1.78 (0.57, 5.71)	6.29 (1.58, 42.21)*

Note. Table entries present odds ratios (95% confidence intervals) of respondent with listed characteristic having a positive response to the study outcome measure (access and use, communication and satisfaction, barriers to care) when compared with other respondents without that characteristic. Larger odds ratios in the first 2 columns indicate more favorable access and use of care and of communication and satisfaction, while larger odds ratios in the third column indicate more barriers to access. *P < .05; **P < .01.

adults and children, the unfavorable access and use and the barriers to care neither worsened nor improved during the period of transition to Medicaid managed care, although communication and satisfaction apparently improved among uninsured adults.

Ethnographic Component

Beneficial effects of Medicaid managed care. The ethnographic team noted certain improvements that resulted from the transition to Medicaid managed care. According to safety-net providers, advantages included the requirement of a primary care practitioner, emergency department case managers, and expansion of prenatal case management services. Managed care organizations also began sending reminders to parents to schedule well child examinations. Disruptive transfers of inpatients at the onset of Medicaid managed care were avoided. During the transition, continuing stays for patients hospitalized in non-contracting hospitals were routinely approved.

Effects on the work process. Personnel at the safety-net institutions experienced the initial transition to Medicaid managed care as chaotic and very stressful. At the income support offices, mailings of information and sign-up packets were late, and many were returned by the postal service owing to outdated address lists. Health care personnel lacked essential information to implement Medicaid managed care. Rosters of patients and primary care practitioners were not available when Medicaid managed care went into effect. Community health centers did not receive operational manuals until weeks after implementation. Telephone systems set up to provide patients and staff with information regarding the rules of the new system were often inoperable or busy. When connections were made, long waits were common and answers were often inconsistent.

At clinical sites, we observed major increases in workload, especially for clerical workers, attributable to new managerial requirements. Paperwork increased markedly because of new eligibility and referral procedures. Lack of training heightened the perceived impact of Medicaid managed care on workers at the clinical sites. In both safety-net institutions and managed care organizations, staff turnover and frequently changing poli-

managed care appeared to have had no major effect on access and use, satisfaction and communication, or barriers to care among respondents with Medicaid. For uninsured

TABLE 4—Relationship of Respondent Characteristics to Measures of Change in Health Care Access and Use, Satisfaction and Communication, and Barriers to Care Over the Transition to Medicaid Managed Care

	Access and Use	Communication and Satisfaction	Barriers to Care
Adults			
Age	1.00 (0.99, 1.01)	0.99 (0.98, 1.01)	1.00 (0.99, 1.01)
Male sex	0.60 (0.43, 0.83)*	0.70 (0.39, 1.19)	0.96 (0.50, 1.74)
Hispanic ethnicity	0.92 (0.67, 1.26)	0.83 (0.49, 1.42)	0.82 (0.45, 1.50)
Urban (Bernalillo County)	0.93 (0.68, 1.27)	1.40 (0.84, 2.36)	0.80 (0.44, 1.45)
High school completed	0.86 (0.62, 1.19)	1.37 (0.71, 2.83)	1.96 (0.94, 4.67)
Medicaid recipient	1.62 (0.95, 2.78)	0.58 (0.16, 1.58)	1.41 (0.56, 3.26)
Uninsured	1.48 (0.84, 2.62)	2.95 (1.43, 5.98)*	0.80 (0.23, 2.26)
Children			
Hispanic ethnicity	0.45 (0.28, 0.73)*	0.84 (0.30, 2.46)	0.83 (0.37, 1.86)
Urban (Bernalillo County)	0.76 (0.47, 1.24)	0.76 (0.26, 2.12)	1.69 (0.77, 3.78)
Medicaid recipient	1.52 (0.85, 2.73)	2.26 (0.49, 15.95)	0.61 (0.23, 1.60)
Uninsured	1.02 (0.43, 2.39)	3.08 (0.35, 27.06)	0.96 (0.24, 3.29)

Note. Table entries present odds ratios (95% confidence intervals) of respondent with listed characteristic having a positive response to the study outcome measure (access and use, communication and satisfaction, barriers to care) when compared with other respondents without that characteristic. Larger odds ratios in the first 2 columns indicate more favorable access and use of care and of communication and satisfaction, while larger odds ratios in the third column indicate more barriers to access. *P < .01.

cies often impeded the development of adequate knowledge to cope with the administrative demands of Medicaid managed care. The managed care organizations negotiated separate contracts with medical laboratories, behavioral health organizations, pharmacies, and transportation agencies. These arrangements created a markedly increased number of forms and procedures for professional and nonprofessional staff.

Financial stress and coping strategies among safety-net providers. Reduced income occurred at most clinical sites. This change resulted from delays in contracting with providers, denials of approvals for patients who sought medical care at customary sites instead of the newly assigned primary care practitioner, and denied claims for service. The Medicaid managed care program randomly assigned many patients to primary care practitioners, rather than to their prior safety-net providers. As a result, these providers lost capitation payments for patients whom they previously had attended. Payments from managed care organizations for capitated Medicaid patients were delayed for several months, resulting in substantial cash-flow problems. Especially hard-hit were small agencies caring for “special populations”—the mentally ill, homeless, disabled, and HIV infected. Private practitioners who previously cared for Medicaid and uninsured patients predicted that they would not be able to continue seeing uninsured patients because of reduced Medicaid payments. Owing to low reimbursements, most rural dentists refused to accept Medicaid managed care patients.

Community health centers and private practitioners reduced the impact of transition to Medicaid managed care through several strategies. One mechanism by which these safety-net providers coped with financial uncertainty was to affiliate with more than one managed care organization, either individually or collectively. Rural providers formed a coalition to provide leverage in bargaining and contracting with all 3 managed care organizations. Providers engaged in financial strategies to augment income or to decrease losses such as opening new part-time clinics or offices, offering new services, and reducing clinic hours. Local cooperation also extended the networks of rural safety-net providers. For

instance, a network of community health centers provided hospital coverage for a smaller network with clinics in more distant rural communities. To supplement the lower reimbursement rates, the rural health centers also negotiated with the state and federal governments to achieve a cost-based reimbursement formula.

Medication formularies, pharmacies, and laboratories. Each managed care organization implemented a reduced medication formulary list for Medicaid managed care, which differed from that for privately insured customers. These differences in formularies caused confusion and inconvenience. Many pharmacies previously serving Medicaid patients were disallowed under Medicaid managed care. In rural community health centers, “drug rooms” that previously provided medications were not approved as pharmacies. This change created problems for rural patients who needed to travel longer distances to contracted pharmacies (in some instances more than 50 miles). It also created some difficulties with language (particularly for urban Vietnamese patients) when the new pharmacies did not provide the interpreter services offered by previous pharmacies.

Problems with laboratory contracts arose since the 3 managed care organizations contracted with different laboratories, each of which maintained different procedures for safety-net providers. Managed care organizations differed regarding which tests could be performed by community health centers vs contracting laboratories. No laboratory maintained a contract with more than one managed care organization.

Urban–rural differences. More adverse effects occurred at rural sites than at urban sites. Rural community health centers, emergency departments, and private practitioners felt especially threatened by Medicaid managed care. Because they often had used Medicaid payments to cross-subsidize services for the uninsured, reimbursement and contracting delays became very stressful for these safety-net providers. One community health center lost approximately 1500 clients because their primary care practitioners were not included on the Medicaid managed care list for clients to choose. When rural patients were randomly assigned to primary care prac-

titioners, they often were assigned to providers outside the county or to more distant practitioners within the county (in some instances more than 30 miles away), creating transportation problems for some patients. Hardest hit were the private practitioners who, unlike the Federally Qualified Health Centers, received no subsidy to offset reduced capitated rates. One private practitioner whose practice largely consisted of Medicare and Medicaid patients decided to retire before the implementation of Medicaid managed care. Others sold their practices, moved, or opened part-time practices for self-pay patients in a nearby city.

Values and ideology. At community health centers, providers often expressed a view that every individual had a right to care, independent of ability to pay. These organizations strove to create a family environment, where clerks and practitioners involved themselves in the lives of their patients. Especially at rural health centers, providers shared an ideology that Medicaid and uninsured patients were poor people at the mercy of the system. Such providers often knew patients or their family members personally and treated them with personalized concern.

Most notably, safety-net providers often made explicit decisions to serve as buffers for patients to ease the obstacles imposed by Medicaid managed care. In some instances, these decisions predictably led to increased financial stress for the organizations. Several clinical sites (especially community health centers and one emergency department) stopped adhering to some of the managed care organizations’ requirements, such as preapproval for visits. An urban community health center for the homeless decided to maintain services for Medicaid patients and not to seek reimbursement from the managed care organizations. In effect, this decision comprised a subsidy for the managed care organizations, which continued to receive capitation payments for these patients. Similarly, Indian Health Service hospitals and clinics decided to accept Native American patients with Medicaid, even though their capitation payments went to the managed care organizations.

In many instances, practitioners and organizations extended themselves to reduce ad-

verse impacts on patients. For example, one physician purchased for a patient an urgently needed medication that was not on the managed care organization's formulary. A rural community health center solicited donations of pharmaceutical samples to dispense to patients when managed care organizations failed to approve contracts for rural drug rooms. Providers diverted time from patient care to argue for approvals of specialty care and to complete paperwork requesting non-formulary drugs. In addition, safety-net organizations buffered other potentially adverse consequences of Medicaid managed care by absorbing the additional workload and solving pharmacy and transportation crises.

Mental health services. Because New Mexico became one of the few states that did not "carve out" mental health services from Medicaid managed care reform, the contracting managed care organizations initiated strict cost control measures in collaboration with their behavioral health organization subcontractors. These subcontractors often authorized lower levels of care for acutely ill Medicaid patients than they previously had received. In many instances, these lower levels of care did not meet clinical needs. Practitioners at residential treatment facilities frequently observed that their caseloads consisted of many acutely ill patients who could benefit from treatment in inpatient hospital settings.

Administrators of institutions providing residential treatment, therapeutic foster care, and partial hospitalization consistently reported that the behavioral health organizations authorized placements in lower levels of care than appropriate to avoid expenditures for inpatient treatment. These decisions by behavioral health organizations created a cascade effect, as many service agencies, designed to serve less acutely ill patients at lower reimbursement rates, struggled to maintain quality standards of care while also absorbing the costs of caring for Medicaid patients. Because of these burdens, several mental health programs for children and adolescents closed.³⁸ Many agencies that stayed open ceased offering otherwise viable mental health programs because of financial constraints. Even when behavioral health organizations authorized payments for appropriate

levels of care, Medicaid patients commonly were placed on long waiting lists because of a marked decline in services throughout the state. Advocates, patients, and practitioners declared that Medicaid managed care had created a crisis of grave magnitude, especially for safety-net institutions.

Administrative responsibilities at these institutions increased considerably. Personnel interacted with as many as 10 different managed care entities. Credentialing, paperwork requirements, and utilization review protocols varied across behavioral health organizations. Safety-net institutions sustained financial expense in complying with these nonreimbursable requirements and protocols. Practitioners observed that the behavioral health organizations frequently delayed or withheld service authorizations and reimbursements. Consequently, fewer mental health practitioners were willing to accept Medicaid patients. Practitioners also feared that they could not adequately attend to the mental health needs of Medicaid patients and their families, mainly because behavioral health organizations did not authorize required levels of care for appropriate lengths of time. This fear deterred practitioners from assuming the ethical, legal, and financial responsibilities of caring for Medicaid patients.

Mental health services became more fragmented, especially in the state's impoverished rural localities, where patients of varying cultural and linguistic backgrounds could not access services consistently. In these areas, Medicaid patients and their caregivers expressed concern over the increasing scarcity of qualified, culturally competent mental health providers and community-based services. Many mental health safety-net institutions in rural areas had long-standing vacancies in professional positions. The already difficult task of retaining mental health staff in rural regions was exacerbated by Medicaid managed care. Staff members at such institutions observed that the added paperwork, cumbersome utilization review requirements, and low reimbursement rates contributed to provider turnover. Some patients in rural areas also experienced problems in accessing available services because they lacked adequate transportation. In addition, staff members at an urban psychiatric hospital observed that rural

Medicaid patients often traveled hundreds of miles from their communities to obtain acute care services.

DISCUSSION

Contrasting Results From the Survey and Ethnographic Methods

This multi-method study during the first year of Medicaid managed care in New Mexico has revealed several important and contrasting results. Data from the population-based survey suggested that this reform neither improved nor worsened access to care for most recipients of Medicaid. Patients with Medicaid, both adults and children, experienced greater access and use and fewer barriers to care (with the exceptions of transportation and possibly language barriers) than other low-income respondents, especially those without insurance. In most measures, respondents with Medicaid resembled those with private insurance. As assessed by the survey, Medicaid managed care caused no major changes for Medicaid recipients in measures of access and use, barriers to care, or satisfaction and communication.

Lack of insurance remained the single most important predictor of access and use and of barriers to care, both before and after Medicaid managed care was begun. States with high Medicaid managed care penetration manifest worse access for the uninsured than states with low penetration.⁹ Our survey data, however, did not demonstrate major effects of the transition to Medicaid managed care on access for low-income, non-Medicaid-eligible persons.

Ethnographic research, on the other hand, suggested certain specific barriers for patients. Particularly in rural areas, transportation became a barrier because some recipients were assigned to more distant primary care providers and pharmacies. Our findings regarding transportation differ from those of Felt-Lisk and coworkers, who found that travel times for rural Medicaid recipients did not generally increase in the 10 rural states that they studied. Most state plans were inclusive in structuring their rural primary care networks, so that providers were more willing to serve rural Medicaid recipients and in some instances competed for them. These researchers

also found that states' automatic assignment practices may have caused longer travel times for some rural residents during transitions to mandatory primary care case management programs.³⁹ In New Mexico, language became a greater barrier for some patients owing to changes in pharmacies. For a relatively small number of patients with severe disabilities or mental health problems, major disruptions and access barriers resulted from Medicaid managed care.

The ethnographic data also raised major concerns about safety-net providers. By markedly increasing the complexity and number of actions required to provide needed services, by disrupting previous service delivery patterns, and by creating barriers to reimbursements, Medicaid managed care changed the environment for these safety-net providers sufficiently that their future capacity to offer services for both Medicaid recipients and the low-income uninsured came into doubt. In particular, the greatly increased workload and heightened financial insecurity that resulted from Medicaid managed care led to stress and burnout for practitioners and staff members.

Because of values that emphasized service to underserved populations, individuals working at safety-net institutions and private practices that previously served the poor worked hard to insulate their patients, even when those efforts required extra personal effort and financial loss for their organizations. Some safety-net institutions such as a clinic for the homeless and Indian Health Service hospitals and health centers initially continued their services for Medicaid patients even though the capitations for these patients went to the contracting managed care organizations. This decision essentially led to a subsidy that the managed care organizations received from safety-net institutions.

At the same time, the safety-net institutions themselves explored strategies to remain viable in the new environment.⁴⁰ In the short duration of this study, no reduction in access for physical health services was apparent due to loss of safety-net providers. Nevertheless, some future loss may occur unless programmatic changes take place or safety-net organizations identify more viable adjustments to their new environment.

The 2 methods also shed light on the varying effects of Medicaid managed care in urban and rural areas. In the survey, no major differences emerged in study outcome measures between rural and urban residents. The ethnographic observations, however, revealed that in rural areas some Medicaid recipients experienced increased barriers to care because of greater distances to primary care and pharmacies.

As revealed through the ethnographic research, Medicaid managed care led to substantial modifications in the delivery of mental health services, which New Mexico did not "carve out" from the managed care program. For some patients in both urban and rural settings, access to services changed. One goal of the reform was to reduce the use of expensive services and to promote the development of less costly, community-based alternatives. Administrators reduced the availability of inpatient hospital beds, residential treatment centers, and therapeutic foster care. These changes led to access barriers for mentally ill patients who previously would have qualified for more intensive treatment.

Although our longer-term ethnographic research is still in progress, our preliminary observations indicate that problems of access and referrals have remained more troublesome in rural than in urban areas. Enrollment of new patients in Medicaid and fluctuation in Medicaid eligibility created a steady flow of new patients, many of whom were auto-assigned to an unfamiliar and more distant provider. In the rural county, the shortage of providers compounded the access issue, leading to long waits for appointments and prompting visits to the local emergency room. Referrals to providers outside the rural county remained problematic for patients lacking transportation.

The mental health crisis continued to deepen after the period of research reported here. By mid-2001, 60 mental health programs had closed since the initiation of Medicaid managed care.³⁸ Eventually, input from advocates, patients, practitioners, and our research group led to a decision by the Health Care Financing Administration (HCFA) in October 2000 to withdraw its waiver that included mental health services in New Mexico's Medicaid managed care program. HCFA

gave the state 90 days to transform the mental health portion of its Medicaid managed care program into a fee-for-service system.⁴¹ As precedents for reversion to fee-for-service arrangements, North Carolina and Montana had discontinued their Medicaid mental health managed care programs in 1999.^{42,43} Although HCFA previously has required corrective action in mental health programs under Medicaid managed care in some states, particularly Tennessee,⁴⁴ its decision to withdraw a waiver for mental health services was, to our knowledge, unprecedented. This decision was praised by Medicaid recipients, mental health providers, and patient advocates, who participated in a vigorous campaign to inform elected officials and HCFA representatives about deficiencies in the Medicaid managed care system for mental health services.

State officials expressed an intention to appeal HCFA's decision after the inauguration of President George W. Bush.⁴⁵ In a letter to Tommy G. Thompson, incoming secretary of health and human services, Republican Governor Gary Johnson stated that he had communicated directly to the president-elect that reversal of HCFA's decision "was my only request from his new administration when I met with him at his Crawford ranch on January 6, 2001."⁴⁶ On February 14, 2001, New Mexico's entire congressional delegation urged Secretary Thompson to acknowledge "the devastating problems" caused by Medicaid managed care as he considered the possible overturn of the waiver denial.⁴⁷ Two days later, in another unprecedented move, HCFA retroactively approved the state government's request to provide mental health services under the Medicaid managed care system.⁴⁸ HCFA's approval was contingent on a list of terms and conditions, which included monitoring procedures and mechanisms to act on Medicaid recipients' concerns and complaints. HCFA also required the creation of an advisory committee composed of Medicaid recipients, providers, and other stakeholders.

Advantages and Limitations of the Multi-Method Approach

To our knowledge, this is the first multi-method study of Medicaid managed care that has used complementary survey and ethnographic techniques. We believe that this

methodological approach is advantageous since it allows an assessment of the impacts of reform on both individuals and safety-net organizations in the same geographic areas. By including Medicaid and non-Medicaid recipients in the study, we also are able to assess the effects, if any, of Medicaid reform on people who do not hold Medicaid coverage. This strategy addresses the issue that Medicaid recipients frequently move on and off the Medicaid rolls owing to changing eligibility.⁴⁹

The contrasting results from the 2 components of the study derive from both the advantages and disadvantages of each method employed. Population-based telephone surveys, with their reliance on statistical measures of central tendency, best depict major trends in a population's experience but remain relatively insensitive to infrequent experiences affecting small segments of the population. Ethnographic approaches do not lead to precise estimates about a population's experience but are able to identify problems occurring infrequently. While the survey revealed that most Medicaid recipients reported no major changes as a result of Medicaid managed care, the ethnographic data showed that certain segments of the population were experiencing important problems.

In particular, the ethnographic research revealed problems that some patients experienced but that the survey did not highlight. The ethnographic observations, for instance, revealed difficulties of transportation for Medicaid patients in rural areas, barriers concerning pharmacies and medication formularies, and problems encountered by patients and families with mental health problems. We believe that the telephone survey, which sampled randomly in the low-income target population, elicited mainly the central tendencies of favorable access and satisfaction for Medicaid patients, while the ethnographic study clarified that small numbers of patients experienced grave difficulties. Moreover, the ethnographic research emphasized the experiences of safety-net organizations as they tried to help patients with unusual problems; the survey could not elicit these organizational perspectives. The contrasting results from the 2 methods therefore provided complementary findings that illustrate the importance of the multi-method approach.

Additional research is needed to confirm the findings of this study in other populations and to understand the effects of programmatic changes in Medicaid managed care. Problems associated with delays in contracting, changes in services, staffing and referral patterns, and increased administrative costs are similar to the initial implementation issues experienced by safety-net providers in other rural states.^{16,39} Continuing research will show whether these are short-term implementation problems or long-term difficulties of Medicaid managed care in rural areas. Our study also will clarify how Medicaid managed care combines with other developments, such as welfare reform, reductions in employer-paid insurance, and state budget cuts, to affect access to services and pressures for safety-net institutions.

Our survey potentially could underestimate access barriers by excluding households without telephones. This concern also has been raised in other recent research, including a study of Medicaid managed care that relied exclusively on telephone surveys.⁵⁰ Our in-person survey will clarify differences, if any, between respondents with and without telephones. We expect that the inclusion of people without telephones will accentuate the major problems deriving from lack of insurance that we found in the telephone survey.

Asking subjects to report on experiences occurring one year before being surveyed raises the possibility of recall bias. In addition, asking adults to report the experiences of one child may result in some difficulty for those with more than one child in accurately recalling the index child's experiences. There is, however, no reason to expect that errors in recall would be differentially distributed among insurance categories. Furthermore, we conducted a pilot telephone survey one year earlier in the same geographic areas where the transition to Medicaid managed care was beginning. The responses in the pilot survey to items concerning current experiences were very similar to those in the present survey asking for recall of experiences before Medicaid managed care (data not shown). This comparison suggests that the effects of recall bias were limited.

Another possible limitation of the survey concerns the apparent inconsistency in the

results regarding satisfaction and access by insurance category. Although uninsured respondents reported substantially worse access and more extensive barriers to care than respondents with Medicaid or other insurance, significant differences in satisfaction did not emerge. While our questions on satisfaction derived from the well-validated and widely used Community Assessment of Health Plans Survey instrument, the inconsistency of our results concerning access and satisfaction suggests that the survey items may not fully elicit dissatisfaction related to access barriers.

Policy Implications

Some authors have expressed concern about the appropriateness of managed care in rural environments where resources are insufficient to support competition among at least 3 managed care organizations.¹⁹ Difficulties encountered by some rural Medicaid recipients (for instance, much greater distances to reach contracted resources) and by safety-net providers suggest that managed care in rural environments creates challenges that require attention in policy. Similar problems have arisen with Medicaid managed care in other rural states.^{17,18} However, in contrast to New Mexico, some other states implementing Medicaid managed care in rural areas initially devoted greater time and effort to the details of implementation, to accommodate existing rural health infrastructures. In these states, before implementation, steps were taken to establish provider networks, to garner support from local representatives, and to incorporate local service-use patterns into the program design.³⁹

As our nation continues to struggle with the dilemmas of access and costs, we must remain vigilant that new policies improve rather than worsen these problems. We have found that Medicaid managed care can exert major effects on safety-net providers while creating little impact on patients, partly because providers seek to buffer the impacts of policy changes. Lack of insurance may remain an important predictor of access, use, and barriers to care despite substantial changes in Medicaid policy. Policymakers should consider the effects of Medicaid reform on safety-net providers and should recognize that such

reform does not address the problems of the uninsured.

Medicaid revenues have become vital in the care of both Medicaid and uninsured patients. The care of both groups has become inexorably linked in the absence of explicit state or federal subsidies and policies regarding care for the uninsured. However, the increasing separation of care for Medicaid recipients from care for the uninsured calls into question the future viability of local safety-net systems.⁸ ■

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Contributors

H. Waitzkin contributed to the study's design, coordinated the study, participated in data analysis and interpretation, and wrote and revised the article. R.L. Williams helped analyze and interpret the survey data and helped revise the manuscript. J. A. Bock analyzed and helped interpret the survey data and contributed to the article's revision. J. McCloskey and C. Willging participated in gathering and interpreting the ethnographic data and helped revise the article. C. Willging and W. Wagner gathered and interpreted ethnographic data and drafted sections of the article on mental health services.

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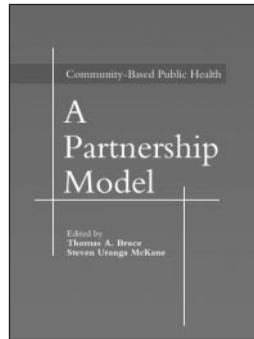
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