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Consumer Perspectives on Medicaid Managed Care: Comparing Rural and Urban Enrollees

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Abstract

This report presents the findings from a telephone survey of 313 respondents who have family members enrolled in Medicaid managed care in a multicounty region encompassing both rural and urban counties in Wisconsin. Consumer perspectives on access to, utilization of, and satisfaction with health care provided by a managed care organization are presented and discussed. Differences between the rural and urban counties are noted and implications for policy are explored.

Consumer Perspectives on Medicaid Managed Care:
Comparing Rural and Urban Enrollees

States continue to turn to competitive market solutions for providing health care services to those individuals and families for whom they pay the bills. Although there is currently a movement to place older adults covered by Medicare and Medicaid into a managed care delivery system, most of these initiatives have targeted the younger Medicaid families, especially moms and their children. States may initially embark upon this course in order to budget more effectively, but many believe that the improved coordination of care made possible in a managed care delivery system will lead to enhanced access and patient health outcomes. One logical correlation to these intentions would be improved patient/consumer satisfaction.

A number of states have had experience with managed care for younger Medicaid populations in urban areas. As states introduce managed care into rural areas, many questions emerge. Will managed care work for rural Medicaid families? Will it work as well or better than it has for urban families? These questions reflect a concern for a population with needs somewhat different from those of an urban population. As with many families living in poverty, rural families face a multitude of barriers, structural and personal, to making healthy choices for their children. However, in rural areas, these may be compounded by distance to formal and informal support systems or general unfamiliarity with the concept of managed care. In Wisconsin, as in many states with large rural populations, managed care is just beginning to expand to the general insured population in rural areas even as metropolitan areas experience high enrollment.

This expansion of managed care into rural areas began at the same time that welfare reform was changing the lives of rural Medicaid families, raising concerns about how these families would cope with both changes at once. For one, under welfare-to-work initiatives, moms are now required to work outside the home. This transition to work, coupled with a general unfamiliarity with managed care and the usual

structural (transportation, provider availability) and cultural barriers to care facing this population, would make changes in the way health care is provided particularly difficult for rural families to deal with. Further complicating matters is the separation of Medicaid and welfare eligibility sign-up, potentially making it more confusing for families to understand their continued eligibility for Medicaid even if they are now at work. Those having difficulties are likely to be less satisfied with the system.

This report presents the findings from a telephone survey of 313 respondents who have family members enrolled in Medicaid managed care in a multicounty region encompassing both rural and urban counties in Wisconsin. Consumer perspectives on access to, utilization of, and satisfaction with health care provided by a managed care organization are presented and discussed. Differences between the rural and urban counties are noted and implications for policy are explored.

THE CONTEXT: THE MEDICAID EXPANSION PLAN

In the mid-1980s the federal government began approving waivers for states to develop new market arrangements for Medicaid. Wisconsin has held waivers for demonstrations in five urban counties since the mid-1980s and was granted a new one in 1996 to allow for expansion into almost all counties, urban and rural, of the state. The plan, begun in 1997, expanded mandatory enrollment in managed care for the (then AFDC) Medicaid population to some or all parts of 68 of the state's 72 counties. The state has contracted with an average of three HMOs per county, though the range is two to eight. Twelve counties offer six or more plans. For managed care to be mandatory in a particular county, at least two competing plans must be offered. During the implementation phase, the state had to drop expansion altogether in counties where the managed care organizations that bid on providing care were unable to find providers within the required 20-mile radius. As one might expect, this happened in Wisconsin's most underserved counties.

The state office implementing the expanded managed care plan has afforded numerous opportunities for provider and consumer input through ongoing regional forums. These began early on and helped determine such rules as the minimum number of plans needed before all county eligibles would have to enroll.[1]

The managed care model in Wisconsin, as is the case with 62 percent of 403 plans providing Medicaid managed care nationwide (Gold, Sparer, and Chu 1996), is mostly a full-risk plan whereby a health plan is paid a fixed monthly fee per enrollee and is at full financial risk for the delivery of a comprehensive range of services (minimal exceptions).

The state has been producing HMO comparison reports for several years, the latest for 1996 (Wisconsin Department of Health and Family Services 1996). These state HMO reports compare the fee-for-service (FFS) and the managed care systems in the aggregate on access and on preventive, acute, mental, and dental health care, with findings generally favorable for managed care. Although it is important for the state to monitor these health outcomes, these reports are not sufficient to explain what is happening to this population. First, with the expansion, FFS is no longer an option for the majority of the state's (former AFDC) Medicaid enrollees. Second, the consumer perspective on how this new type of health care structure works for them has not been publicly available. Even though all of Wisconsin's HMOs are mandated to conduct some type of consumer satisfaction survey, requirements for such surveys have not been standardized nor have the results from them been disseminated. Third, most comparison studies are of urban populations comparing managed care to FFS (Sisk et al. 1996; Freund et al. 1989; Rowland et al. 1995); there are no urban/rural comparisons. As noted above, we expect to find families from rural counties having more difficulty dealing with managed care. Problems would likely

[1]For a further discussion of this forum process, see R. Riportella-Muller, "Evaluating Medicaid Managed Care through a Public-Private Partnership." Discussion Paper no. 1179-98, Institute for Research on Poverty, University of Wisconsin–Madison, 1998.

include not knowing about their assignment to a primary care provider, not utilizing preventive health care appropriately for their children, and not being satisfied with this new system of managed care.

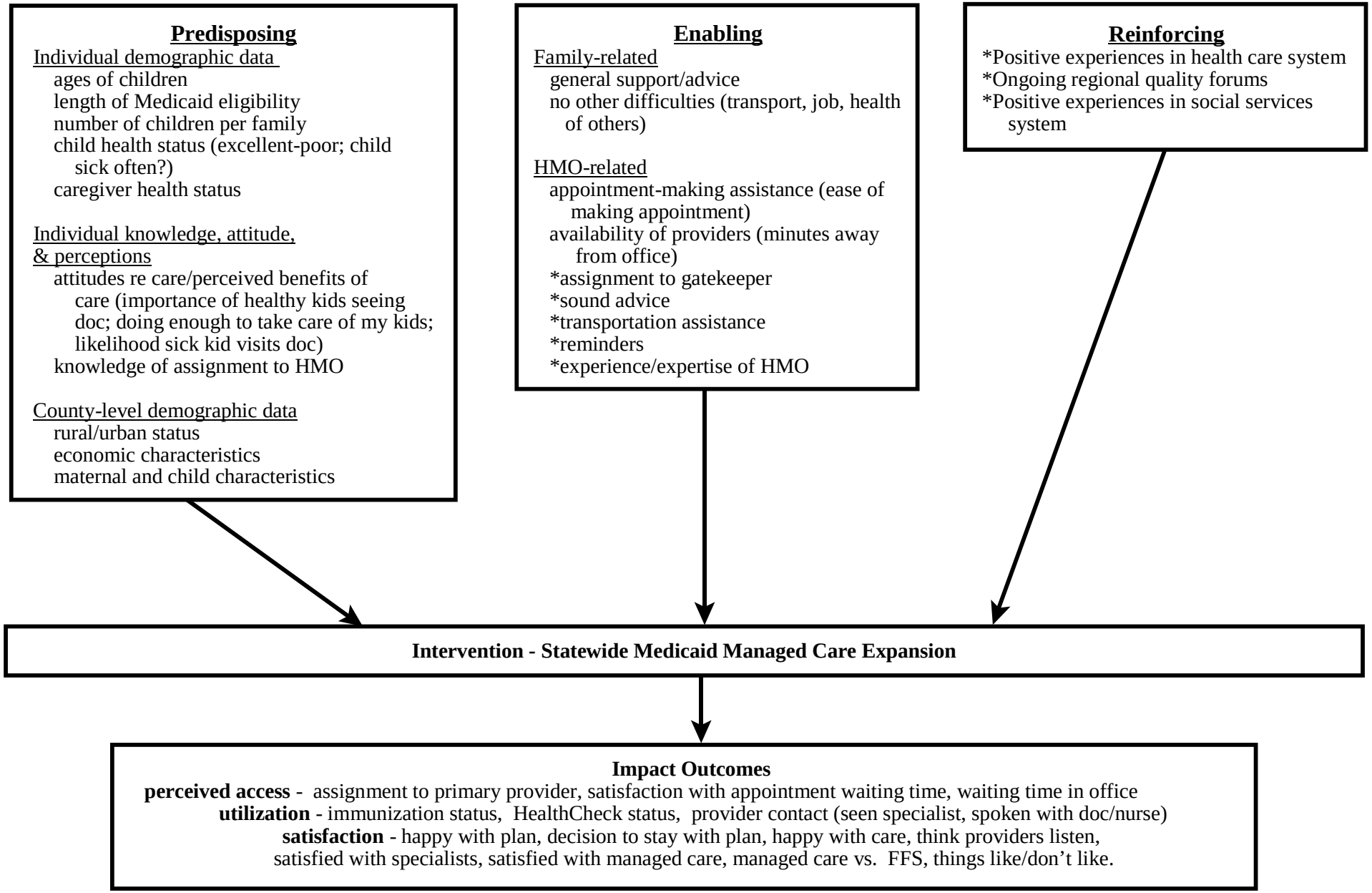
Finally, we suggest that the consumer perspective—attitudes about, behavior toward, and satisfaction with health care—should fit into a larger evaluation scheme, one that acknowledges the complexity that the system and the individuals served bring to bear on a series of outcomes. The adaptation of the PRECEDE model, described in detail elsewhere (Riportella-Muller forthcoming), sets the stage for such an evaluation. The model and how it is used here is described briefly below.

THE CONCEPTUAL MODEL

The adapted PRECEDE model provides a general framework for conceptualizing the types of issues that might influence access, utilization, and satisfaction. This is how is it used here. The variables of this model, presented in Figure 1, are included to acknowledge the breadth of factors allowed by the model. However, several factors that are part of the model are not directly tested here. For example, the ongoing regional quality forums can be assumed to be having a positive impact statewide, although there is no clear way to measure this. Further, the purpose of this analysis is not to test the overall model but to determine the effect of various factors, including the rural/urban dichotomy, on selected impact measures.

The model is an adaptation of the original PRECEDE model (Green et al. 1980), which recognizes the role of predisposing, enabling, and reinforcing factors for outcomes, including process, access, utilization, and health outcomes. The original PRECEDE model is built upon the foundation of sociological theory, including work on the health behavioral model by Andersen (1968) and measures of quality of care by Donabedian (1966). Andersen's model introduced the terms predisposing, enabling, and need, positing their role in access to medical care. Andersen's more recent paper (Andersen, 1995) expands the health behavioral model to allow for the assessment of outcome, measured by perceived

FIGURE 1
Application of Adapted PRECEDE Model to Evaluation of Medicaid Managed Care



* These variables were not measured for this analysis.

health status, evaluated health status, and consumer satisfaction. It was Donabedian's (1966) model that identified three basic components of medical care to be evaluated: structure, process, and outcome.

Predisposing factors include the target population's demographic characteristics as well as knowledge, attitudes, and perceptions that might affect decisions to use care or choose a healthy lifestyle. Even though basic demographic characteristics are not changeable (age, race) and some are not easily amenable to change (economic status and related factors), other components such as attitudes, knowledge, and perceptions certainly are. Ideally, all would be considered when the intervention is designed. For this study the demographic information includes the ages of the Medicaid eligibles, the number of months of eligibility, the number of children per family, and the health status of the children and the respondent. The attitude and knowledge information includes whether or not healthy children see a doctor; whether or not the respondent feels s/he is doing enough for his/her children; the likelihood that a sick child will visit a doctor; and how much the respondent knows about managed care.

The enabling characteristics include features of the health care delivery system that are designed to directly help or hinder use. Enabling characteristics are divided into those in the family realm and those in the control of the managed care organization (HMO for simplification purposes). The ones in this analysis include whether the family has others to depend on when in need; whether there are any difficulties with meeting the health care needs of family members due to transportation concerns, job scheduling concerns, health of other family members, or any other issue; proximity to the doctor's office; and ease of making an appointment.

Reinforcing factors are the interpersonal and professional supports that encourage repeated use. These supports could come from the personal, community, and professional levels. In particular, positive experiences during prior contact are likely to encourage future use; negative experiences are likely to discourage use, even perhaps when it is particularly appropriate. As mentioned above, this concept does not have a corresponding variable. Though not directly measured, this type of feedback probably does

play a role in how an individual utilizes the health care system. It may be indirectly measured by the satisfaction measures; that is, someone who is more satisfied is likely to be less hesitant in using the system in the future. The converse might be the case when someone is dissatisfied.

Finally, the intervention must be evaluated for its impact on the population, given all of the other variables we have identified. The PRECEDE model evaluates the intervention in terms of process, impact, and outcome. Process factors involve the inputs of the system. Impacts are the intermediate behavioral changes resulting from the intervention. Outcomes relate to the achievement of long-term goals. Often we make the assumption that patient outcomes are better for having accessed the medical care system than they would have been without that access. The quality of HMO procedures (process) helps determine whether utilization of care (an individual impact) translates into successful patient outcomes. For this analysis the focus is on the impact measures of access, utilization, and satisfaction. Process and outcome measures will be considered in future studies.

Some factors could appropriately be placed in more than one category. An enabling or impact factor could turn into a reinforcing factor if perceived by the consumer positively. Assignment to gatekeeper could be a measure of how enabling the managed care system is; in this analysis it is translated as assignment to primary care provider, a usual way of measuring access. Minutes away from provider and ease of making an appointment are analyzed as enabling variables, making an assumption that these have an effect on access, though these have been used as measures of access by others. Similarly, satisfaction with time to get an appointment and satisfaction with time waiting in the office are categorized as measures of access. Although they could also be considered measures of satisfaction, they seem to fit better into understanding how easily a family gains access to health care.

EMPIRICAL OPERATIONALIZATION OF THE ADAPTED PRECEDE MODEL

There has been a concern that as states contract for services, data to monitor health outcomes and even consumer perspectives would only be available in the aggregate, thereby diluting the ability to analyze trends and identify problems. Reflective of the cooperative market environment in which this plan was developed, the present research was carried out through a public-private partnership that permitted an independent researcher to conduct the state-mandated consumer satisfaction survey for one of the contracted managed care plans (referred to as Health Plan in this study).[2] Since the state's prior experience was with mostly urban counties, understanding the unique needs of the state's Medicaid recipients who live in rural areas was considered critical to both the researcher and Health Plan representatives. The study described below was designed to answer the questions suggested by the adapted PRECEDE model.

The Sample

The sample families were randomly selected from a sampling frame (stratified based on characteristics described below) that consisted of all (former AFDC) Medicaid managed care enrollees in Health Plan's files for their seven-county service area as of August 1997, 6 months after the initial expansion enrollment period. A family of three met (former AFDC) Medicaid income eligibility criteria if its annual income was less than $12,590 (federal poverty level, 1996). If the family income was less than $23,291, children under age 6 would qualify for the Medicaid Healthy Start program. In this sampling frame there were 4,069 eligibles (urban 2,641, rural 1,428) representing 1,651 families. The overall average number of enrollees per family was 2.5 (urban 2.8, rural 2.0).

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[2]For a further discussion of how this public-private partnership developed, see R. Riportella-Muller, "Evaluating Medicaid Managed Care through a Public-Private Partnership." Discussion Paper no. 1179-98, Institute for Research on Poverty, University of Wisconsin–Madison, 1998.

The stratification criteria chosen reflected the more obvious differences between the counties: (1) whether the county was one of the original demonstration counties having experience with managed care or one of the new expansion counties and (2) whether the county was urban or rural. The four rural counties all had over 50 percent of their populations living in rural areas (U.S. Bureau of the Census 1990). The urban counties on average had 28 percent of their populations living in rural areas, with most of their Medicaid sampling frame populations residing in the urban areas of those counties.

The sample was then stratified on these two criteria with the following sampling configuration:

	Number of Counties	
	Urban	Rural
Experience with managed care	1	0
New to managed care	2	4

The original sampling plan called for 100 surveys from each of these three strata, considered near the minimum needed to determine statistically significant differences between strata. To compensate for a lower response rate in the experienced county, more surveys were attempted. Even more were completed than expected, yielding a three-way split slightly divergent from 100 in each stratum (urban experienced = 91, urban new = 104, rural new = 118).

Data Collection and Analysis Procedures

The design of the survey instrument was guided by a previous state survey of one of the urban demonstration counties (Liss and Dunham 1986), the types of questions used in other studies (Sisk et al. 1996), and the requirements of the adapted PRECEDE model. The survey instrument was subjected to content validity checks by a team of experts, approved by all contractual entities, and pretested.

The phone interviews took place in fall 1997. This was at least 7 months from enrollment for most of the sample, considered enough time for them to have tried to access health care services and to have formed opinions about that care, and at least 4 months from having their names appear on Health Plan's eligibility files. The caller asked to speak with the adult responsible for the family's health care.

The interviews were administered by trained survey center personnel using the computer-assisted telephone interview method.

A comparison of the rural and urban counties on each of the selected predisposing, enabling, reinforcing, and impact variables was conducted using Pearson chi-square for significance testing of categorical variables, and *t*-tests for continuous variables. Logistic regression analyses were applied to selected impact variables; only those with significant findings are discussed here. Further, the variables are presented in terms of the rural/urban comparison. However, results comparing the experienced and new counties are also presented where differences between them are statistically significant.

Sample Representativeness

The randomized sampling frame consisted of 700 (456 urban, 244 rural) eligible families. The frame was generated from the full list of eligibles considering numbers needed for completed sample size in each county. Of these 700, we were able to contact 485 families (69.2 percent). Of these, only 60 (8.6 percent) refused. Of the remaining eligibles, 154 had phone numbers that were disconnected or incorrect (24.7 percent urban, 16.8 percent rural). Therefore, the overall response rate was a low 44.7 percent, 313 (195 urban, 118 rural) completed cases out of 700 eligibles. The response rate was slightly higher for the rural counties, 48.3 percent, than for the urban counties, 42.7 percent.

A different concern is raised by the 60 non-eligibles (7.9 percent of the original frame of 760) who were taken out of the sampling frame. These are people who reported at the start of the interview that they were not eligible for Medicaid. Though this self-report was not verified, this magnitude of loss of eligibility is not unexpected. Rates as high as 15 percent within a 4-month window between eligibility listing and patient contact have been reported elsewhere (Riportella-Muller et al. 1996). This on-again/off-again nature of eligibility always raises concerns for continuity of care. For concerns about sample representativeness, it is not known how well those still eligible represent these non-eligibles; we

assume these families may be on and off often and, therefore, that the current eligibles interviewed here are representative of the current non-eligibles.

RESULTS

Predisposing Variables: The Respondents

The sample included 313 respondents representing 870 enrollees (average 2.8 per family). The predisposing characteristics of the Medicaid eligibles in these families are presented in Table 1. The vast majority of this population were long-term Medicaid eligibles, with a mean of almost 20 months on Medicaid (see Table 1). Three-quarters (n = 222) reported eligibility of longer than one year. This group would have had experience with the former FFS system. Given the way families can be on and off the Medicaid rolls, it is likely that the other 25 percent have also had previous experience with FFS.

There is a significant difference ($p \leq .01$) between the ages of the eligibles in the rural and urban counties, with the urban counties having almost twice as many enrolled adults. The urban counties mirror the statewide distribution of enrollees more closely. Forty percent (n = 125) of families had only one child, an additional 41.1 percent (n = 128) had two or three children, and 17.3 percent (n = 54) had more than three. The mean number of children on Medicaid per family is 2.22, with little difference between rural and urban families. Though the rural counties do not have more children per family, they apparently have more children eligible through the Healthy Start program, for which adults are not eligible.

More families in the urban counties (18.3 percent, n = 35) than those in the rural counties (10.3 percent, n = 12) reported that at least one of their children was in fair or poor health. This is supported by the larger percentage of families in the urban counties strongly agreeing with the statement, “My children get sick often” (8.9 percent, n = 17, urban vs. 2.6 percent, n = 3, rural). A significantly larger proportion of families in the new counties (27.8 percent, n = 61) than in the experienced county (21.5 percent, n = 19) agreed strongly or somewhat with that statement (chi-square = 14.046, df = 4, $p \leq .01$).

TABLE 1
Predisposing Characteristics of Medicaid Respondents: Urban versus Rural

	Demographics		
	Urban	Rural	Total[a]
Medicaid eligibles by age[b]	(n = 585)	(n = 285)	(n = 870)
Birth – < 6 yrs	32.9%	38.9%	34.8%
6 – < 15 yrs	37.1%	40.4%	38.2%
15 – < 20 yrs	7.5%	6.3%	7.1%
> 20 yrs	22.6%	14.4%	19.9%
Mean age (yrs)	12.65	10.43	11.93
Number of months on Medicaid	(n = 182)	(n = 114)	(n = 296)
Mean	19.62	19.23	19.47
Std. dev.	7.21	7.49	7.31
Number of children on Medicaid per family	(n = 195)	(n = 117)	(n = 312)
Mean	2.28	2.13	2.22
Std. dev.	1.46	1.39	1.44
All children in excellent or good health	(n = 191)	(n = 117)	(n = 308)
Yes	81.7%	89.7%	84.7%
No	18.3%	10.3%	15.3%
Children get sick often	(n = 191)	(n = 116)	(n = 307)
Agree strongly	8.9%	2.6%	6.5%
Agree somewhat	19.4%	19.8%	19.5%
Disagree somewhat	33.0%	34.5%	33.6%
Disagree strongly	36.1%	43.1%	38.8%
Self-reported health[c]	(n = 192)	(n = 113)	(n = 305)
Excellent	20.3%	30.1%	23.9%
Good	47.4%	54.0%	49.8%
Fair	25.0%	9.7%	19.3%
Poor	7.3%	6.2%	6.9%

(table continues)

TABLE 1, continued

	Attitudes/Knowledge		
	Urban	Rural	Total[a]
Important for healthy kids to see doctor	(n = 195)	(n = 118)	(n = 313)
Very important	33.3%	39.8%	35.8%
Important	35.9%	24.6%	31.6%
Somewhat	21.5%	28.0%	24.0%
Not at all	7.7%	7.6%	7.7%
Don't know	1.5%	0.0%	1.0%
Doing enough to take care of my kids	(n = 195)	(n = 118)	(n = 313)
Enough	68.7%	75.4%	71.2%
Wish do more	28.7%	24.6%	27.2%
Don't know	2.6%	0.0%	1.6%
Likelihood child will visit doctor when sick	(n = 195)	(n = 118)	(n = 313)
Very likely	42.1%	50.0%	45.0%
Likely	24.6%	25.4%	24.9%
Somewhat	30.3%	21.2%	26.8%
Not at all	1.0%	0.8%	1.0%
Don't know	2.1%	2.5%	2.2%
Knew about managed care[d]	(n = 189)	(n = 116)	(n = 305)
Knew a lot	8.5%	19.8%	12.8%
Knew a little	40.2%	35.3%	38.4%
Knew nothing	51.3%	44.8%	48.9%

[a] May not add to 100% due to rounding.
[b]Independent samples *t*-test run on continuous age variable ($p \leq .01$).
[c]Pearson chi-square between urban and rural (12.153, df = 3, $p \leq .01$).
[d]Pearson chi-square between urban and rural (8.322, df = 2, $p \leq .05$).

Adult health is also of concern. Although most respondents reported their health to be excellent or good (73.7 percent, n = 225), one-quarter of respondents in urban counties reported their health to be fair. The difference between rural and urban families on this measure is statistically significant ($p \leq .01$).

The survey included several questions that reflect attitudes toward care. Two-thirds said it is important or very important for a healthy child to visit a physician, but only a little more than a third of these respondents fell into the "very important" category (35.8 percent, n = 112). Other studies have found similar results (e.g., Riportella-Muller et al. 1996), corroborating a lukewarm interest in preventive health care. Of special concern to the preventive health care system is the 24 respondents (7.7 percent) who believed it is not important at all. These findings are surprising because families reported that they were doing enough for the health care of their children (71.2 percent, n = 223) and that a sick child is at least likely to visit a physician (69.9 percent, n = 219).

The survey also included a question about knowledge of the change in Medicaid to a managed care system (see Table 1). Given the major outreach efforts undertaken in the past year to bring the new and mostly rural counties into the program, we were taken aback to find how little some respondents knew about managed care. Outreach efforts apparently reached some segments of that population, but not all. For this measure there are statistically significant differences between the urban and rural ($p \leq .05$) residents and between residents of the experienced and new counties (chi-square = 6.283, df = 2, $p \leq .05$).

Since only a few demographic characteristics of the sample are known, other data about these counties are presented in Appendix Table 1. In general, these indicators suggest that the study's rural counties are poorer than either the study's urban counties or the state as a whole. However, the urban counties fare worse on the maternal and child health indicators, including having a higher infant mortality rate than the rural counties (though a lower rate than the state as a whole).

Enabling and Reinforcing Factors

Some questions were designed to determine the family and social support network that might be available, or conversely, the types of barriers that might stand in the way of meeting the health care needs of family members (see Table 2). Most families reported having someone, a family member or friend, to depend upon (78.6 percent, n = 246). Whereas there are no significant differences between the rural and urban counties, almost 30 percent (n = 27) of respondents in the experienced county, compared to 16.7 percent (n = 37) in the new counties, reported not having someone to depend upon (chi-square = 6.795, df = 2, $p \leq .05$).

Regarding some other issues that might have an impact on access to care for these enrollees, we note that over 20 percent (n = 64) reported transportation problems (though 75 percent were within 15 minutes of their health providers' offices) and that the statistically significant differences unexpectedly favor the rural families ($p. \leq .01$). One might think that those in rural areas without bus or taxi systems would have more difficulty getting to the doctor's office. Since they do not, this is perhaps an indication (1) that the contractual arrangement for distance to primary care provider (requiring access to be within 20 miles) is working for the rural areas and (2) that rural families are accustomed to being dependent on cars for accessing services. Detailed interview responses demonstrate urban families' displeasure with the bus system.

In addition to transportation issues, slightly more urban than rural families had problems with the health of others that impeded their own or their children's utilization of health care. Rural families reported more of other types of problems. The overriding problem in getting health care for all of these families, however, appears to be conflict with job schedule; almost 40 percent (n = 122) reported such difficulties.

Two questions served as proxies for how "enabling" the HMO, and the health care it provides, was for families. The overwhelming majority of respondents felt it was at least as easy or easier than

TABLE 2

Enabling and Reinforcing Characteristics Reported by Family Members: Urban versus Rural

	Urban	Rural	Total[a]
Have family or friends to depend upon	(n = 195)	(n = 118)	(n = 313)
Yes	76.9%	81.4%	78.6%
No	22.1%	17.8%	20.4%
Don't know	1.0%	0.8%	1.0%
Have difficulties with transportation[b]	(n = 195)	(n = 118)	(n = 313)
Yes	25.6%	11.9%	20.4%
No	72.8%	88.1%	78.6%
Don't know	1.5%	0.0%	1.0%
Minutes away from doctor's office	(n = 194)	(n = 116)	(n = 310)
0–15 minutes	77.3%	73.3%	75.8%
16–30 minutes	16.0%	20.7%	17.7%
31–45 minutes	4.1%	3.4%	3.9%
> 45 minutes	2.6%	2.6%	2.5%
Have difficulties with job schedule	(n = 195)	(n = 118)	(n = 313)
Yes	40.5%	36.4%	39.0%
No	57.9%	63.6%	60.1%
Don't know	1.5%	0.0%	1.0%
Have difficulties with health of others	(n = 195)	(n = 118)	(n = 313)
Yes	9.2%	5.1%	7.7%
No	88.7%	94.9%	91.1%
Don't know	2.1%	0.0%	1.3%
Have difficulties with anything else	(n = 195)	(n = 118)	(n = 313)
Yes	18.5%	23.7%	20.4%
No	81.0%	76.3%	79.2%
Don't know	0.5%	0.0%	0.3%
Ease of making an appointment	(n = 186)	(n = 115)	(n = 301)
Easier than expected	46.2%	42.6%	44.9%
About as expected	44.1%	43.5%	43.9%
Harder than expected	9.7%	13.9%	11.3%

[a] May not add to 100% due to rounding.

[b]Pearson chi-square between urban and rural (10.833, df = 2, $p \leq .01$).

expected (88.8 percent, n = 267) to make an appointment with their primary care doctor. And, as required by contractual arrangement with the managed care organizations, most (83.5 percent, n = 290) reported being within 30 minutes of the physician's office.

Outcome Measures

Access. An interesting significant finding suggests that families in urban counties were more likely to report at least one child not assigned to a primary care provider ($p \leq .05$) (see Table 3).

A different pattern emerges for primary care physician assignment for adults. Here an even larger percentage in both rural (41.5 percent, n = 45) and urban (39.7 percent, n = 77) areas said that they either had not been assigned or did not know if they had been assigned. In either case, they did not know that they had been assigned to a primary care provider.

Respondents who visited a specialist (n = 135) were also very satisfied with the assistance they received in making an appointment with a specialist. Almost 90 percent (n = 121) reported being very or pretty happy with that assistance. A considerable majority of the respondents in both rural and urban counties were at least pretty happy or very happy (84.3 percent, n = 264) with the time it took to get an appointment, although the data do suggest some access barriers regarding the amount of time spent in the doctor's office. Slightly more than 18 percent (n = 57) expressed dissatisfaction with amount of time spent waiting in the office.

Utilization. Of concern to anyone interested in preventive health care for children is the finding that over 11 percent (n = 35) of families reported having at least one child who was not up to date on immunizations and that one-fifth (n = 64) reported having at least one child who was overdue for a HealthCheck exam (see Table 3). In both rural and urban areas, many parents are not bringing their children in for preventive health screens.

At the same time, acute and specialty care needs seem to be met. Over 40 percent (n = 136) reported having seen a specialist, with even greater numbers having spoken with a physician or a nurse

TABLE 3
Access to, Utilization of, and Satisfaction with Medicaid Managed Care as Reported by Medicaid Families: Urban versus Rural

	Access		
	Urban	Rural	Total[a]
All children in family assigned to a primary care doctor[b]	(n = 191)	(n = 117)	(n = 308)
Yes	73.8%	85.5%	78.2%
No	26.2%	14.5%	21.8%
Respondent assigned to primary care doctor	(n = 195)	(n = 118)	(n = 313)
Yes	60.3%	58.5%	59.6%
No	24.2%	20.3%	22.8%
Don't know	15.5%	21.2%	17.6%
Satisfaction with specialist appointment help	(n = 91)	(n = 44)	(n = 135)
Very happy	54.9%	50.0%	53.3%
Pretty happy	33.0%	43.2%	36.6%
Not very happy	5.5%	2.3%	4.4%
Not at all happy	5.5%	2.3%	4.4%
Don't know	1.1%	2.3%	1.5%
Satisfied with time it takes to get an appointment	(n = 195)	(n = 118)	(n = 313)
Very happy	46.7%	44.9%	46.0%
Pretty happy	36.9%	40.7%	38.3%
Not very happy	10.8%	7.6%	9.6%
Not at all happy	2.1%	3.4%	2.6%
Don't know	3.6%	3.4%	3.5%
Satisfied with time waiting in office	(n = 195)	(n = 118)	(n = 313)
Very happy	32.3%	21.2%	28.1%
Pretty happy	47.2%	55.9%	50.5%
Not very happy	11.3%	13.6%	12.1%
Not at all happy	6.7%	5.1%	6.1%
Don't know	2.6%	4.2%	3.2%

(table continues)

TABLE 3, continued

	Utilization		
	Urban	Rural	Total[a]
All children in family are up to date on immunizations	(n = 191)	(n = 117)	(n = 308)
Yes	86.9%	91.5%	88.6%
No	13.1%	8.5%	11.4%
All children in family are up to date on HealthCheck	(n = 191)	(n = 117)	(n = 308)
Yes	77.0%	82.9%	79.2%
No	23.0%	17.1%	20.8%
Someone in family has seen a specialist at Plan	(n = 195)	(n = 118)	(n = 313)
Yes	47.2%	37.3%	43.5%
No	50.3%	61.9%	54.6%
Don't know	2.6%	0.8%	1.9%
Spoken with nurse or doctor within past 2 months	(n = 195)	(n = 118)	(n = 313)
Yes	59.5%	54.2%	57.5%
No	31.3%	28.8%	30.4%
Don't know	9.2%	16.9%	12.1%
Spoken with nurse or doctor within past 6 months	(n = 195)	(n = 118)	(n = 313)
Yes	69.7%	67.8%	69.0%
No	20.0%	15.3%	18.2%
Don't know	10.3%	16.9%	12.8%

(table continues)

TABLE 3, continued

	Satisfaction		
	Urban	Rural	Total[a]
Happy with Health Plan	(n = 195)	(n = 118)	(n = 313)
Very happy	35.4%	35.6%	35.5%
Pretty happy	49.7%	49.2%	49.5%
Not very happy	9.2%	6.8%	8.3%
Not at all happy	2.6%	2.5%	2.6%
Don't know	3.1%	5.9%	4.2%
Want to stay with Health Plan	(n = 195)	(n = 118)	(n = 313)
Yes	87.2%	91.5%	88.8%
No	4.6%	4.2%	4.5%
Don't know	8.2%	4.2%	6.7%
Happy with care provided	(n = 195)	(n = 118)	(n = 313)
Very happy	53.8%	58.5%	55.6%
Pretty happy	33.8%	29.7%	32.3%
Not very happy	5.1%	5.1%	5.1%
Not at all happy	1.5%	2.5%	1.9%
Don't know	5.6%	4.2%	5.1%
Primary care doctor listens	(n = 195)	(n = 118)	(n = 313)
Yes	89.7%	90.7%	90.1%
No	3.6%	2.5%	3.2%
Happy with specialist care	(n = 92)	(n = 44)	(n = 136)
Very happy	57.6%	65.9%	60.3%
Pretty happy	30.4%	22.7%	27.9%
Not very happy	7.6%	4.5%	6.6%
Not at all happy	3.3%	4.5%	3.7%
Don't know	1.1%	2.3%	1.5%

(table continues)

TABLE 3, continued

	Satisfaction		
	Urban	Rural	Total[a]
Satisfied with managed care	(n = 195)	(n = 118)	(n = 313)
Very satisfied	32.3%	33.1%	32.6%
Pretty satisfied	50.8%	44.1%	48.2%
Not very satisfied	6.2%	9.3%	7.3%
Not at all satisfied	3.1%	5.9%	4.2%
Don't know	6.7%	7.6%	7.0%
Refused	1.0%	0.0%	1.0%
Prefer managed care or fee-for-service	(n = 194)	(n = 118)	(n = 312)
Managed care	42.3%	42.4%	42.3%
Fee-for-service	17.0%	22.9%	19.2%
Don't know	40.7%	34.7%	38.5%
Report liking specific things about care	(n = 194)	(n = 118)	(n = 312)
Yes	71.1%	63.6%	68.3%
No	24.2%	28.0%	25.6%
Don't know	4.6%	8.5%	6.1%
Report not liking specific things about care	(n = 194)	(n = 118)	(n = 312)
Yes	30.9%	33.1%	31.7%
No	64.9%	61.9%	63.8%
Don't know	4.1%	5.1%	4.5%

[a] May not add to 100% due to rounding.
[b]Pearson chi-square between urban and rural (5.515, df = 1, $p \leq .05$).

within the past 2 (n = 180, 57.5 percent) or 6 (n = 216, 69 percent) months. Those in the experienced county were more likely than those in the new counties to know if they had spoken with a health care provider within the past 2 months (5.5 percent in the experienced county don't know, compared to 14.9 percent in the new counties, $p \leq .05$) and within the past 6 months (5.5 percent compared to 15.8 percent, $p. \leq .05$). The finding that more families in rural counties don't know if they have spoken to a health care provider in either time frame (16.9 percent in rural counties versus 10.3 percent in urban counties) is surprising. It is not clear why those in rural areas should have a greater lack of recall than those in urban areas.

Satisfaction. In reviewing the results it is important to keep in mind that all of these respondents are from only one of the health care plans operating in Wisconsin. Of the 71 who responded to the question about how they chose their health care plan, almost 60 percent (n = 42) reported being assigned and did not take the given opportunity to choose. Regardless of how they came to be signed up with this managed care organization, enrollees were happy with Health Plan (85.0 percent, n = 266) (see Table 3.) This is reinforced by the almost 90 percent (n = 278) of respondents who said they want to stay with Health Plan as a provider. Respondents were also happy with the care they receive. Again, almost 90 percent (n = 275) reported being very or pretty happy with care received. Only six respondents (1.9 percent) reported being "not at all happy." Almost all respondents reported liking their physicians, both the primary care physicians, with 90 percent (n = 282) reporting that the primary care doctor listens to their concerns, and the specialists, with almost 90 percent of the 136 who have used specialists reporting that they are pretty or very happy (n = 120) with specialist care. However, 18 respondents (8.1 percent) in the new counties and only three respondents (3.3 percent) in the experienced county reported that they did not know if the primary care doctor listens, an indication that perhaps there had been no physician contact (chi-square = 6.965, df = 2, $p. \leq .05$).

Over 80 percent reported they were very or pretty satisfied with managed care (n = 253). Only 13 respondents (4.2 percent) reported they were "not at all satisfied." At the same time, whether respondents liked the idea of managed care is not as certain. While 42.3 percent (n = 132) favor managed care over the 19.2 percent (n = 60) who favor the fee-for-service system, 38.5 percent (n = 120) were unsure which system they preferred.

Many comments were generated in response to the questions, "Are there specific things about your care that you do like, don't like?" The positive comments had to do with knowledgeable doctors, clear explanations, and clean and prompt service. Negative responses included such things as not liking the doctor, not liking to wait, and not being satisfied with the answers to their questions. Respondents in the experienced county were more likely (45.1 percent, n = 41) than those in the new counties (26.2 percent, n = 58) to report on specific things they did not like (chi-square = 11.141, df = 2, p. $\leq$. 01). This may indicate that more experience with managed care leads either to greater dissatisfaction or to a greater willingness to complain.

LOGISTIC REGRESSION ANALYSES

Table 4 presents the coefficients and odds ratios of the logistic regression model using the predisposing, enabling, and reinforcing factors to explain selected measures of access, utilization, and satisfaction. All of the models are statistically significant, with large log-likelihood values. The significant results for each dependent variable are discussed below.

Access

Access is measured solely by knowledge of assignment to primary care provider for the logistical analysis. The odds of having all children in the family assigned to a primary care provider were significantly greater for rural families (OR = 2.16, p $\leq$ .10), for those who live closer in minutes to the

TABLE 4

Logistic Regression Model for Access, Utilization, and Satisfaction with Medicaid Managed Care by Predisposing and Enabling and Reinforcing Factors

	ACCESS		UTILIZATION		SATISFACTION							
	Assigned		Immunization		Happy Plan		Happy Care		Like Man Care		MC vs FFS	
Variables	β	Odds Ratio	β	Odds Ratio	β	Odds Ratio	β	Odds Ratio	β	Odds Ratio	β	Odds Ratio
PREDISPOSING												
Urban or rural	.77†	2.16	.10	1.10	.11	1.11	-1.60	.20	<.001	1.00	.53	1.71
Experienced	-.17	.84	-.21	.81	.49	1.64	-.72	.49	.93	2.54	-.05	.95
Months eligible	.03	1.03	.02	1.02	-.07†	.94	-.02	.98	-.13**	.88	.09**	1.09
No. of children	.07	1.08	-.47**	.63	.47*	1.60	.62*	1.85	.07	1.07	.08	1.09
All children healthy	-.30	.74	.37	1.45	1.39*	4.01	2.76**	15.79	1.82**	6.20	-.31	.73
Child sick often	-.05	.95	.07	1.07	.33	1.39	.43	1.53	.51†	1.67	.13	1.14
Self-reported health	.29	1.34	.27	1.32	.08	1.09	.68	1.97	-.27	.76	-.13	.87
Importance of care	-.24	.78	.20	1.22	.18	1.20	-.03	.97	.08	1.09	-.29	.75
Doing enough	.10	1.11	-.44	.65	-.12	.88	-.57	.57	.29	1.34	.78†	2.19
Likelihood of care	.32	1.37	.24	1.28	.34	1.40	.73†	2.08	-.58*	.56	.15	1.16
Knew about managed care	.17	1.18	.40	1.50	.71†	2.03	.18	1.20	1.19**	3.30	-.71*	.49
ENABLING/REINFORCING												
Have friends	.01	1.01	.80	2.23	.34	1.41	1.08	2.96	.93	2.53	-.62	.54
Difficulties transport	-.59	.55	.43	1.54	-.75	.47	-1.24	.29	-.01	.99	-.68	.51
Minutes away	-.02*	.97	.001	1.00	-.01	.99	.02	1.02	-.03	.97	.03	1.03
Difficulties job	.63†	1.89	.09	1.10	-.89†	.41	-1.11	.33	-.80	.45	-.19	.83
Difficulties health	.77	2.17	.67	1.96	-.66	.52	.53	1.71	.35	1.41	-.41	.66
Difficulties other	.37	1.45	.74	2.10	.81	2.25	.14	1.15	-1.01†	.37	-.13	.88
Ease of making appt	.51†	1.66	-.73†	.48	.62†	1.86	1.83**	6.22	.85*	2.35	-.44	.64
Log likelihood	222.80*		142.06†		145.03*		78.23**		133.25**		160.22**	
Misclassification rate	.18		.11		.12		.06		.10		.24	

N = 313; † $p \leq .10$; * $p \leq .05$; ** $p \leq .01$

doctor's office (OR = .97, $p \leq .05$), for those having difficulty with a job schedule (OR = 1.89, $p \leq .10$), and for those who had an easier time making an appointment (OR = 1.66, $p \leq .10$) (see Table 4). The finding that those with more job conflicts were more likely to have had all children assigned might indicate a proactive/positive attitude toward health care learned in the workplace. These families have to juggle jobs with family health care needs. Though they report difficulties with job scheduling, they have a better idea of their families' need for access to health care.

Utilization

For purposes of the logistical analysis, only the question about immunizations being up to date for all children is used. Although the whole model is significant, few variables stand out. As might be expected, the odds of having all children in the family up to date on their immunizations were significantly greater for those with fewer children (OR = .63, p. $\leq .01$). However, families reporting that the ease of making an appointment was less than expected had a greater likelihood of reporting that all children were up to date (OR = .48, $p \leq .05$). These are families who persevere even in light of this barrier.

Satisfaction

Although each of the models explaining one of the satisfaction measures is significant, not all of the satisfaction measures elicit consistent findings. Some are positively related to some measures and negatively related to others. The measure "are you happy with your care" concerns more the doctor/patient relationship. The measures about liking managed care (happy with the plan, liking managed care, and preferring managed care to FFS) indicate a comfort with the organization of the health care delivery system. It is clear that families may be satisfied at one level and not at all at the other. Months eligible for Medicaid, whether the family had at least one child in fair or poor health, knowing about managed care, and ease of making an appointment are related to at least three measures of

satisfaction. The significant relationships observed in the logistic analysis will be described in the order of the independent variables across the satisfaction measures.

Families with fewer months of Medicaid eligibility were happier with the plan (OR = .94, $p \leq .10$), more likely to like managed care (OR = .88, $p \leq .01$), and more likely to prefer managed care over fee-for-service (OR = 1.09, $p \leq .01$). Interestingly, the more children in a family, the greater the satisfaction ("happy with plan" OR = 1.60, $p \leq .05$; "happy with care" OR = 1.85, $p \leq .05$), and this holds true even when controlling for whether those children were sick.

Having all children in the family in good or excellent health greatly increased the odds that the family was satisfied ("happy with plan" OR = 4.01, $p \leq .05$; "happy with care" OR = 15.79, $p \leq .01$; and "like managed care" OR = 6.20, $p \leq .01$). It would not be unusual for families having sick children, and presumably needing more care than average, to have some concerns that managed care is not fulfilling their families' health care needs. Interestingly, the odds of being satisfied with managed care are greater if the family reports that children get sick often ("liking managing care" OR = 1.67, $p \leq .10$). This may be explained by the finding that 20 percent (n = 49) of parents who reported that all children were in good or excellent health also reported that their children became sick often or very often. Evidently this variable represents reporting about the usual childhood illnesses that would not lead a parent to report the child in all-around fair or poor health. Still, for these families, managed care appears to be working well enough for them to report liking managed care. A related finding is that the odds of preferring managed care over FFS increase for those who reported that they are doing enough for their children's health (OR = 2.19, $p \leq .10$).

The odds are greater that families who reported being likely to bring a sick child in for medical care will report being happy with the care (OR = 2.08, $p \leq .10$). At the same time, these same families have greater odds of reporting that they do not like managed care. These are perhaps the families that like the doctors but not the organization of the delivery system.

The odds are greater that those who reported knowing more about managed care were likely to report being satisfied with it. These families had greater odds of being happy with the plan (OR = 2.03, $p \leq .10$), liking managed care (OR = 3.30, $p \leq .01$), and preferring managed care over FFS (OR = .49, $p \leq .05$).

Some enabling variables also explained some of the differences in the odds of being satisfied. For those who reported having difficulties balancing their jobs and health care, the odds are greater that they were not happy with the plan (OR = .41, $p \leq .10$). Those who reported that they had difficulties with some things in their lives have greater odds of not liking managed care (OR = .37, $p \leq .10$). Perhaps managed care complicates their lives even further.

And finally, the odds of being satisfied were significantly greater for those who had an easier time making an appointment in three measures of satisfaction ("happy with plan" OR = 1.86, $p \leq .10$; "happy with care" OR = 6.22, $p \leq .01$; "like managed care" OR = 2.35, $p \leq .05$) and in the expected direction of preferring managed care over FFS.

LIMITATIONS

Although respondents' answers might be indicative of other families in similar situations, we cannot generalize beyond this sample of respondents, a subset of families enrolled with one managed care organization. We know that they are likely to be similar to other Medicaid-eligible families in most demographic features, even to those enrolled with other HMOs. Certainly, given strict rules for eligibility, we can assume that those in the sample, the sampling frame, and the Medicaid population are likely to be similar in measures of family income.

Respondent bias might be present in the data, reflecting the differences between those who do and do not have working phones. Others have discussed problems with contacting a Medicaid population by phone (Donat et al. 1995; Selby-Harrington et al. 1995). The question remains as to whether those not

reachable by phone are significantly different from those who are. It is possible that unreachable families, particularly if their phones are disconnected, lead lives even more complicated than those who are reachable. We might conjecture that something correlated with phone disconnections makes using managed care more problematic or produces attitudes and behaviors that are inconsistent with healthy choices. Other methods of reaching these populations need to be employed in order to understand the attitudes and behaviors of these harder-to-reach families and their impact on access, utilization, and satisfaction.

DISCUSSION

This study of 313 families enrolled in Medicaid managed care adds the consumer perspective—attitudes about, behavior toward, and satisfaction with health care—to the monitoring of program performance. The chosen model helps organize the issue into the predisposing, enabling, and reinforcing factors we should consider when trying to understand access, utilization, and satisfaction.

While controlling for other factors in the logistic regression, the rural/urban dichotomy stands out as an important and statistically significant factor only for explaining the difference in families' understanding of their assignment to primary care providers for their children. However, the other predisposing factors which are themselves related to the distinction between rural and urban areas, as highlighted in the bivariate analyses, suggest that the features associated with living in urban areas are of concern. When there are differences between families, they favor the new-to-managed-care and the rural counties, indicating that families in the rural counties function more readily and appropriately in managed care than their urban counterparts do. In general it appears that residents of rural areas have less trouble finding transportation and that those in the new expansion counties (including all of the rural counties) have better family and/or friend support networks on which to depend. Obviously, these findings raise concerns for the impact of these barriers on health care needs for urban Medicaid families,

particularly those in the experienced county. These differences may be due to the newness of the program in the rural and new counties and the major push the state has made to have this statewide expansion go smoothly. Families and the institutions serving them in the urban county may be entrenched in their patterns of use and not as amenable to the heightened outreach efforts and the positive benefits they offer.

That being said, the overall message from the survey results is encouraging; these families are satisfied with the care they are receiving. And, the more families knew about managed care, the better they felt about it. This might suggest that some well-placed outreach to help families understand and not be fearful of managed care would be helpful. More difficult to solve is the unease and dissatisfaction with managed care felt by those who reported having at least one child in fair or poor health. This was not unique to those living in rural or urban areas, nor is it unique to the Medicaid population. These are the cases we hear about, people who need a lot of care and are dissatisfied with managed care; these are the people for whom a legislative redress, the patient bill of rights, is being considered. Not only legislation but further examination is needed for any system that is not performing well for those most in need.

The lukewarm attitudes toward preventive health care on the part of most respondents, while of concern, do not seem to be related to utilization, access, or satisfaction when other factors are controlled for. The high numbers who do not think that they or their children have been assigned a primary care provider might be a result of this attitude; that is, poor attitudes may lead to a poor understanding of how to use the health care system. Refinement of the utilization measurement, planned for future analyses, may help explain this relationship so that policymakers can improve utilization of preventive health care.

Of further concern are the large numbers of families reporting difficulty with meeting the health care needs of their families because of job scheduling. This might be due to the increasing number of caregivers who work outside the home, particularly those in this population who are now off welfare and

adjusting to juggling work and family responsibilities. It also speaks to the need for health care providers to expand clinic hours and to work with local employers to develop plans so that working families can find time for both preventive and acute health care needs. This has implications for how the health care system can help these families participate appropriately in their own care and in their utilization of the health care system, managed care or not.

APPENDIX TABLE 1

Demographic Characteristics of the Rural and Urban Counties in Survey Compared to Wisconsin

Demographic and Health Indicators	Sample Counties		
	Urban	Rural	Wisconsin
Number of counties	(n=3)	(n=4)	(n=72)
General population % growth from 1990	6.7%	8%	6%
Economic Characteristics			
Median household income 1989	$30,925	$27,062	$29,442
Per capita personal income 1993	$20,775	$16,855	$19,806
% families below poverty level 1989	6.1%	6.4%	7.6%
% college graduates 1990	20.3%	12.7%	17.7%
Farm population 1990 as % of total	3.4%	10.7%	4.0%
AFDC cases per 1,000 residents 1995	9.4%	5.5%	13.7%
Maternal & Child Characteristics			
Mother: % white (of total births) 1994	92.7%	98.5%	N/A
Births to single mothers 1994	23.3%	19.3%	27.0%
Births to mothers < 18 yrs 1994	3.3%	2.8%	4.0%
Births to mothers < HS educ 1994	13.7%	11.3%	17.0%
Prenatal care in first trimester 1994	87.3%	83.0%	83.0%
Care in third trimester or no care 1994	2.7%	2.8%	4.0%
% of all live births below 5.5 lb 1994	6.0%	5.4%	6.3%
Infant deaths per 1,000 live births 1994	6.7%	5.0%	7.9%
Children < 5 yrs old with WIC 1995 (per 1,000 children)	303.4	270.3	362.4
Children birth–3 yrs old 1995 (per 1,000 children)	16.7	14	16.4

Sources: Bureau of Public Health 1994; Wisconsin Council on Children and Families 1997; U.S. Bureau of the Census 1994; and Wisconsin Department of Health and Family Services 1997.

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