Why Do So Few HMOs Offer Medicare Risk Plans in Rural Areas?

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Only 17 of the 38 health maintenance organizations (HMOs) that have Medicare risk contracts and offer coverage to commercial clients in rural counties include the rural counties in their Medicare plan service areas. Rural counties in which HMOs offer Medicare coverage have higher average adjusted average per capita costs (AAPCCs), larger populations, and more physicians per capita than rural counties excluded by risk plans. Interviewed plans cite low and erratic AAPCCs, scarcity of potential enrollees, lack of negotiating power with physicians, and adverse selection as drawbacks in rural areas. Proposed changes to the payment methodology would probably lead HMOs to increase their Medicare offerings in urban fringe areas, but not in isolated rural areas.

INTRODUCTION

The current debate about reforming the Medicare program to encourage greater use of managed care has virtually ignored the problem of service to rural areas, where few HMOs have offered services. Advocates promote managed care and HMOs as a way to control costs and increase competition in the marketplace while expanding access to services and coordinating beneficiaries' care. While the 9 million rural Medicare beneficiaries, who account for about one-fourth of all beneficiaries nationally, would benefit greatly from increased access and coordination of care, HMOs face serious obstacles to serving Medicare beneficiaries in rural areas.

Since April 1985, HMOs have been allowed to enroll Medicare beneficiaries in Medicare risk plans and receive a prospectively determined payment from HCFA in return for supplying all of the Medicare-covered services needed by enrolled beneficiaries. The payment is set at 95 percent of the AAPCC, an actuarially determined rate that differs across counties and varies with certain characteristics of the enrollee. Under the terms of the Medicare risk contracts signed by participating HMOs, HMOs may offer additional benefits beyond those covered by Medicare, for which they may charge the beneficiary a premium. The key features of Medicare risk plans—lower premiums than those charged for traditional supplemental (medigap) policies, low out-of-pocket costs, an emphasis on and coverage for preventive care, and the coordination of care that HMOs offer—promise to enhance access to care among beneficiaries in areas where HMOs offer a Medicare risk plan.

Unfortunately, relatively few HMOs offer Medicare risk plans in rural areas. In addition, several HMOs have selectively dropped rural counties from the service areas of their Medicare risk contracts. Thus, the promise of HMOs improving access to care for Medicare beneficiaries is not being realized in rural areas.

Our study measures the extent to which HMOs provide services to Medicare beneficiaries in rural areas and explains why the rate of such coverage is not higher, especially for those HMOs that offer commercial coverage to rural

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residents and hold Medicare risk contracts. We draw on both statistical comparisons and findings from interviews with HMOs to address these issues. The statistical comparisons that we make are based on all HMOs that contain rural counties in their commercial market areas and have a Medicare risk contract. As a result, we do not include tests of statistical significance; the differences we find reflect the actual population differences between these risk plans—not estimates—and thus are not subject to sampling error. This study was conducted in 1991 as part of the evaluation of the Medicare risk program that Mathematica Policy Research, Inc. completed for HCFA in 1993 (Brown et al., 1993).

BACKGROUND

Rural areas, defined as counties that are not part of the Office of Management and Budget's (OMB) metropolitan statistical areas (MSAs), contain a considerable share of the Medicare population.[1] Roughly 26 percent of the 31.2 million elderly persons in 1990 resided in rural areas, with substantial variation across regions (Van Nostrand, 1993). In the South and Midwest in 1984, about 38 percent of the elderly resided in rural areas. However, in the West and Northeast less than 19 percent resided in rural areas.

Although rural areas contain a large segment of the Medicare population, the lack of HMO interest in these areas may be explained by the low levels of service use. Under Medicare risk contracting, HMOs profit by reducing utilization of services to levels below that used by beneficiaries in traditional fee-for-service Medicare in the HMO's market area. Thus, there is little profit to be made in rural areas if utilization is already low.

Rural Elderly: More Health Problems

Rural elderly are more likely than urban elderly to have chronic health impairments (41 versus 36 percent), and they are slightly more likely to report themselves in fair or poor health (33 versus 30 percent). However, when both chronic and acute illnesses are considered, rural elderly report slightly fewer days of total disability.

Despite somewhat poorer health status, health care utilization by the rural elderly falls short of the urban elderly's utilization. In 1987, the rural elderly averaged 8.2 physician visits, while the urban elderly averaged 9.1 physician visits. Although there was no difference for individuals 75 years of age or over, rural residents 65 to 74 years of age averaged 7.3 physician visits, while their urban counterparts averaged 8.8 physician visits. This same pattern exists for the proportion of elderly who had seen a physician within the past year.

During 1985, Medicare expenditures for all physician services per rural enrollee were 28 percent lower than expenditures for urban beneficiaries (Dor and Holahan, 1990).[2] After adjusting for differences in prevailing charges, real rural expenditures were 15 percent lower than real urban expenditures. Real rural expenditures were lower for all physician specialties except for general practice, family practice, and general surgery. After controlling for differences in demographic characteristics, price, income, physician availability, hospital volume, and market characteristics, real rural expenditures were still 10 percent lower than real urban expenditures. The major factors explaining this remaining difference are the availability of

[1] This definition and other information presented in this section are drawn from the Office of Technology Assessment (1990), unless otherwise noted. See Hewitt (1989) for definition of MSAs and urbanized areas.

[2] These figures include expenditures for the 12.6 percent of rural Medicare beneficiaries under 65 years of age.

general practitioners and specialists and the average length of stay.

Rural and urban elderly were about equally likely to be hospitalized (26.2 versus 25.4 discharges per 100 population), but the rural elderly's average length of stay and total days of care were roughly 20 percent less.[3] A possible explanation for the slightly higher hospitalization rates but much shorter stays is that the rural elderly are more likely than the urban elderly to be admitted to a hospital for non-critical medical complaints, observation, and testing. In rural areas, where access to urgent care is more difficult than in urban areas, short hospital stays to stabilize and evaluate a patient's condition may be a more common practice than in urban areas.

Rural Areas Underserved by HMOs

According to earlier published estimates, as of June 1984, 118 HMOs (39 percent of all HMOs) reported servicing 408 rural counties in 34 States (Christianson et al., 1986).[4] This represents 17 percent of all rural counties. In contrast, approximately 290 HMOs were servicing 63 percent (430) of urban counties. Furthermore, HMO services are more likely to be offered in rural counties with larger populations than in those with fewer residents. For example, in 1984, only 9 percent of rural counties with populations less than 10,000 were served by an HMO, but 26 percent of the rural counties with populations between 25,000 and 49,000 were served. (A similar pattern existed for urban counties.) Finally, the market penetration rate (the percentage of residents enrolled in an HMO) in rural areas was quite low, at 1.7 percent, while the overall U.S. penetration rate was 9.7 percent.

Three of the health reform proposals considered by Congress in recent years promoted managed competition, which would include integrated health plans or HMOs, and singled out rural areas for special treatment because of the obstacles that rural areas face (Fuchs, 1994). Advocates of managed competition believe that access-to-care problems resulting from a lack of providers and resources can be solved by encouraging service to rural areas through grants, tax incentives, and changes to antitrust laws. A restructured market might attract a significant number of integrated health plans or HMOs to offer rural residents a choice of premiums and benefits.

For managed competition to succeed in rural areas, according to Fuchs, several conditions would have to be met. Adequate demand must be ensured through sufficient population with the ability to pay for insurance. Incentives must be offered for at least two providers to extend their capital and personnel to rural areas. Organizations must also have the capacity to develop integrated networks of providers and services. In addition, a mechanism for adjusting risks must be implemented so that plans compete on price and quality rather than on the selection of good risks. Finally, financial assistance to low-income families to purchase insurance needs to be high enough to preclude income tiering—the concentration of low-income families in the lowest-cost plans.

In its 1995 *Annual Report to Congress*, the Physician Payment Review Commission (PPRC) reviewed several vehicles to bring networks or managed care to rural areas. In some cases, managed-care plans have simply expanded from urban areas to nearby

[3] In 1984, the standardized average cost per admission was 25.7 percent higher in urban areas than in rural areas. Roughly one-third of this difference is explained by wage differences; 10 to 15 percent of the difference is explained by diagnosis-related group (DRG) mix and within-DRG severity of illness differences; and 25 to 50 percent of the difference is explained by variations in procedure intensity for similar types of patients (Cromwell et al., 1987).

[4] These estimates are based on the 1984 InterStudy HMO Census. Although "rural" is not explicitly defined in Christianson et al. (1986), the definition used appears to be non-MSA.

rural areas; in others, employers have brought managed care to rural areas by contracting with health care management companies to assemble networks. Some rural physicians have formed independent practice associations to contract with urban or rural managed-care plans. States have enacted Medicaid and other health reforms that create a structure for managed competition, including integrated service networks that would deliver a full array of services to residents of a particular area at a capitated rate. The Federal Government has three programs that award Grants to rural providers that support network development: Rural Health Care Transition Grants for small rural hospitals, Essential Access Community Hospital/Rural Primary Care Hospital grants to States and hospitals, and Rural Health Outreach Grants to consortia of at least three providers.

PPRC (1995) also reviewed several aspects of the Medicare program that impede the expansion of networks or managed care to rural areas. For instance, the Medicare program currently does not recognize non-HMO networks as a single provider; hence these networks are precluded from risk contracting for Medicare beneficiaries. Also, the capitation methodology for the Medicare risk program may discourage some HMOs from risk contracting because of inadequate risk adjustments and the volatility associated with small numbers of Medicare beneficiaries in rural counties. The bonus Medicare payments to physicians located in health professional shortage areas may also decrease physicians' interest in becoming affiliated with a Medicare risk plan, because this expansion may threaten the area's designation as a shortage area. The fear of antitrust or Medicare fraud and abuse challenges also may retard the development of networks and managed care if providers are unclear about the legitimacy of their arrangements.

STUDY DESIGN

Assessing rural service delivery first requires identifying service areas and defining "rural." The service area of Medicare risk plans is defined primarily by county boundaries. Thus, to determine whether an HMO serves any rural areas, we examined its market area to ascertain whether it includes any rural counties. Any county that is not part of an MSA was defined as rural for this study.

Based on this definition, all HMOs were classified into one of seven categories according to whether their market areas for commercial and Medicare members in 1990 consisted entirely of urban counties, entirely of rural counties, or a mixture. We used the Group Health Association of America's (GHAA) *National Directory of HMOs* for 1990 to identify commercial market areas for HMOs. We examined the actual geographic distribution of Medicare risk plans' enrollment as of July 1, 1990, using the enrollment data from HCFA's Group Health Programs Office (GHPO) to determine Medicare market areas.[5]

As Table 1 demonstrates, very few (18) HMOs offer services to rural Medicare beneficiaries. The market areas of only 11 of the 592 HMOs are strictly rural, and only 1 of these 11 HMOs (HMO Health Plans in south-central Colorado) has a Medicare risk plan. About one-half of all HMOs serve a mixture of urban and rural counties, but only 13 percent (38) of these HMOs have Medicare risk plans, compared with 20 percent of the HMOs serving strictly urban areas. Furthermore, only 17 of these 38 urban/rural HMOs include

[5] A county was included as part of the Medicare service area if: (1) more than 5 percent of a plan's Medicare enrollees as of July 1990 lived in the county and the number of beneficiaries was greater than 10, or (2) more than 50 of a plan's Medicare beneficiaries lived in the county. These criteria were established because the GHPO enrollment file often lists an enrollee's county of residence as outside the HMO's actual service area (due to use of mailing addresses, outdated information, or errors).

Table 1

Number of HMOs: 1990

Commercial Market Area	All HMOs	Medicare Risk Plan Market Area			No Medicare Risk Plan
		Urban	Urban/Rural	Rural	
Total	592	76	17	1	498
Urban	280	55	—	—	225
Urban/Rural	301	21	17	—	263
Rural	11	—	—	1	10

NOTE: HMO is health maintenance organization.

SOURCES: (Group Health Association of America, 1990); Health Care Financing Administration: Group Health Programs Office enrollment files, 1990.

Table 2

Number of Urban/Rural HMOs, by Region

Region	Number of HMOs Serving Urban/Rural Market	Number With Medicare Risk Contracts	Number (Percent) Including Rural Counties in Medicare Service Area
Total	301	38	17 (6)
Northeast	47	4	3 (6)
Midwest	102	14	3 (3)
South	89	7	2 (2)
West	63	13	9 (14)

NOTE: HMO is health maintenance organization.

SOURCES: (Group Health Association of America, 1990); Health Care Financing Administration: Group Health Programs Office enrollment files, 1990.

any rural counties in the service area of their Medicare risk plan.

Even the HMOs that provide services to rural Medicare beneficiaries are not aggressive about doing so in most cases. In total, 16,142 rural Medicare beneficiaries were enrolled in Medicare risk plans in July 1990—15,304 in the 17 urban-rural HMOs offering their Medicare plan in rural counties and 838 in the one rural HMO that has a Medicare risk plan. Most of these HMOs included only one or two of their rural counties in their Medicare service area. The 17 urban/rural HMOs that serve rural Medicare members drew all of their rural enrollees from 27 counties. Rural enrollees comprised less than 8 percent of the Medicare risk enrollment of these HMOs. In addition, the low rural enrollment was not due to a lack of potential enrollees in rural areas—less than 10 percent of the Medicare population of the 27 rural counties (about 198,000 beneficiaries) was enrolled in a Medicare risk plan.

Urban/rural HMOs in the West are more than twice as likely as those in other areas of the country to offer a Medicare risk plan to rural beneficiaries (Table 2). This difference may be due to rural counties adjacent to urban areas in the South and Midwest having a lower population density than rural counties adjacent to urban areas in the West.

Because we are interested in why rural areas are not served by Medicare risk plans, rather than in why HMOs do not have Medicare risk contracts or why more HMOs do not serve rural areas in general, we have drawn on two types of comparisons:

- Urban-rural HMOs that have Medicare risk plans but exclude rural counties from their Medicare service area compared with urban-rural HMOs that include rural counties in their Medicare plan.
- Strictly rural HMOs that do not have a Medicare plan compared with the rural HMO that does have a Medicare plan.

Table 3

Characteristics of HMOs' Rural Counties With and Without Medicare Enrollees

County Averages	Rural Counties Served by Urban/Rural HMOs With Medicare Risk Contracts	
	Some Rural Medicare Enrollees	No Rural Medicare Enrollees
Number of Counties	27	172
Mean AAPCC Rate	$266	$236
Rate Distribution of Counties by AAPCC Rate		
$150 - $200 (Percent)	0	13
$201 - $225 (Percent)	7	28
$226 - $250 (Percent)	30	30
Over $250 (Percent)	63	29
Population	54,763	27,292
Population 65 Years of Age or Over	6,632	3,541
Non-Federal Physicians per 100,000 Population	94	71
Medicare-Certified Nursing Home Beds per 1,000 Residents 65 Years of Age or Over	10	8

NOTES: HMO is health maintenance organization. AAPCC is adjusted average per capita cost.

SOURCES: Health Care Financing Administration: *Adjusted Average Per Capita Costs Rate Book*, 1990; U.S. Department of Health and Human Services: Area Resource File, 1989.

We conducted two types of analyses—a statistical comparison of the HMO groups being contrasted and a qualitative assessment based on interviews with the HMOs. The statistical comparison of HMO characteristics and the characteristics of the counties served and not served by Medicare risk plans yields some insights into why some HMOs offer a risk plan to Medicare beneficiaries in rural counties while others do not, as well as why some counties receive such coverage but others do not. The statistical comparison for the strictly rural HMOs is of limited value, since only one such plan has a Medicare contract.

The interview data were obtained from telephone discussions with eight HMOs—four whose market areas are urban-rural and that have Medicare risk plans (including one whose Medicare service area contained rural counties), and four strictly rural HMOs (including the one that had a Medicare risk contract). These interviews helped verify our quantitative results, enhanced our understanding of the relative importance of different factors, and enabled us to identify factors that cannot readily be quantified but illuminate why a Medicare risk plan is or is not offered to rural beneficiaries.

STUDY FINDINGS

Area and Plan Characteristics Differ

Rural counties in which a Medicare plan is offered differ substantially from rural counties that urban-rural HMOs exclude from their Medicare plan service area. Included and excluded rural counties differed on AAPCC rates, area population, supply of physicians, and supply of nursing home beds (Table 3). Rural counties in which a Medicare risk plan is offered have an average AAPCC rate that is $30 per month (13 percent) greater than the average rate for the rural counties that HMOs exclude from their Medicare service area. The rural areas where risk plans are offered also have an average population that is twice as large and a supply of physicians that is one-third larger than that of the excluded counties. Rural areas with Medicare plans also have about 25 percent more nursing home beds per elderly resident than the rural service areas excluded by Medicare risk plans.

These findings on rural area characteristics are what one would expect. Because rural counties have much lower AAPCCs than adjacent urban counties in general, it

Table 4

Characteristics of Urban/Rural HMOs With Medicare Risk Contracts

HMO Averages	Some Rural Medicare Enrollees	No Rural Medicare Enrollees
Number of HMOs	17	21
Model Type (Percent)		
IPAs	31	52
Network	6	19
Staff	6	5
Group	25	10
Mixed	31	14
Medicare Enrollment	11,628	7,089
Total Enrollment	116,772	119,062
For-Profit (Percent)	44	52
Plan Age (Years)	15	12

NOTES: HMO is health maintenance organization. IPA is individual practice association.

SOURCE: Group Health Association of America, 1990.

is not surprising that HMOs are most likely to include in their Medicare plan service area those rural counties with the highest AAPCCs. It is equally clear that rural areas with a larger population will be more attractive to HMOs. In these areas, HMOs will have greater opportunity to spread the fixed costs associated with extending a Medicare risk plan to rural areas—marketing the plan to rural beneficiaries, explaining the Medicare plan to providers in rural areas, convincing them to participate, and complying with HCFA's quality-assurance requirements—over a larger number of Medicare enrollees. Finally, a greater supply of physicians and nursing home beds in a rural area gives the HMO more options and greater bargaining power.

HMOs that offer their Medicare risk plan to rural beneficiaries differ in model type and size from other HMOs, but not on other organizational characteristics (Table 4). HMOs whose Medicare risk plans include rural areas are less likely to be individual practice associations (IPAs) or network models and more likely to be group or mixed models than urban/rural HMOs whose Medicare plans exclude the rural counties of their commercial service area. They also have substantially more Medicare enrollees, on average. However, the HMO's overall size, age, for-profit status, and Federal qualification bear little relationship to whether the risk plan's service area includes rural counties. Thus, an expectation that non-profit HMOs would be more likely than for-profit plans to include rural counties in their Medicare service areas was not borne out by the data.

Financial Performance Influences Service Area

The projected profitability of Medicare risk plans also appears to influence whether the Medicare service area includes the HMO's rural counties. In the adjusted community rate (ACR) calculations that risk plans are required to prepare prior to each contract year to justify their premiums (Table 5), each of the 21 HMOs that restricts its Medicare plan service area to urban counties showed an expected financial loss (relative to its normal rate of return) for 1990 on its Medicare risk plan. In contrast, only one-half of the HMOs that extend Medicare coverage to the rural counties expected to lose money on their Medicare plan. Thus, urban-rural HMOs with Medicare risk plans that are making money are often able and willing to include rural counties in their Medicare service area, despite the typically lower AAPCC rate. However, if the HMO is unable to earn a normal return on its Medicare plan, it tends to drop the least profitable (i.e., rural)

Table 5

Financial Performance of Urban-Rural HMOs With Medicare Risk Plans

APR-ACR for 1990	Some Rural Medicare Enrollees		No Rural Medical Enrollees	
	n	Percent	*n*	Percent
Number of Plans With Data, 1990 APR-ACR[1]	17	100	15	100
Under -$50	4	23	6	40
-$50 to -$10	2	12	7	47
-$10 to 0	3	18	2	13
0 to $10	5	29	0	—
Over $10	3	18	0	—

[1] No data on APR-ACR were available for 1990 for 6 of the 21 HMOs with risk plans in urban areas only.

NOTES: The average payment rate (APR) is the plan's estimate of the revenue that it expects to receive from the Health Care Financing Administration (HCFA) under the adjusted average per capita cost (AAPCC) payment mechanism, based on the AAPCC rate and the distribution of its Medicare risk enrollees across counties and AAPCC rate cells. The adjusted community rate (ACR) is the health maintenance organization's (HMO's) estimate of the price it would charge for such services, obtained by multiplying the price charged to commercial clients for such services, multiplied by adjustment factors reflecting the greater utilization rates and different case complexity of elderly members. APR-ACR is the difference between these two estimates, indicating whether the plan would expect to earn more or less than their usual rate of return from the payments received from HCFA. (Excess profits must be converted into additional benefits for enrollees or returned to HCFA.)

SOURCE: Data for these computations were obtained from a special computer file maintained by staff at HCFA's Office of Financial Management.

counties from its service area or tends not to expand into such areas.

Plans Cite Additional Decision Factors

Our interviews with four urban-rural HMOs with Medicare risk contracts and four strictly rural HMOs reinforced the findings from the statistical comparisons concerning what affects HMOs' willingness to offer a Medicare risk plan in rural areas, but also identified two other factors: the perception that greater adverse selection exists in rural areas, and the HMO's commitment to the rural community. The three rural HMOs without a Medicare risk contract had rejected it for one or more of the reasons discussed in this section. The urban-rural HMOs with risk contracts gave similar reasons for not including the rural portion of their normal market areas in their Medicare service area.

We conducted interviews with the chief executive officers or Medicare directors of the eight Medicare risk HMOs using different interview protocols for each of the four categories of HMOs depending on whether the HMO had a strictly rural or urban-rural market area and whether it offered services to Medicare beneficiaries in rural areas. The protocols used open-ended questions (i.e., respondents were not given a checklist or prompted about specific factors) to cover the following topics: service areas, factors affecting the decision whether to offer services to Medicare beneficiaries, utilization control mechanisms, financial arrangements with providers, HMO financial performance, Medicare enrollment and utilization (when applicable), and characteristics of the local market. When respondents identified multiple reasons or factors that influenced their decisions, we asked them to identify which were most important.

Low AAPCC

The low AAPCC in rural counties is clearly the primary reason that HMOs choose not to offer a Medicare risk plan to rural Medicare beneficiaries. Urban-rural HMOs cited the wide discrepancy between the AAPCC rates of the urban and rural counties in their service area—the median AAPCCs of their rural counties ranged from 14 to 36 percent below the AAPCCs of the urban county from which the HMO draws most of its enrollees (Table 6)—and argued that the discrepancy was unwarranted because rural beneficiaries would be at least as expensive to serve as urban members.

Table 6

AAPCCs for Counties Served by Urban/Rural Risk Plans Interviewed

Interviewed Urban/ Rural HMOs	State	AAPCC		
		Highest Rural	Median Rural	Principal Urban
HMO Kansas	Kansas	$287	$236	$327
Peak Health Plan	Colorado	249	222	257
AV-MED Health Plan	Florida	327	276	430
Maxicare Indiana	Indiana	256	214	304

NOTES: AAPCC is adjusted average per capita cost. HMO is health maintenance organization.

SOURCES: Study interviews and Health Care Financing Administration: *Adjusted Average Per Capita Costs Rate Book*, 1990.

Table 7

AAPCCs for Rural HMOs Interviewed

Interviewed Urban/ Rural HMOs	State	AAPCC		
		Highest Rural	Median Rural	Nearest Urban
HMO Health Plans	Colorado	$227	$222	$263
United Health Care Plan	Arkansas	250	245	285
Rocky Mountain	Colorado	230	190	263
First Plan HMO	Minnesota	179	176	220

NOTES: AAPCC is adjusted average per capita cost. HMO is health maintenance organization.

SOURCES: Study interviews and Health Care Financing Administration: *Adjusted Average Per Capita Costs Rate Book*, 1990.

Several HMOs noted that the commercial premiums they charge vary little, if at all, between their urban and rural counties.

The strictly rural HMOs we interviewed also stated that the low AAPCC levels in their service areas inhibit them from offering a Medicare risk plan. Although these HMOs do not provide any services in urban areas, they noted that the discrepancy between the AAPCC in their rural counties and that of urban counties in the same State is far greater than the very modest differences between the areas in physician fees. Table 7 shows the discrepancy between the median AAPCCs of the HMOs' rural counties and the nearest urban county. The differences range from 8 to 28 percent.

Other complaints about the AAPCC rates in rural counties include their slow response to overall market area changes and their sensitivity to outlier cases. HMOs complained about the 8 years it takes for a change in market area costs (for example, due to the closing of a rural hospital or other market factors) to be fully reflected in the AAPCC. On the other hand, the rates often change erratically from year to year and differ substantially across apparently similar rural counties because the small number of beneficiaries in these counties makes the AAPCC rates very sensitive to outliers (beneficiaries with extremely high utilization). For example, the rural counties of one HMO had AAPCC rates in 1990 that ranged from $405.58 (for a county with a total population of only 558 in 1990) to $167.06. These two factors make it very difficult for the HMOs to plan and manage their risk. HMOs have much more freedom to control and smooth their revenues flows from their commercial products, where no formulaic method like the AAPCC is used to set premiums.

Small Population

The second reason cited by most HMOs for not offering coverage to rural Medicare beneficiaries is that the population in these areas is simply too small to enable HMOs to cover the associated fixed costs. These costs include those incurred in marketing

to this area, developing a rural provider network or convincing existing rural providers to participate in the Medicare plan, implementing utilization review and quality-assurance procedures over geographically scattered rural physicians, and administering the Medicare plan. These costs are not incurred for commercial members in rural areas because commercial coverage is marketed to employers rather than to individuals, and because covered employees who reside in rural counties are expected to use the mainly urban physicians with whom the HMO contracts. Due to these added costs, the HMOs cannot provide Medicare services at a rate competitive with area supplemental policies. One HMO indicated that it would need to charge $110 per member per month to cover costs, compared with the $40 charged for a supplemental policy offered locally. The small population base also means that the potential profit to be earned in these areas is small, even if costs are controlled. But a substantial loss can be incurred if just a few enrollees have expensive illnesses.

Adverse Selection

HMOs' concern about the low AAPCCs in rural areas is heightened by their belief that they are more likely to encounter adverse selection in rural counties than in urban ones. This belief is based on the expectation that a higher proportion of rural beneficiaries have restricted access to care due to their low incomes. These beneficiaries will be attracted to the HMO if it offers a more comprehensive set of benefits or a lower price than traditional supplemental policies available in the rural area. Beneficiaries with restricted access, who see physicians less often, are also less likely than other beneficiaries to have a strong attachment to a particular physician and thus are less likely to be deterred from joining the HMO by the prospect of having to switch to a new physician.

Availability of Physicians

A fourth factor that inhibits HMOs from offering a risk plan to rural beneficiaries is the small number of physicians in rural areas and the market power that physicians derive from being in this position. HMOs find it difficult in many rural areas to identify physicians with whom they want to contract and who are willing to participate in HMOs. Rural physicians are less likely to accept assignment (that is, to limit their fees for Medicare-covered services to the Medicare-approved rates) than are urban physicians, and see little reason to accept less money from the HMO for their services than they are already receiving from the beneficiaries and Medicare. Since the AAPCC is based on prior utilization experience in the county, the few physicians in rural areas would be competing against their own past performance rather than against that of a large group of other physicians as in urban areas. Furthermore, whereas physicians and medical groups may choose to affiliate with HMOs in urban areas in the hope of attracting more patients, the few physicians in rural areas already have all of the patients and are often overburdened. Thus, one of the key attractions of an HMO to physicians in urban areas is not a benefit in rural areas. Rural physicians are reluctant to forego some of their independence by joining an HMO because they perceive no potential benefit that outweighs these constraints.

The small number of rural physicians also constrains the HMOs in other ways. One HMO said that rural physicians often fail to meet the HMO's quality standards. The small number of rural physicians also leaves the HMO few, if any, opportunities

either to select physicians who are amenable to a managed-care philosophy or to train physicians to adapt to this philosophy. Two of the HMOs interviewed also noted that the scarcity of specialists in rural areas made it more difficult for the rural primary-care physicians to manage the care of patients who had to be referred to specialists, because the patients had to be sent to specialists in urban areas. Rural physicians often do not know these specialists, and coordination of the patients' care is more difficult and less under the control of the primary-care physician, reducing the efficacy of the managed-care procedures espoused by HMOs.

Commitment to Rural Areas

The fifth factor that emerged from the interviews is that some HMOs have a strong commitment to serving rural areas. Most of the 11 strictly rural HMOs are not-for-profit and are concerned primarily with service. The one strictly rural HMO that has a Medicare risk contract indicated that its sole purpose is to provide quality care to the rural Colorado area in which it is located, including Medicare beneficiaries. It chose a risk contract because it believes strongly in the concept of prepaid care and perceives that it leads to better care for patients. Other rural HMOs are also committed to serving the elderly but choose to do so through cost contracts or other vehicles that provide them greater assurance of being able to cover their costs and remain in operation. One plan also noted that, as a health care prepayment plan (HCPP), it is allowed to screen patients for health problems, which reduces the likelihood of adverse selection.

Urban-rural HMOs express less of a commitment to serving the rural area surrounding the urban core of their service area. In most cases, the decision about whether to include adjacent rural counties in their market areas is based primarily on economics rather than on a strong attachment to the rural community.

MEDICARE RISK PLANS IN RURAL AREAS?

The surprising fact is not that so few HMOs offer a Medicare risk plan in rural counties but rather that any do. The profit potential is limited; the risk of loss is great. HMOs are simply avoiding the pitfalls experienced by earlier Medicare risk plans in rural areas, including Marshfield, Wisconsin, rural Delaware and Maryland, and Marion, Ohio. Why should HMOs bother with such areas?

HCFA could probably increase the number of rural Medicare beneficiaries enrolled in Medicare risk plans by paying a single AAPCC rate for a given urban area and its adjacent rural counties, rather than separate rates for each county. This approach would raise and stabilize the payment rates in rural fringe areas. This broadening of the AAPCC geographic unit would probably lower AAPCC payments overall, because the high rates for the more populous urban counties would be averaged in with the lower rates for surrounding rural areas. HMOs would also no longer benefit from concentrating enrollment efforts in the urban county with the highest AAPCC (even among urban counties, AAPCC rates can vary by 20 percent or more within a market area). Payments for rural residents would increase relative to the current system, but that is the objective if enrollment of rural beneficiaries is to be encouraged. Unless the proportion of eligible beneficiaries in rural counties who enroll in the HMO exceeds the proportion in urban counties, average payments per beneficiary should decline.

The widespread geographical distribution of Medicare beneficiaries, however, is a substantial obstacle to the growth of HMOs in rural areas. If travel distances are too great to expect beneficiaries to use urban providers, HMOs may need to contract with a sizeable number of local providers. HMOs may invest considerable resources—e.g., marketing to and negotiating with providers, establishing quality-assurance guidelines—in contracting with a sufficient number of providers to serve a rural area. In addition, each contracted rural provider may serve only a small number of Medicare beneficiaries. As a result, the widespread distribution of rural Medicare beneficiaries limits both the ability of the HMO to extract volume discounts from providers and the economies of scale that HMOs attain when operating in markets with concentrated populations and providers.

These considerations suggest that although paying a single rate for urban and rural beneficiaries may increase Medicare risk plan enrollment in rural counties adjacent to urban areas, it is not likely to do so in isolated rural areas. However, the important goal in isolated areas should be to ensure that rural residents have adequate access to care, not necessarily access to a Medicare risk plan. About one-half of the 11 strictly rural HMOs in the United States in 1990 had some method for serving Medicare beneficiaries, even though only one held a Medicare risk contract. Some rural plans serve Medicare beneficiaries under cost contracts or HCPPs; others offer policies configured to look much like a point-of-service HMO to the beneficiary (for example, preventive care may be covered, and the HMO may require that policyholders use only the HMO's providers for all insured care, but policyholders still have standard Medicare benefits). These vehicles enable the HMO to minimize its risk of losing money, while providing services to the elderly and disabled in a managed-care setting. Several rural HMOs indicated that their goal is not to make a profit, but rather to ensure that their costs are covered.

In isolated rural areas, the problem may not be how to promote Medicare risk contracting but how to encourage the creation of more HMOs in these areas. These alternative forms of coverage for rural Medicare beneficiaries provide the increased access that is needed in rural areas, but create less incentive to constrain costs than a risk contract and may actually increase costs. However, this should not be a major concern. Whereas one of the objectives of promoting risk contracting in urban areas is to control costs, little such need exists in rural areas at this time. As evidenced by the low AAPCC rates and the findings from research on rural health care, rural areas are typically underserved and are not a source of high Medicare costs. It seems appropriate, therefore, to place the emphasis in rural areas on increasing access rather than on controlling costs. Given the problems of low population and a low supply of physicians, who tend to be very independent and have little to gain from affiliation with an HMO, this is likely to be difficult.

The problem of encouraging managed care in rural areas is likely to persist under some of the current proposals to reform the Medicare program, but that is difficult to ascertain without information on the implementation details of the alternatives. For example, if a voucher system is implemented, how would the voucher amount be set for rural beneficiaries? If urban and adjacent rural areas are pooled in setting the voucher amounts for a geographic area, rural areas could be attractive to HMOs. A competitive bidding model, however, is likely to generate few bids from HMOs for rural fringe or isolat-

ed rural areas, and the bids that are received are likely to be substantially higher than current AAPCC rates. Whatever reforms are adopted, careful attention should be paid to how they will affect access to care for the sizeable number of Medicare beneficiaries who reside in rural areas.

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