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An Evaluation of the Medicare Risk Program for HMOs

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Randall S. Brown
Project Director

EXECUTIVE SUMMARY

Since the early 1980s, the Health Care Financing Administration (HCFA) has been encouraging health maintenance organizations (HMOs) to provide Medicare coverage to enrolled beneficiaries in return for fixed prepaid premiums. A five-year evaluation of the Medicare risk program conducted by Mathematica Policy Research, Inc., (MPR) shows that the program is achieving some of its goals but not fulfilling its promise in other areas.

In April 1985, HCFA implemented the Medicare risk program for HMOs and competitive medical plans (CMPs) as a means of reducing costs to the Medicare program while increasing beneficiaries' choice of health care delivery systems. By paying HMOs and CMPs a fixed monthly amount in advance for providing all of the Medicare-covered services an enrollee might need, HCFA created incentives for these providers to deliver care more cost-effectively than providers under Medicare's conventional fee-for-service (FFS) method of reimbursement. In order to share in the expected savings, HCFA set the payment rate at 95 percent of the actuarial estimate of what it would typically spend in reimbursements for these beneficiaries, had they not joined an HMO. To assess whether the risk program achieved these objectives and delivered care of comparable quality to that provided by FFS providers, MPR and the Medical College of Virginia conducted an extensive evaluation of the risk program for HCFA.

FINDINGS IN BRIEF

The risk program does not save money for HCFA—in fact, costs are higher than they would have been had the enrollees not joined the HMOs. Costs under the risk program were 5.7 percent higher than they would have been under FFS because beneficiaries with chronic health problems were less likely than healthy beneficiaries to enroll in HMOs, and the payment (capitation) rates failed to reflect this favorable selection fully. Although payment rates to HMOs were set at 95 percent of HCFA's projected FFS cost for enrollees, these projections were too high, by about 11 percent, on average. HCFA's simple method of basing the payment rate for individuals on their age, gender, and a few other readily available characteristics fails to account fully for the healthier-than-average mix of beneficiaries who choose to enroll in HMOs. Thus, instead of saving 5 percent as intended, HCFA spent nearly 6 percent more than it would have for enrollees had they not joined the HMOs.

Although the payment rates were set too high to result in savings to HCFA, HMOs delivered care more efficiently than FFS providers without reducing quality of care. Even when the favorable selection of enrollees is considered, HMOs used fewer hospital days. They also utilized other expensive resources (for example, home health visits and skilled nursing facility days) less intensively. HMO members were more likely than nonmembers to have had some recent contact with a physician, but again HMO care was less resource intensive—fewer patients had a large number of visits, and patients with chronic ambulatory conditions used specialists less and had fewer follow-up visits.

HMOs and FFS providers delivered care of comparable quality for both inpatient and ambulatory care. The percentage of hospitalized patients who died and the percentage readmitted were similar in the HMO and FFS sectors for both conditions examined (stroke and colon cancer). Similarly, for each of the three ambulatory health problems examined, HMO enrollees who had the condition were just as likely as their FFS counterparts to be symptom-free by the time of our

interview. Lower resource intensity appears to be the result of more efficient use of services, not evidence of poorer quality care.

Beneficiaries enrolled in risk plans generally feel that HMOs' lower premiums and more extensive benefits are adequate compensation for a lower level of satisfaction with their health plan. Although few HMO members are dissatisfied with their quality of care, access to care, and the amount of personal attention they receive, the proportion rating their care as excellent on any of these dimensions is significantly lower than the proportion of nonenrolled beneficiaries. However, enrollees are much more satisfied than nonenrollees with their costs, and 14 out of 15 enrollees would recommend their plan to a friend or family member.

HMOs appeared to have mixed experiences in the risk program, with nearly half dropping out of the program by 1990. Among active plans in 1988-1990, about half earned profits in a given year. The most successful risk plans tended to manage utilization aggressively and to have large enough enrollments to hold down average costs per member.

HMOs' more efficient use of resources suggests that, if the payment mechanism were changed to better account for favorable selection into HMOs, the risk program could yield savings to HCFA while still allowing HMOs to prosper. The results of our study suggest that basing the capitation payment for a beneficiary on whether he or she has a history of serious illness, in addition to the demographic characteristics already incorporated into the payment formula, would eliminate the increased costs to HCFA.

THE MEDICARE RISK PROGRAM: ITS PURPOSE AND EVOLUTION

As one of many efforts to control Medicare costs, HCFA has tried to use HMOs to generate the same cost savings for Medicare that HMOs are widely believed to produce for employers providing health coverage to nonelderly people. HMOs, which act as insurers but have control over the set of providers from which members can choose and how much they are paid, have an incentive to provide care in the most cost-effective manner possible. This cost-effectiveness is achieved by reducing unnecessary services and providing health care in the least expensive but appropriate setting. The market power of HMOs can also help them negotiate favorable prices for provider services.

These incentives are in marked contrast to those of providers that treat Medicare beneficiaries on a fee-for-service (FFS) basis, since FFS providers benefit from *increasing* rather than *reducing* services to their patients. Because most beneficiaries (about 70 percent) have insurance plans (medigap) to cover the cost of Medicare deductibles and coinsurance, there is little pressure on FFS providers to hold down costs.

The Medicare risk program, which became operational in April 1985 under the aegis of the Tax Equity and Fiscal Responsibility Act (TEFRA), allows HMOs to assume responsibility for providing all Medicare-covered services to beneficiaries, in return for a capitated payment. The capitation payment to an HMO for an enrolled beneficiary living in a given county is equal to 95 percent of HCFA's actuarial estimate of the average amount that HCFA would spend in FFS reimbursements for a Medicare beneficiary who resides in that county. This county rate, the Adjusted Average per Capita Cost (AAPCC), is equal to the projected average Medicare reimbursement per beneficiary in the United States for the year, multiplied by the historic average ratio of Medicare reimbursements per beneficiary for the county to Medicare reimbursements per beneficiary for the United States. The payment rate also varies with the individual's age, gender, reason for entitlement (age or disability),

institutional status (residing in a nursing home or not), and Medicaid eligibility, to account for the possibility that those who enroll in HMOs may not be representative of the Medicare population in that county.

In return for the AAPCC premium, HMOs must provide or arrange for all of the Medicare-covered services enrolled beneficiaries need. HMOs also cover the Medicare deductibles and coinsurance for which a beneficiary is responsible and can charge a premium for this coverage, as well as for any other benefits covered by the risk plan but not by Medicare (for example, eye exams and lenses, hearing tests and aids, prescription drugs, and preventive care). Each year, a participating HMO must calculate its expected revenue requirement per member month for providing coverage of Medicare-covered services (based on the rates it charges to non-Medicare members for comparable coverage, adjusted for differences in the utilization rates of Medicare and non-Medicare members) and compare it with its expected average AAPCC payment. The HMO must use any surplus between the expected payment from HCFA and the HMO's projected revenue requirement per Medicare member to reduce the premium charged to beneficiaries or to provide additional benefits to beneficiaries at no charge (or return the surplus to HCFA). The HMO must absorb any deficit, the premium and copayments charged to beneficiaries must not exceed the actuarial value of Medicare deductibles and coinsurance (calculated by HCFA) plus the revenue requirement for any extra benefits.

Risk Program Goals: Reduce Costs and Increase Beneficiaries' Choices

HCFA's primary goal in establishing the risk program was to reduce Medicare costs. HCFA also sought to achieve two other objectives: (1) to provide more efficient health care than that rendered by the FFS sector, while maintaining or improving the quality of care; and (2) to give Medicare beneficiaries access to the same range of choices of health care delivery systems available to younger individuals. HCFA also hoped that costs in the FFS sector would decline as more Medicare beneficiaries enrolled in HMOs. The hope and expectation was that the risk program would be attractive to HMOs, causing rapid expansion in the number of participating risk plans and beneficiaries.

The evaluation of the risk program was funded to determine whether it accomplished these objectives. In addition to testing hypotheses underlying these objectives, the evaluation provided estimates of the magnitude of the effects of the risk program; assessed whether they differ for certain types of HMOs, market areas, or beneficiaries; and identified possible reasons that the program did or did not have the anticipated effects. Analyses of the many topics examined are presented in 19 separate technical reports (listed at the end of this document) completed during the past five years. These reports include impact analyses, case studies and special topic reports, and annual reports on changes in the program. This report provides a summary and synthesis of the findings from these studies.

Enrollment Has Grown Steadily, but the Number of Participating Plans Has Declined

As of June 1992, approximately 1.4 million (3.9 percent) of the estimated 35.5 million Medicare beneficiaries in the United States were enrolled in 83 active Medicare risk plans. The number of enrollees increased steadily each year since 1985, but the number of active participating risk plans dropped to 83 from the peak of 134 in January 1987. About 70 percent of total program enrollment was concentrated in the 15 plans with more than 20,000 members. The three largest plans—two

servicing the Los Angeles area and one serving Miami—accounted for more than one-third of total enrollment. The participating plans serve 40 different metropolitan areas across 28 states, giving about half of the Medicare population in the United States an opportunity to enroll in a Medicare risk HMO. Figure I displays the geographic distribution of risk plans and enrollees.

Structure, Organization, and Features Differ Considerably

Risk plans differ from each other along several important organizational dimensions, including the relationship between an HMO and its physicians, whether the plan is for-profit, and whether it is affiliated with a chain or is strictly local. According to HCFA's classifications, 57 percent of participating HMOs are "independent practice associations" (IPAs), in which individual physicians contract with an HMO to serve the HMO's patients but also continue to see non-HMO patients. IPAs generally have fewer Medicare members than other types of risk plans. About 27 percent of plans are "group model" HMOs, in which an HMO contracts with a physician group to provide services, and 16 percent are "staff model" HMOs, in which physicians are employed by an HMO and paid a salary. For-profit HMOs compose 58 percent of the Medicare risk plans, and just over half are affiliated with chains.

The Medicare risk plans serve primarily urban areas, but nearly one-fourth include at least one adjacent rural county in their service areas. As of 1991, only one risk plan served an exclusively rural area. More than half of the HMOs with Medicare risk plans that offer commercial coverage to rural residents through contracts with employers limit their Medicare plans to residents of urban counties, because AAPCC rates for rural counties are typically far lower than rates for adjacent urban ones.

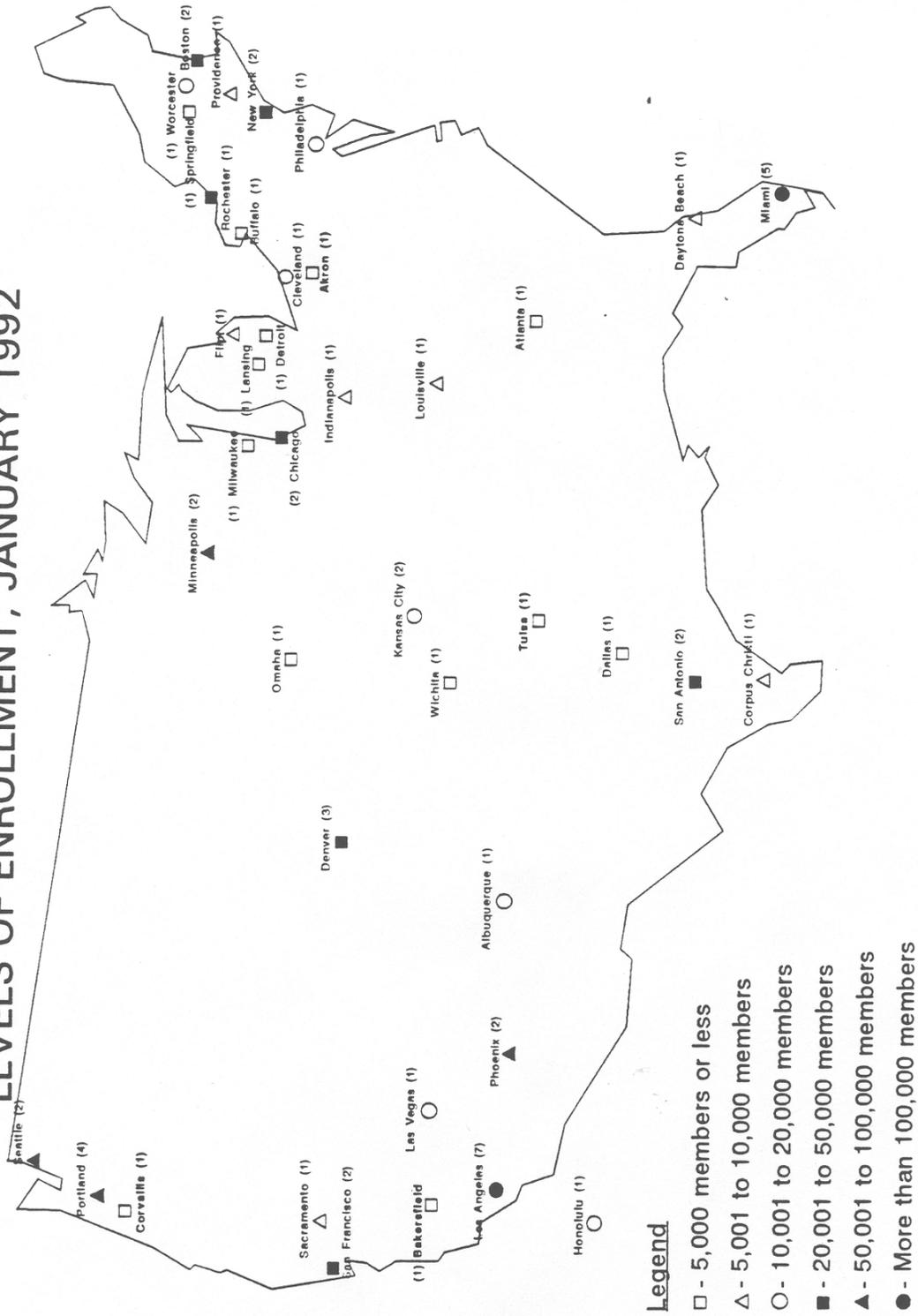
In 1992, risk plans charged beneficiaries premiums that were well below many of those charged by medigap insurers, ranging from no charge (about one-fifth of the plans) to \$97. Many of the plans also covered a wide range of services not covered by Medicare. Almost all risk plans covered preventive care, 82 percent covered eye care, but only one-third covered prescription drugs. The proportion of plans offering coverage for drugs dropped markedly from the proportion in the early days of the risk program (1986), as plans grew increasingly concerned about adverse selection and sought to lower their costs. The median premium increased by an average of 14 percent per year since 1986.

DO HMOs SAVE MONEY FOR MEDICARE?

By design, the risk program should lower costs to HCFA by 5 percent, relative to what HCFA would have paid in FFS reimbursements, because the HMOs are paid only 95 percent of the AAPCC. However, if those who enroll in risk plans are not a representative mix of Medicare beneficiaries (after the risk adjustment factors are considered), HCFA payments based on the AAPCC may not be a particularly accurate estimate of what FFS reimbursements would have been for this group. This potential problem exists even if the AAPCC methodology forecasts average costs for those in the FFS sector perfectly. In particular, if enrollees are healthier on average than other beneficiaries (that is, if the HMOs experience "favorable selection"), the program will save less than the intended 5 percent and may actually increase costs to HCFA. If HMOs experience "adverse selection," HCFA will save more than 5 percent, but risk plans may lose money and drop out of the program. The evaluation measured the extent of favorable or adverse selection and estimated the effects of the risk program on costs to HCFA.

FIGURE 1

AREAS SERVED BY MEDICARE RISK PLANS AND LEVELS OF ENROLLMENT, JANUARY 1992



Legend

- - 5,000 members or less
- △ - 5,001 to 10,000 members
- - 10,001 to 20,000 members
- - 20,001 to 50,000 members
- ▲ - 50,001 to 100,000 members
- - More than 100,000 members

Notes: In a few instances, a risk plan will have enrollees in more than one area (for example, Miami and Tampa; Los Angeles and San Diego). In these cases, the enrollment for the entire plan is attributed to the market area of largest enrollment, unless the plan has separate contracts for the areas. The number of plans in the market area is shown in parentheses.

Risk Plans Attract Healthier-than-Average Beneficiaries

Risk plan enrollees had substantially lower Medicare reimbursements during the two years prior to enrollment than did nonenrollees during a comparable period, even after controlling for differences between the two groups in the demographic risk factors incorporated in the AAPCC payment mechanism. Prior reimbursements for a sample of nearly 100,000 new enrollees in 1987 and 1988 were about 20 percent lower overall than the risk-adjusted reimbursements for nonenrollees from the same market areas. About two-thirds of the 98 risk plans examined experienced clearly favorable selection according to this measure, and the other one-third experienced slightly favorable or neutral selection. None of the plans experienced adverse selection. Similar results were obtained from comparing the proportions of the two groups of beneficiaries with a prior hospital stay for a condition associated with high costs in subsequent years.

Enrollees also had fewer functional disabilities and other indicators of chronic health problems than nonenrollees, were less likely to rate their health as poor, and expressed less inclination to use health care services when they were not feeling well. Even after controlling for enrollee-nonenrollee differences in health status that could be a result of differences between the groups in factors accounted for by the AAPCC payment mechanism (enrollees were much less likely to be on Medicaid, in institutions, over 80 years old, or Medicare-entitled because of disability rather than age), enrollees were 15 to 30 percent less likely than nonenrollees to exhibit various health problems. For example, 27 percent of enrollees had a history of cancer, heart disease, or stroke, compared with 32 percent of nonenrollees (a 16 percent lower rate of incidence), even after adjusting for the demographic risk factors. These findings were obtained from a 1990 survey of more than 6,400 randomly selected enrollees from 75 risk plans and a comparable number of nonenrollees from the same market areas. The sample was drawn from the full set of enrollees, unlike the prior-use analysis samples, thereby providing a more representative picture of the risk program as it matured.

The differences between enrollees and nonenrollees appear to be due primarily to the self-selection of enrollees, because HMOs must enroll any interested Medicare beneficiary. Beneficiaries with chronic health problems are less likely than those in good health to change doctors or give up their freedom to use the primary care physicians, specialists, and hospitals of their choice.

The Risk Program Increases Estimated Costs to HCFA by 5.7 Percent

We estimate that HCFA paid the HMOs approximately 5.7 percent more than it would have spent on FFS care for enrolled individuals, primarily as a result of favorable selection into Medicare risk plans. Although HCFA paid the HMOs 95 percent of the AAPCC estimate of what FFS costs would have been, our estimates of these FFS costs for the survey sample of enrollees were only 90 percent of the AAPCC projection. We obtained the estimated FFS costs by inserting data on various characteristics for enrollees in the survey sample (demographic risk factors, health status, access to care, attitudes, and socioeconomic traits) into a Medicare reimbursements equation that was estimated for the nonenrollees in the survey sample, to project what FFS reimbursements would have been for the enrollees. We used a similar approach based only on the AAPCC demographic risk factors to project the AAPCC payment that would prevail if it predicted FFS costs perfectly, on average, for the nonenrollees in each market area. The estimated effect—the difference between projected AAPCC payments and the projected FFS costs for enrollees—is significantly different from zero at the .01 level. The 95 percent confidence interval for the estimated increase in cost to HCFA resulting from the risk program is 2.4 to 9.1 percent. Our estimates indicate that Medicare Part

A costs (for hospital, skilled nursing facility, and home health care) increased by 8.5 percent; Part B costs (for physician services, laboratory tests, and X-rays) increased only by 2.7 percent.

The difference between projected AAPCC payments and projected FFS costs for enrollees were due almost entirely to enrollee-nonenrollee differences in health status measures that were not fully captured by the demographic risk factors—that is, age, gender, residence in a nursing home. Medicaid eligibility, reason for entitlement, and county of residence. Differences in self-ratings of health, the ability to perform routine daily activities without assistance, and a history of serious illness (cancer, heart disease, or stroke) accounted for 83 percent of the difference between the projected AAPCC payment and the projected FFS costs of enrollees. The history of serious illness indicator alone accounted for 38 of the 83 percent. Differences in attitudes toward health and health care accounted for 14 percent of the difference, and socioeconomic factors and access to care accounted for the remaining 3 percent.

Cost increases to HCFA were greatest for enrollees in (1) the areas with the highest AAPCCs. (2) HMOs that did not charge a premium, and (3) staff model plans. Costs to HCFA for enrollees in plans that did not charge a premium were more than 8 percent higher than FFS costs would have been, whereas costs increased only by 2 percent for enrollees in plans that charged beneficiaries \$50 or more per month. Thus, *although costs to HCFA have increased, the program requirement that excess payments be used to lower premiums or increase benefits to beneficiaries is clearly working as intended*. The higher estimated cost increases to HCFA in areas with high AAPCC rates indicate that selection into risk plans is more favorable in these areas. Our estimates, because of the way they are constructed, are driven only by observable differences in the characteristics of enrollees and nonenrollees and do not reflect any additional effects on costs that would result from errors in the AAPCC in predicting average FFS costs for a given county or market area.

DO HMOs REDUCE THE UTILIZATION OF MEDICARE-COVERED SERVICES?

The premise of the Medicare risk program is that HMOs can prosper while providing Medicare coverage for less money than the FFS sector, primarily by reducing unnecessary service use and inefficiency in the delivery of health care. HMOs are believed to achieve most of their savings by reducing hospital use, presumably by substituting less expensive types of care, including ambulatory care, home health visits, and nursing home care, and by practicing preventive care.

The structure of HMOs enables them to respond to incentives to provide health care more efficiently. Because they are responsible for providing the full range of services to enrolled members, HMOs can coordinate their care, eliminating duplicative services. HMOs can also select physicians who practice medicine in a cost-effective manner and are willing to cooperate with an HMO in finding ways to manage utilization; they can also provide support services and practice guidelines that will increase efficiency. Moreover, by emphasizing preventive care, HMOs may identify health problems before they become serious and their treatment more expensive. Furthermore, unlike providers in the FFS sector, HMOs are not bound by Medicare regulations that limit the situations in which certain types of care are covered (for example, that skilled nursing facility care is covered only after the patient has spent at least three days in a hospital, or that all home health care must be supervised by a registered nurse).

According to several studies, these incentives and mechanisms substantially reduce the service use of *nonaged* HMO members. Studies by Manning et al. (1984) and Dowd (1991) confirm estimates from earlier studies (reviewed by Luft 1981) showing that HMOs reduce hospital use by 10

to 40 percent. Some of these studies showed a reduction in admissions and others, a reduction in the average length of hospital stays (for example, see Stern et al. 1989).

We estimated the impact of the risk program on the utilization of hospital services, skilled nursing facilities, home health care, and physician visits by comparing service use reported on the survey by enrollees and nonenrollees for the year prior to the interview, controlling for differences in health status measures, attitudes toward health care, and demographic variables.

HMOs Reduce the Number of Hospital Days and Average Length of Stay but Not Admissions

HMOs reduced the total number of days spent in the hospital by about 17 percent, relative to what enrollees would have used under FFS care, but did not affect the number of hospital admissions. They reduced the average length of hospital stays by 1.5 days (16.8 percent). The finding that HMOs reduce hospital days by shortening stays rather than by reducing admissions, which is contrary to expectations generated by some previous studies, is especially surprising given that Medicare’s Prospective Payment System (PPS) provides a similar incentive for hospitals to reduce lengths of stay among FFS patients. (Under PPS, which was implemented in 1983, hospitals are paid a fixed, predetermined amount on the basis of a patient’s diagnosis.) However, our findings are supported by our independent analysis of the quality of inpatient care (described later), which showed that lengths of stay among two groups of HMO patients with particular conditions (colon cancer and stroke) were 18 to 23 percent shorter, on average, than lengths of stay among FFS patients with the same conditions in the same metropolitan areas. Further support for these findings comes from an evaluation case study indicating that, to shorten hospital stays, many successful risk plans use “case management”—preadmission planning for each patient by a specially trained nurse, together with the patient’s physician., to determine how long the patient should be in the hospital. Case managers also identify the type of postdischarge care likely to be required and arrange for the care well in advance to ensure that it is available when needed. The lack of an effect on admission rates suggests that few hospital stays for elderly people now are discretionary and that FFS providers are using new technologies to treat individuals as outpatients. Hospital admissions per 1,000 aged Medicare beneficiaries in the FFS sector declined by 25 percent between 1985 and 1989, indicating that Medicare HMOs may have much less opportunity now than they did in the past to save money by reducing hospital admissions.

MEDICARE HMO EFFECTS ON HOSPITAL USE

Hospital Use Measure	HMO	FFS	Impact
Probability of One or More Hospitalizations	15.0%	15.9%	-0.9%
Hospital Stays per 1,000 Beneficiaries	218	212	6
Hospital Days per 1,000 Beneficiaries	1,530	1,839	-309*
Average Length of Stay	7.25	8.69	-1.44*
Sample Size	6,457	6,071	12,528

*Estimated impact is significantly different from zero at the .05 level, one-tailed test.

Medicare Risk Plans Increase the Likelihood that Beneficiaries Receive Some Services but Reduce Their Intensity or Frequency

Medicare risk plans *increased* the likelihood that beneficiaries visited a physician at least once during the year (from 84 to 89 percent) but slightly reduced the likelihood of having one or more visits per month, on average (from 14 to 12.5 percent). HMOs also increased the likelihood that beneficiaries had a physical exam (by 6 percent), consistent with HMOs' emphasis on and coverage of preventive care. However, these plans had no effect on the average *number* of visits per beneficiary in the month preceding the interview. This absence of an effect on number of visits reflects competing HMO incentives: to reduce the number of visits per patient to control costs, while encouraging patients to obtain routine preventive care to reduce the need for more expensive services later.

Similarly, risk plans increased by a large proportion (but a small absolute amount) the likelihood of a beneficiary's receiving care in a skilled nursing facility (SNF), but they did not increase the total number of SNF days relative to what would have existed under FFS care. These estimates are consistent with the expectation that HMOs may shorten hospital stays by substituting SNF care for more expensive hospital days. We found that, for stroke patients, HMO members were discharged sooner and to less intensive types of care arrangements (SNFs instead of rehabilitation hospitals) than FFS patients. However, HMOs appeared to reduce the intensity of use, because there was no effect on the total number of SNF days, despite the increase in SNF admissions.

HMOs had no effect on the proportion of individuals with some home health care utilization, but they reduced the number of home health *visits* by 50 percent. Again, HMOs do not limit initial access to services but do control costs by reducing the intensity of the service rendered. HMOs reduced visits by registered nurses for nursing care and physical therapy and visits by home health aides for assistance with personal care.

The Effects Are Greater for Patients with the Most Serious Health Problems

HMOs increased the use of some services by beneficiaries whose health was poorest, but they reduced the *intensity* of services more for this group than for other beneficiaries. For example, although HMOs had no effect on hospital admissions overall, they increased the probability of admission for enrollees in poor health and those with functional impairments. On the other hand, the largest HMO reductions in hospital days and home health visits were associated with beneficiaries who were in poor health, had impairments in functioning (eating, dressing, bathing, etc.), or died within nine months after the interview. Our results for quality of care (reviewed later) suggest that these reductions are more likely the result of eliminating unnecessary services or substituting other types of care than of restricting access to needed care.

Reductions in Utilization Are Greatest for IPA and Group Model Plans, Plans in High AAPCC Areas, and Plans with Low or Modest Premiums

Staff model plans, plans that charged high premiums, and plans in low AAPCC areas were less successful than other risk plans at controlling utilization. Staff model plans, which pay physicians a salary and do not expose them to financial risk, were unable to reduce hospital days and home health visits, in contrast with the sizable reductions achieved by IPAs and group plans. Staff plans also increased the number of physician visits substantially, unlike the other model types. The much larger

reductions in hospital days per 1,000 members by HMOs in high AAPCC areas suggest that FFS hospital use in these areas may be especially inefficient. Finally, the HMOs that charged 1990 monthly premiums of \$50 or more were unable to reduce hospital use or home health use and showed an increase in physician visits relative to the FFS sector. This finding suggests that their utilization management practices or incentives did not yield more efficient medical practices than FFS and therefore did not enable these HMOs to provide coverage at rates substantially below medigap rates. However, it is possible that competition from HMOs in some of these areas has forced the FFS sector to be as efficient as the HMOs.

Medicare Risk Plans May Spend About 10 Percent Less than HCFA Would Spend for All Medical Services

The combined HMO effects on hospital, physician, home health, and SNF use suggest that HMOs may have spent about 10.5 percent less for all Medicare-covered services combined than the amount HCFA would have spent in reimbursements to FFS providers. This estimate is a weighted average of the proportionate HMO effects on the four types of services examined (with weights equal to the share of that service in total projected Medicare FFS reimbursements for enrollees). It has no bearing on whether the risk program affects the costs to HCFA, because payments to HMOs are predetermined by the AAPCC and are unaffected by the HMOs' actual resource use. However, the estimate does imply that the *potential* for cost savings to HCFA may exist. The reduction in medical resources consumed is reasonably large (resulting almost entirely from the 17 percent reduction in hospital days) and may be sufficient to allow HMOs to cover their administrative costs, even if their AAPCC payments were reduced. However, this estimate is quite rough, because the marginal service use eliminated by HMOs may not be as expensive as service use that could not be eliminated (for example, the last days of a hospital stay may be less resource intensive), thus lowering the amount of potential savings. On the other hand, because HMO members undergo fewer tests and are more likely than FFS patients to be treated by primary care physicians rather than by specialists, the difference between AAPCC payments and the amount paid by an HMO for medical services may exceed the 10.5 percent estimate. Furthermore, HMOs may negotiate more favorable rates for services than those paid by Medicare.

HOW DOES THE QUALITY OF CARE PROVIDED BY MEDICARE HMOs COMPARE WITH THE QUALITY OF CARE IN THE FFS SECTOR?

The quality of care delivered by HMOs may be better or worse than that rendered by FFS providers. In responding to the financial incentives to provide care more efficiently, HMOs may restrict services too much, leading to lower-quality care. Efforts to economize can also lead to poorer care if the HMOs' physicians, other service providers, or facilities are inferior to those in the FFS sector. On the other hand, the features that distinguish HMOs from FFS providers—the coordination of care, the emphasis on preventive care, and lower out-of-pocket costs to members—can lead to higher-quality care for enrollees.

We assessed the impacts of risk plans on quality of care by (1) comparing the services received by HMO and FFS patients who were hospitalized for colon cancer or stroke, and their outcomes, (2) comparing the ambulatory care received by HMO and FFS patients for three chronic problems (joint

pain, urinary incontinence, and recurring chest pain), and (3) comparing the satisfaction of HMO enrollees and nonenrollees with various aspects of the care they received.¹

HMOs Produce Similar Outcomes for Inpatients, Using Fewer Resources

The rates of death, hospital readmission, and postadmission complications among HMO and FFS patients were similar, indicating no differences in outcomes. Furthermore, HMOs achieved these outcomes with significantly lower use of various procedures, tests, or services. HMOs reduced the length of hospital stays by 23 percent among colon cancer patients and by 18 percent among stroke patients, consistent with the 17 percent shorter length of stay observed overall among the survey sample (which did not control for diagnosis). HMO members also spent about one-third less time in intensive care units, on average, for both conditions. In addition, HMOs substantially reduced the use of various laboratory tests and procedures that appeared to be discretionary, such as multiple CAT scans and EEGs for stroke patients.

MEDICARE HMO EFFECTS ON HOSPITAL OUTCOMES

Outcomes	Stroke Patients			Colon Cancer Patients		
	HMO	FFS	Impact	HMO	FFS	Impact
Percentage Readmitted Within:						
31 days after discharge	9.3	12.4	-3.1	7.6	6.9	-0.3
61 days after discharge	14.4	14.9	-0.5	11.6	12.2	-0.6
91 days after discharge	17.3	17.2	0.1	15.2	14.8	0.4
Percentage of In-Hospital Deaths	12.2	14.7	-2.5	3.4	4.8	-1.4
Sample Size	402	408	810	412	401	813

Although the similarity in outcomes suggests no major differences in quality of care, a few differences do indicate that HMOs may be providing less adequate care in some situations. The most striking evidence for this inference was the significantly shorter distance between the tumor and the margin of resection (the portion of the colon that was removed) for HMO patients. For these patients,

¹We assessed the effects on quality of care separately for stroke and colon cancer patients by comparing, for each group, the treatments received by a sample of about 400 HMO patients (from 19 HMOs) with those received by an equal number of comparable FFS patients at hospitals serving the same counties; the data for this analysis were abstracted from the records of 154 hospitals. Data for analyzing the effects on access to care and satisfaction with care came from the same survey of beneficiaries that we used to estimate effects on cost and utilization. Statistical models were used to control for differences between the enrollees and nonenrollees that could create differences in access or satisfaction not resulting from the influence of an HMO.

the average distance was approximately equal to the minimum recommended by some specialists. However, various other indicators of quality of surgical care revealed no differences between the two systems of care—for example, the amount of colon removed, the amount of blood lost during surgery, and the average number of lymph nodes removed. HMO stroke patients received significantly less physical therapy while in the hospital and had greater motor and speech deficits at discharge, yet were not more likely to have postdischarge speech or physical therapy planned. This pattern suggests that HMOs may economize on rehabilitative care: on the other hand, HMO patients were discharged sooner and may well have recovered an equivalent level of functioning with the passage of an equivalent number of days after the date of admission. Finally, HMO patients were not more likely to have postadmission complications, and the responses of HMOs to complications were similar in most cases. However, HMOs were less likely than FFS providers (49 versus 64 percent) to give chest X-rays to colon cancer patients who experienced postoperative fevers (a review of the literature indicates X-rays are called for in 80 to 100 percent of such patients). HMOs also administered preoperative antibiotics less frequently than did FFS providers. (This precaution is recommended for all colon surgery patients by the American Society of Hospital Pharmacists as protection against wound infections.) This difference between enrollees and nonenrollees did not produce a higher incidence of postoperative fevers among enrollees in our sample, however. Although there is no evidence that these differences in care led to poorer patient outcomes, they cause some concern because of their potential adverse effect on outcomes.

In addition to providing less resource-intensive care while a patient is in the hospital, HMOs also discharged both stroke and colon cancer patients to lower-cost settings than did FFS providers. For stroke patients, HMOs discharged a higher proportion to nursing homes and a lower proportion to rehabilitation hospitals, which tend to be substantially more expensive and provide more extensive rehabilitative services. For colon cancer patients, HMOs discharged patients to their homes more often and to nursing homes or rehabilitation hospitals less often. We have no follow-up data on the quality of life or recovery time for either group of patients, so it is not possible to determine whether these differences in posthospital care are evidence of HMOs' greater cost-effectiveness or of poorer care. We know only that these differences did not affect hospital readmission rates for patients with either condition.

HMOs Provide Comparable Access to Ambulatory Care and Produce Similar Patient Outcomes with Less Intensive Use of Resources

We observed no consistent pattern of differences between HMO and FFS patients in the likelihood of receiving medical attention for three common, chronic problems of elderly people. HMOs do consistently use resources less intensively, however. HMO members and FFS beneficiaries were equally likely to have experienced each of the three health problems—joint pain, chest pain, and urinary incontinence. Although there were differences between the two groups in the proportion seeking and receiving medical attention, the differences ranged from HMO members being significantly more likely than nonenrollees to visit a physician for their joint pain, *equally* likely to see a physician for incontinence, and significantly *less* likely to see a physician for chest pains. Further investigation of HMO patients with chest pain who did not see a doctor revealed that none of these individuals had sought care. This absence of evidence of differences in access to care contrasts markedly with the sizable differences in the type and quantity of resources used in their treatment. For each of these conditions, HMO members were less likely than FFS patients to see a specialist, less likely to have a follow-up visit scheduled, and less likely to have their progress monitored. HMOs also administered X-rays less often (but only for patients with urinary incontinence).

However, HMOs prescribed medication more often for patients with joint pain. No differences were observed in prescribed treatments or use of specific diagnostic tests.

As with inpatient care, ambulatory outcomes were quite similar for HMO and FFS patients, despite the lower use of resources by HMOs. The estimated effect of HMOs on the likelihood that a patient was symptom-free at the time of the interview was not statistically significant for any of the three conditions. Of those who were still experiencing joint pain, HMO patients were less likely than FFS patients to indicate that their symptoms had improved; no such difference was observed among patients still experiencing urinary incontinence or chest pain. Taken together, these outcome measures suggest that the ambulatory care received by HMO patients is of comparable quality to that received by FFS patients. The lower level of services rendered appears to be due to the elimination of discretionary services.

MEDICARE HMO EFFECTS ON AMBULATORY OUTCOMES

Symptom Response	Joint Pain			Urinary Incontinence			Chest Pain		
	HMO	FFS	Impact	HMO	FFS	Impact	HMO	FFS	Impact
Percentage No Longer Experiencing Problem	22.7	22.1	0.6	46.6	51.2	-4.6	43.7	45.1	-1.4
Percentage Whose Symptoms Improved (for Those Still Experiencing Problem)	29.3	36.5	-7.2*	35.6	29.2	6.4	39.3	44.4	-5.1
Sample Size	2,243	2,009	4,252	946	764	1,710	556	524	1,080

*Estimated HMO effect is significantly different from zero at the .05 level, two-tailed test.

HMO Enrollees Are Somewhat Less Satisfied than Nonenrollees with Their Care but More Satisfied with Costs and Have Broader Benefit Coverage

More than 90 percent of both HMO enrollees and FFS beneficiaries rated various dimensions of their care as good or excellent. On virtually every dimension examined except cost, however, enrollees were significantly less likely than nonenrollees to rate their care as excellent. Enrollees were less likely to rate their level of satisfaction as excellent for measures of the care process (for example, explanations given by their physicians or attention they received as a patient), the structure of care (ease of obtaining care, waiting times, and ease of seeing the physician of their choice), and the perceived quality and outcomes of care (thoroughness of examinations and overall results of care received). On the other hand, enrollees were much more likely to rate their satisfaction with out-of-pocket costs as excellent and identified significantly fewer instances of needing various types of health care for which they did not have coverage.

Another rough indicator of satisfaction—the proportion of enrollees who left the risk program within the first year of enrollment—suggests that a sizable proportion of new enrollees are not satisfied. Twenty percent of beneficiaries who joined a risk plan voluntarily dropped out within 12 months after joining, although the rates varied widely across risk plans.

Most enrollees, however, seemed to feel that HMOs' lower costs and wider set of benefits more than compensated for their lower level of satisfaction. About 93 percent of HMO enrollees indicated that they would recommend their HMO to a friend or relative.

HOW DOES MEDICARE RISK CONTRACTING AFFECT HMOs?

If the Medicare risk program is to be successful in the long run, it must not only save money for HCFA and ensure that adequate care is provided but also be sufficiently attractive financially to HMOs. Our results on resource use suggest that HMOs are successful at reducing utilization relative to the Medicare FFS sector. Our findings on favorable selection and costs show that HMOs are paid more than what HCFA would have paid for enrollees under FFS coverage. However, these results do not ensure that the premiums received from HCFA and beneficiaries are sufficient to cover HMOs' direct and indirect costs for providing services to Medicare members under a risk contract.

Because HMOs have the incentives and structure necessary to provide health care efficiently, they were expected to make money or at least to break even in the risk program, despite receiving what was intended to be 5 percent less than what FFS providers would have been paid. Nonetheless, a substantial proportion (17 to 28 percent) of Medicare risk plans (primarily quite small plans) dropped out of the program during three successive years (1988, 1989, and 1990) by declining to renew their risk contracts. Almost universally, nonrenewing plans cited financial losses as the reason for leaving the program; almost no new plans entered the program during these years. Although these trends have abated and the number of risk plans has remained fairly constant for the past two years, many plans still complain about the difficulty of covering their costs under the program and indicate that they may soon leave it.

Three studies were conducted under this evaluation to determine the proportion and types of risk plans that are having financial difficulties and the reasons for their problems. One study (Shin and Brown 1992) used financial data submitted by HMOs for their entire operation for 1987, 1988, and 1989, together with the HMOs' estimates of the relative costs of serving their Medicare and non-Medicare members, to estimate the profits or losses on their Medicare risk plan. McGee and Brown (1991) used data on renewal decisions for years 1987 through 1990 to determine the types of risk plans that were most likely to drop out of the program at some point. Nonrenewing plans for 1989 and 1990 were also interviewed to obtain additional insights. Finally, in early 1991, Bergeron and Brown (1992) interviewed executives from 20 risk plans with at least three years of experience and 5,000 or more enrollees in 1990 to determine the factors that enable some to be financially successful. They also examined why HMOs with unsuccessful Medicare plans have such different experiences with Medicare than with commercial plans for nonaged people.

About One-Half of Risk Plans Appear to Be Profitable

About one-half of the HMOs for which we had data (among those that contained at least 1,000 enrollees) had positive net revenues on their Medicare risk plan during the 1987 to 1989 period, according to our cost and revenue allocations. Nearly half (44 percent) of the 117 that contained 1,000 or more members at some point between 1987 and 1990 had discontinued their risk contract by 1991. Median net revenues for the set of Medicare risk plans with usable data were about -\$3 to -\$4 per member month, or about 1 percent of costs. Net revenues on the overall operations of these HMOs were slightly better, on average, but similar. About 57 percent reported overall profits, compared with 48 percent estimated to be earning profits on their risk plans, and the median overall

profit rate was 0.4 percent. However, the largest difference was the much greater volatility of profit rates for risk plans. Whereas few HMOs (less than 8 percent) lost more than 10 percent on their costs overall, 16 percent lost this much on their risk plan. HMOs were also much more likely to be earning 10 percent or more on their risk plan than on their overall operations.

Among plans that had 1,000 or more members, about 3 of every 10 nonrenewing plans converted to a different form of contract (cost or health care prepayment plan), under which the HMO bore little or no risk of losing money and had little or no opportunity to make money. Others discontinued service to Medicare beneficiaries entirely or offered a medigap policy. The proportion of all HMOs with risk contracts that discontinued their contracts during the 1987 to 1990 period (57 percent) was much larger than the 44 percent nonrenewal rate for plans with 1,000 or more enrollees. Many of these plans never enrolled beneficiaries.

Risk Plan Success Varies According to AAPCC Rates, Favorable Selection, and the Ability of the HMO to Control Hospital Use

The three factors that seem to be the strongest determinants of financial success, as measured by either profit rates or risk contract renewals, are a relatively high AAPCC rate, the ability to control hospital use, and highly favorable selection. Each of these factors was expected to be important: a high AAPCC rate guarantees high revenues, a low hospital use rate is necessary to hold costs down, and favorable selection implies that the AAPCC payment exceeds the FFS cost of providing services to the group of enrollees. HMOs with these characteristics were 12 to 19 percentage points more likely to earn profits than others (for example, 58 percent of plans that experienced very favorable selection earned profits, compared with 41 percent of those that experienced less favorable or neutral selection) and were only half as likely to discontinue their risk contract. (Only 29 percent of plans whose AAPCC exceeded the national average cost per beneficiary by 25 percent or more discontinued their contract, compared with 61 percent of those whose AAPCC was below the national average.)

Three other characteristics seem to be associated with both profit rates and contract renewal: (1) Medicare risk plan members constitute a relatively high proportion (at least 10 or 15 percent) of an HMO's total membership; (2) the risk plan is a for-profit enterprise; and (3) the HMO charges low or zero premiums. The relationship between these characteristics and financial success is consistent with expectations. For example, HMOs with a relatively high proportion of Medicare beneficiaries in their total membership are likely to devote more resources to modifying their utilization management procedures specifically for their Medicare plan in order to control these costs. The incentive is particularly strong because Medicare members cost HMOs about four times as much per member month as non-Medicare members, on average. (Medicare beneficiaries would account for about 30 percent of total HMO costs if they constituted only 10 percent of total membership.) It is also not surprising that for-profit plans and low-premium plans are more profitable. For-profit plans have a greater incentive to earn a profit; plans that charge a low premium tend to be those that are paid more by HCFA than they expect to spend (because of favorable selection, high AAPCC rates, and perhaps effective utilization management). As indicated previously, risk plans whose expected revenue exceeds expected costs must reduce their premiums and/or increase benefits.

The type of plan model and other plan characteristics seem to be tied less closely to financial performance. IPAs were much more likely to drop their risk contract than other model types, and large plans were much less likely to discontinue (only three plans with more than 10,000 Medicare

enrollees had discontinued their risk contract by 1991). No such relationships were found for financial performance.

The case study of risk plans provided support for the primary findings. Risk plans that were for-profit, those whose 1990 AAPCC rates were high (more than \$350 monthly), those with fewer than 1,820 hospital days per 1,000 members, and those that experienced the most favorable selection were all much more likely to report that their risk plan was profitable. Although a utilization rate of 1,820 hospital days per 100 members was about 30 percent below the United States average for the FFS sector in 1989 (2,635 days per 1,000 beneficiaries), this rate does not imply that HMOs had to cut hospital use to 30 percent below what it would have been *for their enrollees* under FFS, because HMO members are younger and healthier.

Plan Executives Cite Various Reasons for the Discrepancy Between the Profitability of Medicare and Commercial Plans

Seven HMOs that earned profits on their commercial (employer) accounts but lost money on their Medicare risk plans were interviewed. They offered six reasons for their financial problems with Medicare that, in their view, help explain the disparity between the two lines of business:

- AAPCC rates are too low and variable.
- Utilization rates for services that are used much more frequently by Medicare beneficiaries than by younger HMO members are especially difficult to control.
- Selection into their Medicare risk plans is adverse.
- Competition from medigap insurers and other risk plans forces them to charge premiums that are too low.
- Some state regulations inhibit their ability to prosper.
- Nursing home beds are in short supply, limiting HMOs' ability to transfer hospital patients to SNFs.

From the perspective of HMOs, the problem with the AAPCC is that it is determined in a way that has nothing to do with HMOs' actual experiences with enrolled members—a very different process from the experience-based methods that HMOs use to set premiums for their non-Medicare members. The disparities across counties within a metropolitan area and the wide fluctuations from year to year in AAPCC rates make the financial performance of risk plans very volatile, because risk plan administrators feel that they cannot adjust the beneficiary premium or benefits as radically as the AAPCC may change. Although these features of the AAPCC could clearly create difficulties for HMOs, the perception that the AAPCC rates are too low seems questionable for most plans, as does the perception of “adverse” selection. Nonetheless, HMOs are certainly more likely to earn a profit if AAPCC rates are high or selection is especially favorable. Furthermore, because Medicare does pay less than private payers for most services, the AAPCC payments from Medicare may not fully cover the HMOs' costs based on the rates negotiated by the HMOs with physicians, hospitals, and other providers for their commercial accounts, prompting some HMOs to believe that the AAPCC rate is inadequate. HMOs must address several other problems they cited as unique to their risk contract—difficulties in controlling utilization, competing with medigap insurers, and finding available nursing

home beds—in order to have successful risk plans. HCFA could help by encouraging states to drop restrictive practices that can inhibit HMOs’ ability to prosper, such as requiring that HMOs pay hospitals a fixed rate (state-determined or Medicare-determined) for patients with specific diagnoses, rather than allowing HMOs to negotiate a per diem rate that preserves their incentive to shorten lengths of stay. States could also be encouraged to allow the market to determine the appropriate price for medigap policies.

Administrative Costs for HMOs Are Substantial

One problem that was not cited by HMOs but is clearly a drain on their profits is administrative expenses for marketing, utilization management, negotiation of provider contracts, claims processing, quality assurance, compliance with HCFA and state requirements, and other costs that are not borne by FFS providers. Our estimates suggest that these expenses are about 13 percent of total costs, on average, for Medicare risk plans; other estimates suggest that the average rate is about 10 percent of costs. These administrative costs, coupled with the 5 percent reduction in revenue relative to what FFS providers receive, imply that in order to break even, HMOs must hold the amount they spend on medical care to at least 15 percent below the amount that Medicare would have spent in FFS reimbursements for enrolled beneficiaries (assuming that the HMO experiences neutral selection and the AAPCC rate fairly reflects the average Medicare FFS reimbursement per beneficiary). Although risk plans do provide more efficient care than the FFS sector and may negotiate favorable prices with providers, our overall estimates suggest that, on average, the resource savings may be closer to 10 percent. In the absence of favorable selection, risk plans may find it difficult to prosper unless they can limit the average administrative cost per member month.

HOW DOES MEDICARE RISK CONTRACTING INFLUENCE THE BEHAVIOR OF FFS PROVIDERS AND INSURERS THAT SERVE MEDICARE BENEFICIARIES?

One of the possible benefits of the Medicare risk program is its potential to lower Medicare FFS costs indirectly and enhance access to care among all beneficiaries who reside in the market areas served by HMOs, whether or not they join an HMO. As HMOs increase their share of the Medicare-covered population (the HMO penetration rate) to noticeable levels, the added competition and possible influence on general practice patterns could slow the growth rate for Medicare reimbursements in the FFS sector. Similarly, beneficiaries who remain in the FFS sector may benefit if medigap premiums drop in response to competition from Medicare risk plans, which charge lower premiums and provide more extensive coverage than medigap.

To address these issues, we conducted two studies of the effects of an increase in the proportion of local Medicare beneficiaries who enroll in a Medicare risk plan. One addressed the impacts on the FFS costs to Medicare, and the other examined the effects on medigap premiums.²

²The impacts on FFS costs were estimated on the basis of Medicare claims during 1985 to 1988 for about 100,000 Medicare beneficiaries in 48 separate market areas with Medicare risk plans. The impacts on medigap premiums were estimated from data on the amount paid by individuals for medigap coverage, obtained from the 1990 survey of nonenrollees. The relationship between these measures and Medicare risk plan penetration rates were estimated with regression models, controlling, for the characteristics of the individual and the market area that could affect the outcomes of interest.

The Estimated Effects of Risk Plan Penetration on FFS Reimbursements Depend on the Statistical Model and Have Alternative Interpretations

The estimated effects of risk plan growth on Medicare FFS reimbursements vary widely, depending upon the statistical model used. One model, similar to that used by Welch (1991) to investigate this same issue with a different data set, yielded estimates showing that risk plan penetration had no effect on FFS costs. This finding contrasts markedly with Welch's estimates, which show a statistically significant decline in FFS costs in response to an increase in risk plan penetration into the Medicare market. An alternative statistical model that we employed yields estimates implying that FFS costs drop by 4 or 5 percent with every 10 percentage point increase in risk plan penetration. This estimated effect is even larger than that obtained by Welch.

The estimates indicating that risk plan penetration had no effect on FFS costs appear to be much more plausible than those implying a large or even modest reduction in FFS costs in response to the growth of plans in an area. Increased competition from risk plans is not likely to force FFS providers to practice more efficiently or lower their prices for Medicare-covered services, because they have no incentive to do so—neither action *will* help them retain patients if local risk plans enroll an increasingly large proportion of area beneficiaries. We believe that if providers do respond, they are more likely to *increase* the volume of services (and possibly prices) in order to maintain their income as they lose patients to HMOs. The “spillover effects” explanation put forth by Welch—that physicians who treat both HMO and FFS patients *will* begin to use the same style of cost-effective care with their FFS patients as they do with HMO patients—is weak and would be counterproductive for physicians. This type of behavior could limit physicians' FFS income and drive away FFS patients who may have chosen not to join the HMO even though they could retain their physician, because they object to its style of care. Furthermore, these effects would not influence the behavior of many physicians who are not associated with an HMO or those who have few HMO patients.

Plausible alternative explanations for why a faster-than-average growth in risk plan penetration rates may coincide with a slower-than-average growth in FFS reimbursements support the view that the large negative relationship is not a reliable estimate of the actual effects of risk plans on FFS reimbursements. The most likely explanation for our estimates is that high FFS costs in the mid-1980s made AAPCC payment rates in the late 1980s attractive to HMOs and also generated reactions forcing FFS costs to grow more slowly during the late 1980s. HMOs in areas with higher AAPCC rates marketed their risk plans more heavily and grew more rapidly than other HMOs. These areas were ones with high FFS reimbursements in earlier years because of excess utilization. At the same time that risk plan penetration was increasing, FFS costs in these areas may have grown more slowly than in other areas because (1) the reduction in FFS hospital use that occurred nationally during this time period in response to Medicare's prospective payment system is likely to have been especially large in areas of excess utilization; (2) the high reimbursements from earlier years may have attracted more providers (for example, SNFs and nurses) to these high AAPCC areas, leading to more competition and lower prices; and (3) group averages that are abnormally high or low by chance in one period tend to move closer toward the overall mean in later periods, on average. Weaknesses of the data available for the study may also have contributed to the anomalous estimates. These weaknesses include the small number of market areas with enough penetration to influence FFS costs and the lack of data on HMOs' total market penetration (Medicare and non-Medicare).

Medigap Premiums May Increase Slightly as Risk Plan Penetration Increases

Risk plan penetration appears to create a small but statistically significant increase in medigap premiums. Although greater competition from Medicare risk plans was expected to force medigap insurers to charge lower premiums, our estimates for 1990 indicate that every 10 percentage point increase in risk plan penetration rates raises the monthly premium paid by beneficiaries for medigap insurance by about \$2 (about three percent of the overall mean of \$60).

The estimated relationship could be due to the favorable selection experienced by HMOs or to competition from risk plans that prompts medigap insurers to offer a richer benefit package. It may also be a statistical anomaly. Because risk plans attract healthier-than-average beneficiaries, those who continue to receive FFS care and purchase medigap policies will have higher FFS reimbursements, on average. This situation could force medigap insurers to raise premiums to cover the higher costs, if the HMO penetration rate becomes high enough for the effect to be noticeable. Alternatively, the effect could result when medigap insurers offer richer benefit packages in areas where risk plan penetration is greatest. A third possibility is that the estimated relationship could reflect “reverse causality”—penetration may be higher in some areas *because* medigap premiums are greater there, not because the medigap premiums are responding to penetration. The statistical model linked medigap premiums for 1990 with penetration rates in 1988 to avoid such effects, but reverse effects may still have been present to some extent.

Whether or not medigap premiums increased in response to the market penetration of Medicare risk plans, it appears that competition from risk plans did not produce any significant *downward* pressure on medigap premiums in most of the 44 market areas examined. In general, risk plans tended to charge much lower premiums than medigap insurers, which could then not effectively compete with HMOs on the basis of price (one in five risk plans did not charge a premium, and the median premium in 1989 was about \$35, compared with an average premium of \$60 for medigap policies). The low HMO premiums were made possible—in fact, they were required—because of favorable selection into HMOs. Medigap insurers appear to have focused on attracting Medicare beneficiaries who, for various reasons, would not enroll in a Medicare risk plan regardless of the premium, basing their premium adjustments on the behavior of other medigap insurers rather than on that of HMOs.

IMPLICATIONS OF THE EVALUATION FOR MEDICARE RISK CONTRACTING

The Medicare risk program has increased beneficiaries’ range of choices in health care delivery systems, and risk plans do appear to be able to reduce utilization rates without affecting the quality of care. However, the primary goal of the risk program—to reduce costs to HCFA—has not been realized. Our estimate of a 5.7 percent increase in costs implies that the \$578 million paid out to HMOs in capitation payments for the month of June 1992 was about \$31 million more than HCFA would have spent in FFS reimbursements for the 1.4 million enrollees. Although HMOs channeled much of this increase in costs into lower out-of-pocket expenses and additional benefits for enrolled beneficiaries, the intent of the program was to lower costs to HCFA, rather than to subsidize the health care of beneficiaries in selected areas. However, our estimates suggest that *the potential exists* for such cost savings, as a result of sizable reductions in utilization of hospitals and home health services.

The difficulty in achieving these cost savings is that adjusting the payment mechanism to account for the favorable selection experienced by risk plans will lower the average AAPCC payment to most HMOs, which is likely to reduce profits and discourage HMOs from participating. Half the participating risk plans are already losing money, nearly half of the plans that were active at some time between 1987 and 1990 had discontinued their risk contracts by 1991, and very few new risk contracts have been signed. Furthermore, reductions in AAPCC payments may cause HMOs to increase their premiums, which is likely to slow growth in the rate of enrollment in existing risk plans. Changing the AAPCC in order to save money for HCFA may compromise the objective of offering a managed care option to more beneficiaries.

Finding a solution that will enable HCFA to hold the current costs of the risk program to FFS levels while not driving HMOs and beneficiaries out of the program is important, because managed care has many inherent advantages that should lead to greater efficiency in the long run. The incentives in the risk program are structured to minimize costs rather than to maximize revenues, as in the FFS sector. Risk plans also do not have an incentive or opportunity to shift costs to other types of providers, as often occurs in response to a HCFA initiative to control Medicare costs for a particular service. Finally, HMOs are organized to facilitate the coordination of care (which should eliminate provision of overlapping services to beneficiaries), and their emphasis on preventive care could lead to better long-term outcomes and perhaps lower costs. However, these potential efficiencies will not affect costs to HCFA unless the AAPCC payment mechanism is changed to reflect favorable selection.

HCFA could take several actions to help make the potential cost savings of the risk program a reality without driving HMOs away. One change, modifying the AAPCC, must occur to eliminate the cost increases to HCFA. Several other actions would help HMOs accomplish three key costcutting objectives: (1) enrolling a sufficient number of beneficiaries to spread the financial risk and fixed costs adequately; (2) bringing administrative costs for Medicare plans under control; and (3) holding service utilization rates down (especially for hospital care). The burden is not solely HCFA's; HMOs must also make some changes to increase their likelihood of succeeding in the Medicare market.

Payment Rates Must Be Adjusted to Reflect Health Care Needs More Accurately

Our results suggest that adding one additional factor to the AAPCC payment rate formula—a history of cancer, heart disease, or stroke—could eliminate the increase in costs to HCFA. Our simulations show that if this change were implemented *and the plans were still paid only 95 percent of the revised AAPCC*, HCFA would actually save 1.1 percent relative to FFS costs, rather than losing money. This approach is similar to the diagnostic cost group (DCG) method developed by Ash et al. (1986) but is simpler, includes a larger proportion of beneficiaries in the high-cost group (about one-third of Medicare beneficiaries have had cancer, heart disease, or a stroke), and is not limited to the experience of the previous year. Data from HMOs on a refined version of this type of indicator would be much easier to verify than some of the risk factors proposed by others, such as measures of functioning. In addition, these data would only need to be updated when a beneficiary experiences such a health problem for the first time. This change would reduce AAPCC payments the most for plans that create the greatest cost increases to HCFA—that is, those experiencing the most favorable selection. Our estimates suggest that the change would not yield the full 5 percent savings originally intended but would at least eliminate cost *increases* to HCFA.

Modifying the AAPCC formula by adding an adjuster for health status is likely to force HMOs with particularly favorable selection to charge beneficiaries a higher premium. Because a number of these plans charge no premium, and others charge a rate well below the market price for the benefits they offer, premiums could probably increase significantly without driving enrollees out of these plans. Enrollees would still receive a favorable price, but the price would no longer be subsidized by the Medicare program.

Several other changes to the AAPCC could benefit HMOs without increasing costs to HCFA—in particular, standardizing the rate paid within a given metropolitan area, reducing the year-to-year volatility in payment rates, and tying changes in payment rates more to current market factors than to outdated trends. These changes, which we as well as others have proposed over the years, would make payments to risk plans more consistent with their costs for particular members or in a particular year, enable them to plan more effectively, and smooth out the erratic annual changes in their revenue flow. These changes should be cost neutral and relatively easy to implement.

Finally, although the relative accuracy of AAPCC rates for different counties was beyond the scope of our analysis, there is widespread belief in the industry that the rates are much more generous in some market areas than others. These differences account in part for the fact that risk plans in some areas are able to offer, at no charge to beneficiaries, extensive services beyond what Medicare covers, while risk plans in other areas struggle to survive. Until these disparities are eliminated, there will continue to be great differences across areas in the number, size, and financial success of Medicare risk plans.

Incentives for Greater Enrollment and More Neutral Selection Should Be Increased

Increasing the average enrollment in risk plans and enrolling a greater proportion of individuals who require the most health care are perhaps the best ways to offset the adverse effects that a more accurate payment formula might have on HMO revenues. Having more Medicare members (the median enrollment in 1990 was only 4,733 members) would help HMOs reduce their costs per member month by spreading the large fixed portion of administrative costs over more members and diluting its influence. (Boles [1992] estimates that few HMOs whose administrative costs exceed 10 percent of revenues make a profit overall.) Enrollment growth would also reduce the risk that a few seriously ill members would create overall losses for a risk plan. (A risk plan with 5,000 members that would normally break even has a 12 percent chance of losing 5 percent or more in a given year, simply because of variability in health care costs for beneficiaries.) Encouraging the enrollment of sicker beneficiaries to create a more neutral mix of enrollees would keep AAPCC payments from shrinking as the change was implemented. This change could be especially beneficial in light of the evaluation finding that HMOs achieved their greatest resource savings for the beneficiaries who normally have the greatest health care use. Implicit HMO profit margins on these individuals should be higher than average.

Two changes could make enrollment more attractive to beneficiaries, including those in poor health: (1) increasing the number of area physicians affiliated with a Medicare risk plan; and (2) increasing the number of employers that provide health care coverage to their retirees through a Medicare risk plan. The proposed reduction in AAPCC payment rates would probably engender higher risk plan premiums for beneficiaries, which will dampen their interest in the program. Increasing the likelihood that beneficiaries could join a Medicare risk plan without changing their physicians would offset this adverse effect substantially and could create a more neutral mix of enrollees. Various ways to encourage the participation of physicians in HMOs could be devised,

including offering some form of incentive to either physicians or HMOs. However, adding physicians who are not necessarily agreeable to managed care concepts will be unattractive to HMOs. Alternatively, HMOs could be offered financial incentives for net increases in enrollments of a given size or percentage. Employers could be given financial incentives to offer risk plan membership as a health care option for their retirees. All of these incentives that involve payments to physicians, HMOs, or beneficiaries would have to be temporary, in order to avoid further net increases in long-term costs. The objective of incentives is to help risk plans reach a size at which they can at least break even.

One frequently proposed option for increasing enrollment growth that should not be adopted is reducing the Part B premium of beneficiaries who enroll in an HMO, because it would be very expensive and probably ineffective. It would be difficult and probably illegal to restrict such benefits to new enrollees; hence, unnecessary Part B premium rebates would be made to 1.4 million current enrollees. Furthermore, because only about 20 percent of Medicare beneficiaries enroll in Medicare risk plans, even in areas where the plans do not charge any premium (a savings of \$50 to \$100 per month relative to medigap coverage), offering beneficiaries a rebate of \$5 to \$10 per month on their Part B premium is unlikely to attract many new members.

Administrative Burden on Risk Plans Could Be Reduced

HCFA could also look for ways to minimize the administrative burden that risk program rules and requirements impose on participating plans. For example, HMOs have long complained that the mandated Peer Review Organization (PRO) process for ensuring quality of care is burdensome and redundant, given their own quality assurance procedures. A number of changes have been made to reduce the PRO and other administrative burdens in recent years, but there may still be areas where administrative demands of the program could be reduced without compromising HCFA's ability to comply with its oversight responsibilities.

States Should Be Encouraged to Drop Regulations Limiting Risk Plans' Ability to Minimize Costs

HCFA could encourage states to eliminate regulations that require HMOs to pay fixed rates per hospital admission on the basis of diagnosis; these rates vitiate hospitals' incentive to reduce the length of hospital stays and force them to pay higher effective prices than they might be able to negotiate for hospital care. HCFA could also advocate eliminating regulations that reduce HMOs' ability to impose reasonable levels of financial risk on physicians. Similarly, states could be encouraged to allow the market to determine the appropriate price for medigap policies. These changes would introduce more competitive pressure into the market, increasing the likelihood that the twofold goal of cost reductions for HCFA and growth in the risk program can be attained.

Some HMOs Must Make Changes to Succeed in the Medicare Market

Although HCFA can take some actions to facilitate HMOs' ability to operate successful risk plans, much of the burden must fall on the HMOs themselves. Many risk plans are simply too small to achieve the stable utilization patterns and low administrative cost per member month needed to plan effectively and operate efficiently. These plans will need to be more aggressive about growth if they expect to prosper under a payment system that eliminates the benefits of favorable selection.

Larger plans may also have high administrative costs that are incompatible with acceptable financial performance —these plans must look for ways to reduce these costs.

HMOs can also be more innovative about finding ways to control utilization, especially hospital care. We found that successful risk plans now tend to be proactive rather than reactive in seeking ways to lower utilization, try to foster a spirit of cooperation between the plan and the physicians in managing member services, and emphasize educating physicians rather than attempting to control their behavior (Hurley and Bannick 1992). These HMOs tend to rely heavily on case management of hospital stays to keep them as short as possible, planning strategies for individual patients' treatment and recovery and arranging for needed postdischarge services well in advance. They also are continually seeking ways to improve their performance. Risk plans that find it difficult to control utilization for their Medicare beneficiaries may want to explore these approaches and look for other innovative ways, such as risk sharing, monitoring, practice guidelines, and other mechanisms, to manage the care of their elderly members.

Modest Changes to the Risk Program Could Enable HCFA to Reduce Costs and Help HMOs to Prosper

These suggestions for change would clearly require a much more thorough examination of the possible consequences and operational concerns. The recommendations are put forth simply to illustrate the potential to improve the risk program, from the perspective of both HMOs and taxpayers. At present, HMOs in the risk program provide care that is approximately equal in quality to that rendered in the FFS sector, with more extensive benefit coverage and at a much lower price to beneficiaries than alternative supplemental coverage. HMOs successfully reduce utilization by sizable margins by practicing cost-effective care. They are also capable of generating savings that can be shared among beneficiaries, HCFA, and HMOs. Furthermore, although a number of HMOs have left the risk program and others complain of financial difficulties, the nonrenewal rate has declined and a high proportion of plans that have left the program would be interested in re-entering if the payment mechanism were reformed. With a carefully planned package of changes by HCFA and continued efforts on the part of HMOs, HMOs' ability to deliver Medicare services more efficiently could bring savings to HCFA, beneficiaries, and HMOs.

REPORTS FROM AN EVALUATION OF THE MEDICARE HMO PROGRAM

A brief synopsis of each report on MPR's evaluation of the Medicare risk program is provided here. The order number and cost for each report are shown in parentheses. Copies can be obtained by contacting Jan Watterworth, Librarian, at Mathematica Policy Research, Inc. (609-275-2334). Please state the order number of the report(s) you wish to purchase and add \$2.50 per order to cover shipping and handling.

Final Summary Report

“The Medicare Risk Program for HMOs—Final Summary Report on Findings from the Evaluation.” Randall S. Brown, Jeanette Bergeron, Dolores Gurnick Clement, Jerrold W. Hill, and Sheldon M. Retchin. Princeton, NJ: Mathematica Policy Research, Inc., February 1993. (PR93-03, \$18.60)

The various analyses conducted during this four and one-half year evaluation are briefly reviewed and synthesized in nontechnical language. Because of favorable selection, the Medicare risk program increased costs to HCFA, rather than saving 5 percent as intended. However, risk plans were successful in decreasing the utilization of various services by enrollees, especially the length of hospital stays, without producing adverse effects on outcomes (mortality, readmission, symptom persistence). The report suggests that an adjustment in the payment mechanism for beneficiaries with a history of serious illness might eliminate the overpayment while encouraging HMOs to seek a more neutral mix of enrollees.

Effects on Service Use, Costs, and the Marketplace

“The Impact of the Medicare Risk Program on the Use of Services and Cost to Medicare.” Jerrold Hill, Randall Brown, Dexter Chu, and Jeanette Bergeron. Princeton, NJ: Mathematica Policy Research, Inc., December 1992. (PR92-21, \$18.20)

As a result of favorable selection, HCFA paid 5.7 percent more for enrollees in risk plans than would have been spent on them under fee-for-service care. However, risk plans did reduce utilization of costly services. A crude estimate suggests that the reductions in utilization could cut medical resource use costs by 10.5 percent or more, so the potential exists to eliminate excess payments by HCFA without driving HMOs out of the program.

“The Effects of HMO Market Penetration on Medicare Fee-for-Service Costs.” Dolores Gurnick Clement, Phillip M. Gleason, and Randall S. Brown. Richmond, VA: Medical College of Virginia, December 1992. (PR92-46, \$3.70)

Analyses yielded mixed results; some suggested that risk plan penetration had no effect on the fee-for-service sector, while other models indicated that even modest increases in penetration reduced fee-for-service costs. The authors indicate that the mechanisms by which risk plan penetration might influence fee-for-service providers are weak and offer several alternative explanations for why fee-for-service costs may have increased the least in areas where risk plan penetration was greatest.

“Analysis of the Competitive Effects of Medicare Supplemental Insurance Benefits and Premiums: Implications for the TEFRA HMO/CMP Program Evaluation.” Dolores Gurnick Clement, Randall S. Brown, Sheldon M. Retchin, Meribeth H. Stegall, and Jon M. Thompson. Richmond, VA: Medical College of Virginia. December 1992. (PR92-22, \$6.20)

Contrary to expectations, the premiums paid for medigap supplemental insurance were slightly greater in areas with higher Medicare risk plan penetration. The finding may reflect a true effect resulting from favorable selection into HMOs or richer benefit packages designed to compete with risk plans, or it may simply be a spurious correlation not fully eliminated by the regression model. It appears that HMOs exert little influence on medigap premiums in an area, even if the HMO represents a sizable share of the market.

Effects on Quality of Care

“The Quality of Care in TEFRA HMOs/CMPs.” Sheldon M. Retchin, Randall Brown, Rhoda Cohen, Dolores Gurnick Clement, Meribeth Stegall, and Barbara Abujaber. Richmond, VA: Medical College of Virginia, December 1992. (PR92-23, \$17.50)

Comparison of the inpatient care received by HMO and fee-for-service patients for two conditions, stroke and colon cancer surgery, showed no difference in outcome measures (deaths and readmissions) but sizable differences in resource use. Substantial reductions in length of stay and utilization of mostly discretionary tests and procedures were found among HMO patients, compared with the fee-for-service setting. In addition, for patients with both cerebrovascular accident and colon cancer, there was evidence that HMOs reduced rehabilitative care, relative to the fee-for-service setting.

“Evaluation of Access and Satisfaction with Care in the TEFRA Program.” Dolores Gurnick Clement, Sheldon M. Retchin, Meribeth Herzberg Stegall, and Randall S. Brown. Richmond, VA: Medical College of Virginia, October 1992. (PR92-09, \$12.50)

Enrollees in risk plans were much more satisfied than nonenrollees with their out-of-pocket costs and identified fewer instances in which they needed care that was not covered by their health plan. However, they were less satisfied than nonenrollees with various aspects of the care they received, including the process, accessibility, and perceived quality of care. There appeared to be no large or systematic differences between HMO and fee-for-service patients in access to ambulatory care for the three symptoms examined (joint pain, chest pain, and urinary incontinence) or in outcomes of this care. For each condition, however, enrollees were referred less often to specialists, were less likely to have had their condition monitored, and were less likely to have had follow-up visits. More than 93 percent of enrollees would recommend their HMO to family or friends.

Enrollment and Disenrollment Behavior

“Health Status, Financial Barriers, and the Decision to Enroll in Medicare Risk Plans.” Jerrold Hill and Randall Brown. Princeton, NJ: Mathematica Policy Research, Inc., June 1992. (PR91-38, \$7.10)

The authors found that Medicare risk plans experience favorable selection, as measured by adjusted enrollee-non-enrollee differences in various survey measures of health and functional status. In addition, enrollees are more likely to face financial barriers to care, as measured by low income or lack of supplemental insurance coverage by Medicaid or a medigap policy.

“Biased Selection in the TEFRA HMO/CMP Program.” Jerrold W. Hill and Randall S. Brown. Princeton, NJ: Mathematica Policy Research, Inc., September 1990. (PR90-35, \$10.00)

Three measures of biased selection suggest that the cost to Medicare for enrollees, had they remained in the fee-for-service sector, would have been considerably less than their cost as predicted by the methodology used to pay Medicare risk plans. The measures of biased selection included (1) the ratio of Medicare reimbursements for enrollees prior to enrollment in an HMO to Medicare reimbursements for beneficiaries remaining in the fee-for-service sector, (2) differences in the proportion of HMO members and nonmembers with pre-enrollment hospital stays for illnesses associated with high future costs, and (3) the ratio of mortality rates in the post-enrollment period for enrollees and non-enrollees, adjusted for enrollee-non-enrollee differences in AAPCC risk factors. From HMOs’ perspective, selection was distinctly favorable for about two-thirds, according to any of the measures, and no HMO had adverse selection on any measure.

“Disenrollment Experience in the TEFRA HMO/CMP Program, 1985 to 1988.” Kathryn Langwell, Sally Stearns, Shelly Nelson, Jeanette Bergeron, Lisa Schopler, and Renee Donahay. Washington, DC: Mathematica Policy Research, Inc., May 1989. (PR89-15, \$7.85)

Overall, 7 percent of enrollees in Medicare risk HMOs dropped out within the first three months after enrolling, 12 percent within six months, 20 percent within one year, and 33 percent within two years. More than two-thirds of the disenrollees at each interval examined returned to the fee-for-service sector; the remainder switched to another HMO.

Operational Issues/Case Studies

“HMOs’ Profits on Their Medicare Risk Plans.” Richard T. Shin and Randall S. Brown. Princeton, NJ: Mathematica Policy Research, Inc., February 1993. (PR92-20, \$10.80)

Our estimates of HMOs’ annual profits on their Medicare risk plans for 1987-1989, obtained by allocating costs and revenues between Medicare and commercial lines of business, suggest that just under half of the plans in a given year were profitable. This finding suggests that HMOs appear to have somewhat more difficulty prospering with their Medicare plans than with their commercial business, because 57 percent of these HMOs reported profits on their overall business during the same time period. Plan features associated with higher profits included for-profit status, high AAPCC rates, coverage for prescription drugs, pre-TEFRA demonstration

experience with Medicare beneficiaries, and a high proportion of Medicare members in an HMO's enrollment.

“Utilization Management Practices in HMOs with Medicare Risk Contracts.” Robert E. Hurley and Richard R. Bannick. Richmond, VA: Medical College of Virginia, October 1992. (PR42-43, \$5.50)

Utilization management is a highly important function for the 18 HMOs interviewed and is approached by the plans in similar ways. Building cooperative relationships with physicians, emphasizing education rather than control strategies, investing in more comprehensive utilization information systems, managing inpatient utilization, and creating performance targets were some of the approaches that all of the HMOs employed. Significant differences in utilization management were also noted.

“Why Do So Few HMOs Offer Medicare Risk Plans in Rural Areas?” Carl Serrato and Randall Brown. Princeton, NJ: Mathematica Policy Research, Inc. June 1992. (PR92-19, \$12.50)

Few HMOs offer Medicare risk plans in rural counties. Medicare payment rates are markedly lower in rural counties than in adjacent urban counties nearly everywhere. In those rural counties where Medicare plans are offered, the payment rates are much higher than the rates in rural counties where HMOs offer commercial coverage but don't offer Medicare risk plans. HMOs cite low payment, small populations, the market power of physicians, adverse selection, and a lack of commitment to rural areas as factors affecting the ability and willingness of plans to serve Medicare beneficiaries in rural areas. Only one strictly rural Medicare risk plan was in operation in 1990.

“Why Do the Medicare Risk Plans of HMOs Lose Money?” Jeanette Bergeron and Randall S. Brown. Princeton, NJ: Mathematica Policy Research, Inc., May 1992. (PR91-14, \$15.)

Telephone interviews with the executives of 20 Medicare risk plans revealed reasons why some Medicare risk plans lose money. Unsuccessful plans had low AAPCC rates, high hospital use rates, and were predominantly nonprofit and group or staff model plans. Plans that lost money failed to expose physicians to significant financial risk and attributed their poor financial performance to a variety of factors other than high inpatient utilization. The authors also describe how unsuccessful risk plans intend to improve their performance, discuss plans' recommendations for HCFA, and suggest why commercial success may not extend to the Medicare risk plan for some HMOs.

“What Makes HMOs Drop Their Medicare Risk Contracts?” Jeanne McGee and Randall S. Bromm. Princeton, NJ: Mathematica Policy Research, Inc., May 1992. (PR92-24, \$5.00)

The most powerful predictors of the nonrenewal of Medicare risk contracts were IPA model type, smaller Medicare risk enrollment, higher disenrollment, less favorable selection, 10 percent or more of enrollees in rural counties, a relatively high premium, sizable AAPCC differences between counties within the plan's service area, and financial loss on combined

commercial and Medicare business. The authors discuss the implications of these findings for risk plans and for HCFA.

“Organizational and Operational Characteristics of TEFRA HMOs and CMPs.” Shelly Nelson, Kathryn Langwell, Randall Brown, Barbara Brown, Nancy Carlton, and Gary Swearingen. Princeton, NJ: Mathematica Policy Research, Inc., March 1990. (PR89-39, \$10.25)

With information gathered through personal interviews of key staff in 41 Medicare risk plans in late 1988, this report highlights the striking diversity among plans with respect to incentive structure, utilization control mechanisms, benefits, premiums, copayments, enrollment, disenrollment, and quality assurance plans. Most risk plans (about 60 percent of those interviewed) paid physicians a capitation; very few paid them on a fee-for-service basis. About half withheld a portion of payments to physicians for later distribution, on the basis of their utilization profile. Risk plans also used a variety of utilization control procedures, with 80 percent using primary care gatekeepers, and almost all conducting concurrent reviews of inpatients. The authors found that capitation is the most critical factor in controlling utilization, but capitation combined with a strong bond between the HMO and providers produced the greatest control.

“Report on HMO/CMP Utilization and Cost Data Availability for the TEFRA Evaluation.” Nancy Carlton and Gary Swearingen. Washington, DC: Mathematica Policy Research, Inc., May 1989. (TR89-10, \$4.25)

On the basis of personal interviews with staff from the management information departments of 41 HMOs, this report summarizes the data capabilities of plans in the study and discusses the implications for data collection strategies for the evaluation. The authors found that data are more available for services rendered outside an HMO for which the HMO receives a bill. Because of their financial and payment orientation, IPAs were found to have a higher level of data availability than staff or group model plans.

Annual Reports

“The Third Annual Report of the Evaluation of the TEFRA HMO and CMP Program.” Jeanette Bergeron and Randall S. Brown. Princeton, NJ: Mathematica Policy Research, Inc., February 1992. (PR91-39, \$13.00)

The authors describe changes in program participation and enrollment, review the findings from the evaluation, and document the changes in legislation affecting risk plans. Changes in enrollment, disenrollment, premiums, benefits, and market characteristics of Medicare risk plans are presented, and the effect of risk plan characteristics on premiums and enrollment levels is analyzed.

“Second Annual Report of the TEFRA HMO and CMP Program Evaluation.” Randall S. Brown, Jeanette Bergeron, and Richard Shin. Princeton, NJ: Mathematica Policy Research, Inc., April 1991. (PR90-36, \$9.80)

This report documents changes in legislation, program characteristics, and program size as well as reviews findings from the evaluation through 1990. On the basis of interviews with 34 plans that did not renew their risk contracts, the authors discuss reasons for risk contract nonrenewal and suggestions offered by former Medicare risk plans on ways to improve the Medicare risk program.

“The Evaluation of the TEFRA HMO/CMP Program: First Annual Report.” Jeanette Bergeron, Randall S. Brown, and Jerrold Hill. Princeton, NJ: Mathematica Policy Research, Inc., June 1990. (PR90-46, \$6.50)

Changes between 1985 and 1989 in enrollment, disenrollment, and characteristics of plans in the risk program and of plans that did not renew their risk contracts are presented. The authors summarize the research design for the evaluation and discuss activities for the second phase.

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