CENTER for STUDYING HEALTH SYSTEM CHANGE

Issue Brief

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THE CENTER, SUPPORTED BY THE ROBERT WOOD JOHNSON FOUNDATION AS PART OF ITS HEALTH TRACKING INITIATIVE, IS AFFILIATED WITH MATHEMATICA POLICY RESEARCH, INC.

For more than a decade, Medicare beneficiaries have had the option to enroll in risk-contract health maintenance organizations (HMOs) in which the federal payment is set at 95 percent of the estimated fee-for-service cost. Two questions have been raised by health policy researchers ever since: Are Medicare HMO enrollees healthier than the elderly who receive fee-for-service care? If so, does the government payment rate for Medicare HMOs accurately reflect the costs that would have been incurred by a healthier population? This Issue Brief discusses three recent studies of the extent to which risk-contract HMOs experience biased selection and the cost of this to Medicare.

Policy Implications of Risk Selection in Medicare HMOs

Is the Federal Payment Rate Too High?

THE ISSUE OF RISK SELECTION

HMOs with Medicare risk contracts receive a monthly payment for each enrollee, regardless of actual service use. The adjusted average per capita cost (AAPCC) is based on county and enrollee characteristics such as gender, age, and Medicaid and institutional status. It is widely believed that the health status of risk-contract HMO enrollees, which is not reflected in the AAPCC formula, ultimately determines whether the Medicare program achieves the 5 percent savings built into the payment mechanism, or any savings at all.

Biased selection occurs if the medical care needs of risk HMO enrollees differ from Medicare beneficiaries in the fee-for-service sector. If risk enrollees are consistently healthier and less likely to use medical care than their fee-for-service counterparts, then HMOs experience favorable selection. If, in contrast, risk enrollees are consistently less healthy, then HMOs experience adverse selection. Whether Medicare saves or loses money on the risk-contract program depends on the extent to which risk HMOs experience selection bias.

Biased risk selection has created some thorny research problems, one of the most fundamental of which is how to separate the effects of HMO management of care from population differences. For example, utilization patterns in HMOs could reflect HMOs' style of practice and the characteristics of who enrolls. This means that researchers cannot use utilization during the period of HMO enrollment as an indicator of population differences. As alternatives, they can examine characteristics such as health status of Medicare beneficiaries who are enrolled in HMOs vs. fee-for-service, and utilization for the period prior to enrollment or after disenrollment.

ARE EARLIER FINDINGS STILL VALID?

Research on the earlier years of the risk-contract program suggests that the characteristics incorporated into the AAPCC are not reliable predictors of future medical costs and that Medicare HMO enrollees are healthier than fee-for-service beneficiaries. A 1992 study conducted by Mathematica Policy Research, Inc. (MPR), for example, found that instead of saving 5 percent for each HMO enrollee, Medicare paid 5.7 percent more.[1]

Some researchers have questioned whether prior findings of favorable selection are still accurate for today's Medicare HMO enrollees. HMO enrollment has more than tripled since the time of the MPR study, increasing from 1.1 million beneficiaries in January 1990 to 3.5 million in April 1996. At the same time, the number of plans offering risk contracts increased from 96 to 202. However, if the health status of HMO enrollees continues to be better than that of fee-for-service beneficiaries, losses to the Medicare program will only increase as HMO enrollment grows.

Findings from three new studies were presented and discussed at a policy research seminar sponsored by the Center for Studying Health System Change. Using new data, one study found that

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2. Jack Rodgers and Karen Smith, "Is There Biased Selection in Medicare HMOs?" Health Policy Economics Group, Price Waterhouse LLP, Washington, D.C., March 14, 1996.

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HMO enrollees did not differ from their fee-for-service counterparts while the other two concluded that the pattern of healthier people in Medicare HMOs reported in the MPR study remained generally intact.

PRICE WATERHOUSE: NO BIAS

According to a study commissioned by the American Association of Health Plans, using the 1992 Medicare Current Beneficiary Survey (MCBS), Jack Rodgers of Price Waterhouse found that the characteristics predicting medical care use were approximately the same for HMO enrollees and those in fee-for-service plans.[2] Rodgers's sample was developed by matching each Medicare risk-contract enrollee with all of the fee-for-service beneficiaries in the same county who shared demographic cost factors incorporated into the AAPCC payment formula (the risk subset). By comparing characteristics of the HMO enrollees with the fee-for-service risk subset, Rodgers attempted to measure differences between the two groups not controlled for by the AAPCC. To determine the impact of enrollment in risk-contract HMOs on Medicare spending, he used Medicare costs and characteristics of all fee-for-service beneficiaries to ascertain Medicare costs for each HMO enrollee.

Key among Rodgers's findings are that:

- Rates of chronic conditions did not favor either HMO enrollees or fee-for-service beneficiaries. HMO enrollees had a greater incidence of diabetes and stroke while those in fee-for-service experienced greater rates of cancer and heart disease.
- The average incidence of activity limitations was comparable between the two populations.
- HMO enrollees and the fee-for-service risk subset had similar per capita costs after adjusting for the risk factors included in the AAPCC. The predicted total risk HMO costs were just 2 percent below actual fee-for-service risk subset total costs.

> "While there are differences in characteristics between Medicare HMO enrollees and risk-adjusted fee-for-service beneficiaries in the 1992 HCFA data, their average costs to Medicare are very similar. With no biased selection, Medicare would save, on average, 5 percent for each risk-contract HMO enrollee."
>
> *—Jack Rodgers*

Based on the 1992 data, Rodgers concluded that the average monthly cost to Medicare is approximately the same for HMO enrollees and their fee-for-service counterparts, and that Medicare saves approximately 5 percent for each enrollee in a risk HMO.

HMO PAYMENTS TOO HIGH, SAYS HCFA TEAM

Using 1994 MCBS data, Gerald Riley and a team of researchers at the Health Care Financing Administration (HFCA) analyzed the selection issue in risk-contract HMOs and concluded that the Medicare payment formula for HMOs does not adjust adequately for the better health status (and lower expected costs) of HMO enrollees.[3] This means that HMO payments are higher than they should be.

Riley compared the health status of risk HMO enrollees and fee-for-service beneficiaries. Rather than using a matched sample as Rodgers did, the HCFA study included all fee-for-service respondents living in counties with HMO respondents; AAPCC demographic factors were controlled for statistically. Models that incorporated various health status measures to predict expenses were used to estimate HMO and fee-for-service enrollees' costs.

The HCFA team found that:

- HMO enrollees had better functional status, fared better in activity limitations, and were less likely to report their health status as fair or poor than fee-for-service respondents.
- More fee-for-service enrollees had chronic conditions, although only the results for heart disease were statistically significant.

Using a model that incorporated demographics, self-reported conditions, functional status, and general health status, Riley found that the predicted costs of HMO enrollees were considerably less than those of fee-for-service beneficiaries. In fact, the ratio of HMO costs to fee-for-service costs was 0.85. Given this, the AAPCC is higher than it should be and, Riley suggests, the AAPCC would be lowered by about 12 percent, on average, if it were adjusted to reflect the better health status of HMO enrollees.

FAVORABLE SELECTION CITED IN PPRC STUDY

Results from a Physician Payment Review Commission (PPRC) study also suggest favorable selection in Medicare HMOs.[4] According to the study conducted by Christopher Hogan and Donald F. Cox, spending by new HMO enrollees was 37 percent less than among fee-for-service beneficiaries in the six months prior to HMO enrollment. And spending for those who disenrolled from HMOs was 60 percent higher in the six months after they dropped HMO coverage than it was for those in fee-for-service.

The PPRC study looked at HMO enrollees' experiences prior to and after disenrolling from a risk-contract HMO using expenditure data from Medicare claims files. HMO beneficiaries who enrolled between July 1989 and June 1994 were compared with a fee-for-service control group.

Because prior use data do not capture information during the period of HMO enrollment, beneficiaries' experiences during enrollment in risk-contract HMOs were examined to assess the relationship between length of HMO enrollment and costs or service use. The researchers found that hospital use and mortality rates among new enrollees were lower than the average for all HMO enrollees during the initial years of enrollment. However, hospital use and mortality rates increased with length of HMO enrollment. This suggests that HMO enrollees' costs continue to rise the longer they remain enrolled. In economic terms, this represents a regression toward the mean in beneficiaries' costs after enrolling in HMOs.

PPRC also found that the best available risk-adjustment models captured only about half of the risk selection of new HMO enrollees. These findings—that preenrollment costs are much lower than risk-adjustment models would predict, and that these costs regress only slowly toward the mean—suggest that the MPR and Riley estimates of biased selection may be conservative, and that real incidence of biased selection may well be higher.

WHICH RESULTS ARE MORE RELIABLE?

Earlier findings about risk selection appear to apply to more recent experiences as well. The majority of evidence suggests that two key conclusions have not changed: There is still favorable selection in risk-contract HMOs, and this has resulted in financial losses to the Medicare program. In discussions at the Center for Studying Health System Change seminar and in a memo on risk selection released by the Congressional Budget Office (CBO) on the day the seminar was held, the chief focus of criticism about research methodology concerned the study carried out by Price Waterhouse.[5] At issue were the following key points:

- The size of the database used in the Price Waterhouse study is considered by many researchers to be inadequate for an analysis of the selection issue. The HMO sample in the 1992 MCBS was quite small—it included only 371 respondents, whereas the HCFA study using 1994 MCBS data included 863 respondents. Therefore, the Price Waterhouse

> "Medicare HMO enrollees tend to be healthier than beneficiaries in fee-for-service, after controlling for the demographic factors in the AAPCC. Overpayments are continuing to occur because Medicare's payments do not reflect the better health status of HMO enrollees."
>
> —*Gerald Riley*

Researchers have questioned whether studies of risk selection in Medicare HMOs based on earlier data are still valid today.

The majority of evidence suggests that the additional years of experience and advances in data available for research have not changed the two key conclusions:

- *Favorable selection exists in risk-contract HMOs.*
- *It is large enough to lead to financial losses to the Medicare program.*

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results are sensitive to changes in the health status of small numbers of people.

- The sample was not designed to be representative of Medicare's HMO enrollment; this compounds the problem of small sample size.
- By using the MCBS, the study excluded all people who died during the first nine months of the year. As a result, it does not capture the cost impact of the difference in mortality rate, which is lower in the HMO population.
- Finally, the Price Waterhouse study did not take into consideration enrollment shifts between HMOs and the fee-for-service sector that occurred during the study period, even though these shifts could have had an impact on the average costs of the two populations. Because other researchers reported very low costs among new HMO enrollees and high costs among HMO disenrollees, excluding enrollment shifts that occurred throughout 1992 could bias the results.

(In contrast, the HCFA study measured HMO membership and health status at the same point in time, alleviating the potential problem of shifts in enrollment between risk HMOs and the fee-for-service sector biasing the results.)

Given all these research shortcomings, the CBO concluded that adjustments for biases in the Price Waterhouse study could more than quadruple its estimate of favorable selection.

> "We found that beneficiaries going into HMOs had costs 37 percent below average, but the beneficiaries leaving HMOs had costs 60 percent above average. With numbers like that, it seems pretty silly to debate whether or not there may be risk selection. The prudent question is, what are we going to do about it?"
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> —*Christopher Hogan*

POLICY IMPLICATIONS

With an increase in Medicare beneficiaries enrolling in HMOs and congressional interest in further encouragement of HMO enrollment, the issue of favorable selection into risk-contract HMOs continues to be a concern of the health policy community. To the extent that Medicare is paying too much for risk-contract enrollees, financial losses to the program will only worsen as HMO enrollment increases. And should medical savings accounts or other plan types be made available to Medicare beneficiaries, financial losses may be exacerbated.

One way to improve the appropriateness of payments to Medicare HMOs is to change the payment formula by developing more effective and sophisticated risk adjusters. A key element of improving the AAPCC involves obtaining much more data from HMOs. However, HMOs must be induced to provide such data. It was suggested that an incentive system be developed through which risk HMOs are paid more money in return for providing HCFA with utilization data on their Medicare enrollees, or less money if they do not.

Because a better AAPCC would mean lower payments to HMOs, this might have an adverse effect on Medicare beneficiaries and HMOs. Many risk HMOs currently charge zero premiums and offer more benefits than does the standard Medicare coverage. A reduction in payments to risk HMOs might result in an increase in premiums charged to enrollees and a reduction in the level of benefits. This would make HMOs a less attractive option for the elderly, which could present a political barrier to changing the AAPCC.

Some question the fairness of reimbursing risk HMOs only 95 percent of the AAPCC. This might be addressed by raising the percentage of the AAPCC from 95 to 100 at the same time as the risk adjustment formula is strengthened. Establishing a level playing field is important if policy makers expect HMOs to compete with the fee-for-service program in attracting Medicare beneficiaries. ■