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Who Switches from Medigap to Medicare HMOs?

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Objective. To determine the factors affecting whether Medigap owners switch to Medicare managed care plans.

Data Sources. The primary data were the 1993–1996 Medicare Current Beneficiary Survey (MCBS) Cost and Use Files. These were supplemented by data available from the Centers for Medicare & Medicaid Services (CMS) website.

Study Design. Individuals on the MCBS files with Medigap coverage in the period 1993–1996 were included in the study. The person-year was the unit of analysis. We used multivariate logistic regression analysis to determine whether or not a Medigap owner switched to a Medicare-managed care plan during a particular year. Independent variables included measures of affordability, need for services, health insurance benefits, sociodemographics, and supply of managed care plans.

Principal Findings. We did not detect strong evidence that beneficiaries in poorer health were more likely than others to switch from Medigap coverage to Medicare-managed care. In addition, higher Medigap premiums did not appear to induce beneficiaries to switch into managed care.

Conclusions. We examined selection bias in joining managed care plans among the subset of Medicare beneficiaries who have Medigap policies. No strong evidence of selection bias was found in this population. We conclude that there was no evidence that the Medigap market is becoming prohibitively expensive as a result of unfavorable selection.

Key Words. Medigap, Medicare, supplemental insurance, Medicare managed care, HMOs

The number of Medicare beneficiaries who have chosen to enroll in capitated managed care plans has greatly increased in recent years. In 1992, just 4 percent were in risk-contract plans, but by 1998, this has more than tripled to 14.1 percent (Lieberman 1999). Increasing health plan choices available to Medicare beneficiaries is indeed attractive from a public policy standpoint, and greater growth in managed care enrollment has the potential to save

Medicare money. Problems could arise, however, if certain types of individuals tend to enroll in the managed care plans. More specifically, if the managed care plans attract a substantially healthier group of beneficiaries, then those who remain in the traditional Medicare fee-for-service program will tend to be sicker. One result could be an increase in the premiums for Medigap supplemental plans, which, in turn, could make it more difficult for such individuals to afford supplemental coverage—the ownership of which is considered essential by most observers given the large gaps in Medicare coverage.

There are a number of supplemental insurance options available to some or all Medicare beneficiaries. An estimated 91 percent of Medicare beneficiaries have such coverage, with only 9 percent having Medicare as their sole protection. Of the 91 percent, 17 percent are enrolled in Medicare-managed care programs, 27 percent have individually purchased (or ''Medigap'') coverage, 36 percent have coverage from an employer or former employer, and 11 percent are covered by Medicaid (Rice and Bernstein 1999).

In this article, we focus on Medigap- and Medicare-managed care, which together comprise the ''individual market'' for supplemental insurance. This focus is appropriate because these are the people who have to make a choice. Beneficiaries with Medicaid already have comprehensive coverage (often through managed care) and are not advised to purchase individual coverage. Similarly, those with coverage from an employer also have comprehensive coverage, usually with much lower premiums. Furthermore, most of the choices available are made by the employer.

Already, Medigap premiums are quite high in comparison to the incomes of many older persons. In 1994, the average annual Medigap premiums exceeded $1,000 (Rice, Graham, and Fox 1997). A study using 1996 data found annual premiums in excess of $1,100 for Plan F, which was the most popular

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Medigap plan at that time (Alecxih et al. 1997). In another facet of our study, we found that seniors with low incomes and those in minority groups were less likely to have supplemental coverage (Pourat et al. 2000). If premiums rise much more, many policy owners would face a choice: either drop their Medigap policies or join a Medicare-managed care plan. To some beneficiaries, neither of these would be an attractive alternative.

Although such a scenario is possible, there is some doubt that it will come to pass. Even though managed care plans have enjoyed favorable selection in the past, the future could be different, for two reasons. First, as managed care penetration rates increase, more of the working-age population are likely to be comfortable with such arrangements and be enrolled in them at the time they retire. Thus, more new Medicare beneficiaries of all health states would be enrolling in managed care. Second, Medicare-managed care plans can potentially provide the greatest savings over Medigap for individuals with chronic health problems. In particular, through better coverage of prescription drugs, such individuals may be able to achieve substantial savings. In the future, this could induce sicker beneficiaries to enroll in managed care, thus reducing the extent of selection bias. If this occurred, then Medigap premiums would probably not rise so quickly, and this market would remain a viable alternative for beneficiaries in future years.

Our primary research question is determining what factors induce Medicare beneficiaries to switch from individual Medigap plans to Medicare-managed care plans and, in particular, to determine the impact of health status and Medigap premiums on switching. We use several years of data from the Medicare Current Beneficiary Survey (MCBS) Cost and Use files. The results are used to assess the future viability of a Medicare fee-for-service market.

Previous Research

There have been a considerable number of studies comparing the characteristics of Medicare beneficiaries who are enrolled in managed care plans versus those who are not. Their purpose has been to determine the extent, if any, to which these plans enjoy favorable selection—that is, enroll beneficiaries who tend to use fewer services. The main reason that this has been of policy interest is that Medicare pays these plans based on spending among fee-for-service enrollees. If (as has been the case) healthier beneficiaries join managed care plans, these plans will be overpaid because payment is based on the spending of the sicker individuals who remain in fee-for-service. One of the provisions of

Omnibus Budget Reconciliation Act of 1997 (OBRA-97) was to implement a risk-adjustment formula to better account for these differences when paying for program beneficiaries enrolled in managed care plans. The formula being used is based on enrollee inpatient diagnosis but, like other risk-adjustment instruments that have been developed, is likely to account for only a small portion of variation in expenditures (Health Care Financing Administration [HCFA], 1999). Consequently, health plans are still likely to benefit if they obtain healthier beneficiaries.

Researchers have used a variety of methods to examine the extent of favorable selection into Medicare HMOs. Some of the more common measures used include comparing the health status and/or previous utilization of beneficiaries who join HMOs to those who remain in fee-for-service; examining mortality rates of individuals in HMOs versus those in fee-for-service; and comparing utilization of disenrollees to those who remain in HMOs. Although findings of individual studies differ, in general, it has been found that HMOs enjoy favorable selection with respect to previous utilization, health status (self-assessed and functional), mortality, and postenrollment utilization (e.g., Brown, Clement, Hill, et al. 1993; Cox and Hogan 1997; Hamilton 1999; Hellinger 1995; Langwell and Hadley 1989; Morgan et al. 1997; Riley et al. 1996).

To our knowledge, however, no one has examined the extent of favorable selection in Medicare-managed care plans compared with those with Medigap policies. In most parts of the country, beneficiaries have a choice of purchasing either a Medigap policy and staying in the Medicare fee-for-service system or, alternatively, enrolling in a Medicare-managed care plan. In 1998, 71 percent of Medicare beneficiaries lived in a county served by one or more Medicare-managed care plans. If the individuals who switch into managed care are healthier, then over time, beneficiaries who remain in Medigap will face higher and higher premiums because they will belong to a sicker risk pool of patients. This would likely result in fewer continuing to keep their Medigap coverage as more beneficiaries are compelled to switch to HMOs or drop supplemental coverage. By examining the differences between those who remain in Medigap versus those who switch to HMOs, we obtain some insights into the future composition of these groups and, in turn, the viability of the Medigap market.

Conceptual Model

The health services literature shows that there are a variety of factors that may influence an individual's desire to switch from fee-for-service plans to HMOs.

First, HMOs provide care to seniors at lower out-of-pocket costs. The alternative to those who do not have employer-based coverage is purchasing a Medigap policy at average premiums of over $1,000 annually and still incurring additional out-of-pocket costs when they use services such as prescription drugs. Individuals who are more price sensitive, either because their income is lower or because higher Medigap premiums result in their spending more of their income on supplemental insurance, would be expected to be more likely to switch to an HMO. Thus, affordability should be one key determinant of the switching model.

Conversely, those who have an attachment to a current provider would be less likely to leave the freedom of choice associated with the fee-for-service system to the more restrictive provider panels that characterize HMOs. In general, we would expect these individuals be sicker, have chronic health conditions, or have both. Need for services should therefore be a component of the model.

We posit that there are three additional sets of factors that would affect switching behavior: health insurance benefits, sociodemographic characteristics, and the supply of managed care plans. Health plan benefits such as offering prescription drug coverage should, along with affordability, influence the kind of supplemental coverage purchased. Because HMOs tend to have comprehensive benefit packages, those with Medigap policies with fewer benefits may be enticed to switch. Sociodemographic factors such as age, gender, race, education, and marital status are likely to influence a person's experience with and predilection toward managed care. Supply factors such as the level of managed care competition in an area would be expected to influence positively the probability that consumers enroll in managed care plans.

This conceptual model can be summarized as follows:[1]

Switching = f (affordability, need for services, health insurance benefits, sociodemographics, and supply)

DATA SOURCES

We used data from the MCBS Cost and Use files from 1993 to 1996. The MCBS is a continuing panel survey of approximately 12,000 aged and disabled beneficiaries.

In addition, we used publicly available data from the CMS/website that allowed us to determine the availability of managed care plans and to construct

a Herfindahl Index (discussed under Variable Specification) as well as data providing the amount that HMOs are paid by Medicare for enrolling a beneficiary, which is called the average area per capita cost (AAPCC).[2] This information was merged onto the MCBS files for each study year (1993–1996) for each county in which a sample member lived.

It should be noted that the 1993–1996 period was one of rapid growth in Medicare managed care. In 1993, 5 percent of beneficiaries were enrolled in 110 risk-based Medicare managed care plans. This doubled to 10 percent, in 241 plans, by 1996 (Lamphere et al. 1997). Thus, during this period, there was much more opportunity for beneficiaries to switch from Medigap to managed care than previously.

SAMPLE

The sample consists of Medicare beneficiaries age 65 and over with Part A and Part B coverage who owned individually purchased supplemental (Medigap) policies during the period of 1993 through 1996. Because the person-year was the unit of analysis, beneficiaries whose only supplemental insurance was through an employer or through Medicaid during a particular year were excluded from the sample for that year. We excluded these data because we wanted to understand the factors that affect the choice of moving from Medigap to HMO coverage. Although beneficiaries with employer or Medicaid coverage could join a Medicare-managed care plan, there is a relatively small amount of incentive for them to do so because the costs associated with their particular form of supplementation tends to be low. Another issue we would have liked to examined is the movement from Medicare-managed care back to Medigap, but the small sample of individuals who made such a move ($n = 53$) over the 4-year study period precluded such an analysis.

Another inclusion criterion for a person to be in the sample during a particular year is that there was at least one Medicare-managed care plan offered to county residents that year. Many beneficiaries (an across-the-years average of 29 percent) had no Medicare-managed care plans from which to choose. Obviously, they could not switch during such a year, and their inclusion in the sample would bias the coefficients for the other independent variables.

VARIABLE SPECIFICATION

Dependent Variable

The dependent variable is dichotomous whether a sample member switched from a Medigap policy to a Medicare-managed care plan during a particular year. This is coded as 1 if they switched and as 0 otherwise. The vast majority of beneficiaries (3,796 or 94 percent) did not switch, with (246 or 6 percent) being switchers. Individuals were counted as switchers irrespective of whether they retained their Medigap coverage. The remaining sample members were classified as either switchers or nonswitchers.

Independent Variables

The following independent variables are classified according to our conceptual model.

Affordability. We seek to capture the affordability of Medigap policies and of their alternative, Medicare HMOs. The primary measure of the former is the annual Medigap premiums paid by a sample member, which is obtained directly from the MCBS. We would expect that as the Medigap premium rises, more people would switch to Medicare HMOs. The problem with this variable is it is also likely to capture the effects of omitted variables: the benefits of Medigap plans. Like other insurance, Medigap premiums are highly dependent on the benefits covered. Unfortunately, the data set includes data on only one such benefit: whether the policy covers prescription drugs. (In fact, policies covering prescription drugs averaged 23 percent higher premiums than those that did not.) It is likely that other measures of policy benefits, not included in the survey, would have similar effects so that premiums are also acting as a proxy for these omitted variables. To the extent that this is the case, we might obtain the opposite result: Higher premiums, by proxying for more comprehensive benefits, would result in less switching.

We also experimented with adding another variable: the percentage change in the respondent's annual Medigap premiums over the previous year. Curiously, the coefficient for this variable had an unexpected sign: Those whose Medigap premiums rose more were less likely to switch to a Medicare HMO. This may be because, in some cases, rising premiums are a proxy for a deterioration in health status, in which case the person may wish to stay with their present providers. Regardless of the reason for the sign, however, the inclusion of this variable had little effect on the coefficient of the main premium variable (the coefficient changed from –0.11 to –0.10 and remained

negative and statistically significant at the 0.001 level), but its use substantially reduced the sample of switchers (from 242 to 173) because individuals had to be in the sample two consecutive periods. This, in turn, reduced power and resulted in some other variables losing their statistical significance. Consequently, we did not include the change in premiums in the final model.

Our measure of the affordability of Medicare HMOs is more indirect. We constructed a Herfindahl Index, which reflects the degree of monopoly power in particular Medicare HMO markets. Specifically, it is calculated at the sum of the squares of the proportion of county market share of each Medicare HMO. A high index value indicates more market power, thus there is a good chance that there will be higher HMO premiums. Controlling for other factors, we would expect that a higher index value would result in less switching.

The final measure of affordability is the respondent's family income. We would expect those with higher incomes to be less likely to switch to an HMO because they are more likely to be able to afford the freedom of choice associated with the fee-for-service market.

We also experimented with adding a term that accounts for the relationship between premiums and income. This was specified in two ways: premiums divided by income and, alternatively, an interaction term between the two variables. In neither case was this new variable statistically significant, and thus, neither is kept in the final model.

Need for Services. We derive four separate measures for a respondent's need for services: self-assessed health status, limitations in activities of daily living (ADLs), limitations in instrumental ADLs (IADLs), and a comorbidity index. For self-assessed health status, we created dichotomous variables representing levels of health that were described as excellent (the omitted category), good, fair, and poor. The measures of both ADL limitations and IADL limitations ranged from 0 to 6 and were based on respondent's reports that they had ''any difficulty'' with the activity in question.[3] The comorbidity index ranges from 0 to 18 because it is comprised of information on whether the respondent was ever told that he/she had one of 18 reported medical conditions. In general, we expected those in poorer health would be less likely to switch to an HMO because of their attachment to current providers.

We also experimented with two variables that are proxies for previous utilization: the total number of office visits and the number of covered inpatient days, both during the previous year. The latter was not statistically significant, and the former was significant at a p value of 0.10. Because the inclusion of these variables substantially reduced the number of switchers in the

sample (as before, from 242 to 173) and had little effect on the other coefficients, we did not include them in the final model.

Health Insurance Benefits. As in the case of affordability, we attempt to capture the benefits of both Medigap and Medicare HMO insurance. The only measure of Medigap benefits on the data set is whether the plan covers prescription drugs. As noted previously here, we expect the premium variable to capture other aspects of policy benefits. There are two ways in which a person could have a Medigap policy covering prescription drugs: (1) They purchased standardized Plans H, I, or J, or (2) they continued renewing a policy they had owned prior to the standardization requirements that were implemented in 1992. Under OBRA-90, insurers could continue to offer renewal rights on such policies, and most insurers did so.

Our proxy for Medicare HMO benefits is the Medicare capitated payment amount (the AAPCC) in the sample member's county. Previous research has shown that in counties with higher AAPCCs, Medicare HMOs are able to offer more comprehensive benefits (Barents Group LLC 1997). Therefore, we would expect that a higher AAPCC would result in a greater likelihood of switching.

Sociodemographics. We measure a variety of sociodemographic characteristics, including age, race, sex, education, and marital status. We dichotomize race as White/non-White, where Hispanics were included in the non-White category. Marital status represents only those who reported that they were currently married; those who were widowed, divorced, separated, or never married are categorized as not married. Education is based on the highest grade completed, with a range of 1 (first grade or less) through 18 (six or more years of college). We do not have prior expectations on the directional effects of these variables on switching.

Supply of Managed Care Plans. To control for the supply of managed care plans, we include a measure of the number of plans available in each county. To reduce multicollinearity with the Herfindahl Index, we specify plans as a dummy variable indicating that there are three or more Medicare managed care plans available in the county. We would expect that beneficiaries living in counties with more managed care plans would be more likely to switch to one. A second set of variables are regional dummies; we anticipate that those in the West are more likely than others to have access to more Medicare HMO choices, and beneficiaries in the South have less access.

Other Control Variables. Finally, dummy variables are used to represent the 4 years for which data are available: 1993 through 1996. These are intended to capture changes over time in switching behavior not accounted for by the other independent variables.

STATISTICAL METHODS

The unit of analysis is the person-year. Individuals can be in the sample for up to 4 years. During each year, we examine whether the sample member switched from a Medigap plan to a Medicare-managed care. In the descriptive analysis, data for switchers are provided for the year in which they changed coverage from Medigap- to Medicare-managed care; data for nonswitchers are averaged over the years in which they were included in the data set.

Our primary statistical technique was multivariate logistic regression analysis. We used the software package SUDAAN to adjust standard errors for the complex sample design, as well as the fact that we had multiple observations on individuals who were in the sample for more than 1 year.

An alternative statistical methodology is to explicitly take advantage of the longitudinal nature of the data set through the use of survival analysis. We employed a Cox regression model, in which the duration of beneficiaries (measured in months) in the study file was the dependent variable. Duration was defined as ending either with the last year of data for nonswitchers or during the month of enrollment in a Medicare HMO for switchers. This analysis is more flexible in the sense that it accounts for random censoring (i.e., unequal periods of study duration) among beneficiaries in the study but tends to be less readily understood than logistic regression. We found that the survival analysis results were similar to those in the logistic regression for the key independent variables—in particular, premiums and health status—so they are not presented here.

RESULTS

Descriptive Findings

Table 1 shows how switchers compare with nonswitchers with regard to the independent variables included in the analysis. Nonswitchers tend to be somewhat wealthier than switchers, with incomes about 15 percent higher. Not surprisingly, their Medigap policies are 27 percent more expensive than for switchers and are also more likely to include prescription drugs. Although there are no noticeable differences in self-assessed health status and little difference in IADL limitations and number of comorbidities, nonswitchers have an average of 44 percent more ADL limitations than switchers.

Table 1: Average Characteristics of Survey Respondents by Switching Status
($n = 4,042$)

Characteristic	Switchers n = 246	Nonswitchers n = 3,796
Affordability		
Premiums	$923	$1,170
Herfindahl Index	0.54	0.67
Income	$22,520	$25,892
Need for services		
Number of ADLs	0.48	0.69
Number of IADLs	0.47	0.55
Number of comorbidities	2.8	3.0
Self-assessed health status		
Excellent	46 Percent	47 Percent
Good	36	30
Fair	14	16
Poor	4	7
Health insurance benefits		
Have Medigap drug benefits	22 Percent	28 Percent
AAPCC for Medicare-managed care plans	$439	$428
Sociodemographics		
Age	76	76
White (versus non-White)	88 Percent	94 Percent
Female (versus male)	63 Percent	62 Percent
Highest year of school completed	12	12
Married	53 Percent	55 Percent
Supply of managed care plans		
Number of plans in county	7	5
Region		
East	29 Percent	46 Percent
Midwest	13	9
South	32	30
West	27	14

Switchers are somewhat more likely than nonswitchers to be White and more likely to live in the West. Few differences, however, appear according to gender, education, or marital status. As expected, switchers tended to live in counties with more managed care options than nonswitchers.

Multivariate Findings

Affordability. Table 2 provides the results from the logistic regression analysis. The results for premiums are in contrast to our expectations: Individuals with higher Medigap premiums are less likely to switch to Medicare HMOs. This is most likely because those paying higher premiums have more comprehensive Medigap policies and are less likely to want to switch to

Table 2:   Logistic Regression Predicting Who Will Switch ($n = 7,241$ person-years)

Characteristic	Beta (SE)	Odds Ratio (SE)	p Value (95 Percent CI)
Intercept	−3.729	0.024	0.001
	(1.128)	(0.003–0.220)	
Affordability			
Premiums ($100s/year)	−0.113	0.894	0.000
	(0.017)	(0.864–0.924)	
Herfindahl Index	−0.897	0.408	0.087
	(0.522)	(0.146–1.139)	
Income ($1,000s/year)	−0.007	0.993	0.045
	(0.004)	(0.985–0.999)	
Need for services			
Number of ADLs	−0.089	0.915	0.270
	(0.080)	(0.780–1.072)	
Number of IADLs	−0.059	0.942	0.459
	(0.081)	(0.805–1.103)	
Number of comorbidities	−0.032	0.969	0.410
	(0.039)	(0.898–1.045)	
Self-assessed health status			
Excellent	–	–	–
Good	0.188	1.207	0.265
	(0.169)	(0.867–1.681)	
Fair	0.141	1.152	0.527
	(0.223)	(0.743–1.786)	
Poor	−0.242	0.785	0.505
	(0.363)	(0.385–1.601)	
Health insurance benefits			
Have Medigap drug benefits	−0.303	0.738	0.142
	(0.207)	(0.492–1.108)	
AAPCC for Medicare-managed care plans ($s)	0.001	1.001	0.274
	(0.001)	(0.999–1.004)	
Sociodemographics			
Age	0.015	1.015	0.154
	(0.010)	(0.994–1.036)	
White (versus non-White)	−0.255	0.775	0.287
	(0.239)	(0.484–1.240)	
Female (versus male)	0.118	1.126	0.492
	(0.172)	(0.803–1.577)	
Highest year of school completed	−0.003	0.997	0.891
	(0.025)	(0.997–0.949)	
Married	0.128	1.137	0.450
	(0.170)	(0.815–1.586)	

Table 2:   Continued

Characteristic	Beta (SE)	Odds Ratio (SE)	p Value (95 Percent CI)
Supply of managed care plans			
Three or more plans in county	1.092	2.980	0.000
Region	(0.292)	(1.678–5.292)	
West	–	–	–
East	−1.009	0.365	0.001
	(0.299)	(0.203–0.656)	
Midwest	−0.337	0.714	0.349
	(0.360)	(0.352–1.447)	
South	−0.332	0.717	0.274
	(0.304)	(0.395–1.303)	
Year 1994	0.313	1.368	0.205
	(0.247)	(0.842–2.220)	
Year 1995	0.570	1.768	0.031
	(0.263)	(1.055–2.962)	
Year 1996	0.662	1.939	0.012
	(0.263)	(1.156–3.252)	

managed care. Our data provide information on only one of the many optional Medigap benefits: prescription drug coverage.[4] Because premiums represent a key independent variable in the analysis, we experimented with an alternative estimation method, survival analysis, but found essentially the same effect: Higher premiums significantly decreased the probability of switching. Therefore, we concluded that this finding was robust to alternative estimation techniques.

The results for the other two measures of affordability, however, are as we expected. The sign for the Herfindahl Index for Medicare HMO market power is negative and statistically significant at the 10 percent level. This means that in counties where Medicare HMOs have more market power, fewer beneficiaries switch to them—most likely because they use this market power to charge higher premiums, which reduces the attractiveness of HMOs. Finally, those with higher incomes are less likely to switch to HMOs, presumably because they can better afford to retain their freedom of provider choice that is associated with remaining in the fee-for-service sector.

Need for Services. We did not find any significant evidence that healthier beneficiaries are more likely to switch into Medicare HMOs. None of the four measures of health status—ADLs, IADLs, the comorbidity index, or self-assessed health status—were statistically significant. The largest effect is among those in poor health, whose odds ratio indicates that they are 24 percent less likely to switch than those in excellent health. However, the lack of statistical

significance makes it difficult to assert that there is favorable selection from Medigap to Medicare HMOs.

Health Insurance Benefits. We use two measures to capture the comprehensiveness of Medigap policies and Medicare HMOs: whether prescription drugs are covered (Medigap) and the amount of the AAPCC (HMOs). The prescription drug variable falls just short of being statistically significant at the 10 percent level and perhaps would have been had the sample size of switchers been a little larger. The results imply that those with drug coverage are 30 percent less likely to switch to an HMO than those lacking Medigap drug benefits, although, again, this has to be viewed cautiously given the lack of statistical significance. The AAPCC shows the expected positive sign (more HMO benefits attract switchers) but does not approach statistical significance.

Sociodemographics. None of the sociodemographic variables—age, race, sex, education, and marital status—were statistically significant. This is not too surprising in light of the descriptive findings in Table 1, in which few such differences are observed. The odds ratios for Whites indicate that they are 26 percent less likely to switch to HMOs than other racial and ethnic groups, but this finding also does not approach statistical significance.

Supply of Managed Care Plans and Other Variables. As expected, we found that beneficiaries in counties with three or more Medicare HMOs were more likely to switch into managed care than those in counties with only one or two plans. (Recall that we do not include beneficiaries in the sample when there were no such plans available in their county during a particular year, as that would make switching impossible.) We did find that beneficiaries in the East are less likely to switch than those in the West, probably because they are less likely to have been exposed to HMOs and, as a result, are more hesitant to make this leap.

The final set of independent variables are dummies for each of the study years, with 1993, the first year, being the omitted category. Essentially, these variables help capture the effects of omitted variables: Our data set does not include all of the determinants of switching. To the extent that the values of some of these omitted factors have changed systematically over time, their effects may be captured through these dummy variables. Not surprisingly, we find that there was more switching in later years of the study as more beneficiaries took advantage of Medicare HMOs.

LIMITATIONS

There are several data limitations inherent in this study. First, the sample of switchers was relatively small—a total of 246 over the 4-year study period. This reduced our ability to detect statistically significant differences between the characteristics of switchers and nonswitchers. Second, the data predate the passage and implementation of OBRA-97, which had a number of effects on the supply and demand for Medicare HMOs. It is possible that the determinants of switching may have changed over time. Third, and perhaps most important, the MCBS has very limited information on the benefits included in Medigap policies. Because higher priced policies have more comprehensive benefits, the omission of important policy benefits is likely to bias coefficients for the Medigap premium. Nevertheless, this is, to our knowledge, the first study that has specifically examined who switches from Medigap coverage to Medicare HMOs; such data limitations are often inherent in new investigations like this one. This study will be useful in generating further research in this area.

DISCUSSION

We did not find strong evidence indicating favorable selection among Medigap owners into Medicare-managed care plans or that those paying more for policies were more likely to switch. As discussed earlier, most previous studies have found favorable selection into Medicare HMOs. The most likely reason that our findings differ is that we have examined a different group of beneficiaries: those who own Medigap policies, who make up approximately 27 percent of beneficiaries age 65 and over (Rice and Bernstein 1999). It is possible that although there is more favorable selection among new beneficiaries, there is less among the subset who are already in Medigap plans who are considering whether to switch to managed care. Most of these beneficiaries are paying substantial amounts in Medigap premiums, and those with prescription drug benefits are paying much more. It is therefore not surprising that sick as well as healthy Medigap policyholders would move to HMOs, which usually provide comprehensive benefits, including prescription drugs, at lower premium levels.

The results are encouraging from a policy standpoint. Most seniors and their Congressional representatives agree that beneficiaries should continue to be able to choose to receive their Medicare services on a fee-for-service basis. The biggest threat to this is rising Medigap premiums, because the gaps in

Medicare make it extremely risky for a beneficiary to be without supplementation. If Medigap coverage is unaffordable, most seniors will have little choice except to join an HMO. Although Medigap is expensive, future premiums should rise no faster than health care costs as a whole if there is little adverse selection as more beneficiaries move to HMOs.

By January 2001, many Medicare HMOs will have withdrawn from the market, affecting over a million program beneficiaries. Moreover, many of those HMOs remaining in the market are raising their premiums substantially, and some are beginning to reduce or eliminate their prescription drug benefits (Gold 2000). There are two primary reasons for these developments: reductions in government payments to Medicare HMOs and the tremendous recent increase in prescription drug costs. It is possible these trends will be short lived and there will soon be a return to growing enrollment rates. This is especially likely to occur if Congress substantially increases its payment rates to these plans, a move favored by both political parties. If the trend does not reverse and if HMO enrollment continues to stagnate or even fall, then the Medigap market will be the likely beneficiary. Nevertheless, one would anticipate continued and fast growth in the cost of Medigap Plans H, I, and J, which cover prescription drugs.

The other main policy issue affecting Medigap concerns the possible enactment of a Medicare prescription drug benefit. This would likely have a major impact on the Medigap market, although its exact nature is difficult to predict because it depends on the type of benefit enacted. If, as is the case under some Republican proposals, drug benefits will be sold by private insurers, then companies already in the Medigap market will likely benefit from government subsidies some individuals will receive to purchase drug coverage. Under some Democratic plans, however, Medicare itself will provide either a mandatory or an optional but subsidized drug benefit. If this occurs, then the private Medigap market will be squeezed in two ways: Plans H, I, and J will no longer be necessary, and if most people purchase the Medicare-sponsored drug coverage, they will have less money available to purchase Medigap.

NOTES

1. This model is similar but not identical to the revised Institute of Medicine framework that accounts for the role of managed care in health plan choice and service use (Gold 1998). In that model, the determinants of plan choice are categorized into structural,

financial, and personal. Our data set, however, lacks several of the ''personal'' determinants of choice, such as the consumer's knowledge of managed care and their existing care-giving network.

2. Unlike in the job-based insurance market, where HMOs are paid a negotiated amount by health plans, Medicare uses a formula to pay health plans for enrolling program beneficiaries. The formula is based on the cost of providing care to beneficiaries in the fee-for-service system in that county (the AAPCC).

3. ADL activities were bathing/showering, dressing, eating, getting in/out of chairs, walking, and using the toilet; IADL activities were using the telephone, doing light housework, doing heavy housework, making meals, shopping, and managing money.

4. Others benefits not included in the MCBS but associated with higher premium include coverage for the Part A hospital deductible; and the annual Part B deductible, coinsurance amounts for skilled nursing care; nonassigned physician charges; preventive care; at-home recovery care; and medical expenses associated with foreign travel.

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