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Report to the Chairman, Subcommittee on Health, Committee on Ways and Means, House of Representatives

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MEDICARE

Fewer and Lower Cost Beneficiaries With Chronic Conditions Enroll in HMOs

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Health, Education, and
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The Honorable William M. Thomas
Chairman, Subcommittee on Health
Committee on Ways and Means
House of Representatives

Dear Mr. Chairman:

Some analysts contend that a way to slow the growth in Medicare spending is to enroll more people in health maintenance organizations (HMO), which offer to provide all covered care to patients for set fees but restrict the choice of physicians and closely monitor treatment decisions. Whether increased HMO use will save Medicare money depends, in part, on whether HMOs can attract and retain beneficiaries now in traditional, fee-for-service (FFS) Medicare, particularly those with expensive chronic conditions.[1]

Research conducted on data from the 1980s and 1990s has shown that Medicare HMOs have benefited from favorable selection—they serve healthier-than-average beneficiaries—relative to FFS.[2] To explore whether HMO enrollment and disenrollment patterns of those with and without chronic conditions might explain the favorable selection that has occurred,[3] we examined a mature managed care market to determine

- the extent to which Medicare beneficiaries with chronic conditions enroll in HMOs,
- whether beneficiaries with chronic conditions who enroll in HMOs are as costly as those remaining in FFS, and

[1]Unlike FFS, HMOs provide care in return for fixed premiums and therefore are financially at risk for all covered services beneficiaries use. Medicare pays the same basic rate to all HMOs that serve residents of a particular county, a rate equal to 95 percent of the projected average FFS Medicare payments in counties in a plan's service area. This amount is then adjusted in an attempt to reflect differences in expected levels of spending by age and sex, and by Medicaid, working, and institutionalization status.

[2]For a review of recent studies and an analysis concluding that Medicare risk contract HMOs continue to benefit from favorable selection, see Physician Payment Review Commission, Annual Report to Congress 1996 (Washington, D.C.: 1996), ch. 15. See also "Policy Implications of Risk Selection in Medicare HMOs: Is the Federal Payment Rate Too High?" Issue Brief, No. 4 (Washington, D.C.: Center for Studying Health System Change, Nov. 1996).

[3]In addition to new enrollees from FFS (who may be somewhat healthier than the average HMO enrollee), the health status of HMO populations is affected by the extent to which beneficiaries with chronic conditions age into Medicare HMOs and enrollees acquire chronic illnesses as they age within established HMOs.

- whether beneficiaries with chronic conditions rapidly disenroll from HMOs to FFS at rates different from other newly enrolled beneficiaries.

To address these questions, we used data on Medicare beneficiaries in California, one of the most heavily Medicare HMO-penetrated states, to determine the HMO enrollment and disenrollment decisions of beneficiaries belonging to three health status groups. The state's Medicare risk HMO enrollment experienced rapid growth, increasing nearly five-fold between 1987 and 1995. By 1995, California accounted for over one-third of all Medicare HMO enrollment, and five California plans were among the seven largest in the nation. Medicare HMO penetration rates averaged 27 percent in California compared with the national average rate of about 7 percent.[4]

We obtained 1991 through mid-1995 enrollment and FFS claims data for approximately 1.3 million elderly Medicare beneficiaries in California.[5] To determine the health status of the beneficiaries in our FFS cohort, we screened claims records for a diagnosis of any of five chronic conditions: diabetes mellitus, ischemic heart disease, congestive heart failure, hypertension, and chronic obstructive pulmonary disease. Beneficiaries were then categorized as having either zero, one, or several of the selected conditions.[6] For each health status category, we determined the proportion and relative costs (using 1992 average monthly FFS costs) of those who enrolled in an HMO in 1993 and 1994, and those who disenrolled within 6 months.[7] Appendix I provides a detailed description of our scope and methodology. Appendix II presents information on the prevalence and average expenditures of beneficiaries with selected chronic conditions in the California FFS Medicare population in 1992.

Results in Brief

Data on California's FFS beneficiaries who enrolled in HMOs help explain why, despite the presence of chronic conditions among new HMO enrollees,

[4]Localities where Medicare managed care is particularly well established and experiencing rapid growth include Riverside, San Bernardino, and San Diego counties, which each had HMO market penetration rates exceeding 40 percent.

[5]The Health Care Financing Administration (HCFA) bases its payments to Medicare HMOs on these data, which we did not independently verify. Also, although our analysis pertains to a large portion of the risk contract program, we cannot generalize our findings to other states or to the nation.

[6]The group classified as having none of the selected chronic conditions refers to all individuals not captured by our five claims screens for chronic illnesses. It may include some beneficiaries with chronic conditions that we failed to identify through claims records, as well as people with other conditions, such as cancer, that may be considered chronic by other analysts.

[7]The use of prior costs is necessary because no other relevant cost data are available. After a beneficiary enrolls in an HMO, the Medicare program receives no information on the health care services provided to the beneficiary or their costs.

their average costs are lower than the average FFS beneficiary. The health status of beneficiaries, as measured by the number of selected chronic conditions they have, showed significant differences between those who enrolled in an HMO and those who remained in FFS. Also, when comparing beneficiaries categorized by the presence of none, one, or multiple chronic conditions, new HMO enrollees tended to be the least costly in each health status group. This resulted in a substantial overall cost difference between those that did and did not enroll in HMOs.

About one in six 1992 California FFS Medicare beneficiaries enrolled in an HMO in 1993 and 1994. HMO enrollment rates differed significantly for beneficiaries with selected chronic conditions compared with other beneficiaries. Among those with none of the selected conditions, 18.4 percent elected to enroll in an HMO compared with 14.9 percent of beneficiaries with a single chronic condition and 13.4 percent of those with two or more conditions.

Moreover, we found that prior to enrolling in an HMO a substantial cost difference, 29 percent, existed between new HMO enrollees and those remaining in FFS because HMOs attracted the least costly enrollees within each health status group. Even among beneficiaries belonging to either of the groups with chronic conditions, HMOs attracted those with less severe conditions as measured by their 1992 average monthly costs.

Furthermore, we found that rates of early disenrollment from HMOs to FFS were substantially higher among those with chronic conditions. While only 6 percent of all new enrollees returned to FFS within 6 months, the rates ranged from 4.5 percent for beneficiaries without a chronic condition to 10.2 percent for those with two or more chronic conditions. Also, disenrollees who returned to FFS had substantially higher costs prior to enrollment compared to those who remained in their HMO. These data indicated that favorable selection still exists in California Medicare HMOs because they attract and retain the least costly beneficiaries in each health status group.

Background

HMOs Offer Additional Benefits but Limit Provider Choice

Compared with the traditional Medicare FFS program, HMOs typically cost beneficiaries less money and cover additional benefits. In addition to covering all Medicare part A and part B benefits, advantages of Medicare

HMOs typically include low or no monthly premiums, expanded benefit coverage, and reduced out-of-pocket expenses.[8] In effect, the HMO often acts much like a Medicare supplemental policy (Medigap insurance) by covering deductibles, coinsurance, and additional services.

On the other hand, beneficiaries may be reluctant to enroll in HMOs because they give up their freedom to choose any provider. If a beneficiary enrolled in an HMO seeks nonemergency care from providers other than those designated by the HMO or seeks care without following the HMO's referral policy, the beneficiary is liable for the full cost of that care.[9] In addition, beneficiaries may be reluctant to drop Medigap coverage and enroll in an HMO because it may be difficult to obtain supplemental insurance later at a reasonable price if they return to FFS.[10] Because the elderly face a higher risk of serious illness, they may prefer to remain in the FFS program to take advantage of the ability to visit any provider or maintain their relationships with current providers.[11]

Medicare Beneficiaries Have Freedom to Switch Between HMOs and FFS

Medicare HMOs have enrollment procedures that reflect beneficiaries' freedom to move between the FFS program and HMO plans. Medicare rules allow beneficiaries to select any of the federally approved HMOs in their area and to switch plans or to return to the FFS program monthly. Beneficiaries who otherwise would be reluctant to try an HMO know they can easily leave if a plan does not meet their expectations. Because of this freedom to change plans every 30 days, disenrollments can indicate enrollee dissatisfaction with an HMO. Beneficiaries can also shift to HMOs to get specific benefits when needed and then disenroll with ease to return to FFS.

[8]Under FFS Medicare, beneficiaries pay for most self-administered prescription drugs when not in a hospital or skilled nursing facility. Cost-sharing features include a per admission deductible of over $700 for hospital expenses, a $100 calendar year deductible for most other expenses, and 20 percent copayment for most nonhospital expenses. Beneficiaries enrolled in HMOs must continue to pay the Medicare part B premium and any specified HMO copayments.

[9]In 1996, HCFA clarified its position that a "point-of-service" option (also known as a "self-referral" or "open-ended" option) was available. This option, which covers beneficiaries for some care received outside of the network, is not yet widely offered by Medicare HMOs.

[10]After the initial 6 months of enrollment in part B Medicare, insurers in most states can deny a Medigap policy based on an applicant's medical history. Insurers are especially selective when issuing a Medigap policy covering prescription drugs. See Medigap Insurance: Alternatives for Beneficiaries to Avoid Medical Underwriting (GAO/HEHS-96-180, Sept. 10, 1996).

[11]With the exception of staff model HMOs, changing to or among HMOs does not necessarily require switching physicians because physicians can contract with multiple HMOs.

Because enrolling more beneficiaries enables HMOs to spread their risk and better ensure profitability, recruiting or retaining beneficiaries in a plan is important. HMOs' marketing strategies often call attention to the size and geographic scope of the provider network and the quality of physicians in the network.[12] However, as we have previously reported, some HMO sales agents have misled beneficiaries or used otherwise questionable sales practices to attract new enrollees.[13]

Beneficiaries With Chronic Conditions Less Likely to Enroll in an HMO

For a number of reasons, it would be expected that beneficiaries with chronic conditions would be drawn to HMO plans. HMOs have the potential to provide a range of integrated services required by such people. Ideally, HMO providers should have the flexibility to treat patients with chronic conditions or refer them to an appropriate mix of medical and nonmedical services. They have a financial incentive for keeping people healthy and as fully functioning as possible. To avoid use of emergency room and costly acute-care services, HMOs often emphasize prevention services that address the development or progression of disease complications.

The combination of more extensive benefits and lower costs was evident in the benefit packages offered by the five largest California Medicare HMOs (accounting for 83 percent of the state's enrollment). In 1994, these plans offered

- zero to $30 monthly premiums;
- hospital coverage in full with unlimited days;
- physician and specialist visits with a copayment of $5 or less;
- emergency room care, in or out of the area, with a copayment of $5 to $50 (waived if admitted to the hospital);
- coverage for preventive health services, including an annual exam, eye glasses, routine eye and hearing tests, and health education;
- outpatient pharmacy coverage in three of the five plans, with copayments of $5 to $7 per prescription and an annual cap from $700 to $1,200; and
- outpatient mental health services with a copayment of $10 to $20 per visit, in most cases.

Despite these extra benefits of HMOs, California Medicare beneficiaries with chronic conditions were less likely to enroll in an HMO than

[12]Attracting new enrollees to a plan can be expensive. According to some estimates, advertising, public relations, sales, and administrative costs for signing up an enrollee can average $500 to $600.

[13]See Medicare: HCFA Should Release Data to Aid Consumers, Prompt Better HMO Performance (GAO/HEHS-97-23, Oct. 22, 1996).

beneficiaries without any of the selected conditions. As a result, the new enrollee group had, on the whole, better health status than those who stayed in FFS.

Enrollment Rates Lowest for Beneficiaries With Multiple Chronic Conditions

HMO enrollment typically involves only a fraction of FFS beneficiaries each year. Between January 1993 and December 1994, 16.4 percent of the beneficiaries in our decision-making cohort enrolled in an HMO.[14] But beneficiaries with a single chronic condition were 19 percent less likely to join an HMO than those without any of the selected conditions, and those with multiple chronic conditions enrolled at a rate 27 percent below those with none of the conditions.

One reason beneficiaries with chronic illnesses may be reluctant to enroll in an HMO is because they are more likely than nonchronic beneficiaries to have established provider relationships. In addition, because HMOs require that a primary care physician or "gatekeeper" decide when a patient needs a specialist or hospitalization, these beneficiaries may be particularly concerned about their access to specialty providers. Beneficiaries diagnosed with chronic conditions may prefer to remain in the FFS program to take advantage of the ability to visit any provider or to maintain relationships with current providers.

Within each health status group, HMO enrollment rates declined with age. This may indicate that younger seniors are more familiar with HMOs and thus less reluctant to try them or that they have less severe medical problems and are more willing to switch physicians, if necessary. Reflecting both age and health status, beneficiaries over 85 years old who had multiple chronic conditions enrolled at about half the rate of those aged 65 to 69 without any of the conditions. (See table 1.)

[14]For simplicity, this analysis excluded all FFS beneficiaries who died or moved during 1993 and 1994. This has the effect of excluding too many high-cost cases from the FFS group and thus understating the difference in costs between the group staying in FFS and the group of new HMO enrollees.

Table 1: Rates at Which FFS Beneficiaries Joined HMOs in 1993 and 1994, by Number of Selected Chronic Conditions and Age

Numbers in percent

	All beneficiaries	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All beneficiaries	16.4	18.8	16.7	15.4	12.5
Beneficiaries with none of the selected chronic conditions	18.4	20.7	18.6	17.2	13.7
Beneficiaries with only one of the selected conditions	14.9	16.4	15.2	14.6	12.3
Beneficiaries with two or more of the selected conditions	13.4	14.8	13.8	13.3	10.9

New HMO Enrollees Show Better Health Status Overall

Comparing the two groups of beneficiaries, those who enrolled in an HMO and those who remained in FFS, we found that a larger proportion of the enrolled group had better health status. Whereas beneficiaries with none of the selected chronic conditions represented 49 percent of those staying in FFS, they represented 57 percent of the group enrolling to HMOs. Conversely, the share with multiple conditions was 26 percent greater in the group remaining in FFS than in the group joining an HMO. (See table 2.)

Table 2: Distribution of Beneficiaries Who Enrolled in HMOs and Those Who Remained in FFS, by Number of Selected Chronic Conditions, 1993 and 1994

Numbers in percent

	Beneficiaries who enrolled in HMOs	Beneficiaries who remained in FFS
All beneficiaries	100.0	100.0
Beneficiaries with none of the selected chronic conditions	56.5	49.0
Beneficiaries with only one of the selected conditions	28.0	31.3
Beneficiaries with two or more of the selected conditions	15.6	19.7

Among the 12 California Medicare HMOs receiving the largest number of new enrollees from FFS,[15] the health status of most plans' new enrollees resembled aggregate patterns. However, at one plan, 22.2 percent of its

[15]New HMO enrollment in California was concentrated in a few large Medicare risk contract HMOs. Of the roughly 176,000 beneficiaries leaving FFS to enroll in HMOs during 1993-94, 12 plans accounted for 92 percent of the new enrollees. Plans receiving the largest number of new enrollees from FFS included Pacificare of Southern California with almost 60,000 enrollees (34 percent); FHP with about 33,000 beneficiaries (19 percent); and HealthNet and Pacificare of Northern California, each with about 14,000 beneficiaries (8 percent).

new enrollees had two or more selected chronic conditions. At another plan, 8.6 percent of its new enrollees had two or more chronic conditions.

New HMO Enrollees With Chronic Conditions Are Low Cost Compared With Their FFS Counterparts

Not only were the enrollment rates for beneficiaries with chronic conditions lower than those with none of the selected conditions, but the prior costs of those who enrolled were substantially less than those who remained in FFS. As a result, the average cost of new enrollees was nearly one-third below the cost of FFS beneficiaries that did not enroll.

New Enrollees' Costs Varied Dramatically by Number of Conditions

New enrollees with chronic conditions are potential heavy users of expensive health care services in HMOs. Preenrollment data indicate that new enrollees with the selected chronic conditions had considerably higher FFS costs than those without one of the chronic conditions. On average, 1992 FFS costs for new enrollees were more than twice as high for beneficiaries with a single chronic condition compared with persons with none.

Having multiple chronic conditions dramatically increased the prior cost of care among new enrollees, rising to 7 times the per capita costs of persons with none of the conditions. Even when the age of the beneficiary was taken into account, those with more than one chronic condition had substantially higher costs. For example, the 1992 average monthly FFS cost for new enrollees 70 to 74 years old ranged from $74 for individuals with none of the selected conditions to $565 for those with two or more conditions. (See table 3.)

Table 3: 1992 Average Monthly FFS Cost of Beneficiaries Who Enrolled in HMOs in 1993 and 1994, by Number of Selected Chronic Conditions and Age

	All new enrollees	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All new enrollees	$198	$143	$182	$245	$275
New enrollees with none of the selected chronic conditions	81	60	74	103	128
New enrollees with only one of the selected conditions	224	197	210	244	261
New enrollees with two or more of the selected conditions	580	544	565	608	582

Most Costly Beneficiaries in Each Health Status Group Remained in FFS

The enrollment patterns show that Medicare HMOs attracted people who did not need as costly medical care. Beneficiaries who enrolled in an HMO in 1993 or 1994 had substantially lower 1992 costs compared with those that remained in FFS during that period. As a group, new enrollees cost 29 percent less than those who did not join an HMO.[16] This pattern of drawing new HMO enrollees from FFS beneficiaries with low costs held true for each of the health status categories. The differences in prior costs ranged from 31 percent among those with no chronic conditions to 16 percent for those with multiple chronic conditions. (See table 4.)

Table 4: Comparison of 1992 Average Monthly FFS Costs for Beneficiaries Who Enrolled in an HMO and Those Who Remained in FFS, by Number of Selected Chronic Conditions, 1993 and 1994

	Beneficiaries who enrolled in HMOs	Beneficiaries who remained in FFS	Ratio
All beneficiaries	$198	$280	0.71
Beneficiaries with none of the selected chronic conditions	81	117	0.69
Beneficiaries with only one of the selected conditions	224	275	0.81
Beneficiaries with two or more of the selected conditions	580	692	0.84

Early Disenrollment Rates Were Highest Among Those With Chronic Conditions

Medicare beneficiaries voluntarily disenroll from HMOs for a variety of reasons. A 1996 Mathematica Policy Research, Inc., survey found that disenrollees to FFS who had been in their plan for 6 months or less were more likely than longer-term stayers to cite their reasons for disenrolling as dissatisfaction with the choice of primary care physicians, a misunderstanding of HMO rules, and an inability to obtain appointments

[16]These results are consistent with others that show favorable selection in the Medicare program. We recently reported that California HMO enrollee costs were about two-thirds of comparable FFS beneficiary costs in the year before enrollment. See Medicare HMOs: HCFA Can Promptly Eliminate Hundreds of Millions in Excess Payments (GAO/HEHS-97-16, Apr. 25, 1997). Similarly, the Physician Payment Review Commission reported that spending by new HMO enrollees was 63 percent of that for FFS beneficiaries in the 6 months before they joined an HMO. See Physician Payment Review Commission, Annual Report to Congress 1996, ch. 15. In addition, an analysis of Medicare enrollment and billing records for southern Florida from 1990 to 1993 showed that the rate of use of inpatient services for a group of HMO enrollees during the year before enrollment was 66 percent of the rate in the FFS group. See Robert O. Morgan, Beth A. Virnig, Carolee A. DeVito, and others, "The Medicare-HMO Revolving Door—The Healthy Go In and the Sick Go Out," New England Journal of Medicine, Vol. 337, No. 3 (July 17, 1997).

when needed.[17] High early disenrollment rates may reflect beneficiaries' lack of familiarity with the HMO concept. For example, a beneficiary may realize only after joining a plan that it does not pay for care from an out-of-network provider. These early disenrollees were more likely to return to FFS Medicare, while beneficiaries who disenrolled after a longer period were more likely to join other risk plans.

New Enrollees With Multiple Chronic Conditions Were Most Likely to Disenroll Early and Return to FFS

Early disenrollees to FFS were a small group relative to all new enrollees. The vast majority of new enrollees, 91.5 percent, were still enrolled in their HMO 6 months after joining their plan.[18] Within this brief period, 6 percent returned to FFS and 2.5 percent switched to another HMO.[19]

New HMO enrollees with chronic conditions rapidly disenrolled and returned to FFS at higher rates than healthier new enrollees.[20] The early disenrollment rates were highest among those with multiple chronic conditions, which might indicate greater access barriers and less satisfaction with HMOs for such beneficiaries. Those with two or more of the selected conditions disenrolled at a rate more than twice that of new enrollees with none of the conditions. Also, a greater proportion of older seniors disenrolled than younger beneficiaries, regardless of health status. (See table 5.)

[17]Physician Payment Review Commission, Access to Care in Medicare Managed Care: Results From a 1996 Survey of Enrollees and Disenrollees, Selected External Research Report No. 7 (Washington, D.C.: Mathematica Policy Research, Inc., Nov. 1996). A 1993 survey found that disenrollees were more likely than enrollees to have perceived problems with access to primary and specialty care, and unsympathetic behaviors that potentially restrict service access. See Beneficiary Perspectives of Medicare Risk HMOs, Department of Health and Human Services, Office of Inspector General, OEI-06-91-00730 (Washington, D.C.: Mar. 1995).

[18]To distinguish voluntary from administrative disenrollments, the group of new enrollees was reduced to exclude beneficiaries who had moved or died within 6 months of joining an HMO. We also eliminated apparent disenrollments when an HMO no longer participated in the risk contract program or merged with another risk plan.

[19]The rate of plan switching may indicate that, at least for some beneficiaries, the system of care itself was not problematic, but rather that the market is highly competitive in these counties. Medicare enrollees can switch fluidly from plan to plan, attracted by competing HMOs offering better or less expensive benefit packages and wider provider networks.

[20]People with chronic conditions who are enrolled in managed care plans have reported being denied access to treatment and services that they need and of being assigned to primary care physicians who are not as well acquainted with their condition as a specialist might be. For an overview of recent research on chronic illness, see Catherine Hoffman and Dorothy P. Rice, Chronic Care in America: A 21st Century Challenge (Princeton, N.J.: The Robert Wood Johnson Foundation, Aug. 1996).

Table 5: Rates of Early Disenrollment to FFS for 1993 and 1994 New Enrollees, by Number of Selected Chronic Conditions and Age

Numbers in percent

	All new enrollees	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All new enrollees	6.0	4.6	5.6	7.0	8.3
New enrollees with none of the selected chronic conditions	4.5	3.4	4.2	5.7	6.5
New enrollees with only one of the selected conditions	6.7	6.1	6.5	6.9	8.4
New enrollees with two or more of the selected conditions	10.2	8.9	10.0	10.6	11.6

In the 12 plans enrolling most of new enrollees, the early disenrollment rates for beneficiaries in each health status group exhibited a fairly consistent pattern. At most plans, beneficiaries with two or more of the selected chronic conditions disenrolled at about twice the rate of new enrollees with none of the conditions. However, the disenrollment rates for new enrollees with no chronic conditions ranged from 1.8 percent to 15.4 percent. For beneficiaries with two or more of the selected conditions, disenrollment rates varied even more widely, from 3.3 percent at one plan to 34.4 percent at another.

Taking the enrollment and disenrollment rates together, we found that those beneficiaries who were least likely to enroll in an HMO were also those that were most likely to disenroll early. For example, among beneficiaries 70 to 74 years old with multiple chronic conditions, 13.8 percent enrolled in an HMO and 10.0 percent of those beneficiaries disenrolled early. This compares with 18.6 percent and 4.2 percent, respectively, for beneficiaries of the same age group with none of the conditions.

This pattern of early disenrollment accentuates the health status differences between those who joined an HMO and those who remained continuously enrolled in FFS. Most of the disenrollees returning to FFS, 58 percent, had at least one of the selected chronic conditions. The composition of the group that stayed on in their HMO had better health status, with 42 percent having a chronic condition. (See table 6.)

Table 6: Distribution of New Enrollees Who Returned to FFS and Those Who Remained in Their HMO, by Number of Selected Chronic Conditions

Numbers in percent

	Beneficiaries who disenrolled to FFS within 6 months	Beneficiaries who remained in their HMO for more than 6 months
All new enrollees	100.0	100.0
New enrollees with none of the selected chronic conditions	42.5	57.8
New enrollees with only one of the selected conditions	31.5	27.7
New enrollees with two or more of the selected conditions	26.0	14.5

New Enrollees With the Highest Preenrollment Costs Disenrolled to FFS

The higher early disenrollment rate for those with multiple chronic conditions reinforces the cost implications of an underrepresented enrollment of beneficiaries with chronic conditions. Disenrollment appears to winnow many of the highest cost beneficiaries out of the newly enrolled HMO population, widening the gap between FFS and managed care.

Prior Medicare expenditures for early disenrollees ranged from $132 per month for those with none of the selected conditions to $690 for those with multiple conditions (see table 7). Costs generally increased with age for beneficiary groups with none or one of the selected chronic conditions. However, among disenrollees with multiple conditions, younger seniors had the highest costs. Compared with the prior cost of new enrollees (shown in table 3), the disenrollees' prior costs were higher in every health status group. On average, 1992 costs were 66 percent higher for early disenrollees than for new enrollees.

Table 7: 1992 Average Monthly FFS Cost of New Enrollees Who Disenrolled Early to FFS, by Number of Selected Chronic Conditions and Age

	All elderly	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All new enrollees	$329	$295	$315	$350	$364
New enrollees with none of the selected chronic conditions	132	109	126	150	150
New enrollees with only one of the selected conditions	296	294	259	313	338
New enrollees with two or more of the selected conditions	690	739	714	672	632

Comparing the two groups of beneficiaries, those who disenrolled early also had substantially higher 1992 costs than those remaining in their HMO. This was true for all the health categories. The weighed average cost for beneficiaries who returned to FFS was 79 percent more than those who stayed on in an HMO. (See table 8.)

Table 8: Comparison of 1992 Average Monthly FFS Costs for Beneficiaries Who Returned to FFS and Those Who Remained in Their HMO

	New enrollees who disenrolled to FFS within 6 months	New enrollees who remained in their HMO for more than 6 months	Ratio
All new enrollees	$329	$184	1.79
New enrollees with none of the selected chronic conditions	132	77	1.71
New enrollees with only one of the selected conditions	296	214	1.38
New enrollees with two or more of the selected conditions	690	555	1.24

The low prior costs of those who enrolled in an HMO and remained there for more than 6 months are in sharp contrast to costs for those who stayed in FFS continuously for the 24-month period (as shown in table 4). Longer-term HMO enrollees had far lower preenrollment costs than the FFS stayers, with cost differences ranging from 20 percent lower among beneficiaries with multiple chronic conditions to 34 percent lower for those with none of the conditions.

Conclusions

Compared with healthier beneficiaries, California Medicare beneficiaries with selected chronic conditions were less likely to enroll in HMOs and more likely to rapidly disenroll from HMOs. This pattern was evident despite the fact that California HMOs' coverage of more services (particularly preventive care and prescription drugs) with less cost-sharing would be expected to attract beneficiaries with chronic conditions.

Furthermore, the debate about the better health status of HMO enrollees hinges on a subtle point, but one that has significant cost implications. That is, beneficiaries grouped within health status categories—the presence of zero, one, or multiple chronic conditions—incur a range of costs depending on the severity of their chronic condition(s) or the presence of other conditions (not accounted for in this analysis). Those at the low end tend to be the new HMO enrollees, whereas those at the high

end are likely to remain in FFS. Thus, this study helps explain a pattern of favorable selection in California Medicare HMOs despite the presence of some new enrollees with chronic conditions.

We provided copies of a draft of this report to health care analysts at HCFA, the Physician Payment Review Commission, and the Prospective Payment Assessment Commission. They generally agreed with the information presented and offered some technical suggestions that we incorporated where appropriate.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to interested parties and make copies available to others on request. Please call me on (202) 512-7119 if you or your staff have any questions. Other major contributors to this report include Rosamond Katz, Robert Deroy, and Rajiv Mukerji.

Sincerely yours,

Bernice Steinhardt
Director, Health Services Quality
and Public Health Issues

Contents

Abbreviations

EDB	Enrollment Database
FFS	fee for service
HCFA	Health Care Financing Administration
HMO	health maintenance organization
SAF	Standard Analytic Files

Scope, Data Sources, and Methodology

This appendix describes our (1) scope and data sources, (2) methodology for identifying Medicare fee-for-service (FFS) beneficiaries with selected chronic conditions, and (3) methodology for analyzing the health maintenance organization (HMO) enrollment and disenrollment patterns of FFS beneficiaries.

Scope and Data Sources

Our study is an analysis of HMO enrollment and disenrollment patterns in 14 counties in California from January 1993 through June 1995. We chose California because it has been the hub of Medicare HMO activity nationwide. In 1995, over 40 percent of all Medicare beneficiaries enrolled in risk contract HMOs[21] resided in the state. California had 32 HMOs with Medicare risk contracts, including 5 of the nation's 7 plans that had the largest number of beneficiaries enrolled.

We selected California counties where opportunities for enrollment were not limited by HMO participation. The 14 counties[22] included in our study each had at least one risk contract HMO operating within its boundaries, and 10 counties listed two or more Medicare HMOs.[23] In addition, all of the counties had over 1,000 Medicare beneficiaries enrolled in risk contract HMOs and together accounted for 99.2 percent of California risk contract HMO enrollment. As a result of substantial HMO enrollment growth, several of these counties had high Medicare HMO market penetration rates (the proportion of Medicare beneficiaries enrolled in an HMO) in 1994: San Bernardino (47 percent), Riverside (47 percent), San Diego (42 percent), and Orange (36 percent).

We used the Health Care Financing Administration's (HCFA) Enrollment Database (EDB) file to select a cohort of FFS beneficiaries who lived in the 14-county area in December 1992. The EDB is the repository of enrollment and entitlement information of anyone ever enrolled in Medicare. It contains information on a beneficiary's age, sex, entitlement status, state and county of residence, and HMO enrollment history. To focus on the enrollment behavior of people who had no recent HMO experience, we identified beneficiaries who were eligible for Medicare part A and part B

[21]Under risk contracts, HMOs receive a fixed payment for each beneficiary enrolled. As a result, they assume a level of risk in managing the cost of providing care because, for any particular patient, the cost of care may exceed the fixed payment.

[22]Los Angeles, San Diego, Orange, Riverside, San Bernardino, Ventura, Kern, San Francisco, San Mateo, Sacramento, Santa Clara, Santa Barbara, Marin, and Butte.

[23]Although some Medicare managed care plans were cost plans or health care prepayment plans, most of them converted to risk contract HMOs during 1993 and 1994. Therefore, all plans were included in our analysis.

for all of 1992 but were not in an HMO at any point during that year. We further narrowed the cohort by excluding patients with end-stage renal disease and those entitled to Medicare benefits because they were disabled and under 65 years old.

We used HCFA's Standard Analytic Files (SAF) to determine Medicare's payments for each FFS beneficiary. The SAFs contain final action claims data for various types of Medicare-covered services, including inpatient hospital, outpatient, home health agency, skilled nursing facility, hospice, physician/supplier, and durable medical equipment. We obtained expenditure information from the "payment amount" portion of the claim and added pass-through and per diem expenses to the payment amount for inpatient claims. From the claim files, we computed 1992 monthly average expenditures for each beneficiary enrolled in FFS throughout 1992.

Individual expenditure information was combined with EDB data to produce a single enrollment and expenditure file containing information on 1,270,554 California FFS Medicare beneficiaries.

Identifying FFS Beneficiaries With Chronic Conditions

We also used claims information contained in the SAFs to determine the health status of each beneficiary, as measured by the presence or absence of any of five chronic conditions; that is, whether a claimant had been diagnosed with zero, one, or two or more of the chronic conditions. The chronic conditions included in this analysis were diabetes mellitus, ischemic heart disease, congestive heart failure, hypertension, and chronic obstructive pulmonary disease. These five conditions were identified by Medicare officials as ranking among the most highly prevalent in the elderly population and generating the highest costs to the program.

For each cohort beneficiary, we screened 1991 and 1992 inpatient, outpatient, skilled nursing facility, home health agency, and physician/supplier claims for diagnoses (3-digit ICD-9 codes) related to the five chronic conditions. A beneficiary was classified as having a given chronic condition if he or she had

- one or more hospital claims with a diagnosis of any of the five chronic conditions,
- two or more other claims with the diagnosis of diabetes mellitus or chronic obstructive pulmonary disease, or

- three or more other claims with the diagnosis of hypertension, ischemic heart disease, or congestive heart failure.[24]

We then summarized the information for each beneficiary to determine if he or she had zero, one, or two or more chronic conditions.

Analyzing HMO Enrollment and Disenrollment Patterns of FFS Beneficiaries

We analyzed information contained in the EDB to determine the cohort's HMO enrollment patterns from January 1993 to December 1994. For each beneficiary, there were four possible occurrences: death, change of residence (out of county), enrollment in an HMO, or 24 months of continuous enrollment in FFS. If the first occurrence for any beneficiary was death or a move, we excluded those beneficiaries from further analysis. During the period, the proportion who died was 6.2 percent for those with none of the selected conditions, 9.6 percent for those with one condition, and 18.6 percent for those with two or more conditions; the percentage who moved was about 5 percent for each health status group.

Excluding beneficiaries who died or moved during the 2-year period reduced the size of the cohort to 1,074,819 beneficiaries. We then calculated their 1992 average monthly FFS expenditures, by number of chronic conditions and age group, and the proportion of the remaining beneficiaries that enrolled in an HMO.[25] This 24-month requirement made our pool of potential enrollees a somewhat healthier group than otherwise, and therefore, our estimates of HMO enrollment rates were more favorable than if this requirement were not a criterion for inclusion. Also, because people in their last 12 months of life have costs that are significantly higher than those of other Medicare beneficiaries, the health status and 1992 average costs for those who stayed in FFS was below what they would be if a less stringent criterion were used.

To determine the early disenrollment rates, we tracked those beneficiaries who joined an HMO (175,951) for 6 months after they enrolled using January 1993 to June 1995 EDB information. Disenrollments may occur for administrative reasons (the individual died or moved out of the HMO's

[24]The screens may undercount or overcount beneficiaries with each chronic condition. For example, patients may stop visiting a doctor following their recovery from heart failure or ischemic diseases. On the other hand, the Montana-Wyoming Foundation for Medical Care, which developed and tested the screen for beneficiaries with diabetes, found that it overcounted by 3 percent the number of those with diabetes that could be identified through medical record reviews.

[25]The program payments associated with each beneficiary pertain to all services claimed, not only those related to the treatment of chronic conditions. For example, the average monthly expenditure for a patient with diabetes could include expenses for treating acute back pain.

service area) or voluntarily (to return to FFS or switch to another HMO). We excluded from further analysis those beneficiaries who disenrolled for administrative reasons, leaving a cohort of 14,455 who voluntarily disenrolled within 6 months.[26] We then calculated the proportion of beneficiaries who chose to return to FFS and their 1992 average monthly FFS expenditures, for each health status and age group.

We conducted our review of enrollment and disenrollment patterns between April 1996 and June 1997 in accordance with generally accepted government auditing standards.

[26]During this period, the California HMO market experienced a number of mergers among its risk contract plans. Beneficiaries whose plan enrollment changed due to a merger were not counted as voluntary disenrollees.

Prevalence and Cost of FFS Beneficiaries With Selected Chronic Conditions in California, 1992

Chronic conditions may begin in middle age but often progress in terms of severity of symptoms and the degree to which they limit a person as the person ages. Many people with any kind of a chronic condition have more than one condition to manage, further adding to their health care burden. Those who are chronically ill have substantially higher utilization of health care services, accounting for a large share of emergency room visits, hospital admissions, hospital days, and home care visits. This appendix presents 1992 data on the proportion of California FFS beneficiaries that had selected chronic conditions and how their costs compared with those without the conditions.

Chronic Conditions Were Prevalent Among Half the Elderly

In 1992, about 660,000 or one-half of the elderly Californians in our cohort were identified as having diabetes, ischemic heart disease, congestive heart failure, hypertension, or chronic obstructive pulmonary disease. Of these, about 40 percent had more than one of these chronic condition. As shown in table II.1, the prevalence of these conditions is greatest among the oldest of the elderly. For example, for those over 75 years old, one in three beneficiaries had a single chronic condition and at least one in four had two or more of these chronic conditions.

Table II.1: Prevalence of Chronic Conditions Among FFS Beneficiaries, by Number of Selected Chronic Conditions and Age

Numbers in percent

	All elderly	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All beneficiaries	100.0	100.0	100.0	100.0	100.0
Beneficiaries with none of the selected chronic conditions	48.1	59.1	51.1	42.2	37.3
Beneficiaries with only one of the selected conditions	30.6	26.3	30.1	33.1	33.1
Beneficiaries with two or more of the selected conditions	21.3	14.6	18.8	24.8	29.7

Beneficiaries With Multiple Chronic Conditions Are Far More Costly Than Those Without the Conditions

There were substantial cost differences between beneficiaries who had none, one, or several of the selected conditions. The average cost for a beneficiary with multiple chronic conditions was over 6 times the cost for a beneficiary with none of the conditions, and more than twice the cost for a beneficiary with only one of the conditions.[27] As shown in table II.2, even within the same age group, costs varied widely across health status groups.

Table II.2: 1992 Average Monthly Costs for FFS Beneficiaries, by Number of Selected Chronic Conditions and Age

	All elderly	Aged 65-69	Aged 70-74	Aged 75-84	Aged 85 and older
All beneficiaries	$328	$237	$289	$379	$445
Beneficiaries with none of the selected chronic conditions	127	96	113	151	185
Beneficiaries with only one of the selected conditions	308	268	283	325	371
Beneficiaries with two or more of the selected conditions	812	756	775	839	854

[27]We found that a significant share of our cohort, 14 percent, showed no claims for Medicare reimbursement in 1992. A small proportion, less than 3 percent, of FFS beneficiaries with chronic conditions (identified from 1991 claims data) did not use Medicare-covered services, probably because they did not experience an acute health problem in 1992. By comparison, about 28 percent of the FFS beneficiaries with none of the selected conditions had no Medicare claims in 1992.

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