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# INSIGHTS FROM THE MEDICARE HMO DEMONSTRATIONS

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by Kathryn M. Langwell and James P. Hadley

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**Prologue:** In June 1989, Secretary of Health and Human Services Louis W. Sullivan made an unexpected announcement at the annual meeting of the Group Health Association of America, a health maintenance organization (HMO) trade industry group. He stated that one of his priorities was to see HMOs under Medicare paid amounts comparable to fee-for-service providers rather than 95 percent, as current policy dictates. Because the secretary's request carried a \$100 million price tag, the 101st Congress failed to pass any increase in payments at the end of its 1989 session. The secretary's move surprised observers, however, because of the perception in some quarters that Medicare already overpays HMOs for its beneficiaries. HMOs hold the opposite view: that they lose money on every Medicare beneficiary that enrolls. To shed some light on these and other difficult, often contradictory issues, Mathematica Policy Research, a Washington, D.C.-based think tank, undertook an evaluation of the Medicare HMO demonstrations between October 1983 and January 1989. In 1980, HMOs began to participate in Medicare under demonstrations with the Health Care Financing Administration (HCFA). The Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 opened Medicare participation to more HMOs when the regulations were implemented in 1985. This article presents the findings of the evaluation. Economist Kathryn Langwell served as project director of Mathematica's evaluation. She received her master's degree in economics from the University of Southern California, and spent six years at Mathematica before joining the Congressional Budget Office as deputy assistant director for health in late 1989. James Hadley, a research analyst with the HCFA Office of Research and Demonstrations, served as project officer of the evaluation. He received a master in health science degree from The Johns Hopkins University School of Hygiene and Public Health and also holds a master of arts degree in clinical psychology from Bradley University in Peoria, Illinois.

Between 1980 and 1985, thirty health maintenance organizations (HMOs) entered the Medicare-market under Medicare risk contracting demonstrations. These demonstrations preceded the Tax Equity and Fiscal Responsibility Act (TEFRA) HMO/CMP program, initiated in 1985, which opened the Medicare market to more HMOs and competitive medical plans (CMPs). The purpose of these demonstrations was to assess the feasibility of risk contracting; refine operational procedures; and evaluate the impact of risk contracting on use, cost, and quality of care provided to Medicare beneficiaries. Because of the length of time required to collect data on Medicare beneficiaries' service use and cost, create databases, and conduct statistical analyses, full evaluation findings were not available until early 1989. However, these results provide substantial insights into many issues of concern for the current TEFRA risk contracting program.

In this article, we present the findings of the evaluation of the Medicare risk contracting demonstrations, conducted by Mathematics Policy Research and the Medical College of Virginia between October 1983 and January 1989. Included in the evaluation were twenty-seven HMOs and CMPs that had participated in the demonstrations. These findings provide information on: (1) implementation and operational issues for Medicare risk contract HMOs; (2) Medicare beneficiaries' choices between fee-for-service and HMO service delivery; (3) the impact of HMOs on beneficiaries' access to care; (4) beneficiaries' satisfaction and enrollment patterns; (5) quality of care; and (6) impact on use and costs of services, including costs to the Medicare program.

In addition, the evaluation process required in-depth examination of data capabilities of the Health Care Financing Administration (HCFA), which runs the Medicare program, and of HMOs for ongoing monitoring and program evaluation. In the final section of this article, we consider the value of these results to HMOs and to HCFA.

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### Implementation And Operational Issues

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Overall, the HMOs were successful in enrolling Medicare beneficiaries during the demonstrations, and all plans converted to program status in 1985 when risk contracting under TEFRA began. However, our observation of the plans over a four-year period made clear the dynamic nature of the HMO industry. By the end of 1986, four of the plans had chosen not to renew their risk contracts, two of the original plans had converted from nonprofit to for-profit status, five had become affiliated with national chains, and four had changed from staff-model to mixed- or network-model organizations.

Contracts not renewed included Delmarva Health Plan (which HCFA terminated because of insolvency problems), ChoiceCare, Maxicare Chicago, and HealthOhio (which converted to a cost contract). All of the terminating plans were individual practice associations (IPAs); several were in areas with low adjusted average per capita cost (AAPCC), had contracted with a high proportion of area physicians, and were paying physicians on fee-for-service contracts. Relative to continuing plans, the terminating plans were younger, were less likely to be federally qualified or to be chain affiliated, and had enrolled fewer beneficiaries.

The loss of 15 percent of the plans during 1985 and 1986 is similar to what is currently happening with terminating HMOs in the TEFRA program. In 1987, twenty-nine plans with 8 percent of Medicare enrollment chose not to renew their risk contracts. In 1988, an additional thirty two HMOs with TEFRA risk contracts notified the HCFA Office of Prepaid Health Care that they were not renewing their contracts. While these HMOs make up approximately 20 percent of the total number of risk contracts, they account for only 6 percent of the beneficiaries enrolled in TEFRA HMOs. Two of the nonrenewing plans had no enrollment, and twenty-eight had fewer than 5,000 enrollees. Average enrollment was less than 2,000 per nonrenewing plan at the time they chose not to renew their contracts.

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### **Beneficiaries Choice And Access To Care**

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The evaluation of the Medicare competition demonstrations makes it clear that Medicare's HMO/CMP program has the potential for benefits beyond cost containment. In assessing the success of the program, cost containment is an important issue, yet the effects of the additional choices offered to Medicare beneficiaries as well as improved access to health insurance coverage and care may be even greater.

In the demonstrations, beneficiaries living in areas with more than one HMO had a choice of plans, each with a unique benefit package and style of service delivery. For example, in the Miami area, during the demonstration period and now under TEFRA, beneficiaries could choose one of five HMOs as well as the usual range of traditional supplemental insurance options. All of the prepaid plans provided expanded coverage for inpatient and outpatient care, as well as for some combination of dental services, hearing aids, eyeglasses, and prescription drugs. Premiums ranged from zero to twenty dollars per month in 1986.

In addition to expanding beneficiaries' choice of plans, the demonstrations appeared to have made care more affordable, thereby improving access. Beneficiaries who were poor but not eligible for Medicaid, who

did not have supplemental coverage, and who did not have a regular source of care were four times as likely to join one of the plans as were other beneficiaries.

While choice among options and affordability are important components of access, the critical component is beneficiaries' ability to receive needed care once they are enrolled. The results of a survey of those who did and did not enroll in the demonstration HMOs indicate that both groups reported high rates of caregiver follow-up for symptoms—98 percent for those enrolled versus 96 percent for those not enrolled overall. Thus, while it is still important for HCFA to continue to evaluate beneficiaries' access under TEFRA, the demonstrations suggest that Medicare HMOs may improve access to care in terms of choice and affordability without affecting ability to obtain needed care.

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### **Satisfaction And Enrollment Patterns**

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The overall satisfaction level of Medicare HMO enrollees surveyed was high; generally, the former demonstration plans provided the coverage and services beneficiaries wanted at a cost they found reasonable, relative to their fee-for-service options. However, HMO enrollees tended to rate physician competence and willingness to discuss problems lower than did those not enrolled. It is important to determine whether this perception reflects real differences in competence or rather the amount of time physicians spend with patients and the amount of information they volunteer without being questioned, that is, physicians' "bedside manner." It is conceivable that some of the personal aspects of the physician/patient encounter may suffer in a managed care setting, depending on the incentives offered physicians to administer care in a time-efficient manner, without diminishing either the quality or the outcome.

While the demonstration HMOs performed well on all quality measures used in the evaluation, including process of care, it is possible that treatment outcomes may be affected when beneficiaries' perceptions of physician competence influence their compliance with treatment. These negative perceptions of physicians contribute to beneficiaries' dissatisfaction and movement into and out of plans, whether or not they affect quality of care and/or treatment outcome. One of the primary safeguards for beneficiaries built into the TEFRA program is their option to leave a plan at any time. During the first year following their enrollment in the demonstrations, 22 percent of enrollees took advantage of this option. The individual HMO rate, which ranged from a low of 4.36 percent to a high of 38.86 percent, was related to the number of competing plans in

the area. Approximately one-quarter of disenrollees joined another HMO after leaving a plan.

While the ability to leave a plan is designed to safeguard beneficiaries' right to choose their provider and health coverage, disenrollment is not risk-free for either beneficiaries or HCFA. Although HCFA makes every effort to ensure continuity of coverage after disenrollment, some beneficiaries may experience discontinuity of care or insurance coverage during a transition period. This can affect access to and quality of care. In addition, if heavy users of services are dissatisfied and leave plans at a rate disproportionate to that of low users, the result may be biased retention, and HCFA may be overpaying for continuing enrollees who are healthier, on average, than disenrollees.

HCFA is currently engaged in a number of studies to further understand disenrollment; in addition, HCFA is planning to use disenrollment as a monitoring tool. Monthly disenrollment rates and data from beneficiary surveys will be used to examine disenrollment patterns, both relative to other plans and within plans, over time. These data, along with a system for tracking beneficiaries' complaints, will be used to alert HCFA to possible problems within a plan.

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### Quality Of Care

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Quality of care is an exceptionally important issue when providers are offered financial incentives to do less. Under capitation arrangements, HMOs profit by eliminating unnecessary care. In addition, many Medicare HMOs pass these incentives on to the physicians with whom they contract either by capitating the physicians or by offering them financial bonuses tied to utilization targets. While the financial incentives of fee-for-service practice also may be associated with quality concerns through overuse, the primary issue for government must be to determine whether changing incentives leads to a deterioration of quality of care.

Quality is difficult to define and measure and, in addition, is very expensive to investigate because of the need for substantial clinical input into the design, data collection, and analysis. It was, however, an important component of our evaluation, and it was pursued in several interrelated studies. Despite the fact that this research was limited to a relatively small number of HMOs and CMPs and to a set of beneficiaries who were willing to join an HMO early in the Medicare program, the results of these studies have provided HCFA and the industry with considerable information that may be used, especially, for defining the role of peer review organizations (PROs) in monitoring ambulatory health care in the future.

First, quality assurance programs were examined in twenty of the demonstration HMOs and CMPs. Four were found to have no formal quality assurance program, and a number of others relied primarily on their utilization review mechanisms to identify quality-of-care problems. These results were somewhat disturbing, since most HMOs had little experience with Medicare beneficiaries prior to the demonstrations and should have been closely monitoring their experience, at least initially.

Another area of major concern for HCFA was whether HMO rules that limit direct access to care would create barriers that were difficult for older enrollees to understand and overcome, even for serious health problems. Our analysis suggests that this is not the case and that Medicare beneficiaries continuously enrolled in HMOs report access to care—even when a serious symptom is present—that is similar to that reported by beneficiaries in fee-for-service settings. This was a particularly important finding in light of a study by The RAND Corporation that suggested that, while most HMO enrollees were able to obtain necessary care, Medicaid beneficiaries—who were perhaps less well educated and less sophisticated about health care—were not able to obtain care in all cases. This finding, although limited to one HMO, raised questions about whether Medicare beneficiaries, too, might find the access barriers (for example, primary care gatekeeper, prior authorization) difficult to overcome and, consequently, fail to obtain essential services. The evaluation was able to provide reassurance that access to care does not differ for those with potentially serious symptoms in capitated settings.

Finally, HCFA felt that, to have a complete picture of capitation's impact on Medicare beneficiaries, it was important to conduct a study on the quality of the process of care. Quality-of-care studies require medical record data, collected by clinically knowledgeable individuals, using data collection directions based on specific clinical criteria developed by physicians. Studies of clinical quality of care are typically expensive per case examined; this expense limits the number of cases examined. Evaluation of quality of care under the Medicare HMO demonstrations is typical in this regard; data were collected from eight HMOs and CMPs on approximately 2,000 beneficiaries in HMOs and in fee-for-service practices. Although the data collection process was complex, lengthy, and expensive, the results are important to understanding and continuing the Medicare HMO program. They provide the necessary reassurance that, at least for these early Medicare HMOs, changing providers' financial incentives does not appear to affect the quality of the process of care for several basic and resource-intensive conditions. This reassurance is one of the most valuable outcomes from a demonstration evaluation that is intended to determine whether or not to continue a program.

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## Use And Cost Of Services

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We studied the Medicare HMOs' impact on use and cost of services for several purposes. First, we desired to find out how HMOs save money, assuming they do. There were a number of alternatives, not necessarily mutually exclusive. HMOs may save money by negotiating discounts with providers, so that for the same number of services, the HMO pays less than the Medicare program pays. HMOs may reduce use of services through a combination of provider selection, incentives, and utilization management, resulting in lower cost, though not lower unit costs. HMOs' management style might be more efficient, providing less duplication of services and unnecessary testing than occurs under unconstrained fee-for-service practice.

Second, we wished to determine whether apparent savings from Medicare HMOs are due to the HMOs' actions, or whether there is self-selection among healthier Medicare beneficiaries into HMOs. If the latter is true, then the HMO program does not save money for Medicare but results in additional costs, as more is paid out in capitation amounts to Medicare HMOs than if the beneficiary had remained in fee-for-service care. Alternatively, if HMOs are withdrawing from the program, it is important to document the presence of adverse selection.

Finally, we wished to assess the overall financial impact of the Medicare HMO program on Medicare program costs, and whether the existing payment methodology is accurate and appropriate.

Our results are both interesting and valuable for these purposes. First, we found that HMOs do not appear to be able to control Medicare beneficiaries' use of hospital services during their first year of enrollment. This may be because many of the beneficiaries who join HMOs had previously unmet health care needs that are identified by the HMOs' preventive care system and that require treatment during the first year of enrollment. It may also be because these HMOs were in their initial years of learning to manage the health care needs of an older population and were not yet fully effective. In either case, it is important that HCFA and HMOs realize that serving this population may bring greater use of services and higher costs during an HMO's first year of operating in this market.

Overall, the evaluation results indicate that these HMOs reduced utilization of hospital services by Medicare beneficiaries by no more than 8 percent over the two years of enrollment experiences examined. The reduction in hospital services was achieved through lower admission rates rather than through reductions in length-of-stay. However, only half of the HMOs studied accounted for the observed reduction in

hospital use; no statistically significant effect on admission rates was observed in the remaining half of the study HMOs.

The findings of the biased selection analysis confirm the continuing concern, expressed almost since the beginning of the Medicare HMO program, about the accuracy of the payment methodology. Although these plans were demonstrations at the time the biased selection sample was chosen, the results of the overall analysis and of the HMO-specific analysis were overwhelmingly consistent: nearly every HMO studied had experienced favorable selection. The implications of these findings for payment methodology are significant. The evaluation findings suggest that HCFA paid between 15 and 33 percent more for beneficiaries enrolled under risk contracts than would have been paid for those individuals in the fee-for-service sector.

The results of the Medicare capitation evaluation's biased selection analysis were an important consideration in the deliberations of HCFA's newly formed panel to study AAPCC methodology. These deliberations were intended, in part, to address the need for a health status adjustment to the AAPCC. HCFA's current demonstration to assess the value of the diagnostic cost group modification to the AAPCC is a direct outcome of the AAPCC advisory panel's recommendation that alternative approaches to health status adjustment be explored.

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### **Data For Program Evaluation And Monitoring**

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Last, but clearly not least, the evaluation of the Medicare demonstration HMOs and CMPs caused us to investigate the availability and quality of a variety of data sources that are essential for program evaluation and ongoing monitoring by HCFA. The results of our five-year search for and use of a variety of data sources have highlighted the need for more and better data collection and maintenance, to permit research and evaluation of the TEFRA HMO/CMP program.

**HCFA data.** HCFA spent considerable time identifying internal sources of data for research on prior use patterns of Medicare beneficiaries who join HMOs and on use patterns and costs of beneficiaries who are selected as comparisons to the enrolled population. A precursor of the new Medicare Automated Data Retrieval System (MADRS) was used for the evaluation. MADRS is a 100 percent file of all claims, arranged by beneficiaries' county of residence and updated as new claims are processed. It offers researchers and program evaluators a relatively accessible data source and enables HCFA's data support group to fulfill requests in a matter of weeks rather than months, as was the case in the past. MADRS does have some limitations, however. MADRS data present claims, but

they do not reflect such additional reimbursed items as hospital capital and medical education costs that have been handled as passthrough costs under the diagnosis-related group (DRG) system. As a result, MADRS data appear to underrepresent full HCFA reimbursements on behalf of Medicare beneficiaries by 10 to 20 percent. This is a particular problem if these data are examined to determine whether, for a cohort of beneficiaries, HCFA paid more or less in AAPCC-based capitation payments than under fee-for-service arrangements.

Another HCFA data set that was drawn upon extensively for the HMO evaluations is the Group Health Plan Operations (GHPO) file, which contains data on every Medicare beneficiary who has ever enrolled in an alternative health plan. This is an operational file, used by HCFA to pay HMOs and CMPs for enrolled beneficiaries; it has not, in the past, been used for research and evaluation. In using this file for the HMO evaluations, we focused primarily on enrollment patterns into and out of specific HMOs and CMPs, and within particular market areas. As might be expected, we found this file to have a variety of complex problems related to the fact that it is a payment and not a research file. For payment purposes, errors in recording specific HMO enrollments that are subsequently corrected are not a problem. For research purposes, these errors may indicate that a beneficiary is enrolled in two or more HMOs at the same time. When this occurs (and it does frequently), GHPO retroactively corrects the HMO's payments. However, the misinformation remains in the GHPO file, necessitating a substantial amount of case-by-case examination of the data to clarify enrollment episodes. GHPO is currently refining its data system and file maintenance and is very concerned that its new system be as useful as possible to all users of the file, within the constraints of GHPO's primary purposes. When this new file is available, it may be much easier than before to examine enrollment patterns in Medicare HMOs.

Finally, the requirement that HCFA imposed on the demonstration and TEFRA plans that no-pay hospital bills be submitted on behalf of Medicare beneficiaries enrolled in an HMO when they are hospitalized was examined as a potential source of data for research purposes. The purpose of the no-pay bills was to track lifetime hospital use and to provide a basis for PRO review of hospital cases for HMO enrollees. Examination of 1985 and 1986 HCFA claims data and cross-matching hospital records with the HMO records of hospitalization for its enrollees indicated that, among HMOs, compliance with the no-pay bill requirement ranged from nearly 0 percent to over 50 percent of all inpatient admissions. Under a recent change in the rules, hospitals, rather than HMOs and CMPs, are now required to submit the no-pay bills. Through

1988, however, the no-pay bill is not a potential source of data for researchers or for monitoring Medicare HMO enrollees' hospital use.

**HMO and CMP data.** During the evaluation of the Medicare demonstration HMOs and CMPs, enormous amounts of time were spent attempting to obtain and clean data on Medicare beneficiaries' use of health services within HMOs. Usable data on hospital admissions and hospital days were obtained from eight of the HMOs; on hospital admissions, data came from only one additional HMO. Only two HMOs were able to provide even partial data on ambulatory services. The reasons that data are not available relate primarily to the way that HMOs are paid: they receive capitation payments and therefore have no incentive to maintain records that document each service provided, as fee-for-service records do. This is further reinforced if the HMO pays some of its providers on a capitation basis. If a primary care physician is capitated, there is no need to maintain financial records on that physician's services to specific beneficiaries. HMOs often have pieces of information on use of services spread across several components of their data systems. Utilization review may capture some utilization elements; quality-of-care monitoring may focus on others; while the accounting system may include payments made for specific services by some providers who bill on a fee-for-service basis. In the present HMO environment, where a staff-model HMO may have added a group practice or two and then decided to add an IPA component to increase its marketing flexibility, some HMOs have good data on some components of their provider network and no data on others.

The status of health services use and cost data within HMOs suggests that Medicare is going to lose information on the services used by Medicare beneficiaries while they are enrolled in HMOs. It seems unlikely that HMOs would be willing to radically change their current management information systems, which are based on their existing management needs, to provide fee-for-service counterpart data on Medicare beneficiaries. Since, for the most part, they do not pay their providers on a fee-for-service basis, change might not be possible, even if they were willing. The no-pay bill system for hospital services will address some of this problem, if it is enforced. However, there appears to be no obvious mechanism—that is not very costly to implement—that will permit HCFA to obtain data on Medicare HMO enrollees' use of ambulatory care. This may not be a major problem at a time when only 3 percent of Medicare beneficiaries are enrolled in HMOs. However, as more beneficiaries join HMOs, this lack of data may become an increasingly serious problem as HCFA attempts to maintain its understanding of beneficiaries' use and cost patterns over time.

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## Where Do We Go From Here?

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These findings provide reassurance that risk contracting results in high levels of satisfaction among Medicare beneficiaries who join and remain in HMOs; improved financial access to care for low-income Medicare beneficiaries who are not eligible for Medicaid and overall access to care that equals that under fee-for-service; and quality of care that rivals that found under fee-for-service practice. The results also highlight differences among HMOs and their performance under risk contracting. The HMOs that appear less likely to succeed financially in Medicare are those that are IPAs, pay their physicians on a fee-for-service basis, are located in areas with relatively low AAPCC levels, and have contracted with many area physicians. Some HMOs, because of their organizational characteristics and Medicare payment levels in their market areas, may find it difficult to participate successfully in risk contracting.

For their financial projections, HMOs may find it useful to consider the implications of three key findings from this evaluation. First, a substantial proportion of Medicare beneficiaries who join HMOs have low incomes and did not have a regular source of care or Medigap insurance before joining. These beneficiaries may have unmet needs for care that will result in higher use of services, initially, once they are in the HMO. Second, there is strong evidence of favorable selection of Medicare beneficiaries into HMOs, although favorable selection is lower in IPAs than in other HMOs. Adverse selection was found in only one of the demonstration plans and neutral selection in three. Third, it appears that HMOs have only a small effect on hospital use by Medicare beneficiaries, once selection effects are accounted for.

These results point out two areas of concern for HCFA. First, further consideration of the AAPCC payment methodology appears warranted. Second, increasing numbers of Medicare beneficiaries enrolled in capitated systems bear implications for HCFA's ability to monitor and report use of HMO/CMP services and expenditures under Medicare. Overall, the evaluation findings are positive. Beneficiaries have more choices and are using them to improve their access to and satisfaction with care. HMOs now can choose to participate or not in the Medicare program and, for most of those that do participate, can expand their markets to serve a large and growing number of Medicare beneficiaries.

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