Medicare capitation and quality of care for the frail elderly

by Albert L. Siu, Robert H. Brook, and Laurence Z. Rubenstein

Previous studies have shown that the quality of care provided in health maintenance organizations (HMO's) is either similar or better than that in fee-for-service settings; however, few studies have included sufficiently large numbers of older persons. Although it is reasonable to believe that healthy older patients will do as well in HMO's as younger people, the outcome for the frail elderly is less certain. This population may not do as well in the conservative medical practice environment of HMO's, and decreased hospitalization may have detrimental effects on their health. On the other hand, this population may benefit from the improved continuity of care and potential for comprehensive assessment in HMO's. The quality of care received by the frail elderly will be an important test of the success of Medicare capitation.

Introduction

Before the enactment of the Tax Equity and Fiscal Responsibility Act (TEFRA) in 1982, few health maintenance organizations (HMO's) were significantly involved in the Medicare program. In 1981, Medicare enrollees accounted for less than 500,000 of the estimated 10 million Americans enrolled in HMO's; and among the 24 largest HMO's reporting any Medicare enrollees, 11 reported that Medicare accounted for less than 2 percent of total enrollment (Department of Health and Human Services, 1981). In the ensuing 5 years, much has changed; by March 1986, more than one-half million additional Medicare beneficiaries had enrolled in HMO's with TEFRA contracts (Ellwood, 1986).

Several papers have reviewed the subject of quality of care in HMO's (Cunningham and Williamson, 1980; Wyszewianski et al., 1982; Hornbrook and Berki, 1985; Hammons et al., 1986). The purpose of this article is to focus specifically on elderly Medicare patients and the implications for quality of care of their recent entry into capitated systems—organizations that have had relatively limited experience with the health problems of the frail elderly. It is our thesis that capitated systems may need to make specific organizational adjustments to provide high-quality care to the frail elderly.

A discussion of capitation under Medicare must first recognize the many possible variations on the capitation theme. Capitated plans vary in length of operation, size, ownership of facilities, and physician staffing and remuneration. Although most HMO's have had limited experience with capitated Medicare patients, some HMO's (e.g., the Group Health Cooperative of Puget Sound in Seattle) have had risk-sharing Medicare contracts for many years. Most HMO's offer the standard Medicare benefits, supplemented by expanded benefits such as coverage for drugs or eye services. A few capitated demonstration systems even include coverage for long-term care services. For example, the demonstration social HMO's include community-based and institutional long-term care benefits (Knickman and McCall, 1986). Although almost all capitated systems have intended to serve the elderly population in general, this need not always be the case. For example, On-Lok Senior Health Services in San Francisco is a capitated system that enrolls only the frail elderly who meet State eligibility criteria for skilled nursing care. In view of the diversity of capitated models, it is unfortunate that most studies on the quality of HMO care have been performed in the larger and more established HMO's. Whether the findings of these studies can be generalized to other capitated models is debatable.

Although many different formulations of the concept of quality of care have been proposed (Donabedian, 1980), in this article we use concepts advanced by Brook and Lohr (1985) and Donabedian et al. (1982). We will consider quality of care to be a reflection of how patient health status, achievable by a provider in a given setting, differs from that achievable under ideal circumstances. We include both beneficial and detrimental effects of care on physiological, physical, and mental patient function. By ideal circumstances, we mean a well-trained medical provider unconstrained by available medical technology or resources.

We use this definition because it is not enough to judge the performance of HMO's against the standards prevailing in fee-for-service practice. Many of the potential pitfalls we will discuss apply to quality of care in fee-for-service medicine as well. Given the inadequacies of the traditional health care system in the care of frail older persons (Eisdorfer, 1981), it is not unreasonable to hope that HMO's might be able to improve on quality of care.

Focus on the frail elderly

Older persons are a heterogeneous group. Most are relatively healthy and incur only moderate health expenditures. Only 5 percent of those 65-74 years of age are limited in physical activities (Feller, 1983), and mild cognitive impairment is present in at most 15

Reprint requests: Dr. Albert L. Siu, Rand Corporation, 1700 Main Street, Santa Monica, CA 90406. Dr. Siu is supported by grants from the Henry J. Kaiser Family Foundation and the Brookdale National Fellowship.

percent of those over age 65 (Mortimer, Schuman, and French, 1981). Thus, it is not surprising that 60 percent of those over age 65 had annual health expenditures totaling less than $500 in 1980 (Kovar, 1984). The health care needs of the unimpaired elderly are likely to be relatively similar to those of the younger adults who have been the principal clients of HMO's.

HMO's, however, are expected to enroll Medicare beneficiaries that are representative of the older population overall. If this is the case, HMO's will necessarily include a significant and growing number of the frail elderly—individuals with multiple chronic medical problems or limitations in physical function. Among the rapidly growing segment of the population over 75 years of age, 16 percent are limited in at least one physical activity; for those over age 85, this number approaches 35 percent (Feller, 1983). Unlike their healthier counterparts, these frail individuals are likely to differ from the populations traditionally served by HMO's with respect to the quantity and types of health services needed. For example, they are more likely to need or benefit from long-term care services, interdisciplinary geriatric assessments, home health services, or homemaker services.

Elderly people who are unable to perform their usual activities have twice the annual health expenditures of those who are not limited (Kovar, 1984). Because of their higher use of health services and the difficulty in accurately setting a fair capitation rate (Thomas and Lichtenstein, 1986), an HMO may not be adequately reimbursed for their care; this puts these frail individuals at risk for possible underprovision of services in HMO settings. HMO's enrolling a disproportionate number of the frail elderly might lack the financial resources required to provide the specialized services needed.

On the other hand, the frail elderly would potentially benefit most from being in HMO's. The HMO offers protection from the financial hardship of illness (although not necessarily the financial hardship of long-term care). HMO's also have the potential of providing these individuals with more coordinated and comprehensive health services. Consequently, we focus the remainder of this article on the frail elderly, because the potential for improved or worse quality of care for older persons is magnified in this group.

Disadvantages of health maintenance organizations

Subgroups at high risk

Hornbrook and Berki (1985) have hypothesized that some patient subgroups are more likely than others to experience poor outcomes in HMO's. They have argued that the outcome of the "worried well" (i.e., patients with health concerns in the absence of physical illness) would not be adversely affected by the presumably conservative style of HMO medical practice, because the outcome in these patients would have been only marginally changed by extensive diagnostic work-up. Also, patients with established diagnoses for which efficacious therapy is available (a group we will call the "diagnosed sick") would presumably do equally well or better in HMO's, because the standards of care for these conditions are known to all physicians (HMO or fee for service).

People who are "subtly sick," however, are likely to have medical problems that require specialty referral or sometimes extensive laboratory or radiologic testing to adequately diagnose and treat. Hornbrook has suggested that these subtly sick individuals may have poor outcomes in the more conservative HMO practice environment where laboratory tests (Epstein et al., 1986) and referrals (Luke and Thomson, 1980) are probably less likely to occur.

The subtly sick descriptor, unfortunately, is applicable to the presentations of many illnesses in the frail elderly. One of the recurrent themes of geriatric medicine is that older patients may present with minimal or atypical symptoms (Rowe, 1985). Myocardial infarctions (heart attacks) may present without the classical symptoms of chest pain (Pathy, 1967), systemic infections may present without fever (Gleckman and Hibert, 1982), and hyperthyroidism may present without the usual symptoms seen in the nonelderly (Davis and Davis, 1974). When present, symptoms may be atypical; for example, a patient with pneumonia may present simply with anorexia or confusion or weakness. The diagnosis of these problems requires laboratory testing that might not be indicated in a younger patient with a similar clinical presentation. If the subtly sick are indeed at risk in HMO's, then the frail elderly are at risk of poor outcomes for this reason.

The frail elderly may also be less likely to fall into the "diagnosed sick" subgroup that presumably does well in HMO's. Establishing a definitive diagnosis is frequently more difficult in older patients; in fact, it has been suggested by some geriatricians that for some clinical problems less attention should be paid to obtaining a specific diagnosis and more to functional consequences of illness (Williams and Hadler, 1983). When multiple medical conditions converge to cause a given medical problem (such as urinary incontinence or lower back pain) in an older person, it may not be possible to disentangle the contributing etiologies to give the condition a specific diagnostic label. Diagnostic dilemmas of this type are more frequent among the frail elderly.

There is yet another subgroup of frail elderly patients to consider, "the noncomplaining sick." An estimated 17 percent of people over 70 years of age do not seek medical care even when they believe they should. This is either because of appointment difficulties, transportation problems, or a belief (possibly unjustified) that their symptoms are simply the result of old age (Branch and Nemeth, 1985). Although the literature on the subject is contradictory (Luft, 1981), complicated HMO appointment systems and the need to travel to centralized clinics or

facilities may make access to care more of a problem for frail elderly patients disinclined to seek care.

Among the noncomplaining sick we should also include those who either may not seek care or may not clearly communicate their problems to a physician because of the presence of a major depressive disorder, with an estimated prevalence of 3.7 percent among those over age 65 (Blazer and Williams, 1980), or mild-to-moderate cognitive impairment, with an estimated prevalence as high as 15 percent among noninstitutionalized elderly (Mortimer, Schuman, and French, 1981). A physician may need to spend extra time taking a history from these patients, or need to obtain it from a family member, friend, or nurse. If a physician does not have enough time, problem recognition may be delayed and outcomes may worsen. Clearly this problem is not limited to HMO's. In fact, the amount of time available to evaluate a patient may be greater in HMO's to the extent that physician extenders are employed. However, the use of physician extenders in HMO's may be highly variable (Steinwachs et al., 1986), and a tightly scheduled HMO outpatient setting may not offer the flexibility necessary to spend more time with an older patient.

None of the problems of the subtly sick and the noncomplaining sick are limited to capitated medicine. Fee-for-service providers also must be educated about atypical presentation of disease, dementia, and depression in the elderly. Studies performed in fee-for-service settings have documented underrecognition of dementia (McCartney and Palmateer, 1985) and incontinence (Ribeiro and Smith, 1985). We discuss these issues as potential HMO problems, because we believe that the subtly sick and the noncomplaining sick may be at particular risk in HMO's.

Decreased hospital use

Experimental and nonexperimental investigations have shown that HMO's achieve their cost savings by reducing use of the hospital from 10 percent to 40 percent over comparable fee-for-service rates (Luft, 1978; Manning et al., 1984). Most of these studies have been done with nonelderly populations; however, limited evidence exists that similar reductions in hospital use may also be achievable with the Medicare population (Greenlick et al., 1983; Weil, 1976; Iglehart, 1985).

Decreased hospital use could have either beneficial or detrimental effects on patient outcomes. Because iatrogenic complications are frequent in hospitalized older individuals (Steel et al., 1981; Gillick et al., 1982), it is plausible that overall outcomes would improve by reducing hospitalization rates. On the other hand, there is evidence suggesting that decreased HMO surgical rates are a result of reductions in both necessary and unnecessary procedures (LoGerfo et al., 1979). To the extent that necessary procedures and hospitalizations are reduced in HMO's, one might expect negative effects on patient outcomes.

For the elderly, we believe that decreased hospital use may have one other potentially detrimental effect on quality of care. To reduce hospital use, HMO's may substitute ambulatory services and home health services (Hornbrook and Berki, 1985). Although these substitutions may be desirable for patients with adequate social support and resources at home, these benefits may not accrue to older individuals with minimal social support. Although 90 percent of men and 81 percent of women 55-64 years of age have somebody else at home, only 74 percent of men and 43 percent of women over 75 years of age have somebody else at home (U.S. Senate Special Committee on Aging, 1984). These figures probably overestimate the level of support available to those over age 75; for the older person fortunate enough to have someone at home, that person is likely to be a spouse who may not be able to manage an ill patient.

Consequently, HMO's may need to adopt criteria for hospital admission and discharge of the elderly that are different from those used for the nonelderly. An attempt to substitute outpatient services for hospital services may lead to noncompliance, increased complications, and decreased health for the elderly with little or no social support.

Advantages of health maintenance organizations

There are several reasons why HMO's might be better suited to provide care to the frail elderly. Many derive from the fact that HMO's are organized systems of care and, as such, should be better able to organize and coordinate the many services required by these individuals.

Quality of care

HMO's appear to provide care that is equal or better in quality to that provided in fee-for-service settings. National surveys, conducted by Harris, have shown that HMO enrollees are generally satisfied with the quality of their physicians, hospital care, access to care, and costs (Taylor and Kagay, 1986). Cunningham and Williamson (1980) reviewed 27 studies that compared the quality of care in HMO and fee-for-service systems; in 19 of the studies, they found that the HMO provided superior quality of care. With respect to chronic medical problems, two recent studies have shown that HMO's and fee-for-service practitioners achieve similar health outcomes for rheumatoid arthritis (Yelin et al., 1986) and colorectal cancer (Francis et al., 1984).

Unfortunately, problems of generalizability and internal validity limit extrapolation from these studies to the care of older persons. The Harris surveys interviewed individuals under the age of 65. Most of the comparative studies evaluated the care in large and well-established HMO's; they, too, focused on populations with few (if any) older enrollees. For example, 6 of the 27 studies reviewed by Cunningham

and Williamson examined pediatric or obstetrical problems. Although two studies focused on older patients in HMO's (Shapiro et al., 1967; German et al., 1976), they focused primarily on access to care. Mortality was examined by Shapiro et al., but the process and other outcomes of care were not evaluated. The available studies have also been limited by the possible lack of comparability of HMO and fee-for-service populations in terms of demographic factors or initial health status. Thus, results may have been biased by selection in favor of either the HMO or fee-for-service system.

Although the Rand Health Insurance Experiment is also limited by problems of generalizability to the Medicare population, it provides information on health outcomes for comparable groups, in that families were randomly assigned to either HMO or fee-for-service practice. The results of this study indicate that health outcomes were relatively similar for the average individual assigned to HMO or fee-for-service care. However, low-income HMO patients with health problems had poorer health outcomes as measured by bed-days from illness, serious symptoms, and a risk-of-dying index (Ware et al., 1986). This would suggest that the frail elderly are at risk of poorer outcomes in HMO's, because nearly one-quarter of those over age 65 are below or just above the poverty line and there is a higher prevalence of chronic conditions in this age group (U.S. Senate Special Committee on Aging, 1984). The results of this study argue for careful monitoring of the health of the frail elderly in HMO's.

Continuity of care

Although continuity of care is usually considered within the larger subject of quality, it warrants separate consideration because of its perceived importance in the care of the frail elderly. It has been hypothesized that continuity might be associated with improved physician and patient relations, increased compliance and patient satisfaction, reduced hospitalizations and costs, and improved management of medical problems (Rogers and Curtis, 1980); however, the evidence linking continuity with these benefits is very limited (Dietrich and Marton, 1982), as is the evidence that HMO's improve continuity of care (Shortell et al., 1977).

Very few of the studies on this subject, however, have included elderly patients (in fact, most of the evidence comes from the care of children). Because the medical problems of the frail elderly are more numerous, complex, and of long duration, it is plausible that continuity would be of greater value in improving health for the frail elderly than for a well child. This is consistent with the findings of a recent study that showed that continuity of care led to fewer hospital days and improved patient satisfaction among veterans over the age of 55 (Wasson et al., 1984). Because HMO's are in a good position to implement policies to increase continuity, it is reasonable to expect that improved continuity may be an important benefit to Medicare HMO enrollees.

On a related issue, HMO's might be advantageous to the frail elderly in that they are suitable environments for the use of primary care as a gatekeeping mechanism. If this approach is used to maximize health as opposed to containing costs, the gatekeeper could act as a case manager tailoring a package of health services to the patient's medical, social, and emotional needs; the gatekeeper would be responsible for deciding on appropriate referrals and for coordinating the patient's care. Although such arrangements have the potential both for containing costs and improving quality of care, these benefits are theoretical and have never been demonstrated (Powe and Eisenberg, 1986). Thus, as with continuity, this remains only a potential benefit to Medicare HMO enrollees.

Geriatric assessment

There is mounting evidence on the value of specialized geriatric assessment, especially when coupled with a system for treatment (Rubenstein et al., 1982 and 1984). By geriatric assessment, we mean the comprehensive evaluation and management of the medical, psychiatric, and social problems of frail elderly patients in an interdisciplinary setting. Such evaluations, performed in specialized geriatric assessment units (GAU's), have been demonstrated to result in fewer acute hospital and nursing home days and improvement in survival and functional status (Rubenstein et al., 1984). However, relatively few GAU's have been established in the United States, presumably because of the high costs and uncertainty of fee-for-service reimbursement for such services. As a consequence, many of the prototype units have been located in medical centers within the Veterans' Administration, which may be described as a capitated system. (Currently, more than one-half of the 180 Veterans' Administration Medical Centers have GAU's.)

Reimbursement obstacles to the establishment of GAU's should not exist in HMO's. Indeed, their seeming cost effectiveness would act as an incentive for HMO's to establish such units. Here again, however, the potential advantage of a Medicare HMO may be elusive. Although geriatric evaluation reduces total institutional costs (including both hospital and nursing home costs), hospital costs may be increased (Rubenstein et al., 1984). The savings come from reduced nursing home days. Hence, if HMO's do not cover long-term care (as most do not), there may be little financial incentive to establish such assessment services.

Use of cost savings

As part of their arrangement with the Federal Government, participating TEFRA HMO's must use their cost savings (any difference between the capitation rate and their estimated costs) to either

lower premiums or expand the benefits available to their beneficiaries. For example, some HMO's have used savings to expand coverage for visual and hearing aids, prescriptions, or dental care. Clearly, this benefits both healthy and frail older persons. Alternatively, however, the funds might also be used for programs to offset some of the potential HMO quality difficulties in treating the frail elderly. To improve the care of the subtly sick or noncomplaining sick elderly, HMO's might wish to emphasize continuing education in geriatrics or establish geriatric medicine consultation services. Extensive coverage of homemaker or nursing home services is not possible within the current TEFRA framework. Nevertheless, to counter some of the potentially negative effects of decreased hospital use, HMO's could expand the continuum of care available to their older enrollees by including limited homemaker or other long-term care services. Whether any of these measures can be successful deserves careful evaluation.

Independent review for quality

Given the many uncertainties previously outlined, should the quality of care rendered to Medicare beneficiaries in HMO's be independently monitored by peer review organizations? One could argue that such activities are not necessary, because some HMO's have their own quality assurance systems. Alternatively, it is said that HMO's should be subject to the same quality review process as fee-for-service physicians and hospitals.

However, the quality of care problems posed by capitation are quite different from those associated with prospective payment of fee-for-service hospitals, and the methods to detect them are not as well developed. For example, in a capitated system, there would be much less concern about patients being admitted to the hospital for services that could have been performed in an outpatient setting. With capitation, one would instead be concerned about the effect on the health of patients not being admitted to the hospital. Whereas the necessity of hospitalization could be judged from the hospital record in the former case, this would be much more difficult to do for a hospitalization that should have occurred but did not. For these reasons, quality review in HMO's would necessarily need to encompass office visits, ambulatory surgery and other outpatient services, home health services, and nursing home services. As Donabedian (1983) has indicated, the quality assessment process for HMO's would need to focus on entire episodes of illness rather than on hospital care, ambulatory care, or any other single component.

The inexperience of many HMO's with elderly patients and the potential quality problems previously enumerated lead us to the conclusion that some form of independent monitoring of quality in HMO's is justified. Such monitoring would also help allay (or maybe confirm) public suspicions regarding the quality of capitated care. It needs to be recognized, however, that an effective quality assessment program may bear little resemblance to the current activities of peer review organizations.

Conclusion

Many of the problems discussed in this article exist in both fee-for-service and capitated care, and a case could be made in favor of capitation even if it saved money alone without affecting quality of care. However, the argument in favor of capitation would be stronger if it saved money while simultaneously addressing some of the quality of care problems of traditional medicine for older persons.

Because of Medicare's late entry into the capitated area, little is known about the quality of care older individuals will receive in HMO's. Although studies indicate that the quality of care in HMO's is better or similar to that provided in fee-for-service settings, most of the studies have included few older individuals. Nevertheless, it is reasonable to expect that the relatively young and healthy among older persons will do as well in HMO's as the nonelderly. Whether the frail elderly will have better or worse outcomes in HMO's is less certain, and much of the success of Medicare capitation will depend on how the frail elderly fare in these systems. Thus, we anxiously await findings from the evaluation being funded by the Health Care Financing Administration on quality of care in HMO's involved in the Medicare Competition Demonstrations. But much more knowledge in this area is desperately needed so that if we write another article on the subject in 5 years, it could contain evidence and information as opposed to theory and speculation.

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