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

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MANAGED HEALTH CARE

Effect on Employers' Costs Difficult to Measure

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Human Resources Division

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October 19, 1993

The Honorable Fortney (Pete) Stark
Chairman, Subcommittee on Health
Committee on Ways and Means
House of Representatives

Dear Mr. Chairman:

During the last decade, employers have increasingly turned to network-based managed health care plans to constrain the steadily rising cost of health benefits. Employers have implemented managed care plans with optimistic financial expectations. As reflected in many health care reform bills, the administration and some members of Congress expect enrollment in managed care to control costs, increase the use of preventive services, and reduce unnecessary care. This report responds to your request that we examine employers' recent experience with managed care in terms of cost control and enrollee perspectives.

Background

Conventional models of health insurance, with no constraints on choice of providers or utilization controls, are losing market share. In 1992, enrollment in managed care plans using provider networks grew to more than half of all employees covered by employer group health insurance. Enrollment in managed indemnity plans requiring utilization review, such as hospital preadmission certification, declined to 41 percent of employees. (See fig. 1.) This report focuses on network-based managed care plans.

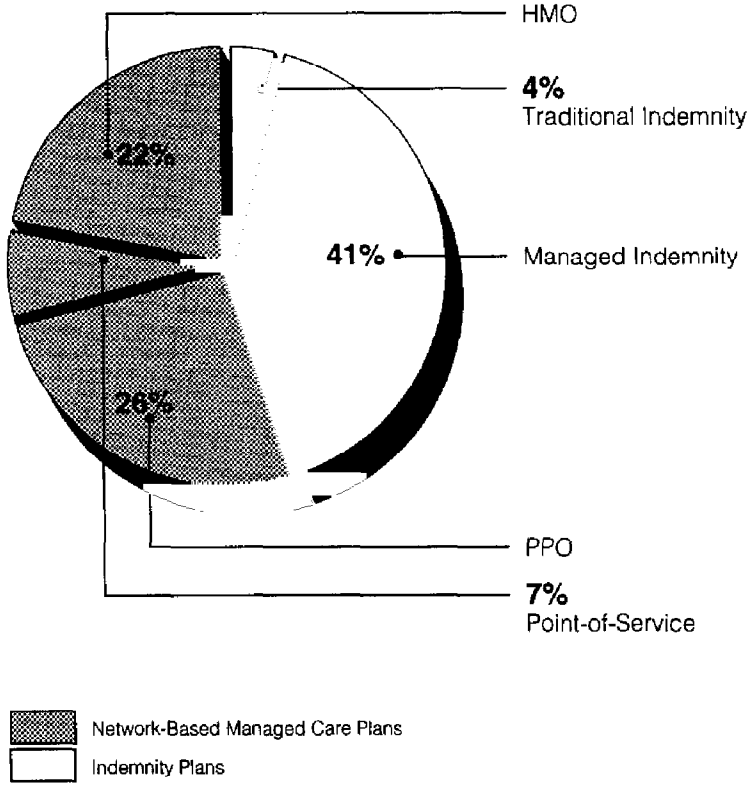
Evolution of Managed Care Types

Network-based managed care has evolved considerably from its prototype health maintenance organization (HMO) developed in the 1940s. Currently, managed care types represent a continuum of most and least restrictive controls over an enrollee's choice of provider and utilization of services. Certain HMOs are at the most restrictive end of the continuum. Enrollees receive comprehensive, prepaid benefits only through doctors and hospitals associated with the HMO and must obtain a referral to receive care from a specialist. At the least restrictive end, generally, are preferred provider organizations (PPOs). Like HMOs, they also have associated doctors and hospitals but allow enrollees to seek care outside the network at greater out-of-pocket costs, and specialist visits are permitted without prior authorization. In the middle of the continuum are hybrid

arrangements such as point-of-service (POS) plans that combine features of HMOs and PPOs.

The three plan types vary widely on how they select and pay providers, their effectiveness in constraining the use of expensive services, and the kinds of incentives they give to providers and patients. In principle, managed care plans with greater restriction on choice and use of provider services also have greater potential to control costs.

Figure 1: Health Care Coverage by Plan Type, 1992



Source: KPMG Peat Marwick, Health Benefits in 1992.

Scope and Approach

We interviewed health policy experts and representatives of managed care associations, health insurers, health care providers, and more than 60 private employers. In addition, we reviewed literature on the influence of

managed care on costs and utilization and the consequences for providers and patients. We conducted our review between March 1992 and March 1993 in accordance with generally accepted government auditing standards.

Our review focused on private employers' experience with managed care; we did not review the experience of public payers—Medicare, Medicaid,[1] the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), the Federal Employees Health Benefits Program, or state or local public employee plans—with managed care. We limited our review to managed care plans focusing on acute and chronic medical care; we did not review managed care programs specializing in long-term care, dental, vision, mental health, substance abuse, or prescription drugs.

Results in Brief

Although many employers believe that, in principle, managed care plans save money, little empirical evidence exists on the cost savings of managed care. Employers' faith in managed care is reflected in the rising number of employers who are offering managed care plans. The proportion of private employees enrolled in managed care plans grew from 5 percent in 1980 to 55 percent in 1992. The growth has occurred mostly in the newer models of managed care plans.

Most studies comparing firms' health care costs for employees under managed care and indemnity plans do not adequately control for key factors affecting cost, such as employees' age or health status. Consequently, because of the tendency of managed care plans to attract younger and healthier employees, cost savings revealed in many studies may be attributable to employee health status rather than to cost containment. In addition, comparisons of plans generally do not account for differences in benefits provided. As for the newer HMOs using physicians in independent practice associations (IPAs), preferred provider networks, or the managed care hybrids, little research has been conducted on their experience in containing employers' costs.

Some managed care plans have a potential for cost savings. Cost containment efforts in managed care occur primarily through controls on the use of expensive medical services. Studies have found that group and staff model HMOs reduce hospital admissions and the use of certain health services. Some employers distinguish, however, between lower service

[1]We reported on Medicaid's experience with managed care in Medicaid: States Turn to Managed Care to Improve Access and Control Costs (GAO-HRD-93-46, Mar. 17, 1993).

utilization and lower costs: that is, network-based plans reducing the use of services may not be passing savings on to employers as lower premiums. Plans may use the savings to provide richer benefits to attract and retain enrollees, enhance plan administration, or produce profits.

Restrictions on employee choice of health care provider is viewed as the major constraint on employee acceptance of network-based managed care plans. In exchange for restrictions on choice, managed care plans offer enrollees lower out-of-pocket costs. The importance of physician choice is evidenced by the growing array of and increased enrollment in more flexible managed care plans that allow employees to pay higher costs to receive care from non-network providers. Compared to indemnity plan enrollees, managed care enrollees rate the availability, continuity, and treatment manner of their care lower. However, they are more satisfied with the financial access and coordination of care than indemnity enrollees.[2]

Increasingly, employers are taking steps to address the need for adequate information on health plans' costs and quality. To improve their ability to assess plans, employers are asking managed care plans for more data on costs, outcomes, use rates, and enrollee satisfaction. Nearly all HMOs reported employer requests for these data, and local employer coalitions are working to enhance the development of this information.

Managed Care Has Evolved From Its HMO Prototype

The term "managed care," lacking a commonly accepted definition, has been used to characterize a wide range of health care plans. Some employers broadly define managed care to include all plans that incorporate mechanisms to monitor and authorize the use of health services. Others more narrowly define managed care to include only health plans that direct enrollees to selected physicians and hospitals with which the plan has negotiated payment methods and utilization controls.

Traditional indemnity plans that pay for health services without reviewing and questioning the appropriateness of certain medical decisions are losing market share.[3] In 1992, 41 percent of employees were enrolled in managed indemnity plans—plans that allow free choice of provider and

[2]"Availability" refers to patients' ability to make an appointment or telephone contact with a physician; "continuity" refers to patients being able to receive care from the same physician; "coordination" refers to the relationship between different providers; and "financial access" refers to the lack of out-of-pocket costs for the enrollee.

[3]Less than 5 percent of employees are enrolled in traditional health plans that do not restrict the choice of provider or require authorization for any hospital or specialty care.

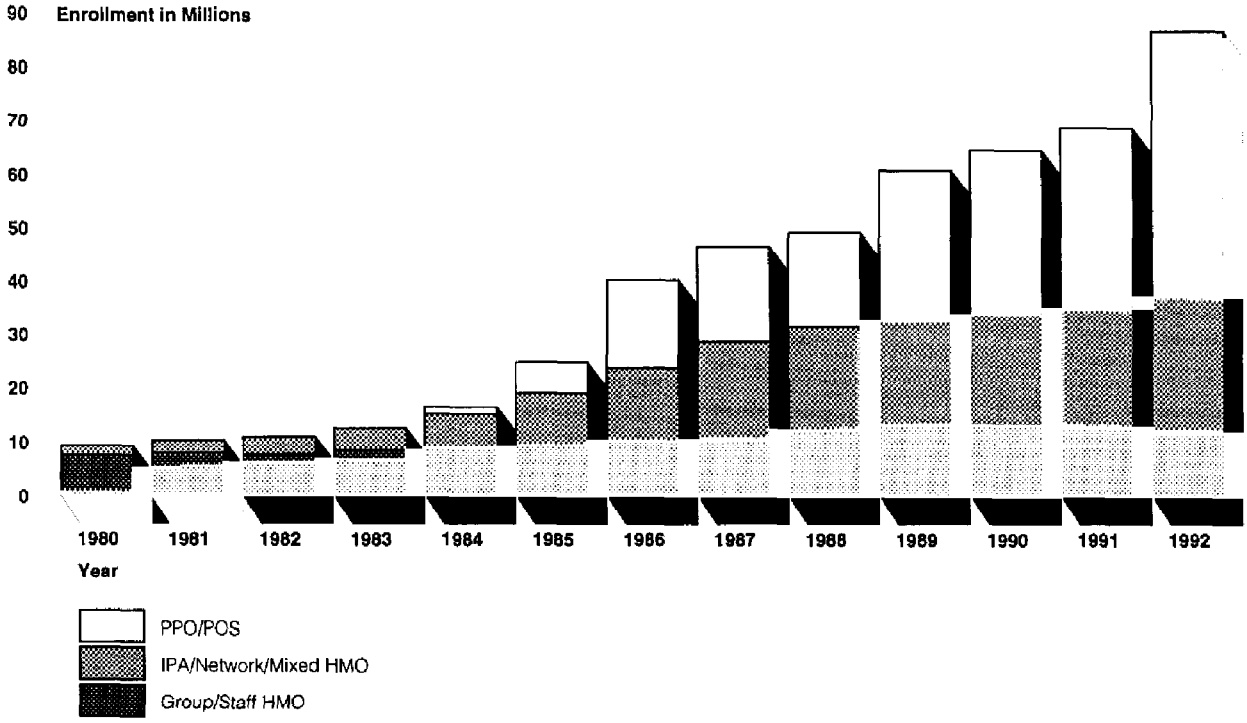
reimburse providers on a per-service basis but impose utilization review requirements, such as hospital preadmission certification and second surgical opinions. Appendix I details the use of utilization review (UR) techniques and their effectiveness in containing costs.

Most private employees are enrolled in network-based managed care plans that seek to restrict choice and utilization more tightly than do managed indemnity plans. These plans select a network of physicians and hospitals, negotiate reimbursement with the network's providers, and apply utilization controls. The more tightly controlled plans, including some HMO plans, pay only for care received through their network of providers. The more flexible plans, including some PPOs and POS plans, provide enrollees financial incentives to receive care from network providers. Refer to figure 1 for the proportion of private-sector employees enrolled in 1992 in network-based managed care plans.

Although the United States has had network-based managed care plans since the 1940s,[4] much of the growth and development of managed care has occurred during the last decade. During the 1980s, rapidly rising health care costs encouraged rapid growth in HMO enrollment and the emergence of new types of managed care plans, including PPO and POS plans. We estimate that by 1992 nearly 90 million persons, including more than half of all employees covered under employer-sponsored group health insurance, were enrolled in a network-based managed care plan. Figure 2 illustrates the growth of network-based managed care plans since 1980.

[4]Kaiser-Permanente began in California, Washington, and Oregon in 1942; the Health Insurance Plan of New York began operation in 1947.

Figure 2: Managed Care Enrollment by Type of Plan, 1980-1992



Note: HMO data include Medicare and Medicaid enrollees.

Source: GAO estimates based on data from Interstudy, KPMG Peat Marwick, and Health Insurance Association of America.

Health Maintenance Organizations

HMOs are the most tightly controlled type of managed care plan. Staff model HMOs hire physicians directly, whereas group model HMOs contract with one or several large physician group practices. Most physicians in staff or group models serve HMO enrollees exclusively, often practicing in HMO-owned clinics.[5] Staff and group HMOs typically pay physicians either a salary or a fixed amount per enrollee for providing comprehensive health services. HMOs require patients to use only services delivered by providers affiliated with the HMO.[6] HMOs also typically require patients to select a

[5]Some HMOs contract with several group practices that also care for a large share of patients from other indemnity and managed care plans. This type of HMO is referred to as a "network" model HMO.

[6]HMOs provide limited exceptions to this requirement for emergency care received outside the HMO's service area.

primary care physician—often called a "gatekeeper"—to coordinate the patient's care, especially services involving referrals to specialists and hospital care.

The Health Maintenance Organization Act of 1973[7] attempted to encourage growth of HMOs, and by 1980 enrollment in HMOs had tripled to more than 9 million people. During the 1980s, HMO enrollment continued to grow rapidly, nearly 14 percent a year. Much of this growth occurred among IPAs, which are networks of individual physicians that also serve non-network patients covered by other insurance. Typically, IPAs contract with a large number of physicians, and IPA enrollees represent only a small portion of the physicians' practices. Because of this, IPAs generally have less leverage over physicians' use of services than do staff or group model HMOs.[8]

About as many IPA plans reimburse their network primary care physicians by fee-for-service as those that make prepayments. Like staff and group model HMOs, many IPAs have primary care physicians functioning as gatekeepers. Although staff and group HMO enrollment grew modestly between 1980 and 1991 (from 7.4 million to 12.9 million enrollees), IPA enrollment grew dramatically—from 1.7 million to 14 million enrollees.[9]

Preferred Provider Organizations

To compete with and provide an alternative to HMOs, insurers and employers began offering PPOs during the early 1980s. PPOs retain many elements of indemnity plans but provide enrollees a financial incentive to receive care from providers selected by the employer or insurer.

Unlike many HMO network physicians under prepaid financial arrangements, PPO network physicians are generally not required to assume financial risk for the provision of services. Instead, PPOs typically reimburse physicians' fees per service, but they negotiate with their network physicians to pay discounted or standard fees. Enrollees may

[7]The 1973 HMO Act, Public Law 93-222, required employers with at least 25 employees to offer a qualified HMO as an option to their employees (if requested by a local, federally qualified HMO). To be federally qualified, an HMO was required to provide comprehensive benefits, community-rated premiums, and an annual open enrollment period. Subsequently, these requirements were amended to provide federally qualified HMOs with additional rating flexibility.

[8]In addition, rapid growth occurred among network model HMOs that resemble group model HMOs but contract with multiple physicians' groups that predominantly serve patients from other indemnity and managed care plans and mixed model HMOs that contain elements of staff, group, network, and IPA models.

[9]An additional 8 million people are enrolled in network and mixed model HMOs.

receive services from non-network providers but face higher cost-sharing requirements. PPOs generally employ the UR techniques common to managed indemnity plans. By 1992, more than one-fourth of insured employees were enrolled in PPOs.

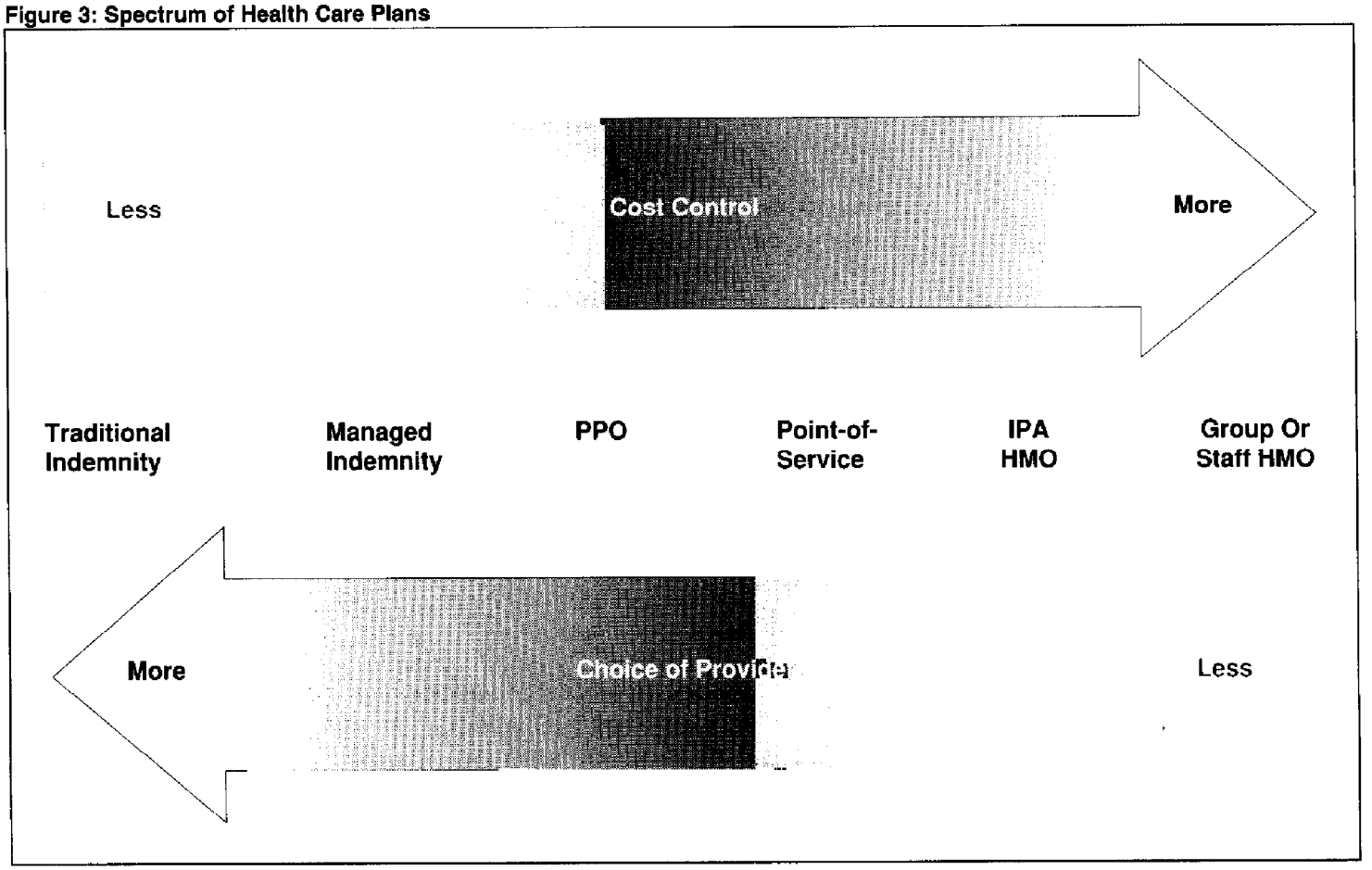
Point-of-Service Plans

Many newer managed care plans are hybrids combining the cost control mechanisms of HMOs and the provider choice features of PPOs. Similar to PPOs, POS plans allow enrollees to choose, at each visit, whether to use the managed care network providers. Similar to HMOs, POS enrollees select a primary care physician who coordinates the patient's network-based care, including care requiring referrals to specialists. By 1992, 7 percent of covered employees in private-sector firms with 200 or more workers were enrolled in POS plans.

Managed Care Cost Controls Involve Networks and Alternative Financing Methods

Despite the variety of managed care plans, most include the following common cost control features: (1) provider networks, with explicit criteria for selection; (2) alternative payment methods and rates that often shift some financial risk to providers; and (3) utilization controls over hospital and specialist physician services. The cost savings potential of managed care plans depends on the stringency of these features. In general, HMOs tend to use more stringent controls than PPO or POS plans (see fig. 3). But the stringency of the controls varies even among HMOs and, as a result, some PPO or POS plans may have tighter controls than some HMOs. The controls that managed care plans use are discussed briefly below and in more detail in appendix II.

Figure 3: Spectrum of Health Care Plans



Limiting the Number of Providers

Network-based managed care plans, by definition, limit enrollees' choice of providers to a specified network. Employees often request that managed care plans select a wide range of providers to ensure geographic access and minimize the need for changing providers. Although criteria for inclusion vary, most managed care plans screen providers for minimum professional standards, including board certification and medical liability claims history. A few managed care plans are beginning to select or reselect providers on the basis of comparative utilization rates and outcomes.

The use of selective networks is a control intended to help managed care plans contain costs. First, limiting choice to a network of providers with less resource-intensive practice styles is designed to help plans reduce the use of health services among its enrollees. Second, when a plan enrolls

enough patients to represent a substantial share of each physician's or hospital's business, it then has greater leverage to control providers' use of services and reimbursement rates.

Alternative Payment Methods and Rates

Managed care plans also use provider payment methods to control costs. Some plans simply negotiate discounts from providers. In these plans, however, because income is tied to the volume and types of services delivered, incentives exist for providers to offset lowered fees by increasing frequency and intensity of services. Other plans negotiate standard payment rates per service, hospital day, or episode of care. These plans place the providers at some financial risk for exceeding these rates, which moderates but does not eliminate the incentive to provide more services. Plans that prepay physicians a fixed lump-sum for each enrollee (that is, "capitate" provider payments) shift more financial risk to the provider. Capitation reverses the fee-for-service incentive to provide more services and instead may, depending on the amount of risk shifted to the provider, encourage physicians to maximize income by providing too few services.

Managing Utilization

A third cost control involves mechanisms to contain utilization. Many network-based plans use UR techniques common to managed indemnity plans. Others use alternatives to manage the delivery of services. More tightly controlled plans constrain the use of expensive health services by requiring patients seeking specialist care to obtain the referral of a primary care physician. Some also compile profiles of physician practice patterns to identify high users of services.

Constrained Choice of Providers Concerns Patients

Managed care plans constrain enrollees' choice and access by directing patients to a network of providers and requiring authorization for many specialist and hospital services. PPOs and POS plans exert this control through payment differentials based on whether members use participating hospitals and doctors. In a tightly managed HMO, the plan allows the use of nonparticipating providers only in emergency situations and requires the primary care physician's authorization for all health care services provided.

Although enrollees in indemnity plans may continue to receive care from the same physician for many years, some enrollees in managed care plans may have less continuity in their source of care. Some new enrollees in a

managed care plan need to change providers if their current physicians are not in the plan's network and select a new provider with whom they may not be accustomed.[10] Changes in providers can recur when doctors leave the network, the employer changes health plans, or the employee changes jobs.[11] Some managed care plans also prohibit or provide lower coverage for self-referrals to specialists, requiring patients to first obtain authorization from a primary care physician or the plan.[12]

Many employees enroll in HMOs despite the limitations on choice. When offered multiple choices of plans, on average about one-third of employees enroll in an HMO. These employees are willing to accept HMOs' restrictions on choice of provider in exchange for reduced out-of-pocket costs and more extensive preventive care. HMOs generally require only minimal copayments and no deductibles. Well baby care and adult physicals, for example, are nearly universally covered by HMOs but offered by only one-third to one-half of indemnity plans.[13] Enrollees in HMOs, POS plans, and PPOs also enjoy not having to submit claims forms for physician or hospital visits as long as they use plan providers.

However, enrollment trends show that many employees prefer more flexibility than is afforded by traditional HMOs and are willing to pay additional out-of-pocket costs to receive care from a provider of their choice. Among those who select PPO and POS plans, more than one-third of claims' dollars paid are for care delivered by non-network providers. To enhance cost control, many employers are increasingly adopting larger cost sharing differentials to encourage employees to use network providers.

Although research is limited, some evidence suggests that patients rate the care they receive from managed care providers lower than those visiting fee-for-service physicians. The Medical Outcomes Study analyzed patients' satisfaction in managed care and indemnity plans by surveying over 17,000

[10]Many employers report that employees' initial dissatisfaction tends to moderate over time.

[11]Some managed care networks experience high physician turnover, which often generates dissatisfaction among members. Group and staff model HMOs do not impose the barriers to beginning or ending practice that private practice physicians face. HMOs do not require physicians to invest large sums for a partnership or sell equity when they leave. Some physicians find group and staff model HMOs a convenient place to practice for a few years before establishing a private practice.

[12]In response to some of these requirements, some employees may opt out of their employer's managed care plan and seek alternative health insurance, such as joining a spouse's health care plan. Employers have also attempted to address employees' concerns about restrictions on choice in their selection of network providers. For example, some employers establish networks that explicitly select providers that already serve most employees.

[13]PPOs and POS plans are also more likely to offer these preventive benefits than conventional indemnity plans.

patients and adjusting for population differences. Patients reported similar levels of satisfaction with hospital care in prepaid and fee-for-service plans. However, patients reported lower overall satisfaction with physician care in prepaid plans.[14] Specifically, patients gave primary care physicians in prepaid plans lower ratings for availability, continuity, and treatment manner but received higher ratings for financial access and coordination of care.

Employers' Experience With Managed Care Costs Vary

Although many employers believe that they are saving money from network-based managed care, the evidence has been inconclusive about the extent to which such plans hold down employers' costs. For example, in some cases, employers have found that one-time reductions in cost growth accrue with managed care but that rapidly growing health care costs resume in future years (although from somewhat lower premiums). In other cases employers attribute lower premiums to the effectiveness of managed care plans in controlling price and utilization, yet savings are more likely the result of serving healthier enrollees.[15] None of the recent surveys of employers' premiums adjust for differences in enrollee characteristics or benefits covered in network-based managed care and indemnity plans.

Although no conclusive evidence exists that employers save money on managed care plans, the potential for savings exists for group and staff HMOs because they reduce the utilization of certain expensive services.[16] (Studies of Medicare enrollees show that HMOs lower the average length of hospital stays by about 17 percent but do not reduce hospital admissions.)[17] Less research is available for newer types of managed care, such as IPAs, POS plans, and PPOs, despite their prevalence.

[14]Haya R. Rubin et al., "Patients' Ratings of Outpatient Visits in Different Practice Settings: Results from the Medical Outcomes Study," Journal of the American Medical Association, Vol. 270, No. 7 (1993), pp. 835-840.

[15]Managed care plans often receive favorable selection by enrolling younger, healthier, and less costly members. This biased selection could result from the reluctance of persons receiving regular medical care to change doctors to join a managed care plan and managed care's emphasis on preventive and well child care services. For evidence of biased selection, see Jack Zwanziger and Rebecca R. Auerbach, "Evaluating PPO Performance Using Prior Expenditure Data," Medical Care, Vol. 29, No. 2 (1991), pp. 142-151; Richard L. Kravitz et al., "Differences in the Mix of Patients Among Medical Specialties and Systems of Care: Results From the Medical Outcomes Study," The Journal of the American Medical Association, Vol. 267, No. 12 (1992), pp. 1617-1623.

[16]Some research has found that staff and group model HMOs reduce utilization of health services relative to traditional plans. See Robert H. Miller and Harold S. Luft, "Managed Care: Past Evidence and Potential Trends," Frontiers of Health Services Management, Vol. 9, No. 3 (1993), pp. 3-37.

[17]See Randall Brown et al., "The Medicare Risk Program for HMOs—The Final Summary Report on Findings from the Evaluation," Mathematica Policy Research, Inc., February 18, 1993.

Even if a managed care plan lowers utilization, the savings may not be passed on to the employer in lower premiums. "Shadow pricing," which occurs when a health plan sets its premium at a rate near employers' other health plans regardless of the actual costs of the plan, can erode employers' savings. Shadow pricing may enable the plan to maintain higher administrative costs, pass savings on to the enrollee through expanded benefits or reduced out-of-pocket costs, or increase profits.[18]

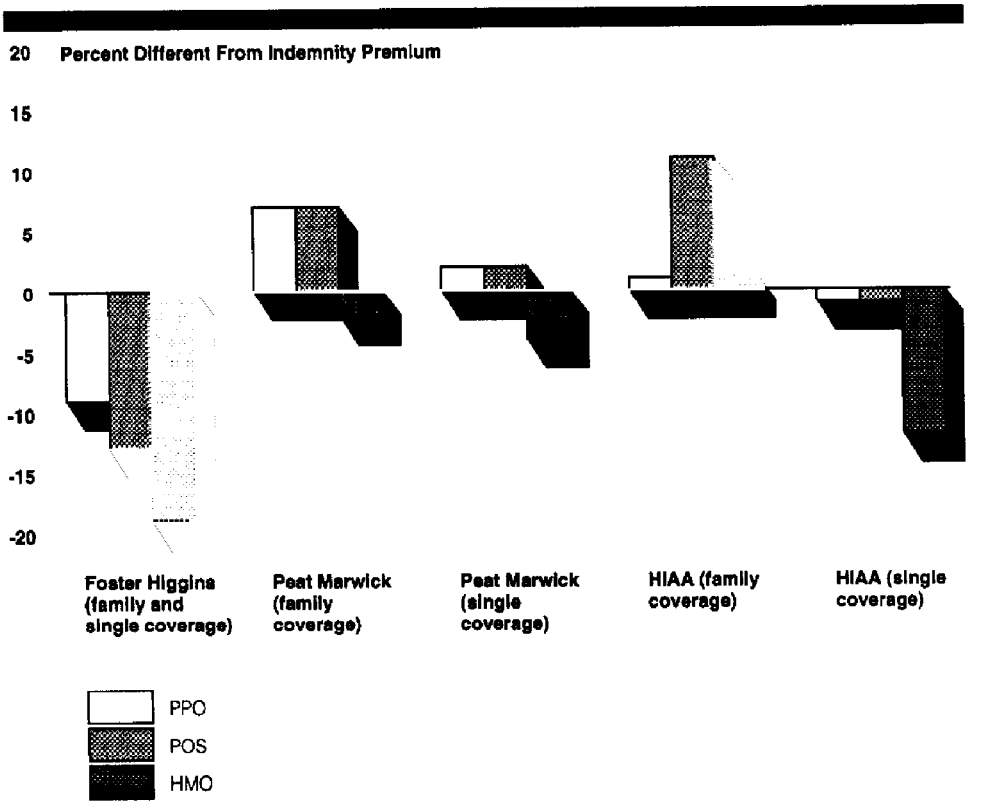
Some employer surveys indicate that premiums are lower for network-based managed care plans than for indemnity plans, while other surveys provide contradictory results. A survey of more than 2,400 firms indicated that, for 1992, HMO plan premiums averaged nearly 11 percent below PPO plans, which were 9 percent lower than indemnity plans.[19] By contrast, two surveys covering roughly 1,000 and 3,000 firms each, found that, for a similar period, network-based managed care premiums are often similar to or greater than indemnity plans (see fig. 4).[20]

[18]Some managed care plans have higher administrative costs than indemnity plans. Loss ratios show the percent of premium dollars spent to cover medical care costs, with the rest of the premium dollar going for overhead costs and profit. Some HMOs experience loss ratios of 80 to 85 percent, compared to indemnity plans for large employers with loss ratios of about 90 percent.

[19]1992 Health Care Benefits Survey: Medical Plans, Foster Higgins, (Princeton, New Jersey: 1993), pp. 2-64.

[20]Health Benefits in 1992, KPMG Peat Marwick, (Washington, D.C.: 1992), pp. 1-56; Cynthia B. Sullivan et al., "Employer-Sponsored Health Insurance in 1991," Health Affairs, Winter (1992), pp. 172-185.

Figure 4: Health Plan Premiums Reported by Three Employer Surveys



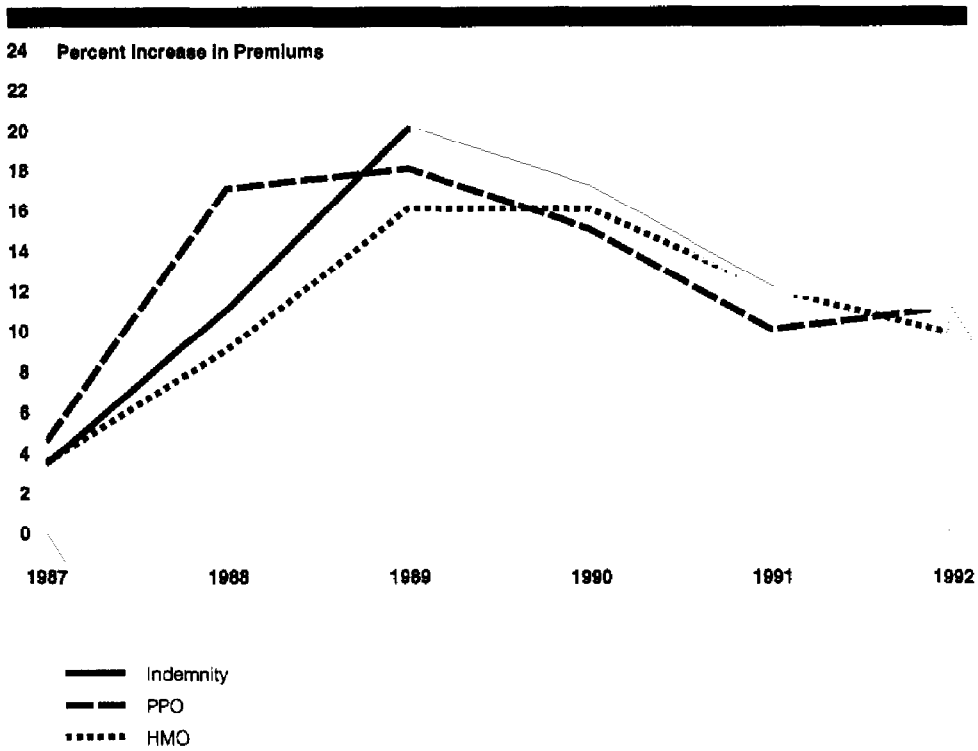
Note: Peat Marwick's survey does not distinguish between PPO and POS premiums.

Sources: Health Insurance Association of America, 1991; Foster Higgins and Peat Marwick, 1992.

These surveys also indicate that, over the last 6 years, network-based managed care and indemnity plan premiums have experienced similar rates of growth (see fig. 5).[21] For most years, though, HMO premium increases were marginally below indemnity plan premiums.

[21]Foster Higgins reports that, for the most recent year surveyed (1992), managed care premiums increased at a slower rate than indemnity plan premiums. For 1991, Foster Higgins reported premiums growing by between 13 and 14 percent for HMOs, PPOs, and indemnity plans.

Figure 5: Growth in Health Plan Premiums, 1987 to 1992



Sources: Health Insurance Association of America, 1987 to 1990; Peat Marwick, 1991 to 1992.

Some firms have found that their total health care costs have increased after implementing network-based managed care. This increase results from averaging ever higher rates for less healthy individuals concentrated in the indemnity pool and somewhat costly, benefit-rich rates for the pool of relatively healthy managed care enrollees. One study found that, when Minnesota employers offered their employees an HMO among other health plans, employers' health care costs on average were higher, in part because costs were far higher for the indemnity plans offered.[22] Another analysis found that part of Southwestern Bell Corporation's savings from a POS plan resulted from enrollees leaving HMOs that had premiums exceeding the costs of their care for the POS plan.[23]

[22]Roger Feldman, Bryan Dowd, and Gregory Gifford, "The Effect of HMOs on Premiums in Employment-Based Health Plans," Health Services Research, Vol. 27, No. 6, (1993), pp. 779-811.

[23]The analysis also found that the POS plan reduced expected inpatient expenditures by one-fourth, although outpatient expenditures increased. See Ron Z. Goetzel et al., "Behind the Scenes of a POS Program," Journal of Health Care Benefits, March/April (1992), pp. 33-37.

Few rigorous analyses have been conducted by employers to determine whether network-based managed care has controlled their health costs. Employers' attempts to assess managed care plans have been hindered by the unavailability and incomparability of data on their health plans. Most employers depend on simple premium comparisons that do not account for other important factors, such as enrollee characteristics and benefit differences. Appendix III presents additional information on the uncertainty of employers' cost savings from network-based managed care plans.

Concluding Observations

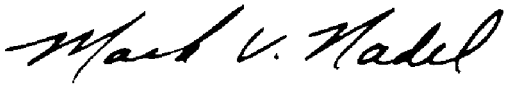
Managed care arrangements continue to undergo dynamic changes as enrollment expands. Many insurers, employers, and policy analysts recognize that empirical evidence of employers' cost savings from managed care is inconclusive. At the same time, proposals for comprehensive health care reform at the state and federal levels typically include greater use of managed care.

Employers are increasingly focusing on strategies to improve their ability to assess plans. They want reliable data on costs, outcomes, and consumer satisfaction so they can make meaningful evaluations. Ultimately, performance measures need to be developed that will allow employers to make informed decisions about health care plans and providers.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. 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 about this report. Other major contributors are listed in appendix IV.

Sincerely yours,



Mark V. Nadel
Associate Director, National and
Public Health Issues

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Abbreviations

AAPPO	American Association of Preferred Provider Organizations
AHA	American Hospital Association
AMA	American Medical Association
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
GHAA	Group Health Association of American
HIAA	Health Insurance Association of America
HMO	health maintenance organization
IPA	independent practice association
POS	point-of-service
PPO	preferred provider organization
UR	utilization review

Utilization Review Techniques Are Common to Most Health Plans

Utilization review techniques have become nearly universal, incorporated in more than 90 percent of indemnity plans and most network-based managed care plans.[1] By reviewing physicians' clinical decisions and requiring authorization for some specialist and hospital services, UR attempts to lower costs by avoiding services that do not meet the reviewers' standards for necessity of care. Insurer claims analyses have found one-time savings from UR of as much as 6 percent. However, UR imposes an administrative burden on physicians and hospitals due to the frequency of reviews and the multiplicity of different UR firms.

The principal UR techniques include hospital preadmission review, concurrent review, and retrospective review; second surgical opinions; and catastrophic case management.

- Preadmission review requires the patient or provider to receive third-party approval before a hospital admission. The UR organization compares information about the proposed admission with established practice protocols to determine the appropriateness of the hospitalization and may establish a maximum length of stay.
- Concurrent review evaluates the length of a hospital stay, confirming that the patient's continued stay is appropriate (according to the reviewer's standards) or denying coverage for additional days of care.
- Retrospective review evaluates the appropriateness of a treatment after its completion. In some cases, retrospective review may lead to denied reimbursement for inappropriate or lengthy hospitalizations but is also used to educate providers about the standards for appropriate care and to identify providers who deviate from these standards.
- Second surgical opinions require patients to obtain the opinion of a second physician when a physician recommends surgery. If the reviewing physician recommends against surgery, a third physician reviews the case.
- Case management requires selected cases, such as coronary artery bypasses, transplants, or chronic conditions, to be coordinated by a case manager. In addition to certifying hospital admissions and lengths of stay, case managers determine appropriate outpatient and home care services. In general, case management focuses on the most expensive and high-risk cases.

[1]We have reported on the size and ownership of organizations that perform UR, the professional qualifications of staff involved in UR decisions, the complexity of UR decisions made by various types of staff, UR appeal procedures, clinical review criteria used in UR, and UR quality assurance procedures. See Utilization Review: Information of External Review Organizations (GAO/HRD-93-22FS, Nov. 24, 1992).

Insurer claims analyses have found one-time savings of up to 6 percent resulting from UR, with most UR focused on inpatient hospital utilization and costs. For example, one study credited UR with a 6-percent cost reduction in total medical expenditures, resulting from 13 percent fewer hospital admissions, 11 percent shorter lengths of stay, 7 percent fewer routine inpatient services, and 9 percent fewer ancillary services.[2] A study of Blue Cross and Blue Shield plans with UR found that preadmission certification and concurrent review reduced hospital admissions and days of care by about 5 percent, reducing hospital payments by 4.2 percent. Retrospective review that includes denying payment for inappropriate care was also credited with reducing hospital payments by 1.6 percent.[3] Mandatory second surgical opinions did not significantly reduce hospital use or costs. A review of Aetna's UR programs found an 8.5-percent reduction in average hospital length of stay that led to 4.5-percent lower medical expenditures.[4]

Although UR may result in some direct savings from denying coverage or avoiding hospitalization for care deemed inappropriate, much of the savings may result from an indirect sentinel effect. Data from Aetna indicate that some procedures, such as cataract surgery and hip replacement, have low denial rates (2 or 3 percent) resulting from UR, whereas other procedures, such as magnetic resonance imaging of the knee, have relatively high denial rates (25 percent). The low rates for some procedures may reflect the fact that physicians are recommending fewer surgeries because they know that their decisions will be reviewed.

Many physicians view external UR review as an interference with their clinical decision-making. The American Medical Association (AMA) reports that UR intrudes into physicians' medical practices more than any factor other than professional liability issues. AMA's survey reports that 20.6 percent of physicians found that utilization review was the most

[2]The study analyzed the experience of 91 insured groups with preadmission certification and concurrent review requirements and 132 groups that did not have any UR between 1984 and 1986. The insured groups averaged 1,511 enrollees. This study updates a previous analysis by the same authors that had found an 8-percent reduction in medical expenditures resulting from UR. See Thomas M. Wickizer, John R.C. Wheeler, and Paul J. Feldstein, "Does Utilization Review Reduce Unnecessary Hospital Care and Contain Costs?" Medical Care, Vol. 27, No. 6 (1989), pp. 632-647.

[3]The study did not examine the effect that these UR programs had on outpatient spending or overall (inpatient and outpatient) claims costs. See Richard M. Scheffler, Sean D. Sullivan, and Timothy Haochung Ko, "The Impact of Blue Cross and Blue Shield Plan Utilization Management Programs, 1980-1988," Inquiry, Vol. 28 (1991), pp. 263-275.

[4]Rezaul K. Khandker and Willard G. Manning, "The Impact of Utilization Review on Costs and Utilization," ed. P. Zweifel and H.E. Frech III. Health Economics Worldwide, (1992), pp. 47-62.

intrusive factor in clinical decision-making.[5] Physicians also contend that the appropriateness of a medical decision cannot be made by an external reviewer because of the variation in patient medical histories and treatment responses. They question the professional qualifications of nonphysician reviewers, and many believe that other physicians should conduct reviews.[6]

Physicians and hospitals also cite the administrative burden of contacts with multiple UR organizations. The AMA survey of physicians found that on average physicians spent 2.1 hours per week and physicians' staffs spent 5.4 hours per week dealing with UR and had contact with about four different UR organizations per week.[7] An American Hospital Association (AHA) survey found that on average hospitals are dealing with 38 separate UR firms and often more than 100. Because the UR process varies among different UR organizations, many providers believe that the multiplicity of reviewers causes undue complexity.

[5]David W. Emmons and Anita J. Chawla, "Physician Perceptions of the Intrusiveness of Utilization Review," Socioeconomic Characteristics of Medical Practice 1990/1991, American Medical Association Center for Health Policy Research, (Chicago: 1991), pp. 3-8.

[6]The AMA has promoted state legislation to require UR physicians to have comparable experience and education backgrounds and to be licensed in the same state as the physician being reviewed. Critics contend that these "anti-managed care laws" impose undue expense.

[7]Emmons and Chawla, pp. 3-8.

Managed Care Mechanisms Designed to Control Costs and Use of Services

As network-based managed care plans have developed and differences among types of plans have become blurred, it has become harder to categorize different plans. Increasingly, managed care plans have become hybrids with features of traditional HMO and PPO models. These plans vary widely on how providers are selected, the method of reimbursement, the effectiveness of utilization management activities, and the extent of enrollee and provider incentives. Rather than comparing different models of managed care plans, some experts recommend analyzing specific mechanisms of managed care plans.

Managed care plans gain leverage in negotiating prices and utilization controls by concentrating patients among fewer providers. Plans can achieve this by limiting the number of providers in the network, but many plans maintain large networks to attract enrollees. Some managed care plans employ rigorous selection criteria to choose the most cost-effective providers, but most plans select providers that meet minimum professional standards and are willing to contract with the plan. Many managed care plans maintain fee-for-service reimbursement, with most PPOs negotiating discounts or establishing standardized fees, but lower prices do not restrict the provider from increasing the volume of services. Many HMOs prepay providers, using capitation rates, to shift some financial risk to providers and provide an incentive to decrease services. Others use salaried physicians who do not increase earnings by furnishing more services. Although utilization review techniques remain common in network-based managed care plans, more tightly controlled plans also use primary care gatekeepers to limit the use of expensive specialist and hospital services.

Criteria for Selecting Providers Key to Price and Utilization Control

A fundamental feature of the managed care approach is to direct patients to a limited number of less costly or more efficient providers. Managed care plans must select a sufficiently broad network to ensure enrollees adequate access to local providers, but narrower networks enable more cost control potential. By steering enrollees to a limited number of providers, plans represent a more substantial share of a provider's business. This increases the plan's leverage in price negotiations and provides more control over utilization. Over time, many firms that designed broad networks to attract enrollees have narrowed their networks to better control costs.

Network Size and Location Selected to Attract Enrollees

Employers often seek managed care plans that include a wide range of providers to ensure geographic access and minimize the need for enrollees to change providers. Easy access is particularly important for PPOs and POS plans that offer enrollees an option of using non-network providers by paying higher out-of-pocket costs. If enrollees do not have adequate access to network physicians and hospitals, services provided by non-network physicians and hospitals may increase, which may raise plan costs. But providing greater access can erode the plan's ability to direct patients to a limited number of providers and also result in higher plan costs.

One approach used to ensure access is to preserve existing physician-patient relationships. Some employers ensure access by selecting health care providers that currently serve the majority of enrollees.[1] Selecting providers that employees have relationships with enhances the plan's acceptability among employees. Another important consideration used to ensure adequate access to selected providers is geographic distribution. Often plans compare the geographic location of employees and network providers to ensure proximity.[2]

Several employers said they initially offered a broad provider network to minimize employee concerns about limits on provider choice but have found large networks to be ineffective at controlling costs. Physician-to-enrollee ratios that are too high may add to a plan's overhead costs and reduce productivity.[3] Some employers are now considering reducing the number of network providers to constrain costs.

As managed care plans become established in a community, it often becomes necessary for health care providers to join managed care networks to remain competitive. Because managed care plans direct enrollees to network providers, providers associated with a managed care plan anticipate an increased volume of patients and a competitive advantage over non-network providers. Due to these competitive pressures and practice considerations, about 60 percent of physicians and

[1]For example, one company we contacted initially selected network providers by reviewing prior insurance claims to identify the physicians and hospitals that most employees used.

[2]When developing a POS plan, one company we contacted mapped the locations of employees' residences and primary care physicians' offices. The review calculated employees' average distance to the nearest network providers and identified the percent of employees who would not have access to at least two physicians within 8 miles. With these data, the company could select networks that would minimize the number of employees lacking convenient geographic access to plan providers.

[3]On the other hand, physician-to-enrollee ratios that are too low may erode the level of service and cost effectiveness of the plan. At low ratios, the stress levels on primary care physicians rise as they try to meet the demand for services. Overburdened primary care physicians have less time for evaluating patients and may be inclined to refer the patients to specialists.

80 percent of community hospitals contract with at least one managed care network.

Use of Selection Criteria to Identify Efficient Providers Varies Greatly

Some plans also establish selection criteria to identify cost-efficient providers to include in the plan. Many plans screen providers for unusual practice patterns, and a few plans are beginning to apply more rigorous quality criteria. However, managed care organizations, insurers, and employers are often unable or unwilling to screen out physicians and hospitals from their network. Most plans use only minimal standards, such as board certification, professional accreditation, and malpractice history, that may not be particularly selective.[4]

Some managed care plans screen network providers more tightly by gathering and reviewing data on the providers' practice patterns. To initially select providers, large insurance carriers may use claims data from their indemnity business to evaluate which physicians practice cost effectively.[5] Thereafter, to decide whether to retain the provider, networks may review practice patterns of physicians already in the network. By developing a profile of the providers' patterns of care, the managed care plan can identify physicians and hospitals that exceed or fall below norms for similar providers. It may choose to contract only with providers whose profiles indicate appropriate care and end contracts with providers who are frequent users of medical services.[6] Managed care plans that do not select providers based on patterns of care might choose to more carefully monitor and control provider practice, but this, in turn, adds to the plan's administrative costs.[7] However, many employers find that sophisticated data on quality of care, particularly for physicians, are scant.

[4]The selection of providers also depends on the provider's willingness to contractually accept the managed care plan's reimbursement levels and utilization controls.

[5]Claims data may also provide a crude method of assessing quality by identifying physicians with abnormally high rates of certain procedures or those who use outmoded treatments.

[6]For example, one company we contacted ranked 23 local hospitals based on data on patient outcomes and hospital clinical efficiency and selected the top 10 hospitals for its network. The company is seeking to also select physicians based on outcomes measures but does not currently have sufficient quality data to use for selecting physicians.

[7]Some managed care plans also contract exclusively with groups of physicians rather than physicians in individual practice. Multispecialty group practices may offer less expensive care. The Medical Outcomes Study has found that physicians in multispecialty group practices have lower hospital admission rates than physicians in individual practices, whether serving indemnity or managed care patients. See Sheldon Greenfield et al., "Variations in Resource Utilization Among Medical Specialties and Systems of Care: Results From the Medical Outcomes Study," Journal of the American Medical Association, Vol. 267, No. 12 (1992), pp. 1624-1630.

Many managed care plans include teaching hospitals in their networks but often contract with only a single specialty care hospital in a local market. They often develop exclusive contracts with some providers for specific high-cost medical services, such as organ transplants or heart bypass surgery. These selections are typically based on perceived quality, and, in return for reduced prices, the selected hospitals expect an increased volume of patients.

Overall, the extent to which managed care plans use performance data to select providers is quite limited. In establishing more loosely managed systems, managed care plans generally select physicians and hospitals using only minimum professional standards. For physicians, typical screens include reviews of professional liability claims history, hospital admitting privileges, board certification, and information from the National Practitioner Data Bank and state medical licensing agency. For hospitals, plans often review Medicare certification, assessments from the Joint Commission on the Accreditation of Healthcare Organizations, the range of services offered, malpractice experience, and regulatory actions.

A number of managed care plans do not use professional standards to select network providers but rather accept any licensed provider willing to agree to reimbursement and utilization control mechanisms.[8] Other plans do not require that all providers meet all standards. For example, one-third of PPOs accredited by the American Accreditation Program, Inc. have less than 80 percent board-certified physicians. Seventeen percent of accredited PPOs require all network physicians to be board certified.[9]

Reimbursement Methods That Share Risk Influence Providers' Incentives

Employers and managed care industry representatives that we interviewed identified reimbursement mechanisms as key tools for controlling costs. Managed care plans attempt to reduce costs by negotiating lower prices for health services or providing hospitals and physicians with financial incentives to provide fewer services. By shifting some financial risk to providers, some plans attempt to discourage extensive use of referrals and expensive services.

[8]Providers have begun to advocate state-level restrictions on managed care programs, including "any willing provider" laws that require managed care networks to accept all providers willing to meet the terms of a contract. Some states have also enacted utilization review regulations that define how UR may be conducted.

[9]A leading HMO accreditation program, the National Committee for Quality Assurance, does not require HMOs to provide information on board certification in its standards for accreditation.

Traditionally, most indemnity insurers have reimbursed health care providers by paying the billed charges for a service, limiting payment to within a range of commonly charged fees in the community. PPOs and many other managed care plans have maintained fee-for-service reimbursement but negotiate discounts from the provider's usual charge or establish fee schedules. HMOs often use fee-for-service arrangements to pay specialists and hospitals, but many HMOs fundamentally change primary care physicians' incentives by prepaying for health services through capitation.

The effectiveness of managed care reimbursement mechanisms depends, in large part, on the share of the provider's practice composed of managed care enrollees. Plans that insure a large share of providers' patients can negotiate more cost-effective arrangements with them. In the case of group and staff model HMOs, physicians serve the HMO's enrollees almost exclusively. On average, 82 percent of these physicians work full time in the HMO. Group and staff model HMOs provide each full-time physician with an average of 385 to 455 patients.[10]

In contrast, looser networks tend to insure only a small share of a physician's patients, weakening their leverage in negotiating with providers. Currently, more than 60 percent of physicians and 80 percent of community hospitals have contracts with at least one HMO or PPO. However, most physicians receive only a fraction of their patients from any single managed care plan. For example, only about 14 percent of primary care physicians contracting with an IPA receive at least 30 percent of their patients from the IPA.[11] The average IPA and PPO provides only about 25 patients to each network physician.

Discounted Fee-for-Service

PPOs most frequently use discounted fee-for-service as reimbursement for hospital and physician services. Hospitals and physicians agree to accept discounted fees as payment in full in exchange for increased volume of patients and timeliness of payment. Many firms cite discounts as the cornerstone of their cost containment strategies.[12] Other firms, however,

[10]For primary care physicians, the typical full-time group or staff model HMO physician had 833 to 1,000 enrollees. HMO Industry Profile, Group Health Association of America (Washington, D.C.: 1992), pp. 61-67.

[11]Unlike staff and group model HMOs, physicians in IPAs and PPOs, where enrollees are generally only a small proportion of each provider's practice, can shift costs to non-network patients to reduce the risk of income loss.

[12]For example, one company we contacted attributed two-thirds of its first-year cost savings from a POS network to provider discounts.

have found that discounts are ineffective at controlling health care costs if providers offset them by increasing fees or utilization.

The size of discounts that managed care plans negotiate varies widely but is typically 10 to 20 percent below billed charges. Hospitals are willing to negotiate larger discounts when other competing hospitals are located nearby but tend to negotiate lower discounts when several managed care plans serve the same area. Discounts vary also by type of provider or service, geographic location, and markup over cost.

Although discounts may lower the provider's usual price, discounted fee-for-service payments are vulnerable to several types of manipulation: (1) In response to lower prices, providers may attempt to recover reduced revenues by increasing the number of services they provide.[13] Providers may achieve this through "churning," that is, performing more procedures than are necessary and scheduling more patient revisits. (2) Providers can increase their usual charge, with the discounted fees rising equally. (3) Physicians and hospitals may practice "code creep," that is, charging for more intensive services.

Standardized Payment Rates

Managed care plans are increasingly using standardized payment rates rather than reimbursing based on the provider's charge. These payment mechanisms include per diem hospital payments, physician and hospital fee schedules, and case rates. Per diem payments reimburse hospitals a fixed amount for a day of care regardless of actual costs incurred and the services provided.[14] Physician and hospital fee schedules also set fixed rates on the basis of categories of procedures.[15] Unlike traditional fee schedules, case rates reimburse for groups of services. By combining the costs of all services related to a particular treatment, including hospital care, attending physicians, and all other providers, into a flat fee, case rates shift more risk. This method is often used for very expensive cases, such as coronary artery bypass surgery.

Because these payment mechanisms set reimbursement at a fixed rate, some risk is shifted to the provider. For example, a hospital would lose

[13]Evidence of physicians' response to discounted fees can be found in the Medicare program. From 1984 to 1986, Medicare froze Part B fees to physicians. During the same period, payments to physicians increased by nearly 30 percent due to increased volume of services.

[14]Multiple sets of per diem charges may be negotiated on the basis of type of service (for example, separate per diem rates for medical/surgical, obstetrics, intensive care, neonatal, and rehabilitation).

[15]A common hospital fee schedule is modeled after Medicare's diagnosis related groups method.

money if the costs of an intensive case exceeded its per diem payment but would profit if costs were less than the per diem payment.[16] Similarly, hospitals and physicians have financial incentives to provide cost-effective care with case rates. However, because providers continue to receive greater compensation if they increase the number of patients they serve, standardized payment rates do not fully remove the incentive to overutilize.[17]

Prepayment Shifts Financial Risk to Providers

Some managed care plans more fundamentally change provider reimbursement by prepaying for health care services. With prepayment, the group of physicians is responsible for the health services required by the enrollees but does not receive a payment for each service.[18] This places the risk of expensive services and the reward of less costly care on the providers. Most primary care physicians in group model HMOs are reimbursed through capitation, paying a flat amount monthly for each patient assigned to the group.[19] Specialty care is often not covered in the capitation payment received by the primary care physician.

The physician's financial incentives under prepayment are opposite from those under fee-for-service. With fee-for-service reimbursement, provider income is based on the volume and types of services delivered. Providers can maximize their income by providing more services, possibly leading to overutilization. On the other hand, in prepaid plans, reimbursement is divorced from the provision of services. The provider receives a flat amount regardless of the number of services provided. This creates an incentive for the provider to avoid excessive services that can erode the provider's income. Without appropriate review, underutilization may result.

[16]Some insurers warn, however, that hospital per diem payments may encourage longer stays since the final days of a hospitalization are generally the least costly, but the per diem payment remains the same. Most plans also implement concurrent utilization review to limit this incentive.

[17]Also, many fee schedules provide higher payment for procedural services, such as surgery, than for cognitive services, such as consultations with patients and general medical exams. This may provide an incentive for physicians to increase the number of procedural services they conduct. Medicare has implemented Resource Based Relative Value Scales to reform physician payment, which may also increase reimbursement for physician time spent on cognitive services relative to procedures.

[18]In group or IPA model HMOs, the HMO may pay the physician group or network a capitated rate, and the group can redistribute the reimbursement to individual physicians through salary, capitation, or fee-for-service methods.

[19]Most capitation systems vary payments by the age and gender of the enrolled member to account for the differences in average utilization of medical services in those categories. About half of IPAs capitate their physicians, and half of IPAs pay physicians discounted or standardized fees.

Indeed, prepayment has been associated with lower levels of health care utilization. One study found that capitation reduced the average number of hospital days by nearly 8 percent compared to fee-for-service.[20] Another study found even larger reductions (29 percent) in hospital admissions in prepaid HMOs compared to fee-for-service plans. Physicians also ordered fewer medical tests for patients in prepaid plans than for fee-for-service patients, but prepaid plan patients made more physician office visits.[21]

Although prepayment may lower utilization, the employer may not directly benefit. Because the risk has been shifted from the employer to the provider, it is the provider who benefits from lower utilization. To achieve cost savings, the employer's managed care plan must negotiate a capitation rate lower than the average cost would have been if paid for by fee-for-service.

To provide further financial incentives to control utilization, about two-thirds of HMOs used withhold and bonus arrangements in 1989. Under these arrangements, the plan withholds a portion of the physicians' reimbursement to establish a fund for rewarding physicians' performance. Often, the costs of referrals and diagnostic tests are deducted from the fund, with any remaining funds distributed to the physicians.

The pressures on physicians to reduce utilization from withhold and bonus arrangements are strongest when the risk is based on the performance of individual physicians rather than large groups of physicians. One study found that withhold and bonus pools for groups of physicians did not reduce hospitalizations or physician visits. Systems that placed individual physicians at risk for referrals, however, led to 10 percent fewer physician visits.[22]

[20]Alan Hillman, Mark Pauly, and Joseph Kerstein, "How Do Financial Incentives Affect Physicians' Clinical Decisions and the Financial Performance of Health Maintenance Organizations?" New England Journal of Medicine, Vol. 321 (1989), pp. 86-92.

[21]The study does not identify specific mechanisms that the prepaid plans used, so that the lower utilization could also result from mechanisms other than the method of payment. Sheldon Greenfield et al., pp. 1624-1630.

[22]Many HMOs moderate the risk assumed by providers by limiting the withhold and bonus system to a fraction of a physician's income, pooling groups of physicians rather than placing individual physicians at risk, and providing reinsurance mechanisms. The Physician Payment Review Commission has recommended that the Health Care Financing Administration limit total risk assumed by individual physicians or small groups in Medicare HMOs through reinsurance or stop loss provisions. See also Medicare: Physician Incentive Payments by Prepaid Health Plans Could Lower Quality of Care, (GAO/HRD-89-29, Dec. 12, 1988).

Some providers cite concern that managed care reduces their compensation. As managed care plans become more prevalent, some providers may increase their revenues by contracting with managed care networks and increasing the volume of patients they serve, but, if managed care succeeds in reducing health care utilization and prices, providers across the community would lose income. Physician groups that have a large share of revenue from managed care plans average lower compensation than physician groups that do not depend on managed care revenue. In addition, capitation and withholds are unpopular with some doctors because they put the physician's income at risk. However, some physicians may shift costs to other plans to compensate for reduced income.

Authorization of Hospital and Specialist Services Controls Utilization

Tightly controlled managed care plans attempt to limit the number of patient visits to specialists and hospitals. Many managed care plans attempt to reduce utilization indirectly by selecting providers that have conservative practice patterns or by sharing financial risk with providers. However, most managed care plans also find it necessary to directly control utilization by requiring patients to get authorization for expensive medical services. Employers and managed care representatives that we spoke with identified this as a key element of managed care plans' efforts to contain costs.

While managed care plans may limit patients to using a network of providers, most managed care plans do not require additional authorization for using primary care services; patients generally have few access barriers to network primary care physicians in managed care plans. However, most managed care plans require authorization for expensive specialty and hospital care. Plans may require authorization from an independent reviewer, or the primary care physician has the responsibility to manage all health care services for the patient.

Enhanced Utilization Review and Practice Protocols Target Ineffective Care

Many managed care plans, particularly PPOs, employ external utilization reviewers similar to those also common among managed indemnity plans. In general, cases requiring surgery or hospitalization require review and approval by the insurer's representative of the appropriateness of the physician's clinical decisions. Without authorization from the review process, the patient or physician may be financially penalized or have insurance coverage withheld. Appendix I discusses these utilization review mechanisms in more detail.

PPOs may have particular need to aggressively use utilization review techniques. As discussed earlier, many PPOs depend on negotiating discounts or standardized payment rates for reducing costs. Without additional review, lower prices paid for health care services may lead to higher utilization. To counteract the incentive for physicians to increase the number of services they provide, most PPOs implement utilization review systems.

PPOs may have some advantages in using utilization review effectively. By selecting network providers, PPOs can require the providers to agree to external review of specified services. This may screen out physicians who are particularly averse to utilization review. Furthermore, PPOs can discontinue contracts with network physicians who consistently fail to meet the utilization review criteria for appropriate care.

The trend toward gathering more data on physicians' practice patterns may reduce the need for requiring external review of individual cases for all providers. PPOs and other managed care plans reduce the need to review the appropriateness of individual case decisions if they profile providers' practice patterns and select those with lower utilization rates for the network. Some managed care plans also use provider profiles to identify network physicians with high utilization rates; the plan may target these physicians for review rather than require prior authorization for all providers. As employers and insurers emphasize collecting outcomes data and develop new reporting and profiling systems, in the long run utilization review may become less extensive and more focused on specific providers.

A trade-off also exists between the level of financial risk assumed by providers and the need for individual case reviews. Providers in indemnity plans and PPOs paid through fees-for-service without any risk sharing are most likely to face utilization review. Insurers are increasingly requiring providers to accept more risk sharing; if the provider is unwilling to accept more financial risk, the insurer requires authorization for the provider's claims.

In addition, some managed care plans have established standardized practice protocols or guidelines for selected conditions to delineate

appropriate practice behavior.[23] While utilization review organizations often use written practice protocols as standards for deciding whether to authorize a particular health service, some HMOs and other managed care plans use standardized protocols that the physician consults directly to determine appropriate practice. This substitutes for review by an external utilization review organization. Although the availability of practice guidelines based on medical outcomes is limited, many companies hope to further incorporate these protocols in the future.

Primary Care Physicians Serve as Gatekeepers

Rather than requiring external review of individual cases, some managed care plans implement mechanisms that more fully internalize authorization systems. In most HMOs and POS plans, network services not rendered directly by the primary care physician require the primary care physician's authorization. The patient may see a specialist or go to a hospital for a nonemergency condition only after receiving a referral from the primary care physician. In this way, the primary care physician serves as the gatekeeper for specialist and hospital services. Often, capitation along with withhold and bonus systems provide primary care gatekeepers a financial incentive to limit referrals.

The use of a gatekeeper and prepaid reimbursement underlies the HMO philosophy that emphasizes the role of the primary care physician as the principal source of health care.[24] The use of gatekeepers also recognizes that, although physicians' services account for less than one-fourth of personal health care spending, physicians direct or prescribe the provision of more than 70 percent of all personal health care.[25] By giving the primary care physician responsibility and financial risk for managing the patient's health care, HMOs contend that they are better able than indemnity plans to coordinate care and avoid duplication of services.

[23]By establishing practice protocols, managed care organizations hope to minimize geographic variations in health care use among their enrollees. For example, hospital rates of 700 bed days per 1,000 persons are typical in the South and Midwest, whereas 500 bed days per 1,000 persons are more typical on the West Coast where network-based managed care is more common. Data also show significant variations in practice patterns in similarly sized cities in the same geographic area. See John E. Wennberg et al., "Hospital Use and Mortality Among Medicare Beneficiaries in Boston and New Haven," The New England Journal of Medicine, Vol. 321, No. 17 (1989), pp. 1168-1173.

[24]Similarly, many managed care plans utilize alternative, nonphysician providers. Staff and group model plans are twice as likely to use nurse practitioners, physician assistants, and nurse midwives as IPA plans. By including these alternative health care providers in the network, managed care plans can steer patients to less expensive practice settings.

[25]Katharine R. Levit et al., "National Health Expenditures, 1990," Health Care Financing Review, Vol. 13, No. 1 (1991), pp. 29-54.

Some employers believe gatekeepers are effective in controlling access to the health care system and reducing utilization. A study of SAFECO Insurance Company indicated that gatekeepers can reduce utilization. Those enrolled in a gatekeeper plan had 6 percent more visits to primary care physicians and 9 percent fewer visits to specialists than enrollees in a similar plan without a gatekeeper.[26]

By placing limits on the physician's ability to independently determine appropriate care, managed care plans necessarily limit the physician's autonomy. For example, primary care gatekeepers may limit physicians' medical discretion by limiting specialists to one patient visit per authorization. Plans may also prohibit secondary referrals from a specialist to another physician; the primary care physician serving as the gatekeeper would have to make these referrals.

Physicians and hospitals dislike the additional administrative requirements imposed by managed care plans. Requiring the provider to get authorization for services, either through utilization review organizations or primary care gatekeepers, adds administrative burden. Some managed care mechanisms, such as physician profiling and using cost and quality data for selecting network providers, impose additional data and record-keeping requirements on physicians and hospitals. In particular, physicians and hospitals that serve patients from different managed care plans dislike the multiplicity of reimbursement, authorization, and review requirements.

[26]The two plans, however, did not differ significantly in hospital use. The gatekeeper plan also included a financial risk sharing arrangement to reduce specialist referrals. See Diane P. Martin et al., "Effect of a Gatekeeper Plan on Health Services Use and Charges: A Randomized Trial," American Journal of Public Health, Vol. 79, No. 12 (1989), pp. 1628-1632.

Evidence on Managed Care Cost Savings

With more than half of all employees enrolled in network-based health plans, policymakers and company executives are asking whether managed care has succeeded at controlling costs. Because each group views this question differently, the answer is not clear. For policymakers, the relevant question is whether shifting more employees from managed indemnity plans to network-based managed care plans would slow the growth in national health care expenditures. For large employers, the relevant question is whether the current mix of managed care plans constrains their health care spending because they generally offer their employees a choice of health plans (including managed indemnity, PPOs, and HMOs).[1]

Although some employers believe that they are saving money through managed care, other employers contend that apparent savings, which are often attributed to managed care, have been illusory. To date, a definitive evaluation of managed care does not exist because of a lack of clear definition, difficulty in obtaining data, the high cost of conducting an evaluation, and the constantly changing structure of managed care.

Evidence From the Literature

Few studies of managed care's potential to reduce costs have been able to rigorously isolate savings resulting from managed care mechanisms from other important factors that also influence costs. Although some studies have indicated that staff and group model HMOs reduce use of health care services, few studies have examined whether these lower use rates result in savings for employers. Also, little evidence exists for the newer and typically less tightly controlled forms of managed care networks—IPA HMOs, POS plans, and PPOs—that are prevalent among employers.

Variables that could diminish or confound differences are considerable and range from differences in health insurance benefits to comparing network and non-network populations. A leading health policy expert estimates that favorable selection—that is, healthier individuals enrolling in managed care plans—and differences in benefit levels may account for as much as 75 percent of the difference in health plan costs.

[1]Managed care plans are beginning to use quality measures to select and monitor providers. Sufficient data have not been developed yet to properly assess their effectiveness.

Managed care plans often attract younger, healthier individuals (who are less costly to care for) than indemnity plans for several reasons.[2] Managed care plans may gear their promotional efforts to healthier populations, with some benefits offered by HMOs and other managed care plans, such as well child care and preventive services, appealing to young, healthy families and individuals. Also, high users of health services may be reluctant to break established relationships with doctors to switch to a managed care plan.

In addition, differences in managed care and indemnity plans' benefits can influence costs.[3] HMOs typically provide comprehensive coverage at little out-of-pocket cost. PPOs and POS plans offer two levels of patient cost sharing to encourage enrollees to use network providers. These benefit differences can work to increase costs since broader scope of coverage and minimal copayments may generate greater utilization. However, benefit design features may reduce costs by directing enrollees to providers with whom the plan has established cost controls.

Only a handful of studies have successfully addressed the problem of biased selection.[4] One of the most frequently cited, the RAND Health Insurance Experiment (1976-1981), avoided biased selection by randomly assigning individuals to a staff model HMO or several indemnity plans with different cost sharing requirements. The HMO had per capita costs about 25 percent lower than an indemnity plan without any cost sharing, largely due to a 40-percent reduction in hospital admissions.[5]

The RAND results may not reflect the cost savings most employers would typically find from enrolling in current managed care plans. Neither the managed care plan nor the indemnity plan used in the RAND experiment resembles most plans operating today. During the last decade, most managed care plans implemented by employers have been less tightly

[2]Selection bias may reverse as the managed care plans mature. Enrollees in the plan age and may develop health problems that they did not have before joining the plan; enrollees also establish relationships with physicians in the managed care network and then avoid changing to other managed care or indemnity plans.

[3]Nearly all HMOs cover adult physicals, well baby care, and well child care. These benefits are covered by 54 to 75 percent of PPO and POS plans, and only 32 to 46 percent of indemnity plans. Indemnity plans are much more likely than HMOs to cover chiropractic care and slightly more likely to cover outpatient drug and alcohol care and mental health care. See KPMG Peat Marwick, p. 23.

[4]For a summary of the literature, see Miller and Luft, pp. 3-37 and James P. Hadley and Kathryn Langwell, "Managed Care in the United States: Promises, Evidence to Date and Future Directions," Health Policy, Vol. 19 (1991), pp. 91-118.

[5]Willard G. Manning et al., "A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services," The New England Journal of Medicine, Vol. 310, No. 23 (1984), pp. 1505-1510.

managed than the staff model HMO assessed by RAND. Because they allow enrollees to opt out of the network and include a broader range of providers, most of today's plans have less control over utilization and costs. Moreover, the indemnity plan with no cost sharing, which the RAND study used as the primary comparison model, does not resemble typical current indemnity plans. Most indemnity plans today require significant cost sharing and utilization review to reduce the use of services.[6] Since the early 1980s, many health care services have shifted from hospitals to outpatient settings, such as surgical centers. A recent study concludes, therefore, that much of the savings possible from reduced inpatient hospital use has already been achieved.[7]

A recent study, the Medical Outcomes Study, found that patients cared for by physicians in HMOs were hospitalized nearly 45 percent less than patients visiting physicians practicing individually or in small, single specialty groups.[8] However, about one-third of this difference was due to the fact that patients visiting HMO physicians were healthier to start with. After adjusting for differences in patient demographics and severity of illness, the HMO patients had nearly a 30 percent lower rate of hospitalization, but 9 percent more physician visits. The study did not estimate the net effect of these utilization differences on the costs of care per patient or premium costs.

Several recent analyses confirm that the literature is insufficient to determine the cost savings potential of managed care plans. The Physician Payment Review Commission and the Congressional Budget Office have reported that the evidence on the effectiveness of managed care to control costs is inadequate and inconclusive.[9] Other analysts have concluded that "...some very basic questions about managed care remain unanswered. We do not even know if managed care saves money."[10] Advocates of managed competition, a health reform proposal that would establish a new framework for large managed care organizations to compete, acknowledge that current managed care plans have often "increased administrative

[6]The RAND study also compared the HMO's use rates and costs with fee-for-service plans with various cost sharing requirements. The differences in use narrowed when cost sharing was introduced.

[7]See William B. Schwartz and Daniel N. Mendelson, "Why Managed Care Cannot Contain Hospital Costs—Without Rationing," Health Affairs, (1992), pp. 100-107.

[8]Sheldon Greenfield et al., pp. 1624-1630.

[9]Physician Payment Review Commission, "Managing Care: Beyond the Rhetoric," Annual Report, 1992 (Washington, D.C.: 1992), pp. 313-346 and Congressional Budget Office, "CBO Staff Memorandum: The Effects of Managed Care on Use and Costs of Health Services," (Washington, D.C.: 1992), pp. 1-32.

[10]Robert H. Miller and Harold S. Luft, "Diversity and Transition in Health Insurance Plans," Health Affairs, (Winter 1991), pp. 37-46.

complexity and arms-length conflict without equivalent improvements in cost and quality."[11]

Evidence From Insurers and Managed Care Organizations

Representatives of health insurers and managed care trade associations that we contacted contend that managed care plans cost less than indemnity plans. However, the evidence they present to validate their views consists mostly of anecdotal evidence and simple cost comparisons. Several associations acknowledged that a lack of rigorous evidence exists to carefully compare managed care's cost effectiveness to that of indemnity plans. While they recognize that comparisons need to adjust for biased selection and benefit differences, insurance and managed care associations did not provide information that included such adjustments.

One method to assess managed care is to predict what health plan costs would have been if the group had not switched from an indemnity plan to managed care. This forecasted health care cost is compared to actual costs, and the difference is credited to managed care. Although this approach appears straightforward, it may overstate the savings attributable to managed care. Unless the forecasted spending level is properly adjusted for other changes affecting the local health care market, managed care may be credited with savings actually attributable to changes in other variables.

Another approach to estimating savings from managed care is to compare the costs of a group enrolled in a managed care plan with a group of indemnity enrollees. The difference in the rate of cost growth is ascribed to managed care. Unfortunately, such comparisons require selecting actuarially equivalent groups (defined by demographic characteristics and health status) or adjusting for differences between groups. Both approaches also require a sufficient time period to measure a fully implemented managed care program and need to account for differences in benefits and employee cost sharing.

Insurers and managed care trade associations generally recognize the definitional problems but only have simple cost comparisons to support claims of cost savings from managed care. The Health Insurance Association of America (HIAA), which represents commercial insurers, has conducted a survey of employers that shows that premiums for HMOs and

[11]Paul Ellwood, Alain Enthoven, and Lynn Etheredge, "The Jackson Hole Initiatives for a Twenty-First Century American Health Care System," Health Economics, Vol. 1 (1992), pp. 149-168.

PPOs are nearly identical to indemnity plan premiums.[12] HIAA acknowledges that few rigorous analyses exist of the cost effectiveness of managed care. HIAA has commissioned a study comparing the claims experience of several large insurers but reports that data problems have hampered this study.[13]

The Blue Cross and Blue Shield Association cites its medical expense experience as evidence of managed care's cost effectiveness. Between 1987 and 1991, medical expenses per enrollee rose by more than 55 percent for indemnity and PPO plans but by about 35 percent for HMO enrollees. However, this simple comparison in growth rates does not adjust for possible changes in enrollee health status or plan benefits over time.[14] Blue Cross and Blue Shield also points to a study of Minnesota's state employees health plan showing a substantial slowing of cost growth following the introduction of managed care. However, in the 2 years before implementation, costs rose 50 percent per year. It is unclear whether the lower cost increases for this group are due to managed care or to the several years of sharp cost increases.

The Group Health Association of America (GHAA), representing prepaid group health plans, also contends that tightly controlled prepaid health plans are more cost effective than indemnity plans but cannot specify the amount of savings. GHAA presented examples of companies that claim savings. In its survey, the association found that HMOs have lower inpatient hospital utilization rates than the national average. However, these comparisons also lack necessary adjustments for health status differences and benefit levels.

The American Association of Preferred Provider Organizations (AAPPO) reported that most data on PPO cost savings are anecdotal and cannot be generalized. Since PPOs have traditionally emphasized discounts from billed charges, PPOs have traditionally collected data on prices of services rather than total costs of care per enrollee. AAPPO is developing a methodology to assess PPO cost savings over time but currently does not have such data.

[12]The 1991 HIAA survey shows that HMO and indemnity plan premiums for family coverage are nearly identical, but HMO premiums for individual coverage are 12 percent less than indemnity plans.

[13]Other researchers who have attempted to analyze insurance claims data to assess managed care and indemnity plans' relative cost effectiveness also note that much of insurers' data is considered proprietary and is unavailable for public research.

[14]Furthermore, the comparison does not separately assess the cost experience of the more than 14 million persons enrolled in Blue Cross and Blue Shield PPOs (nearly three-fourths of Blue Cross and Blue Shield's managed care enrollees).

Evidence From Employers

Although many employers we contacted believe they are saving money, others expressed general disappointment in the cost record of managed care. Some firms have experienced initial savings but are disappointed with the continued cost increases of both managed care and indemnity plans. Employers face data problems in assessing the cost performance of managed care plans compared with indemnity plans. Most employers have not analyzed their managed care costs while controlling for benefit and demographic differences or other factors. Given these results, companies are finding it necessary to frequently change the structure of their benefit plans.

Aggregate Employer Data

Several employer benefits consultants have surveyed companies to measure the differences in costs per employee between managed care and nonmanaged care plans. Although these surveys provide aggregated employer data on health plan costs, they do not adjust these costs for biased selection or benefit differences among the plans. Two of the largest employer surveys, conducted by Foster Higgins and Peat Marwick, indicate inconsistent results and wide variation among employers.[15] Foster Higgins's survey of more than 2,400 employers found that HMO costs per enrollee averaged nearly 19 percent less than the average indemnity plan in 1992. Compared to indemnity plans, the average POS plan and PPO plan cost 13 percent and 9 percent less per enrollee, respectively. However, about half of employers reported that HMO rates were the same or greater than their indemnity plan rates. In its survey of more than 1,000 employers, Peat Marwick found that HMO premiums averaged only 2 to 4 percent less than indemnity premiums in 1992, but PPO and POS plan premiums exceeded indemnity premiums by as much as 7 percent (see fig. 4).

These employer surveys are also inconsistent in reporting whether managed care plans have significantly reduced the growth of health care costs. Foster Higgins reports that, in 1992, indemnity plan premiums rose by more than 14 percent, whereas HMO and POS premiums rose by less than 9 percent. However, in 1991, costs per enrollee rose by 13 to 14 percent for indemnity plans, HMOs, and PPOs. For a longer period, from 1987 to 1992, data from Peat Marwick and HIAA suggest that indemnity and managed care premiums followed similar rates of increases. Indemnity and PPO/POS premiums each increased by 105 percent, while HMO premiums increased by 90 percent (see fig. 5).

[15]Foster Higgins, pp. 2-64, and KPMG Peat Marwick, pp. 1-41.

Individual Employer Data

In reviewing their health care expenditures, many employers compare costs between different types of managed care plans and their mix of plans from year to year. Some companies reported that they believe that some managed care plans have reduced costs. However, other firms have found savings from managed care plans to be elusive. Most employers cannot confidently determine whether their managed care plans are resulting in savings.

Southwestern Bell Corporation is one of the few employers that has rigorously assessed its managed care plan costs, including adjustments for demographic differences. The company's analysis found that the costs of its POS plan were 13 percent lower than expected, primarily due to 25 percent lower inpatient hospital expenditures.[16] However, the analysis shows that some of the POS plan's savings resulted from employees shifting from other managed care plans. Employees who had enrolled in the HMOs offered by the company tended to be younger and less costly than most Southwestern Bell employees, but the HMOs' premiums averaged more than the cost would have been if they had remained in the company's POS plan. Over time, as HMO enrollees switched to the company's POS plan, the company recouped the higher premium costs of the HMOs. Therefore, while Southwestern Bell provides an example of a successful POS plan, the cost savings the company reports also result from changes among different managed care plans, rather than just a change from traditional indemnity plans to managed care.

Other employers have also found that, even with favorable selection, HMO premiums are not necessarily less than premiums for indemnity plans. Some employers are disappointed by shadow pricing that occurs when some HMOs simply track the employer's alternate plan and set their rates slightly lower to retain a competitive edge. Employers are now pressuring HMOs to modify their premiums to more accurately reflect the employers' demographics and experience.

Many employers' attempts to assess managed care plans were hindered by the unavailability and incomparability of data on their health plans. Companies attributed the unavailability of data to several factors. Many companies are frustrated by their inability to obtain data from the HMOs that serve their employees. Because many HMOs do not need to collect individual claim forms, they often lack the group-specific cost and utilization data that employers seek. Even when employers received data

[16]The reduction in costs from lower inpatient hospital expenditures was somewhat offset by increased outpatient care. See Ron Z. Goetzel et al., pp. 33-37.

from HMOs and other managed care plans, they were frequently incomparable because of different report formats, time periods, and local market conditions.

In addition, several employers have changed managed care plans too recently to have obtained reliable data. To properly assess the effect of a change in health plans, several years of data are necessary.[17] The frequent changes in employers' managed care plans and the evolving managed care market have made such assessments of plan effectiveness difficult.

Several employers also indicated that, from their perspective, it is unnecessary to precisely compare the cost effectiveness of managed care plans to that of indemnity plans. Many employers are primarily concerned with comparing the current year's health costs with previous years' costs rather than with a health plan previously offered. If the trend in health costs is acceptable, then the company does not feel a need for rigorous analysis; if the trend is unacceptable, the company will attempt additional changes to control costs. Therefore, many employers did not commit the resources necessary to carefully assess the cost effectiveness of their managed care plans.

[17]First-year results from a change in health care plans are frequently unreliable and may not reflect future trends. Some employees may delay health care until they are more familiar with the new requirements of their health plan, while other employees may begin to receive care they have put off because of new benefits that are covered or lower out-of-pocket costs. Problems from biased selection may also be more acute in the first years of a plan.

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