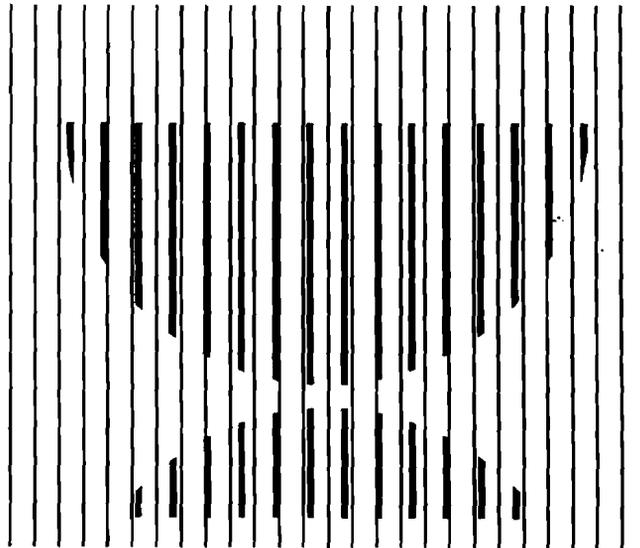


# **CBO STAFF MEMORANDUM**

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**THE EFFECTS OF MANAGED CARE ON  
USE AND COSTS OF HEALTH SERVICES**

June 1992



**CONGRESSIONAL BUDGET OFFICE  
SECOND AND D STREETS, S.W.  
WASHINGTON, D.C. 20515**

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This Congressional Budget Office (CBO) Staff Memorandum was prepared in response to requests from the Committee on Ways and Means of the U. S. House of Representatives and the Committee on Finance of the U.S. Senate. It assesses the evidence about the effectiveness of managed care organizations and interventions on the use and costs of health services--both for the affected populations and for the entire health care system. The focus of this examination is on managed care for acute care services; it does not consider the issue of managed care's effects for chronically ill populations nor does it examine managed care interventions that focus on specific services--for example, mental health or dental care. Also, because the arrangements are so diverse, no attempt has been made in this memorandum to assess the impacts of managed care under the Medicaid program.

This report updates and supplements CBO's May 1990 Staff Memorandum "Managed Care and the Medicare Program: Background and Evidence." It draws upon CBO's review of the existing research into the types and effectiveness of managed care arrangements and upon information and suggestions from a series of expert panel meetings convened by CBO to discuss various cost containment approaches. An appendix that defines terms commonly used to describe managed care organizations and interventions is included at the end of this memorandum. In keeping with CBO's mandate to provide objective and impartial analysis, the report contains no recommendations.

This memorandum was prepared by Kathryn Langwell, of CBO's Human Resources and Community Development Division, under the direction of Nancy M. Gordon. Julia Jacobsen and Kimberly Guise provided research assistance and prepared the appendix. Roger Feldman of the University of Minnesota and Judy Cahill of the Group Health Association of America provided valuable comments. Sherwood Kohn edited the manuscript. Sharon Corbin-Jallow prepared the final version of the manuscript. Questions about the analysis may be addressed to Kathryn Langwell at (202) 226-2653.

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## INTRODUCTION

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Managed care has been widely advocated since the early 1970s as a strategy for controlling the costs of health care. Its principal impetus is evidence that some health services provided to consumers are unnecessary or inappropriate. Managed care is designed to intervene in the decisions made by providers of care to ensure that they furnish only necessary and appropriate services.

Recent studies suggest that health care providers perform many inappropriate medical procedures. For example, one study of selected medical procedures furnished to Medicare beneficiaries in eight states found that 17 percent of coronary angiographies, 32 percent of carotid endarterectomies, and 17 percent of upper gastrointestinal tract endoscopies were inappropriate.<sup>1</sup> If these patterns persist in all medical services, the loss to society from providing unnecessary or inappropriate services may be substantial. Managed care, based on guidelines for appropriate care, and employing utilization review and feedback to physicians about appropriate care, is expected to reduce this loss.

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1. See Mark Chassin and others, "Does Inappropriate Use Explain Geographic Variations in the Use of Health Care Services?" *Journal of the American Medical Association*, vol. 258 (November 13, 1987), pp. 1-5.

In addition, some managed care organizations negotiate with providers to obtain the lowest prices available for specific services. They may also offer to providers financial incentives that are tied to aspects of the organization's performance. These negotiated prices and incentives may, in turn, lead to greater efficiency in providing services.

## DEFINITION OF MANAGED CARE

The term "managed care" encompasses a variety of interventions in health care delivery and financing.<sup>2</sup> The major aspects of managed care include:

- o Reviewing and intervening in decisions about providing health services,
- o Establishing a network of providers and then limiting or influencing patients to use those providers, and
- o Negotiating different payment terms with providers.

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2. This memorandum examines managed care as applied to acute care services normally covered by insurance. Although there are managed care interventions that focus on specific types of services—for example, mental health services—or on specific populations, such as people who are chronically ill, these more narrow managed care programs are not considered. In addition, because the managed care systems under the Medicaid program are very diverse, no attempt is made in this memorandum to assess their impacts.

Each of these approaches can be carried out in ways of varying effectiveness. Moreover, many managed care organizations limit their activities to one or two of these interventions.

## TYPES OF MANAGED CARE

Health maintenance organizations (HMOs), preferred provider organizations (PPOs), hybrid plans that offer choices to patients at the "point of service," and "managed" fee-for-service insurance plans that require utilization controls all employ some form of managed care.<sup>3</sup> Each of these arrangements manages care in a different way, although the distinctions among them are not always clear cut. HMOs afford the greatest degree of intervention in health care decisionmaking through an integrated delivery and financing system. There is, however, great diversity among HMOs. Some offer provider networks that serve only HMO members and permit access to specialists only through a referral. Others offer arrangements that limit the consumer's choice among fee-for-service providers in the community, but permit direct access to specialists in the HMO's networks. HMOs may pay physicians on a salary, capitation, or fee-for-service basis. These and others

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3. See the Appendix for definitions of various forms of managed care.

differences among HMOs have a significant effect on the ability of HMOs to reduce use and costs.

PPOs attempt to influence patients' choice of providers by offering differential cost sharing that rewards the patient who selects a provider from the PPO network. Point-of-service (POS) plans, like PPOs, offer patients the opportunity to choose managed care each time a service is sought. Most POS plans, however, impose considerably higher cost sharing on patients who do not choose a managed care option, and in addition require that patients who choose managed care obtain treatment by referral to an approved provider through a primary-care gatekeeper. "Managed fee-for-service" ordinarily involves utilization management and review overlaid on a traditional insurance package.

Managed care grew dramatically during the 1980s. The number of HMOs more than doubled after 1980, with almost 39 million enrollees by the end of 1991. Growth in the population covered by PPOs was also substantial during the 1980s. In 1984, only 1.3 million households were eligible to use PPOs, compared with more than 18 million by January 1989. Recent data on the growth of managed care arrangements between 1987 and 1990 indicate that fee-for-service insurance that includes utilization management also grew dramatically over that period, while growth in PPO enrollment was modest,

and point-of-service plans accounted for only 5 percent of total insurance coverage in 1990.<sup>4</sup> HMO enrollment increased by 6 percent between 1990 and 1991 after relatively slower growth between 1987 and 1990.<sup>5</sup> Overall, 95 percent of employees who are covered by private insurance based on employment are subject to some type of utilization review and management arrangement (see Table 1).

#### THE EFFECTS OF MANAGED CARE ON HEALTH CARE SPENDING

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Managed care could affect health spending through three mechanisms. First, providers who practice cost-effectively may be identified and patients may be required or offered incentives to use them. Second, utilization management and control techniques may be used to reduce the amount of inappropriate or unnecessary care. In addition, managed care organizations may negotiate with providers for lower prices and offer financial incentives to providers to control costs. These mechanisms could result in lower spending for health services than would have occurred without these interventions. Lower spending could be achieved through a one-time drop in use and spending

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4. Elizabeth W. Hoy, Richard E. Curtis, and Thomas Rice, "Change and Growth in Managed Care," *Health Affairs*, vol. 10, no. 4 (Winter 1991), pp. 18-36.

5. Personal communication with Judith Cahill, Group Health Association of America.

TABLE 1. DISTRIBUTION OF EMPLOYEES AMONG TYPES OF HEALTH BENEFIT PLANS, 1987-1990

Type of Plan	Percent of Employees			
	1987	1988	1989	1990
Unmanaged Fee-for-Service	41	28	18	5
Managed Care	59	72	82	95
Managed fee-for-service <sup>a</sup>	32	43	49	57
Health maintenance organizations	16	18	17	20
Preferred provider organizations	11	11	16	13
Point-of-service plans	b	b	b	5

SOURCE: Congressional Budget Office, based on data from Elizabeth W. Hoy, Richard E. Curtis, and Thomas Rice, "Change and Growth in Managed Care," *Health Affairs*, vol. 10, no. 4 (Winter 1991), pp. 18-36.

- a. Managed fee-for-service includes any traditional insurance arrangement that uses utilization monitoring or review as an integral component of its benefit package to reduce unnecessary or inappropriate care.
- b. No data available.

levels or through a reduction in the growth rate of health expenditures over time. Reduced levels or rates of growth of spending for a particular group, however, would not necessarily result in reduced health spending for the nation as a whole.

### Impact of Managed Care on Use and Costs for Covered Populations

Reliable evidence on the effectiveness of managed care is relatively sparse and limited mostly to the experience of health maintenance organizations. The limited research on this issue is attributable to several factors. First, few studies have been able to make allowances for differences in health status and preferences for style of medical practice between those who choose to enroll in managed care plans and those who remain in traditional insurance arrangements. Thus, differences in use and costs of health care between managed care enrollees and those with traditional insurance coverage may substantially reflect selection patterns rather than the effectiveness of managed care. Second, detailed and reliable data on use and costs of health services provided within managed care organizations are often unavailable. Many managed care organizations pay providers on a basis other than fee-for-service and therefore do not maintain records of the use of services by individual patients and the costs of those services. Finally, many of the newer

forms of managed care, including PPOs and POS plans, have emerged only recently and little research on their impacts and effectiveness has been conducted.

Health Maintenance Organizations. Most of the well-designed research into the effectiveness of HMOs in controlling use and costs of services has been conducted in organizations with integrated financing and delivery systems--staff and group model HMOs--that are different from the majority of today's managed care organizations. In a study that lacked the confounding effects of biased selection, one HMO was found to have reduced hospital admissions by about 40 percent and total spending by about 25 percent.<sup>6</sup> Another study of Medicare enrollees in HMOs, one that adjusted for selection effects, found that group and staff model HMOs were able to reduce hospital use of Medicare enrollees significantly, but that independent practice association model HMOs--plans that contract with independent fee-for-service physicians rather than a physician group that exclusively serves the HMOs' members--had little or no effect on hospital use.<sup>7</sup> Another recent study focused on differences among HMOs, medical group practices, and solo medical

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6. See Willard G. Manning and others, "A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services," *New England Journal of Medicine*, vol. 310, no. 3 (June 7, 1984), pp. 1505-1510.

7. Randall Brown, *Biased Selection in the Medicare Competition Demonstrations* (Washington, D.C.: Mathematica Policy Research, April 1987).

practitioners in using resources to treat specific medical conditions.<sup>8</sup> Results of that analysis--which examined three HMOs and medical practices in three cities--indicated that HMOs used fewer resources, particularly hospital services, than did solo practitioners in treating specific conditions. The study did not examine the extent to which these differences were associated with lower spending for health care, either for specific conditions or for the overall care provided to patients in these settings. While there have been many other studies of the impact of HMOs on use and costs of services, problems in the design of those studies and with the data available for the analyses make the findings inconclusive.

Preferred Provider Organizations. Little research has been done into the impact of PPOs on overall use and costs of health services. One study of five PPOs found that their enrollees were more likely to use health services than those who were not enrolled. In addition, the probability of admission to a hospital and the number of hospital days used were not significantly different for users and non-users of PPOs, but PPO users visited physicians less often on an ambulatory basis. Because of the lower ambulatory use and discounts from PPO providers, costs for PPO users were found to be less in four of the five plans.<sup>9</sup> Researchers, however, were confronted with substantial data

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8. Sheldon Greenfield and others, "Variations in Resource Utilization Among Medical Specialties and Systems of Care," *Journal of the American Medical Association*, vol. 267, no. 12 (March 25, 1992), pp. 1624-1630.

9. Susan D. Hosek and others, *Health Care Utilization in Employer Plans with Preferred Provider Organization Options* (Washington, D.C.: The RAND Corporation, May 1989).

problems, including difficulty in defining PPO users and obtaining adequate data to control for biased selection. These data limitations may, in part, account for the finding that the PPOs--unlike the HMOs in other studies--appeared to affect ambulatory rather than hospital use.

Other Managed Care Approaches. While there are studies of the effects of utilization controls and review when applied within a traditional insurance framework, no well-designed studies based on adequate data appear to have been conducted on point-of-service plans or other new and hybrid arrangements.

Several studies of the effects of fee-for-service insurance with utilization management programs have recently been reported, however. One study analyzed a utilization review program run by a large private insurance carrier in 88 employer groups between 1983 and 1985.<sup>10</sup> The study found that utilization review reduced hospital expenditures by nearly 12 percent and total medical expenditures by 8 percent when compared with groups that had not set up a utilization review program. The impact was most substantial in groups that started with high levels of hospital admissions. An extension of this analysis over another year indicated that both utilization and expenditures

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10. Paul Feldstein and others, "Private Cost Containment: The Effects of Utilization Review Programs on Health Care Use and Expenditures," *New England Journal of Medicine*, vol. 318, no. 20 (May 19, 1988), pp. 1310-1314.

continued to be affected, but that growth rates were not affected by utilization review.<sup>11</sup>

Another recent study of utilization review under fee-for-service insurance arrangements attempted to isolate the effects of various types of utilization controls.<sup>12</sup> The analysis of nine years of experience with utilization review in Blue Cross and Blue Shield plans indicated that the combination of preadmission certification and concurrent review of hospital episodes reduced hospital admissions and the number of days of inpatient care. The result was that payments for hospital inpatient services were reduced by about 4 percent. The study was not able to determine, however, whether the reduction in hospital use increased the use of outpatient services. If outpatient services increased, the effect on total spending would be less than the reported effect on spending for inpatient services.

Evidence from a study of a utilization review program phased in by Aetna Life and Casualty Insurance Company during the 1987-1988 period provides further information on the effects of utilization review under fee-for-

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11. Thomas M. Wickizer, "The Effect of Utilization Review on Hospital Use and Expenditures: A Review of the Literature and an Update on Recent Findings," *Medical Care Review*, vol. 47, no. 3 (Fall 1990) pp. 327-363.

12. Richard Scheffler and others, "The Impact of Blue Cross and Blue Shield Plan Utilization Management Programs, 1980-1988," *Inquiry*, vol. 28 (Fall 1991), pp. 263-275.

service insurance arrangements.<sup>13</sup> After adjusting for demographic characteristics, plan benefits, group size, year, and seasonal effects--and controlling for utilization prior to the introduction of the utilization review--spending on patients in the hospital dropped about 8 percent after one year and total medical expenditures fell about 4 percent. Since this study has the data to control for prior-use patterns of the affected populations, it provides the most convincing evidence to date of the impact of utilization review under fee-for-service insurance.

#### Impact of Managed Care on Systemwide Costs

Only a few studies have examined the effect of managed care on systemwide health care costs, and those, hampered by data limitations and the complexities of determining causality in the context of numerous variables, produced mixed results. These studies fall into two categories: those that attempt to assess the effect of HMO penetration of the Medicare market on Medicare costs, and those that attempt to assess the effect of HMO market share on hospital costs. Thus, the central question of whether reductions in health care costs achieved by managed care also result in lower total spending

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13. Rezaul K. Khandker and Willard G. Manning, "The Impact of Utilization Review on Costs and Utilization," in P. Zweifel and H.E. Frech III eds., *Health Economics Worldwide* (The Netherlands: Kluwer Academic Publishers, 1992).

within the health care system has not been addressed. Such savings might occur for two reasons: managed care could reduce spending for those people who are covered by it, and as physicians and other providers begin to treat more patients under managed care, they may adopt these practice patterns for their fee-for-service patients as well.

Two studies examine the effect of HMO penetration on average fee-for-service spending under Medicare in markets with Medicare HMOs. In one study, the HMO share of the Medicare market among counties in the 1985-1988 period had little effect on average fee-for-service Medicare costs. But the study covered the very beginning of the Medicare HMO program, and the early effects may have been slight.

A more recent study examined the impact of the HMO share of the Medicare market on average Medicare costs within metropolitan areas over the 1986-1987 period.<sup>14</sup> The results suggest that a 10 percentage point increase in Medicare HMO market share decreased average Medicare expenditures in the market area by 1.2 percent. However, this study has significant methodological problems as well as data limitations that place its findings in question. In addition, the coefficient of the HMO market share variable is not significant at the generally accepted level. Thus, it is

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14. W. Pete Welch, "HMO Market Share and Its Effect on Local Medicare Costs" (Washington, D.C., The Urban Institute, 1991).

unwarranted to conclude that this study demonstrates that HMO market penetration lowers Medicare spending.

Several other studies have examined the effect of HMO penetration on the use of and spending for hospital care in these markets.<sup>15</sup> The studies' results are mixed, although most of the evidence indicated that HMO market share had little or no effect on hospital use and costs. Only two studies (Robinson, 1991; and Melnick and Zwanziger, 1988) found that HMO market penetration reduced hospital costs, and in both of these studies the actual reduction in the rate of increase of hospital costs associated with HMO market share was very small when compared with total growth in hospital spending. None of the studies was able to examine the effect of HMO market share on total spending for health services. If a reduction in hospital spending in areas with higher HMO market share was observed, it also would be useful to know whether spending for nonhospital health services increased in response to this change.

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15. Catherine G. McLaughlin, "HMO Growth and Hospital Expenses and Use: A Simultaneous-Equation Approach," *Health Services Research*, vol. 22, no. 2 (June 1987), pp. 183-205; James C. Robinson, "HMO Market Penetration and Hospital Cost Inflation in California," *Journal of the American Medical Association*, vol. 266, no. 19 (November 20, 1991), pp. 2719-2723; Glenn A. Melnick and Jack Zwanziger, "Hospital Behavior Under Competition and Cost Containment Policies," *Journal of the American Medical Association*, vol. 260, no. 18 (November 11, 1988), pp. 2669-2675; Jack Hadley and Katherine Swartz, "The Impacts on Hospital Costs Between 1980 and 1984 of Hospital Rate Regulation, Competition, and Changes in Health Insurance Coverage," *Inquiry*, vol. 26 (Spring 1989), pp. 35-47.

## Summary

The available evidence suggests that group and staff model HMOs can have a significant impact on use and costs of services for their enrollees, although these effects may not lower systemwide costs. Research on independent practice association model HMOs and PPOs is more limited, particularly when considering only well-designed studies with data to control for selection effects. The limited evidence suggests that these forms of managed care may reduce use and costs, but there is much less certainty about this conclusion, and the potential effect is probably much less than the effect reported for group and staff model HMOs. Recent research into the effects of utilization review applied to traditionally insured populations suggests that these approaches may be effective, particularly when applied to insured groups with hospital use patterns that are exceptionally high.

Despite the fact that much has been written about the effects of various managed care interventions on the use and costs of services for affected groups, there is only a limited amount of well-designed research based on adequate data. As a result, the consensus of a number of recent reviews of this evidence is that the results are inconclusive. The Physician Payment Review Commission states that "...the research base for evaluating the effects of managed care on costs and quality is inadequate to

the task of drawing meaningful conclusions. As Miller and Luft (1991) conclude, 'Some very basic questions about managed care remain unanswered. We do not even know if managed care saves money.'<sup>16,17</sup>

Similarly, the evidence is mixed concerning how much one payer's saving through managed care can be extended to the overall health care system. A recent survey of the literature concluded that the growth of managed care does not appear to have affected systemwide costs.<sup>18</sup> The reasons for this conclusion, assuming that at least some types of managed-care organizations are effective in reducing costs for their populations, might include higher administrative costs for managed care, shifting of costs from the segment of the population covered by managed care to the population not covered by managed care, or insufficient interest on the part of health care buyers in obtaining services for the least cost. At present, based on existing knowledge, it cannot be assumed that further growth of managed care would reduce either the level or the rate of increase of systemwide health care spending.

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16. Robert H. Miller and Harold S. Luft, "Perspective: Diversity and Transition in Health Insurance Plans," *Health Affairs*, vol. 10, no. 4 (Winter 1991), pp. 37-47.

17. Physician Payment Review Commission, *Annual Report to Congress 1992* (Washington, D.C., 1992).

18. Stanley S. Wallack, "Managed Care: Practice, Pitfalls, and Potential," *Health Care Financing Review, Annual Supplement, 1991*, pp. 27-34.

## CBO'S ASSUMPTIONS FOR ESTIMATING THE IMPACT OF MANAGED CARE ON HEALTH SPENDING

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The available evidence concerning the effectiveness of managed care supports the following assumptions that the Congressional Budget Office uses to assess the impact that managed care proposals would have on national health expenditures:

- o Staff model HMOs and group model HMOs reduce hospital use significantly. The impact on total health spending for the group that is associated with such a reduction in hospital use is less, however, because use of other services increases.
- o Other forms of managed care have less effect on hospital use and expenditures; between 0 percent and 8 percent reductions in overall expenditures have been reported.
- o The effect of any type of managed care appears to be a one-time reduction in spending; there is little evidence, to date, that growth in spending is affected by managed care.
- o The growth in the number of people subject to managed care does not appear to have been associated with a significant

reduction in the level or rate of growth of national health expenditures.

## DISCUSSION

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During the past decade, managed care appears to have had little effect on total health care spending in the nation. While some specific types of managed care--staff and group model HMOs--can be effective in reducing health care use and spending, enrollment in these types of organizations has not grown rapidly. There are two reasons. First, they offer a limited set of providers, and because these providers only serve HMO patients, potential enrollees would have to give up their current fee-for-service physicians. Second, staff and group model HMOs require much more capital for expansion than other types of arrangements that offer managed care through established fee-for-service providers who have their own facilities and equipment. Because expansion of capacity and voluntary enrollments has been limited, enrollment in staff and group model HMOs has grown only from 7.4 million in 1980 to 13.1 million in 1990--an average annual growth rate of less than 6 percent, compared with 14 percent annual growth in overall HMO enrollment. Thus, the most effective types of managed care accounted for only 23 percent of the total growth in HMO enrollment over this period.

As long as managed care approaches to cost control rely on modest incentives for voluntary enrollment in staff and group model HMOs, they are unlikely to produce significant decreases in health expenditures--even though those people who join in response to the new incentives may spend less and use fewer services. This might happen because relatively few people would join these organizations in response to modest increases in incentives and because, under the current system, reductions in spending for one group appear generally to be offset by increased spending for other groups.

If managed care arrangements were extended to cover everyone in the nation--for instance, through requiring that all insurance policies include utilization management and that financial penalties be imposed on consumers and providers for inappropriate use--overall spending might fall, since there would be no group outside managed care. Loosely structured managed care arrangements tend, however, to be less effective in reducing overall use and spending. As a result, even if everyone was covered by managed care, the impact on overall spending could be relatively small.

Managed care may also be less effective in controlling health care spending than the evidence from the 1970s and 1980s indicates, even for those organizations that are most tightly controlled. In the past, managed care has succeeded largely in reducing hospital use, but similar drops in the future are

now less likely. Between 1980 and 1990, community hospital admissions per 1,000 population dropped nearly 14 percent. At the same time, the average length of stay per admission declined 5 percent. Hospital use has declined throughout the entire population; while those in HMOs use hospitals less, admissions and length of stay have also fallen among the population that is not enrolled in HMOs.

Insofar as managed care's impact on spending is linked with its ability to reduce hospital admissions and length of stay, less hospital use means that HMOs will be able to squeeze less waste out of the health care system in the future. And the management techniques necessary to reduce the use of ambulatory care are relatively undeveloped. In other words, the trend within the health care system toward less hospital use could mean that managed care may achieve fewer savings in the future, except in the areas of the country where hospital use is high. In order to generate savings, therefore, technologies necessary for managing ambulatory care would have to be developed and be sufficiently inexpensive to warrant their application.

Conversely, managed care may offer greater control over the adoption of new technology. The most recent evidence that managed care does not slow the rate of increase in spending is from the mid-1980s<sup>19</sup> and may not

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19. Joseph Newhouse and others, "Are Fee-for-Service Costs Increasing Faster Than HMOs' Costs?" *Medical Care*, vol. 23 (August 1985), pp. 960-966.

reflect current capabilities to identify new technologies and develop guidelines for their use. More research into the methods being used by these organizations and their effects on the use of new procedures and diagnostic tests would be useful. In a competitive insurance market, the HMOs and insurers that effectively control use of these new and innovative procedures might attract fewer enrollees. Therefore, they may not yet have developed the mechanisms that would permit them to control the use of high-cost procedures and tests. With a substantial proportion of the growth in health spending attributed to technological change, however, it seems likely that administrators of managed care will explore the appropriate use of new services. Moreover, as a higher proportion of the population is covered by managed care, and fewer people are covered by unconstrained insurance, the potential for managed care to slow the growth of spending on health care may increase.

## APPENDIX

### DEFINITIONS OF MANAGED CARE TERMS

#### MANAGED CARE ARRANGEMENTS

**Managed Care:** Any type of intervention in the delivery and financing of health care that is intended to eliminate unnecessary and inappropriate care and to reduce costs.

#### Health Maintenance Organizations

**Health Maintenance Organization (HMO):** An organization that combines insurance coverage with a defined delivery system. Services are covered only when the insured population uses the organization's delivery system.

**Staff Model HMO:** An HMO that owns the clinical facilities that the insured population is required to use and that employs physicians on a salaried basis who only serve the HMO's membership.

**Group Model HMO:** An HMO that contracts with a multispecialty medical group to provide care to the HMO's membership. The medical group is managed independently of the HMO and is usually paid by the HMO on a

capitation basis. The medical group practice, not the HMO, contracts with the physicians who are members and may pay them on a fee-for-service, salary, or other basis. There are two types of group model HMOs. The HMO may require that the medical group's practice be limited to serving the HMO's membership. In this case, the medical group is fully integrated with the HMO, seeing no fee-for-service patients. Other group model HMOs may contract with an existing fee-for-service medical group to serve the HMO's patients. In this case, the medical group has a greater degree of autonomy from the HMO and usually maintains a substantial fee-for-service practice.

**Network Model HMO:** An HMO that contracts with two or more medical group practices that are independent, operate on a fee-for-service basis, and offer several specialties, to provide medical services to its members. A network model HMO that contracts with groups of primary care physicians (that is, physicians specializing in family practice, internal medicine, or pediatrics) is called a primary care network model HMO. Physicians are typically paid on a capitation basis.

**Independent Practice Association (IPA) Model HMO:** An HMO that contracts with individual fee-for-service physicians to provide services to the HMO members in the physicians' private offices. Originally, IPA physicians were generally paid on a discounted fee-for-service basis and were required

to bear some financial risk for excess use of services. This risk was imposed by withholding a portion of their fee-for-service payments that was paid only if use and costs met target rates set by the HMO. In recent years, it has become more common for HMOs to negotiate capitation payments that cover routine office-based care, and some specialty services, provided by IPA physicians. The IPA model HMO may contract directly with independent physicians or may contract with an association of physicians specially organized to negotiate with the HMO.

**Mixed Model HMO:** An HMO that adopts one model initially, then expands by adding a component of a different model. For example, a staff model HMO may expand its capacity and geographic area served by adding an IPA arrangement with fee-for-service physicians, rather than by building new clinical facilities and hiring additional salaried physicians.

**Open-Ended or Open-Access HMO:** An HMO that allows members to use providers (usually physicians) who do not participate in the HMO. When using physicians outside of the HMO, the HMO member is typically subject to traditional insurance arrangements, including a deductible and coinsurance of some fixed percentage.

## Preferred Provider Organizations

**Preferred Provider Organization (PPO):** An organization that contracts with an insurance company or employer to arrange a network of providers whose services are offered to members of an insurance plan or employment group. Insured members typically are offered incentives to use the PPO providers--for example, lower cost sharing or coverage of extra benefits. When enrollees need services, they decide whether to receive care from a PPO or a non-PPO provider. The provider network is generally chosen on the basis of performance and the PPO provides some type of utilization review. The PPO providers often agree to discount charges for services to their clients.

**Provider-Sponsored PPO:** A PPO that is owned, developed, and promoted by health care providers (such as hospitals, physician groups, and physician/hospital joint ventures). A provider-sponsored PPO is mainly a marketing device used to attract patients and assure market share in competitive environments.

**Carrier-Sponsored or Insurer-Sponsored PPO:** A carrier-sponsored or insurer-sponsored PPO plan is owned by an insurance company. An insurance carrier contracts directly with a network of providers to offer care to members

who choose to use the network, in exchange for additional benefits or lower cost sharing.

**Broker Model PPO:** A broker model PPO is owned, developed, and managed by an independent organization other than a group of providers or an insurer. Independent investors negotiate contracts to form the provider networks. In the broker model PPO, sponsors sell insurers and self-insured groups access to preferred provider networks.

**Primary Care/Capitated PPO:** A PPO that reimburses primary care physicians on a capitation basis, usually with withholding on physician compensation. The primary care physician is a "gatekeeper" for medical referrals and institutional services. The enrollee can choose to use non-PPO providers after seeking a referral from the gatekeeper. If non-PPO providers are used, however, a substantially higher cost-sharing amount may be required.

#### Other Managed Care Arrangements

**Exclusive Provider Organization (EPO):** An arrangement similar to a preferred provider organization, but one that only reimburses members for

services rendered by providers in its network. If an EPO member uses non-network providers, the member must pay the full cost of those services out of pocket.

**Point-of-Service (POS) Plan:** An arrangement that offers traditional indemnity insurance, an HMO, and a PPO plan. Enrollees select a primary care physician from a network of providers. The primary care physician then acts as a gatekeeper and controls referrals to specialists. When service is desired, the enrollee obtains a referral from the gatekeeper, but is free to choose services from a participating HMO, a PPO network provider, or a non-network provider. Depending on the provider used, the enrollee faces different cost-sharing levels, with the highest cost sharing associated with use of non-network providers. POS plans are distinct from PPOs in that POS plans are prepaid, provide an HMO-type product coupled with an indemnity benefit, and require that members obtain referrals from a gatekeeper before being eligible for reimbursement.

**Utilization Review Organization:** Utilization review organizations contract with insurers and employers to assure patients of quality care in a cost-effective manner. These organizations review the quality of medical services, analyze the patterns of use in facilities, identify practice problems, and propose remedies. The protocol for review usually includes three basic

activities: precertification, concurrent review, and retrospective review. Recently, some utilization review organizations have begun to offer management support services, network development, and contract administration, in addition to review functions and monitoring services.

**Targeted Managed Care:** Targeted managed care is applied to specific subsets of services that have been identified as particularly vulnerable to overuse or inappropriate use. The most common services for targeted managed care are mental health and substance abuse services, prescription drugs, dental care, and vision care. Targeted managed care may include utilization review and case management services, development of PPO networks with gatekeepers, and requirements for prior authorization and concurrent review of treatment plans, as well as price negotiations with network providers.

**One-Stop Shopping:** The practice of a single insurer offering a combination of health insurance products to employers: for example, an HMO, a PPO, and a traditional indemnity insurance plan. This approach allows the employer to work with only one insurer, may simplify administration of the employer's health insurance arrangements, and offers employees multiple options.

**Triple Option Plans:** Triple option plans are packages that insurers offer to employers that include an HMO option along with a PPO and indemnity insurance.

**Third Party Administrators (TPAs):** Third party administrators process claims for self-insured employers, usually charging fees that reflect their actual costs. Some TPAs may also arrange delivery systems and provide utilization review and management, in conjunction with their responsibilities for claims processing.

#### UTILIZATION REVIEW

**Prior Authorization/Precertification:** Requires that the patient or physician obtain advance approval for specific procedures, elective surgery, and nonemergency hospital admissions. It may be applied to all elective procedures or limited to particular diagnostic procedures and treatments with a demonstrated high level of overuse. Failure to obtain prior authorization or precertification may result in the insurer paying less of the cost of the procedure or, in some instances, none of the costs.

**Concurrent Utilization Review:** Ongoing review of treatment plans for patients admitted to the hospital. This review may include determining the patient's estimated length of stay and scope of treatment during inpatient care. After review or appeal, a longer stay may be justified, the patient may be discharged, or alternate care may be arranged.

**Retrospective Utilization Review:** Analyzes after the fact whether hospitalization and treatment were medically necessary and appropriate, as well as being within the terms of coverage as indicated in the benefit contract. Retrospective utilization review serves primarily to identify problem areas and providers so that insurers can address these areas for future cases.

**Second Surgical Opinion:** Second surgical opinion is the most common service-specific approach to utilization review. In most programs, the patient or the physician must obtain a concurring medical opinion before a surgical procedure will be authorized by the insurance company.

**Case Management:** Case management involves coordinating and planning services for high-risk cases or for high-cost conditions, with the objectives of reducing costs and improving the quality of services.

**Same Day Surgery/Ambulatory Surgery/Outpatient Surgery:** Some managed care plans provide a list of elective surgical procedures for which same day admission is required in order to reduce hospital costs. Outpatient surgery can be performed in various settings, including short-procedure units in hospitals, free-standing surgical clinics, and physicians' offices.

#### FINANCIAL INCENTIVES FOR PHYSICIANS AND OTHER PROVIDERS

**Capitation:** Capitation is a form of payment that provides a predetermined amount per enrollee served by the provider. The provider agrees by contract to accept this payment without regard to the type or frequency of service actually rendered. Capitation may cover a variety of services. The scope of services included in the capitated payment range from physicians' office-based services only to all physician services, laboratory services, and hospital services.

**Fee-for-Service:** Payment is based on the specific services provided. Fee-for-service payments may be based on costs; a fee schedule; or the usual, customary, and reasonable charge criteria. Some managed care organizations and insurers are able to negotiate fee-for-service payment levels that are

lower than the normal charges of providers. The discounts are offered by providers in return for an anticipated larger volume of patients.

**Withholding of Partial Payment, Subject to Performance:** A portion of the capitation amount or fee-for-service payments to providers, usually physicians, may be withheld by the managed care organization and paid to the provider only if the performance of the organization warrants doing so. Withholding a portion of the payment provides incentives for providers to limit care to appropriate and cost-effective services.

**Bonuses, Related to Performance:** Some managed care organizations offer bonuses to physicians who are paid capitated amounts, salaries, or fees for service based on their performance in providing only necessary and appropriate services in a cost-effective way.