
Commentary

Why Managed Care Cannot Contain Hospital Costs Without Rationing

by William B. Schwartz and Daniel N. Mendelson

Managed care has long been considered by many health policy analysts as a mechanism that can contain costs without intrusive governmental regulation or sacrifice of medical benefits. Indeed, managed care is the centerpiece of current efforts by business, Congress, and the Bush administration to slow the rise in health expenditures as well as the focus of the Winter 1991 volume of *Health Affairs*.¹

We believe that this optimism is misplaced. While managed care providers historically have had significantly lower costs than other insurers, the rate of increase in their costs has been virtually indistinguishable from that of the fee-for-service sector.² This is because managed care is subject to the same upward pressure on costs—resulting from a flow of new technology and rising wages—that other providers face. Unable to control these forces, managed care providers have instead kept costs below those of fee-for-service providers by using fewer hospital days. For example, health maintenance organizations (HMOs) traditionally have used some 30 percent fewer days than fee-for-service providers.³

During the 1980s, the growth of managed care, the introduction of prospective payment, and other efforts to contain costs caused a reduction in hospital days throughout the entire hospital sector roughly equal to that traditionally associated with HMOs. The result was a brief slowing in the rate of increase in community hospital costs.⁴ But this very success has made it unlikely that any conceivable further reduction in unnecessary days can have more than a slight, brief effect on the cost spiral. Indeed, despite the rapid diffusion of managed care in recent years, few additional days have been saved. In this Commentary, we argue that neither managed care nor fee-for-service providers will be

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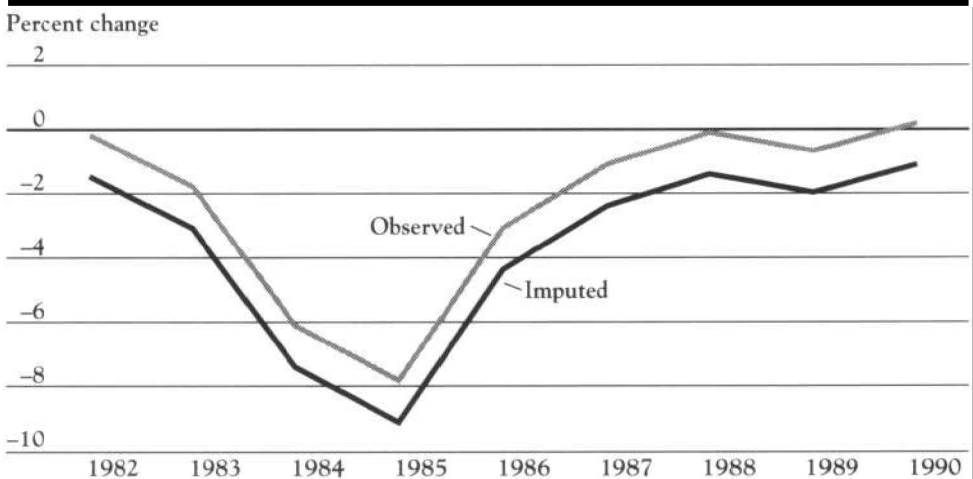
able to control the long-term rise in costs except by denying some patients access to certain types of expensive but useful services.

Cutting Costs By Reducing Hospital Days

The story begins in 1982, when cost containment efforts reversed a long-standing annual increase of 1.3 percent in number of inpatient community hospital days.⁵ Although annual reductions in days were initially modest, by 1984 and 1985 they reached values of 7 percent and 8 percent, respectively (Exhibit 1). During the remainder of the decade, the reductions were far smaller, and during 1989 and 1990, virtually no further savings in days were observed. In total, the observed reduction in inpatient community hospital days was about 20 percent between 1982 and 1990.

However, this observed reduction understates the actual savings that occurred during this period. Before major efforts to contain costs were undertaken, hospital days were growing by about 1.3 percent per year, chiefly because of demographic factors. Without the cost containment efforts of the 1980s, this trend presumably would have continued. Thus, to calculate the true savings in days, we must calculate the difference between the cumulative increase in days that would have occurred in the absence of cost containment and the observed reduction in days; we define this value as the “imputed” reduction in days. Calculated in this manner, the cumulative saving in inpatient community hospital days

Exhibit 1
Reductions In Inpatient Days, 1982-1990



Source: Calculations based on data from *Hospital Statistics, 1991-92* (American Hospital Association).

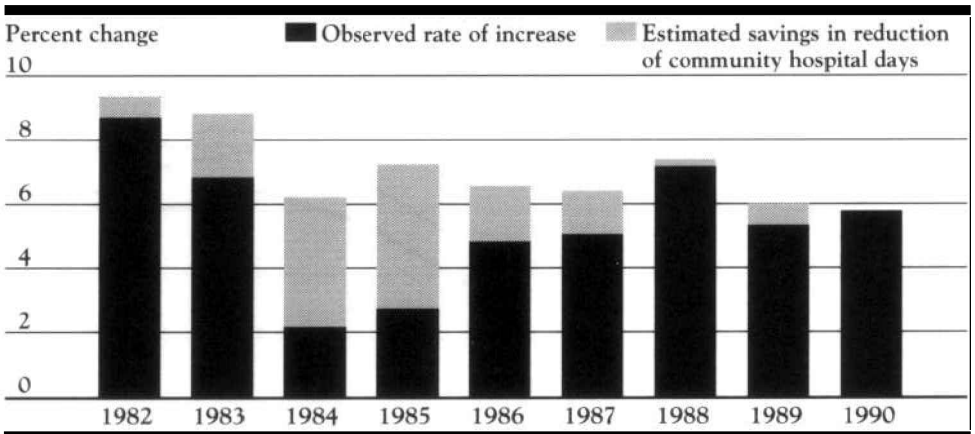
appears to be approximately 30 percent, rather than the observed 20 percent. Although annual savings in “imputed” days have dwindled, an annual savings of about 2 percent persisted between 1988 and 1990.

The reduction in days observed during the early 1980s was accompanied by a marked slowing in the rate of rise in community hospital costs. The inflation-adjusted increase in costs averaged 6.1 percent per year between 1976 and 1981. Beginning in 1983, however, the rate of increase slowed dramatically, reaching lows of 2 percent and 2.5 percent in 1984 and 1985, respectively (Exhibit 2). Most observers interpreted this attenuation as evidence that the cost spiral had been brought under permanent control; in fact, then Secretary of Health and Human Services Margaret M. Heckler declared, “We have broken the back of the health care inflation monster.”⁶ But such optimism was short-lived. Hospital costs began to rise again in 1986, and between 1988 and 1990 the average increases again exceeded 6 percent annually.

Our analysis indicates that this slowing, and the pattern of savings achieved over time, can be explained by the pattern of changes in hospital days. We base this conclusion on an estimate of the changes in costs that would have been observed had there been no reduction in days (Exhibit 2). We calculate these values (the “underlying” rate of increase) by adding our estimate of the savings achieved by the cutbacks to the observed increase in costs.

The savings from the reductions in days was calculated by multiplying the percentage reduction in days by an estimate of the reduction in costs

Exhibit 2
Observed And Underlying Increase In Community Hospital Costs, 1982-1990



Source: Calculations based on data from *Hospital Statistics*, 1991-92 (American Hospital Association).
Note: The full height of each bar represents the rise in costs that would have been expected in the absence of any savings from a reduction of community hospital days. We define this value as the “underlying” rate of increase in costs.

when a day is eliminated. In this calculation, we used adjusted patient days to account for the fact that some care was simply shifted from the hospital inpatient to the outpatient sector. Based on analysis of the literature and the assumption that relatively inexpensive days were more likely to be eliminated, we assumed that a 1 percent reduction in days resulted in a 0.65 percent reduction in long-term costs.⁷

Exhibit 2 demonstrates that were it not for the reduction in days, the rise in costs in every year from 1982 through 1987 would have exceeded the historical rise of 6.1 percent. As the savings in days shrank during the subsequent three years, the observed rate of increase rose sharply. In fact, during the period 1988–1990, the average annual increase in costs returned to a level of 6.1 percent. From these findings, it appears that the underlying rate of change was unaffected by both the growth of managed care and other efforts to contain costs.

The savings in days observed during the 1980s did, however, have a major impact on hospital spending: hospital costs in 1990 were about \$20 billion less than would have been expected in the absence of these changes.

Implications For Future Cost Control

These data suggest that additional dollar savings through elimination of unnecessary days will be both small and difficult to achieve. The key reason is that the 30 percent cut in days achieved during the 1980s has brought the fee-for-service sector into line with the historical profile of staff-model HMOs. A study of HMO experience between 1950 and 1980 and a randomized study comparing an HMO with a fee-for-service control indicate that HMOs used 30 percent fewer hospital days than the fee-for-service sector and that HMOs' lower level of spending was accounted for by this difference.⁸ The data presented above indicate that the U.S. hospital system as a whole has now matched this performance.

The possibility remains, however, that further expansion of managed care and the diffusion of new practice guidelines can generate some appreciable additional savings. For example, data from a recent study show that despite the systemwide savings in hospital days during the mid-1980s, differences between HMO and fee-for-service use persisted through 1986. In that year, patients in fee-for-service plans had about 40 percent more hospitalizations than did patients in HMOs (that is, patients in HMOs were hospitalized about 30 percent fewer times).⁹ As the researchers recognized, it is unclear how much of this disparity is due to true differences in the use of services and how much resulted from such factors as self-selection of patients, disease-specific severity, and health

status. As we discuss below, it is also possible that HMOs, under increasing pressure to remain competitively priced, further reduced their use of days by denying some patients beneficial services.

But even if further savings of the magnitude suggested by this study are achievable without sacrifice of medical benefits, the impact on the upward cost spiral would still be relatively small and transient because only about half of the U.S. population is currently enrolled in managed care of some form.¹⁰ Consider the unlikely proposition that the remaining half of the population joins HMOs and uses 30 percent fewer hospital days. This scenario represents an extreme upper bound on the savings that can be achieved, because it is almost certain that some fee-for-service insurance will survive and because further expansion of managed care is likely to consist largely of preferred provider organizations (PPOs) and point-of-service plans, which typically achieve smaller savings in days.¹¹

Even assuming that half of the population joined an HMO, and hospitalization rates were thus reduced by 30 percent, this would result in further systemwide savings of only about 15 percent of hospital days. If 3 percent of hospital days were saved annually over a period of five years, the anticipated rise in costs would probably be attenuated by no more than 1 to 1.5 percentage points per year.¹² Savings would not be larger because fixed costs cannot be eliminated by cutting back days, and shifting patients from the inpatient sector typically causes outpatient costs to rise substantially. More importantly, once the potential savings in days are exhausted, there will be no further offset against the upward trend in costs.

Moreover, the pattern of savings in hospital days achieved over time suggests that savings of this magnitude are unlikely in the foreseeable future. Despite the rapid growth of managed care and other cost containment efforts, in recent years there have been no savings in "observed" days, and savings in "imputed" days have been small. Such savings have had only a trivial effect on the rise in costs.

Causes Of Rising Costs And Control Measures

All of the above considerations indicate that effective cost control can be achieved only by influencing the factors that are responsible for the upward trend—demographic changes, the rising costs of labor and supplies, and new medical technology.¹³ The first of these factors—the aging and growth of the population—is clearly beyond the control of either managed care or any public policy initiative. The second—the rise in wages—cannot be controlled if hospitals wish to attract and

retain skilled personnel.¹⁴

The third and largest factor—the introduction and diffusion of new technology—can be controlled only if we are willing to limit the availability of expensive new services. The technologic revolution observed over the past two decades has changed the face of medicine and, at the same time, driven costs dramatically upward. Just two decades ago, there was no computed tomography (CT) scanner, magnetic resonance imaging (MRI), hip replacement, or angioplasty, nor any liver, heart, or bone marrow transplantation—t mention only a few medically valuable but extremely costly advances.

To make this wide array of advances available to all of their patients who might benefit, managed care providers have had to increase their expenditures in much the same fashion as have fee-for-service providers. HMOs have presumably saved some dollars by the more judicious use of these new technologies but not by enough to have had a noticeable impact on costs.¹⁵

The cost pressures imposed by new technology surely will continue unabated. Consider just a few of the recent medically valuable but expensive new advances: the automated implantable cardiac defibrillator for the treatment of life-threatening arrhythmias, erythropoietin for the anemia of kidney failure, and nonionic contrast media for safer radiologic studies. Fully exploited, these few technologies alone would add some \$5 billion annually to the nation's health care bill. The future promises even more rapid and dramatic innovation with developments in immunology and molecular biology almost certain to bring a host of expensive new methods to treat cancer, rheumatoid arthritis, and other common, serious diseases.

Managed Care And Rationing

Given the rapid advances in medical technology, the only way in which managed care or other providers can slow the long-term rise in costs will be to limit the availability of beneficial services. Managed care providers, by the very nature of their role as “gatekeepers,” are particularly well positioned to take on this responsibility.

The first logical goal for such cost containment activities is to eliminate care that involves high costs and yields small benefits. But weighing the costs of care against the potential benefits represents a radical departure from the standards of patient care long employed by the medical community. Until recently, the only acceptable standard of care for insured or affluent patients was, “If it will help, do it.” In other words, physicians were taught to continue their diagnostic or therapeutic efforts

to the point at which the next test or treatment had no prospect of yielding additional benefit to the patient. Twenty years ago, this approach could be implemented at low cost because there were relatively few expensive technologies available. But the explosion of medical advance has made this exhaustive approach increasingly expensive and inevitably untenable. Cost-effectiveness analysis and other techniques to quantify medical economic decisions are emerging in response to the need to back away from traditional standards of care while providing a rational and efficient means to ration services.

How might cost-effectiveness analysis be used to maximize benefits within a given budget constraint? Simply eliminating reimbursement for specific procedures is not an efficient solution, because each diagnostic or therapeutic intervention yields a spectrum of benefits that varies widely as a function of the clinical circumstances.¹⁶ Instead, a managed care provider will need to ensure that the last dollar spent on any particular type of care purchases medical benefits worth no less than the last dollar spent for any other type of care.¹⁷

In the short run, some degree of cost containment of this type can be achieved by "silent rationing," or the decision to use a less costly but less effective intervention without the patient's knowledge.¹⁸ But this approach cannot be expected to last for long. As cost pressures resulting from the explosion of medical technology continue, rationing decisions by all providers will, of necessity, become increasingly visible.

In response to these pressures, it is quite possible that managed care organizations will begin to differentiate themselves on the basis of the prices they charge. By setting their premiums at differing levels, managed care providers could differentiate themselves according to the level of benefits provided. By offering a variety of levels of benefits, managed care providers could respond to a range of consumer preferences. Such explicit price rationing raises difficult social and medical issues that will demand attention in the future.

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NOTES

1. Executive Office of the President, "The President's Comprehensive Health Reform Program" (6 February 1992).
2. H.S. Luft, "Trends in Medical Care Costs: Do HMOs Lower the Rate of Growth?" *Medical Care* 18 (1980): 1-16; J.P. Newhouse et al., "Are Fee-for-Service Costs Increasing Faster than HMO Costs?" *Medical Care* 23, no. 8 (1985): 960-966; and J. Gabel et al., "Employer-sponsored Health Insurance, 1989," *Health Affairs* (Fall 1990):

- 161-175.
3. Newhouse et al., "Are Fee-for-Service Costs Increasing Faster than HMO Costs?," and H.S. Luft, *Health Maintenance Organizations* (New York: John Wiley and Sons, 1981).
 4. W.B. Schwartz and D.N. Mendelson, "Hospital Cost Containment in the 1980s: Hard Lessons Learned and Prospects for the 1990s," *The New England Journal of Medicine* 324 (1991): 1037-1042.
 5. *Hospital Statistics, 1991-92* (Chicago: American Hospital Association, 1991).
 6. M.M. Heckler, remarks before the National Association of Counties, Seattle, Washington, 9 July 1984.
 7. M.V. Pauly and P. Wilson, "Hospital Output Forecasts and the Cost of Empty Hospital Beds," *Health Services Research* 21 (1986): 403-428. Pauly and Wilson estimated that after a hospital has had a chance to adjust to the new level of occupancy, a 1 percent reduction in hospital days over the long term results in a 0.90 percent reduction in costs. However, in our analysis, we use a value of 0.65 because we assume that the patients who were not admitted were less sick than the average.
 8. Luft, "Trends in Medical Care Costs;" and Newhouse et al., "Are Fee-for-Service Costs Increasing Faster than HMO Costs!" The latter study indicated that HMO enrollees used about 40 percent fewer days than did fee-for-service enrollees with no copayment. However, the average fee-for-service plan contains an appreciable level of copayment. Adjusting these experimental data for the average level of copayment in the United States, Schwartz has estimated that HMO enrollees used about 3 1 percent fewer days than fee-for-service enrollees. See W.B. Schwartz, "The Inevitable Failure of Current Cost-Containment Strategies," *Journal of the American Medical Association* 257 (1987): 220-224.
 9. S. Greenfield et al., "Variations in Resource Utilization among Medical Specialties and Systems of Care," *Journal of the American Medical Association* 267 (1992): 1624-1630.
 10. Advisory Council on Social Security, "Managed Care as a Cost Containment Vehicle," in *Critical Issues in American Health Care Delivery and Financing Policy* (Washington D.C.: Advisory Council on Social Security, December 1991), 355-392.
 11. *Ibid.*
 12. Schwartz and Mendelson, "Hospital Cost Containment in the 1980s."
 13. *Ibid.*
 14. W.J. Baumol and W.G. Bowen, *Performing Arts: The Economic Dilemma* (New York: Twentieth Century Fund, 1966).
 15. Luft, "Trends in Medical Care Costs;" and Newhouse et al., "Are Fee-for-Service Costs Increasing Faster than HMO Costs?"
 16. W.B. Schwartz and H.J. Aaron, "The Achilles Heel of Health Care Rationing," *The New York Times*, 9 July 1990.
 17. H. Aaron and W.B. Schwartz, *The Painful Prescription* (Washington, D.C.: The Brookings Institution, 1984). An efficient allocation of resources in this context means that it would not be possible to increase total benefits by taking money away from one service and buying more of another. A framework designed to achieve maximum efficiency will have to make use of "benefits curves." Imagine that the level of expected benefits for any given therapy is listed from largest to smallest; a curve can then be drawn showing how the expected benefits decline as the number of people served increases. Using such curves, the HMO can choose the mix of services that provides the most benefits to enrollees.
 18. W.B. Schwartz, "We're Already Rationing Medical Care," *The New York Times*, 16 October 1989.