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PHYSICIAN INCENTIVES IN MANAGED CARE ORGANIZATIONS

Medical Practice Norms and the Quality of Care

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In the current health care environment, it is hard to remember that health maintenance organizations (HMOs) were once viewed as a force for progress in U.S. medicine.[1] By structuring contracts that included incentives for physicians and other providers to control unnecessary medical expenditures, HMOs offered the prospect of more cost-efficient medical care. As new technology made health care more effective, however, public concern grew that HMOs would lead a "race to the bottom" in which competitive pressures to reduce costs would drive care quality down to minimally acceptable levels.

Paradoxically, we find that although physicians do respond to incentives to reduce costs, there is little evidence that incentive contracts cause a reduction in the quality of medical care. Powerful physician practice norms and the need to build large networks of physicians to attract consumers make it difficult for HMOs to impose high-powered cost-containment incentive contracts on physicians.

What Do Physician Incentives Do?

A number of recent econometric studies (Barro and Beaulieu 2000, Kessler and McClellan 1996) find that physician practice style is influenced by explicit and implicit financial incentives. Given these findings, it is reasonable to ask whether the cost-control incentives used by managed care organiza-

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tions have an adverse effect on the quality of medical care patients receive. Analyzing the effect of managed care on clinical outcomes is difficult because the healthiest individuals are most likely to opt for the managed care insurance with the lowest premiums. Nevertheless, careful studies that examine the issue find generally that managed care has no influence on clinical outcomes (Altman, Cutler, and Zeckhauser 2000; Cutler, McClellan, and Newhouse 2000). These studies present a paradoxical set of conclusions. While physician practice styles do respond to financial incentives, little evidence exists that HMO cost-containment incentives cause a reduction in care quality, at least not for the serious and costly conditions (heart disease, cancer, and diabetes) included in these studies.

Most of the empirical literature treats physician incentive systems as black boxes whose internal operations are obscured from view. A recent case study by Gaynor, Rebitzer, and Taylor (2001), however, looked closely at the physician incentive system in one particular HMO. This HMO built its network of doctors through contractual arrangements with physicians in independent practices, and it held primary care physicians responsible for the medical utilization costs incurred by their patients. If these primary care gatekeepers kept costs below actuarially determined target levels, they received a sizeable bonus. The authors found that the incentive system provided physicians with substantial rewards for reducing costs and also induced behaviors that lowered costs. A typical physician in the network gained $0.10 in income for every $1.00 reduction in medical utilization costs. This incentive resulted in a 5 percent reduction in utilization costs, relative to no cost-cutting incentives at all.

A surprising feature of the HMO's incentive system was its "stop-loss" provision under which no patient could "cost" the physician more than $15,000 per year. This provision had the effect of limiting cost-cutting incentives for the most seriously ill patients. Consistent with the expected influence of the stop-loss provision, the authors reported that the cost reductions occurred primarily in outpatient charges and specialty referrals, while in-hospital costs were minimally affected.

This last conclusion raises an important economic question about incentives in managed care. In the environment of rising health care costs in which this HMO was competing for new members, why did it write incentive contracts that diminished incentives to cut costs for the most expensive patients? The answer is that at the same time that this HMO was cutting prices to build market share, it was trying to position itself as the high-quality provider in the market. This explanation may be correct, but it is also incomplete. Managers at the HMO did not expect consumers (patients and employers) to be as influenced by care quality as by other features of the plan that were easier to track, such as premium costs and the breadth of physician networks. If the HMO was marketing itself as a high-quality provider, but paying customers did not perceive quality, to whom was the HMO sending its message about quality?

Quality Competition When Customers Do Not Perceive Quality

Understanding the effect of HMOs on the eventual level of care requires an appropriate model of the competitive environment in which HMOs operate. Suppose, for example, that HMOs attempt to reduce premiums at the expense of care quality by giving physicians generous financial rewards for containing costs. In a typical economic setting, consumers would perceive such a decline in the quality of services and "vote with their feet" by choosing another insurer and physician if quality fell below acceptable levels. Put differently, if health care were like other services, we might justifiably conclude that market forces would constrain the level of quality from falling too far.

Health care is not, of course, like other services because patients cannot easily perceive the quality of medical care they are receiving. Physicians, in contrast, have the clinical knowledge and patient information required to assess the quality of medical care they (and others) provide. For this reason, the physician's perception of quality, not the consumer's, is decisive in the HMO market. The physician's perception is important because managed care organizations must persuade physicians to join their provider networks. Since many consumers are willing to pay a higher premium to HMOs that offer a wider choice of providers, managed care organizations risk losing valuable physician memberships if they write incentive contracts so stringent that they drive physicians out of their network.

In a recent Levy Institute Working Paper (Cooper and Rebitzer 2002), we used a game theoretic model to examine the implications of quality-based competition for physicians on the kinds of incentive contracts written by HMOs. In this model, physicians have both *absolute* and *relative* practice norms. This means that doctors are concerned not only about the treatment they deliver, but also about how this treatment compares to that received by other patients with similar medical conditions. HMOs will have difficulty attracting physicians if their cost-control mechanisms induce providers to offer low levels of care in either absolute terms or relative to other care providers.

Practice norms have great economic significance because they put HMOs that try to introduce excessively stringent cost-control incentives at a competitive disadvantage. In the absence of practice norms, competition from these low-cost entrants would cause a "race to the bottom" in which medical expenditures and care quality would decline for all HMOs. When physician practice norms are important, however, low-cost HMOs find it hard to build provider networks of sufficient size to attract members. Indeed, if relative practice norms are sufficiently strong, a "race to the bottom" is less likely than a "race to the top" in which all segments of the market employ only weak measures to induce cost-conscious medical practices among physicians. The recent and highly publicized shift away from certain cost-containment practices by United Healthcare and other large HMOs may reflect this competitive dynamic (Weber 2002, Cowley 1999).

Implications for Public Policy

Concern over the adverse consequences of managed care has grown with the increasing importance of HMOs in the U.S. health care system. Although the managed care industry has always been subject to regulation at the federal and state levels, interest is growing in public policies that more directly influence HMO incentive systems (Gosfield 1997).

Two broad regulatory strategies for shaping physician incentives have received most of the public attention in this area: (1) imposing caps on the proportion of "at-risk" income allowed in physician contracts, and (2) making HMOs legally liable for adverse medical consequences attributed to their cost-containment systems.

The first strategy is embodied in Physician Incentive Plan regulations implemented in 1997 by the Health Care Financing Administration. These regulations require that incentive contracts not place more than 25 percent of physician income at risk. The second strategy is embodied in proposals to modify the Employee Retirement and Income Security Act to make HMOs liable for damages linked to their cost-containment systems (Havighurst 2000).

Our model of quality competition for physicians suggests that the effects of capping physicians' at-risk income are analogous to the "race-to-the-top" phenomenon. If the caps bind and weaken measures to control costs, then the low-cost managed care organizations must reduce the intensity of their physician incentive contracts. Having lost their ability to contain costs, these HMOs would move "upmarket" by increasing their premiums and the size of their physician networks. Companies in the upscale segment of the market would then protect their customer niche by taking similar actions. As a result, premiums would rise everywhere and the number of uninsured would increase. These newly uninsured individuals, a group that would tend to include younger and lower-income workers, would clearly be made worse off by the rise in insurance premiums. Employees at the other end of the spectrum, i.e., those who were willing to pay a lot of money for large networks and a high degree of physician choice, would likely be made better off by a "race to the top." The impact for workers in the middle is ambiguous: while some would be made better off by the availability of larger networks, many would experience a welfare decline because of increased insurance premiums.

Analysis of the second regulatory strategy—increasing HMO liability for malpractice—is a bit more complex. Strictly speaking, making HMOs liable should have no effect at all on the HMO market. Physicians, after all, are heavily insured against malpractice suits, and the cost of this insurance is already included in the compensation that HMOs must pay to attract physicians to their networks. Recent studies of jury behavior, however, suggest that large organizations with "deep pockets" are typically hit with higher punitive damage awards than smaller organizations (Kahneman, Schkade, and Sunstein 1998). These results suggest that making large organizations like HMOs defendants in malpractice suits would increase the size of jury awards. If this is so, then HMOs whose management and incentive

practices pressure physicians to provide relatively lower-cost care would risk higher malpractice costs. As a result, low-cost HMOs would come to resemble their higher-cost counterparts, and premiums would rise throughout the marketplace. This rise in costs would have the now familiar effect of increasing the number of uninsured.

Is Intervention a Bad Idea?

We have argued that public policies limiting cost-containment incentives have the twin effects of increasing premiums and the number of uninsured. Given that the number of uninsured workers has been rising (Gruber and McKnight 2002), is regulating HMO physician incentive systems necessarily bad policy? Our answer is no.

Important externalities to health care support the case for policy interventions. Some of these externalities involve health outcomes. Allowing a less cost-conscious approach to medical care may improve the welfare of caregivers and family members who are not directly involved in the purchase of health care insurance. Other externalities involve the physician-patient relationship. If the net social value of more expensive practice styles or restrictions on contracting exceeds their private value, a strong case remains for interventions that limit the ways HMOs regulate care.

The lesson of our analysis is not that policy interventions are necessarily a bad idea, but, rather, that they must be addressed with an understanding of their cost, especially when they result in an increase in premiums and a potential increase in the number of uninsured. Policies that regulate HMO incentive systems can be made more effective and palatable if they are implemented in conjunction with policies that increase access to care for the uninsured.

Note

1. Today's health care marketplace has an "alphabet soup" of acronyms that describe some variation on the theme of the HMO. To keep the discussion simple, we refer only to HMOs and managed care organizations and use the terms interchangeably.

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