Cite this article as:
A L Hillman
Managing the physician: rules versus incentives
*Health Affairs* 10, no.4 (1991):138-146
doi: 10.1377/hlthaff.10.4.138

The online version of this article, along with updated information and services, is available at:
http://content.healthaffairs.org/content/10/4/138.citation

For Reprints, Links & Permissions:
http://content.healthaffairs.org/1340_reprints.php

Email Alertings:
http://content.healthaffairs.org/subscriptions/etoc.dtl

Not for commercial use or unauthorized distribution
Managing The Physician: Rules Versus Incentives
by Alan L. Hillman

With the growing prevalence of managed care has come greater third-party influence on physicians’ clinical decisions, to achieve efficient and high-quality health care. Physicians, as professionals, resist these challenges to their autonomy. Despite this resistance, managed care is here to stay. Most employed Americans are now members of managed care plans, and physicians find that participation in managed care is a matter of financial survival.1 Despite the lack of conclusive evidence about all their effects, two basic mechanisms—rules and incentives—are assuming important roles in the attempt to shape physicians’ practice patterns in managed care. In this Commentary, I offer a conceptual framework to compare the use of rules and incentives to manage physicians’ clinical decisions, and I discuss the challenges for health policy.

Managing variations in practice patterns. Ideally, physicians’ loyalties are only to their patients. Patients engage physicians as agents to pursue their best clinical interests, and physicians act autonomously to achieve this goal. In reality, however, there are important external influences on physician behavior. In traditional fee-for-service medicine, the incentive is to do more, because more services lead to more payment. This economic influence has coincided with society’s inclination toward generous use of medical technology. By stressing efficiency as well as quality, however, managed care contradicts the traditional “more-is-better” approach to health care.

When a single acceptable standard of care exists for a clinical scenario, then the appropriate role of management is to monitor for compliance. This is true when either rules or incentives are used. For example, all good physicians would admit to the hospital a patient with acute angina and newly elevated ST-segments on electrocardiogram, and management should assure that this decision is always made. Similarly, when two

Alan Hillman is assistant professor of medicine and health care management at the University of Pennsylvania School of Medicine and the Wharton School. He directs the Center for Health Policy at Penn’s Leonard Davis Institute of Health Economics.
medical interventions clearly have different costs but equal outcomes, or when one intervention has both higher costs and poorer outcomes, then management’s goals should be to educate, motivate, or constrain physicians to make the more cost-effective decision. However, good doctors often disagree about the best clinical approach; this results in variations in practice patterns that have been identified from doctor to doctor, hospital to hospital, and town to town. In these circumstances, management should restrict the physician to a range of options that reflect management’s decisions about what is appropriate, high-quality, and efficient medical care.

Clinical Rules

Clinical rules have assumed various names as managed care has evolved: treatment protocols or algorithms, regulations, administrative constraints, practice guidelines or parameters, prospective utilization review, utilization management, “cookbook” medicine, and simply “controls.” All embody the same basic concept: direct instructions on how a physician should or should not act in specific clinical circumstances. Rules are typically issued by insurance companies, the government, or other organizations that employ, contract with, or pay physicians, and by quality assurance committees in hospitals. Various studies have shown the impact of specific rules in specific circumstances. However, the science of designing, implementing, monitoring, and evaluating clinical rules is new, and there is little conclusive evidence about its effect on the cost and quality of medical care. In addition to rules regarding clinical decisions, other rules, including new legal and ethical constraints on referral behavior, credentialing, and ownership of medical facilities, have altered physicians’ behavior.

An example of a specific clinical rule is the following: “Bradycardia, in which the largest R-R interval is less than three seconds and the minimum heart rate above 40 beats per minute, with no symptoms or no correlation of symptoms with arrhythmia, is a diagnosis that does not indicate the implantation of a permanent cardiac pacemaker.” Payers who issue such rules can withhold payment if physicians fail to comply. Since few patients or physicians can afford to forfeit insurance payment, this sanction is usually effective. Physicians’ employers or hospitals may use other types of sanctions, the most extreme being termination of the physician’s privileges.

Rules are generally written and explicit. Thus, specific rules or rulings can be contested, appealed, and changed. Physicians contribute to the development of valid rules by helping managers to understand clinical
realities and uncertainties. Good treatment protocols depend on extensive use of expert, independent-thinking physician consensus panels, selected in good faith by both managers and clinicians on the basis of their knowledge, not their opinion of managed care. Systematic input from clinicians formalizes the profession’s role in setting valid standards and helps to preserve the profession’s authority to regulate itself. However, this authority comes at the expense of practitioners’ independence in specific circumstances.

While specific clinical rules are not always possible or even desirable, they have certain advantages. First, they provide a mechanism to disseminate new knowledge about appropriate, effective methods of treatment. Second, rules afford explicit criteria for evaluating compliance with new clinical approaches and may help physicians justify withholding unnecessary services from a demanding patient. Finally, rules based on explicit criteria and physician consensus provide an opportunity to standardize the approach to some common medical problems across different insurers and sites of care, which, in turn, may help to reduce the confusion of all parties (including patients) about appropriate medical care. However, if rules are not updated as scientific evidence for standards of care changes (so-called defective rules), or if different sets of rules conflict, then there is the potential for doing more harm than good.\(^5\) Certainly, clinical rules will be deleterious if they are arbitrary, unrealistic, lacking in flexibility, or cumbersome in daily clinical practice.

**Incentives**

A more subtle approach is the use of incentives to influence physicians’ clinical decisions. Incentives are generally financial in nature and expose physicians to some risk or reward for certain patterns of behavior. Some common incentives employed in health maintenance organizations (HMOs) include capitation payment (in which a physician is paid a set fee, regardless of the number of services administered), bonus distributions, and withhold accounts (through which a practitioner stands to gain or lose some amount of money for over- or underuse of medical resources against budget).\(^6\) Incentives have a less immediate impact on physicians than rules have. In theory, managed care incentives may be designed to either reduce or promote the use of medical services; in reality, the former is much more common. There are fewer synonyms for incentives than for rules, but “bedside rationing” is both commonly used and pejorative. As with rules, the implementation and evaluation of financial incentives is a new and immature science; thus far, reduction in hospital use due to financial incentives has been best documented.\(^7\)
Rules Versus Incentives

Impact on clinical decisions. The influence of incentives on specific clinical decisions generally is indirect and economic. For example, incentives contain no specific statement about which patients should have pacemakers; instead, they induce physicians to perform fewer procedures, which, in turn, minimizes the impact on the budget for medical services and maximizes the physician’s and the organization’s prosperity. Incentives have always existed in health care, because even traditional fee-for-service (unmanaged) care encourages maximal use of health care resources. It is unclear if one set of incentives is worse than the other, since both can potentially harm patients—one through underuse of necessary services, the other through overuse of unnecessary services.

Research has shown that financial incentives change clinical behavior in the aggregate. However, because incentives usually are not designed for particular clinical scenarios and contain no specific instructions, their impact in specific clinical circumstances is much more difficult to measure than is the impact of rules. In addition, incentives do not guarantee cost-effective clinical practice in every case, because they allow individual practitioners the prerogative of practicing inefficiently.

While physicians should be involved in the design of incentives, their input through consensus panels is not mandatory and, if it exists at all, may be limited to that of a medical director. Thus, the use of incentives may challenge the authority of the medical profession to regulate itself by obviating the necessity for formal, collective physician consensus. Furthermore, because incentives usually do not address individual clinical decisions, physicians are necessarily less able to defend specific clinical priorities than in the design of rules. It is hard to prove that a nonspecific financial incentive (such as “referral expenses must remain within budget to sustain surplus distributions”) has a deleterious impact in specific clinical circumstances. Physicians in managed care could, however, advocate the use of positive incentives to encourage some categories of services, such as prevention and health maintenance. Because of their more direct control and immediate impact, rules are perceived by many physicians as the greater affront to professional autonomy.

Impact on patient advocacy. When management uses financial incentives to stimulate efficiency, it places on the individual physician the responsibility for both the patient’s clinical interests and the organization’s financial solvency. This is a dual mandate: treat the patient properly, but do so within budget so that the organization can prosper. In this way, physicians become agents of management in meeting its goals; this role may conflict with physicians’ traditional role as patient advocate. A
physician acting purely as a patient advocate would ignore all organizational and personal influences (including costs) to determine the best clinical decision for individual patients. Thus, although incentives (in both managed and traditional fee-for-service care) theoretically sustain physicians’ freedom to make individual clinical decisions, in reality, they may divide physicians’ loyalties, subliminally or otherwise. Ironically, some economists may view managers’ use of incentives ultimately as a decision made on behalf of patients to keep premiums competitive.

When management issues rules, however, it gives physicians guidance about the “appropriate” relationship between clinical considerations and costs. Rules reduce the need for “bedside rationing,” because the organization is rationing care, not the physicians who interact with individual patients. Rules also help preserve physicians’ ability to act as patients’ advocates by allowing—perhaps encouraging—physicians to challenge management overtly in certain clinical circumstances. This requires that effective measures for due process be established. (Of course, some physicians may choose not to take such action when necessary, which also threatens the patient’s best interests.) In contrast to incentives, which require that a physician make a decision about the cost and quality of every possible intervention, rules establish a framework for decision making. Only for those patients perceived to fall outside the guidelines must a physician weigh the costs and benefits of challenging the rules or providing the additional unit of care.

Other Ways To Influence Physicians

There are other approaches to influencing physicians’ clinical decisions in managed care, such as feedback to physicians about their prescribing behavior compared to a norm, followed by education to change their prescribing. However, these mechanisms generally have had only modest or transient impact, perhaps because they lack sanction or reward.8 Physicians in managed care systems may be more receptive to feedback and education than to rules, but there has been little formal evaluation of such interventions in this setting.

Socialization and recruitment policies also play a role in how physicians respond to being managed. For example, managed care networks may screen provider applicants carefully, selecting only those who they believe are likely to assimilate the goals and philosophy of managed care. Other attributes of the workplace also may influence physicians. For example, managers may use the promise of promotions, additional leave time, or better on-call responsibilities to reward certain behavior patterns. Clearly, rules and incentives can be combined with these other factors in
myriad permutations; determining the interactions among them and how best to combine them is a major challenge for researchers and managers.

Finally, the style in which rules and incentives are implemented may be important. A recent analysis compared two approaches to quality management in health care: distrust between managers and physicians, or collaboration, with the end of meeting common goals. Although the latter may be more desirable, difficulties in determining quality standards and major variations in practice patterns naturally lead to conflict at times between physicians and management. Nevertheless, at least in the near term, management likely will continue to rely on rules and incentives to manage physicians’ clinical decisions.

### Challenges To Policymakers: Balancing Rules And Incentives

Managed care systems need to balance the use of rules and incentives to meet the goals of providing high-quality, cost-effective care. Explicit rules can help to prohibit an overly parsimonious response to financial incentives in managed care (or an overly generous use of medical resources in traditional fee-for-service care). By capturing physicians’ attention, financial incentives can foster a milieu in which rules are better accepted and more likely to work.

To the extent that legislation is deemed necessary to contain costs or improve quality in managed care, it should seek to maintain an appropriate balance between rules and incentives. For example, volume performance standards—the result of federal legislation—will create an imbalance between rules and incentives when implemented. By capping annual Medicare payments to physicians and placing physicians at risk for overspending (through the possibility of reduced allocations in subsequent years), volume performance standards will create a form of managed care in which participating physicians as a group will operate under a financial incentive to practice efficiently (in effect, a national risk pool). Individual physicians, however, will still be able to increase their income by performing additional procedures—creating a potentially chaotic situation in which individual incentives conflict with those of the group. The development of practice guidelines and mechanisms to provide timely feedback to physicians about prescribing behavior were mandated along with the volume performance standards. This infrastructure of rules for clinical behavior is necessary to encourage individual physician behavior that is consistent with the goals of the legislation. Unfortunately, the infrastructure is not likely to be in place by the time the legislation takes effect.

Policymakers should evaluate new systems to balance the use of rules
and incentives that are emerging from within the managed care industry. For example, several HMOs are experimenting with systems in which payment to primary care physicians is based partly on quality assessments. These assessments include chart reviews for adherence to clinical protocols, patient satisfaction surveys, and reviews of providers’ adherence to certain predetermined administrative standards of care. Although this approach is desirable in theory, HMOs must allow external evaluation of these systems to ensure that the indicators of quality are valid and that the systems result in the desired physician behavior. HMOs must collect primary data to assess quality, instead of relying on data from existing claims databases, despite the additional hassles and costs involved in collecting primary data. Also, HMOs need to establish primary care databases that better allow evaluation of how changes in rules and incentives affect quality and productivity.

The potential for intentional abuse exists in all systems of paying doctors. Policymakers should be alert to abuses in managed care as well as in the traditional fee-for-service sector. However, the more important challenge to policymakers lies in balancing rules and incentives to reduce the possibility of unintentional abuse. Incentives exert most of their effect when the best decision is arguable—for example, influencing physicians to wait (in managed care) or to act (in traditional fee for service). Some may argue that a physician’s decision is less critical when there are several possible approaches to a patient’s care. I believe, however, that these circumstances call for physicians to be most circumspect and wary about allowing subconscious financial incentives to prevail over subtle clinical clues or patients’ preferences. Ironically, the situations in which physicians should be least distracted by such external factors as financial incentives are the ones in which they may be most tempted by them.

After a five-year delay for debate and study, Congress repealed the 1986 budget act provisions that would have prohibited any “negative” financial incentives (those likely to reduce intensity of care) in Medicare-participating HMOs. Current language permits incentive programs under four specific circumstances: (1) no payments are made to individual physicians on the basis of their experience with individual patients; (2) the physician also is at risk for services other than his or her own; (3) the HMO provides stop-loss protection to physicians for the costs of enrollees’ catastrophic illnesses; and (4) the HMO surveys enrollees periodically to ensure adequate access and satisfaction. Although these regulations are somewhat vague and likely will be clarified over time by additional regulations, legal action, or (preferably) setting of standards by the HMO industry itself, the fact that these regulations are milder than the original law does not indicate that Congress has backed down from its original intent.
Indeed, in the five years during which implementation of this legislation was pending, many HMOs moved away from stronger incentives, based on individual physicians’ efficient behavior with individual groups of patients, toward pooled incentives, in which panels of physicians share risks. (Individual physicians’ incentives were the government’s biggest concern.) Thus, congressional activity had a strong sentinel effect; legislative goals to soften financial incentives for physicians were accomplished even before formal regulations were issued. (Ironically, while one arm of the government sought to reduce financial incentives in HMOs, the Internal Revenue Service made an opposite ruling: individual practice association (IPA)-model HMOs must “at least” shift financial risk of primary care to providers to qualify for tax-exempt status.)

Policymakers also need to clarify the legal issues surrounding the use of clinical rules and incentives. HMOs have been sued for failing to disclose financial incentives and for poor clinical outcomes that were allegedly due to the impact of prospective utilization review decisions. (In contrast to retrospective review, which is performed after the fact, prospective utilization review has the potential to influence ongoing clinical decisions.) The courts have dismissed these cases on technicalities and have overruled initial verdicts on appeal. These actions have left HMOs with a palpable level of uncertainty regarding their legal obligations.

In contrast, courts have consistently acknowledged physicians’ responsibility to invoke appropriate standards of care for individual patients, independent of rules and incentives. Rules may offer physicians a safe harbor in litigation by helping to shape standards of care. Physicians may be better able to defend themselves against malpractice complaints if they can demonstrate compliance with valid, up-to-date rules that represent the profession’s collective view about the best approach to individual clinical problems. On the other hand, physicians must be aware that compliance with outdated or invalid rules might contribute to malpractice liability. Policymakers should create an environment in which physicians who follow clinical rules in good faith (or who deviate from them when appropriate) are protected from litigation.

Policymakers should sponsor more research on the impact of specific rules and incentives. Such research should evaluate rules and incentives in combination and in the context of the overall managed care setting in which they are implemented. These data will be important both to designing effective but not abusive management interventions and to protecting the HMO industry against overregulation.

Finally, there is a need to change the philosophy of medical education and training that currently breeds on overly adversarial relationships with
management. Physicians need education about managed care and encouragement to participate in the design of rules and incentives. Although physicians and managers may always retain some skepticism about each other’s motivations and behavior, current medical training produces physicians who have unrealistic expectations of and desire for complete autonomy.11

The art of medicine always will require that rules be flexible and, in most circumstances, that medical professionals use their experience, knowledge, and judgment to make decisions on behalf of individual patients. In contrast, any payment system involves financial incentives that influence behavior. The “art” of crafting policy in managed care is to determine the proper balance between the use of rules and incentives and to mandate that this balance be maintained.

The author is indebted to John M. Eisenberg, Neil I. Goldfarb, J. Sanford Schwartz, and Mark V. Pauly for advice; and to Danita Joell for administrative support.

NOTES

3. Institute of Medicine, Controlling Costs and Changing Patient Care? The Role of Utilization Management (Washington, D.C.: Institute of Medicine, 1989).
8. Eisenberg, Doctors’ Decisions and the Cost of Medical Care.