

Market-Oriented Cost-Containment Strategies and Quality of Care

LEON WYSZEWIANSKI,
JOHN R.C. WHEELER, and
AVEDIS DONABEDIAN

*School of Public Health,
University of Michigan*

ONE APPROACH TO REDUCING EXPENDITURES FOR medical care services that has been suggested by politicians, by academicians, and most recently by the business community is to increase the influence of market forces on medical care decision-making. While the potential for success of this approach in achieving its aim of cost containment has been much discussed, the related question of what effects it may have on quality of care has received no systematic treatment. To begin filling this gap, this paper examines the implications for the quality of medical care of some general proposals designed to reduce health care expenditures by increasing the influence of market considerations in medical care decision-making.

The proposals evaluated are represented by the work of Feldstein (1971), Pauly (1968, 1980), Enthoven (1978), and McClure (1978). These proposals principally depend on increasing cost-consciousness on the part of decisionmakers in the medical care process. These decisionmakers include the consumer (or patient), the provider, the insurer, and, in some cases, the employer. Further, increased cost-consciousness may come at three decision points: 1) at the point of deciding what insurance policy to buy or which health care plan to

Milbank Memorial Fund Quarterly/*Health and Society*, Vol. 60, No. 4, 1982
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0160/1997/82/6004/0518-33\$01.00/0

enroll in, 2) at the point of selecting a provider from whom to receive care, and 3) at the point of deciding which services to utilize.

Characteristics of Proposals for Market-Oriented Cost Containment

The main approach to increasing cost-consciousness employed by the proposals is to change the tax treatment of both health insurance premium contributions and medical expenses. Subsidization of premiums and expenses through such devices as tax deductibility and treatment as nontaxable income would be reduced, causing consumers (and, in some cases, employers) to bear a larger proportion of the price of insurance and perhaps of the price of medical services.

While the proposals are similar in their general implementation strategy, they differ from one another in some important respects. One critical issue is the choice of a decision point at which to foster cost-consciousness. Some proposals are intended principally to encourage consumers and employers to consider the cost-effectiveness of insurance coverages and of specific insurers, and thereby to increase competition among insurance plans for enrollees. In their most directive form, such proposals aim to encourage people to enroll in prepaid organized delivery systems. These developments are themselves expected secondarily to bring about changes in provider behaviors, as described below. Other proposals are designed to act more directly to foster cost-consciousness in the choice of a provider as a source of care and in the use of the services that may be recommended by the provider.

A second aspect on which the proposals differ is in the scope of benefits prescribed to be included in qualified insurance policies. More precisely, the proposals differ in the extent to which they specify the kinds of services that must be covered by insurance. On the one hand, some proposals would rely on people's judgments about the relative costs and benefits of insuring against a particular medical condition to determine the precise nature of insurance that they would choose. These proposals would permit widely varying levels of coverage. On the other hand, some proposals would be very directive, specifying a minimum but fairly comprehensive set of benefits that all insured persons should have. These proposals would prohibit coverage below

this minimum, and some would discourage supplementary coverage above the minimum.

A general statement that might be made about the differences among the proposals with respect to these issues is that they reflect to a large degree varying beliefs about the true viability of consumer sovereignty in medical care decision-making. Those proposals calling for increased competition, while at the same time 1) deemphasizing consumer decision-making at the points of choice of provider and receipt of services, and 2) specifying a fixed set of benefits, implicitly rest on a belief that while cost-consciousness should be expanded to improve efficiency, there are limits to the viability of consumer sovereignty in health care. In contrast, those proposals calling for increased competition, including 1) more cost-consciousness at the points of choosing a provider and receiving services and 2) greater choice in scope of benefits insured, reflect confidence in the ability of consumers to make informed, rational choices.

Aspects of Medical Care Quality Likely to Be Affected

If successfully implemented, the provisions contained in market-oriented proposals will alter specific aspects of the medical care process, thereby affecting the goodness or appropriateness of the process, and, more generally, the quality of the care provided. The medical care process, at its most fundamental level, results from the interaction between client and provider. Within that interaction it is useful to distinguish between the *initiation* of care and its subsequent *continuation*.

Initiation of care refers to the behaviors that lead to the first contact between client and provider. In this process, the client is the key figure. Continuation of care refers to the set of activities in which both client and provider participate in a regimen of therapy. The client plays an important role in this process as well, because continuation requires at least the client's acquiescence; more often, it requires the client's active participation.

In the initiation of care the provider is usually not directly involved. By contrast, in the continuation of care there is active participation by the provider. Although in theory the provider may, like the client, decide to terminate the therapeutic process prematurely, in most

instances the role of the provider is more one of inspiring the necessary confidence on the part of the client to sustain the relationship (Donabedian, 1973).

The interaction between provider and client can be evaluated in terms of two components of care, the technical and the interpersonal. Technical care refers to “the application of the science and technology of medicine, and of the other health sciences, to the management of a personal health problem” (Donabedian, 1980). The interpersonal component refers to the management of the relationship with the client, including the “milieu, manner and behavior of the provider in delivering care to and communicating with the patient” (Brook et al., 1976). A third component is sometimes distinguished, that of “amenities of care.” However, to the extent that amenities refer to “comfort, promptness, privacy, courtesy, acceptability and the like,” they can be considered “primarily as part of, or contributions to, the management of the interpersonal relationship” (Donabedian, 1980). The two components—the technical and the interpersonal—are acknowledged to be not only of approximately equal importance in evaluating care, but in fact to constitute a mutually reinforcing set (Freidson, 1961; Donabedian, 1980).

An important consideration in the evaluation of the quality of care is the quantity of care provided. If, in a given instance, the amount of care provided is insufficient to produce health outcomes that would otherwise be attainable, then the care provided is, by that fact alone, of poor quality. More generally, it can be said that quantity represents a necessary, though not a sufficient, prerequisite for quality (Donabedian, 1976b). By extension, the provision of unnecessary care can be said to represent poor quality, for two reasons. First, unnecessary care, like most care, is likely to have some harmful side effects, which in the case of unnecessary care are not balanced by any positive gains. Second, even if not harmful, unnecessary care represents an inefficient use of resources, which is socially undesirable and violates the rule of parsimony in the delivery of care (Donabedian, 1980).

Although the relation between quality and efficiency will not be examined in detail in this analysis, the distinction between production efficiency and clinical efficiency is relevant here. *Production efficiency* refers to how the services that make up any given clinical strategy are produced. For example, care is inefficiently produced if the hospital stands half empty, if the laboratory is slow in reporting findings, or

if highly trained personnel are used to do work that can be done just as proficiently by less trained, lower-paid personnel. Even if services are produced at maximum production efficiency, however, they still may not be deployed in a way that maximizes *clinical efficiency*. The achievement of maximum clinical efficiency requires the provider to select, time, and sequence services in a manner that produces the greatest increment in health for a given expenditure of resources. It is therefore possible to obtain larger increments of health (or "more quality") per dollar of expenditure by 1) combining, timing, and sequencing services into more efficient strategies to achieve higher clinical efficiency and 2) producing services at lower cost, to increase production efficiency (see Donabedian et al., 1982).

Some Expectations Based on What Is Known about Quality

Before turning to a detailed examination of the effects of market-oriented cost-containment strategies on quality of care, we briefly list below the salient implications and expectations related to those strategies that derive from what is known about quality of care:

1. *The provision of excessive services and the failure to provide appropriate services have been documented with respect to many aspects of health care delivery.* Much attention has focused on the excessive use of hospitals that results from admissions and lengths of stay that are judged inappropriate, as documented in several large-scale studies, including those by McNerney et al. (1962), Morehead et al. (1964), and Payne et al. (1976). The findings from other studies of inappropriate use of hospitals have been summarized by Gertman and Restuccia (1981), whose own recent work suggests that over 25 percent of days of care represent inappropriate use of the hospital. The literature on inappropriate utilization of surgical services has been most recently reviewed by McCarthy et al. (1981), whose study of a mandatory second opinion surgery program showed that 19 percent of elective procedures were not confirmed for surgery by the consultant, therefore representing potentially unjustified services. Excessive use of services has also been found in studies of laboratory services (Griner and Liptzin, 1971; Korvin et al., 1975; Cummings et al., 1982) and therapeutic

services (Brook and Williams, 1976), among others. There is another aspect to the problem of inappropriate care. Many studies have shown that a substantial number of the procedures and tests deemed to be necessary were not done; as a result performance levels in relation to criteria are for many diagnostic categories below 65 percent (see, for example, Hare and Barnoon, 1973; Osborne and Thompson, 1975; Payne et al., 1976; 1978; Hulka et al., 1979; Riedel and Riedel, 1979). Therefore, higher quality can be achieved by a) reducing over-service, thereby reducing both utilization and costs, or b) increasing compliance with standards, which may mean increasing costs in some instances and decreasing them in others, or c) a combination of these strategies. However, to date we have been far better able to identify instances of over-service and under-service than to remedy them, as Williamson (1977) concluded after a comprehensive review of the quality assurance literature.

2. *A unilateral emphasis on cutting unnecessary services is likely to result in cutting necessary services as well.* In surgery, for example, a very conservative approach that would result in minimal removal of normal tissue can be shown to have as its concomitant the failure to remove abnormal tissue in enough cases that the probability of mortality and morbidity is thereby increased (Howie, 1968; Neutra, 1977). This adverse change in the balance of the two types of errors (those of commission and of omission) is more likely to occur when one resorts to rather indiscriminating restrictions on access through the imposition of financial or other barriers. McNerney et al. (1962) reported, for example, that patients who paid their entire hospital bill were about half as likely to stay in the hospital unnecessarily, but they were also three times as likely to remain in the hospital for a shorter period than was judged to be appropriate.

3. *The low absolute level of quality suggests the need to use all available opportunities to raise it.* The low level of quality to which we have already alluded is a special concern in the context of cost-cutting proposals. It is certainly true that eliminating unnecessary care has the happy attribute of simultaneously cutting costs while raising quality. However, the reduction in unnecessary care should be achieved by methods that are sufficiently discriminating to avoid reducing necessary or useful care. In addition, the emphasis on unnecessary care does not address the issue of services that should be provided but are not. More generally, we are facing a dilemma which Brook and Lohr

(1981) have described in these terms: "In the 1980s, cost containment is the issue. The motivation for assessing quality might be characterized as no more than 'protective'—attempting to prevent a level of cuts in services that would push the quality of care below some extremely minimal level—as opposed to 'enhancing'—attempting to maximize the health of a population regardless of the associated costs."

4. *The available evidence suggests that not all groups in the population receive the same level of quality of care.* Any effort to correct the social maldistribution of quality of care that exists (Wyszewianski and Donabedian, 1981) is likely to require a kind of direct intervention that is quite different in orientation from most efforts to strengthen the role of market forces in health care. It is not likely, therefore, that implementation of market-oriented proposals will decrease existing inequalities in the distribution of the quality of care. If anything, there can be concern about the potential those proposals have for exacerbating the inequalities that already exist.

5. *The variation in performance among physicians has been found to be substantial.* In the study by Hulka et al. (1977), for example, internists received performance scores ranging from 39 to 89 percent. Similarly, Brook (1973) studied cases treated by physicians in the outpatient clinics of Baltimore City Hospitals and found that in 14 percent of those cases none of the performance criteria were met, in fewer than 2 percent of cases *all* the criteria were met, and the remaining cases were almost evenly distributed across the range. Although some systematic differences exist—in particular, specialists practicing within their own domain consistently get higher scores than general practitioners (see, for example, Payne et al., 1976; 1978; Brook and Williams, 1976; Hulka et al., 1979; Riedel and Riedel, 1979)—no simple generalizations are possible. As a result, it can be expected that a change in a person's source of care will affect the quality of care received, but the effects are not all likely to be in one direction and their magnitude is not easily predicted.

6. *Client and provider views of quality of care are not entirely congruent.* The views of clients and providers are similar in that both consider technical competence to be of central importance. Clients, however, place a greater weight than providers on the interpersonal aspects of care and even more so on amenities. The relatively larger emphasis that clients give to interpersonal care and amenities appears to be explained, not by a relative disregard on the part of clients for technical

care, but by the greater difficulty they have in evaluating such care, and by the fact that “technical competence is assumed by many to be generally present, so that other characteristics, which obviously vary a great deal from doctor to doctor, become more distinguishing among practitioners” (Donabedian, 1980). Therefore, it is not likely that choices of source of care made by consumers will incorporate accurate judgments of *technical* quality (see Newhouse et al., 1981), unless some mechanism is found for rating, on behalf of the public, the practices of every physician, and making such ratings public knowledge. It is safe to predict that such a mechanism may be some time in becoming a reality.

Effects on Quality of Reduced Subsidization of Insurance

As was already mentioned, the principal mechanism in market-oriented strategies for containing health care costs is to reduce tax subsidies for health insurance premiums. With respect to choice of insurance, this means that the consumer is being induced to consider, first, whether to opt for a) conventional health insurance (representing fee-for-service reimbursement by the insurer without capitation) or b) health maintenance organization (HMO) coverage (characterized by capitation) and, secondly, within each of these two choices whether to elect, in response to lower subsidies, new, lower coverage or whether to maintain previous coverage and compensate for the loss of subsidy through out-of-pocket payments for the premium. Each of the resulting possibilities involves additional choices with respect to providers and services, leading to a large number of combinations. The quality of care implications of each of these possibilities depend on how each compares, for a given consumer, with the consumer's current health insurance, providers, and services. Since the total number of possible combinations that would have to be considered would rapidly become unmanageably large, we confine our discussion primarily to those possibilities that theoretical considerations and empirical evidence suggest to be the most likely ones to occur.

Our discussion of the effects of reduced subsidization of insurance begins with an examination of the effects associated with selecting conventional insurance coverage.

Effects on Quality when Traditional Insurance Is Selected

Persons who are likely to select traditional insurance in response to market-oriented proposals are those who already have such insurance. The evidence on choice of plan (Berki et al., 1977; Berki and Ashcraft, 1980; Scitovsky and Benham, 1978; McGuire, 1981) suggests that it is not likely that many people will respond to increased out-of-pocket payments for premiums by moving from HMOs to traditional insurance. If anything, the response is expected to be in the opposite direction; in fact, the intent of some of the proposals is to induce people to opt for organized systems of care, particularly HMOs.

Explicit in the proposals is the expectation that reduced subsidization of insurance will lead consumers to purchase less insurance. This expectation receives support from Ginsburg (1981), who has predicted, on the basis of the few pertinent studies currently in existence, that the elimination of tax subsidies for the purchase of employment-related insurance might reduce by a substantial fraction—approximately 25 percent—the proportion of medical expenses covered by insurance (see also Congressional Budget Office, 1982). Consumers can be expected to purchase insurance that will cover less, either through the exclusion of certain services or through increased cost-sharing.

In what follows we focus on the quality of care implications for consumers who, in response to market-promoting policies, opt for reduced levels of traditional insurance. We examine the effects of such reduced insurance, first on the choice of provider and second on initiation and continuation of care.

Choice of Provider under Reduced Insurance. One likely result of reduced insurance is that people seek less costly sources of care. The available evidence (Berki and Ashcraft, 1980) suggests that those who have an established relationship with a physician or a group are likely to remain with that source and therefore are likely to try to reduce their out-of-pocket costs by other means, particularly by modifying their pattern of use of services.

On the other hand, those who do not have a regular source of care—accounting for about 22 percent of the total population (Aday et al., 1980)—can be expected to shop for a provider on the basis of price, among other characteristics (see Olsen et al., 1976). In

addition, if cost-sharing provisions are sufficiently burdensome to consumers, even some of those with a regular source of care may engage in shopping behavior (Frech and Ginsburg, 1978; Cantwell, 1981), thus overcoming the tendency, described by Scitovsky and Benham (1978), to stay with an established source of care even when an ostensibly better value is offered by another plan.

In theory, it should be rewarding for consumers to shop for providers using price as a key criterion, since variability in prices among providers is a well-documented phenomenon (Newhouse and Sloan, 1972; Reinhardt, 1975). This, however, is likely to remain more of a theoretical possibility than a reality as long as consumers continue to have little or no access to information about providers' prices. It remains to be seen whether past efforts by the Federal Trade Commission to lift bans on advertising by physicians and other professionals will be successful in making available the information needed for effective price shopping behavior on the part of health care consumers. Even if information on the prices of individual services becomes more available, consumers will still have difficulty assessing the total costliness of providers. This difficulty arises because of the differences across providers in the units of service prescribed for similar conditions, which account at least in part for the large variability in the cost of an episode of illness (Lyle et al., 1974; 1976). Information on such differences across providers is unlikely to be available to the consumer.

To the extent that shopping does take place, consumers without a regular source of care and those induced by price to seek a lower-cost source may as one option turn to providers who are at least as qualified as those the consumers would otherwise have used, but whose prices are lower. These providers would be characterized by higher clinical efficiency, higher production efficiency, or lower input prices. Some of the market-oriented proposals are explicitly intended to increase the number of such providers, primarily through the creation of organized delivery systems, of which McClure's (1978) proposal for "Health Care Plans" is one example. Such organized providers are presumed to deliver care that is higher in quality and lower in cost.

The expectation that selecting fee-for-service group practice will improve the quality of care for people retaining traditional insurance is based in part on the greater concentration and range of resources in these organized settings. In addition, as Freidson (1975) has argued, physicians who work in groups tend to be aware of each other's work,

and to learn from one another, resulting in better technical care than that of physicians who work in isolation. This prediction receives some support in the findings of Payne et al. (1976) and Riedel and Riedel (1979). However, the observed differences are relatively small, and there is some evidence that the positive quality differences associated with group practice are confined to large multispecialty groups. Rhee (1975) found that groups of fewer than 16 physicians provided care that was lower in quality than that of solo practitioners, while that of multispecialty groups with more than 16 physicians was highest.

Furthermore, the evidence is mixed on whether fee-for-service group practices and other organized arrangements do indeed achieve significant efficiencies in the delivery of care (Kimbell and Lorant, 1977). Only when organized arrangements are combined with putting the provider at risk, as in HMOs, are efficiencies consistently present, and even then these are attributable primarily to reductions in use of inpatient care (Luft, 1981). This adds support to the expectation that those who, for price reasons, opt for organized settings are likely to forgo traditional insurance altogether and join HMOs. In addition, it is not known to what extent individual providers would form fee-for-service groups in response to increased competition. The trend in areas of the country where such competition exists has been toward individual practice associations (IPAs) more than toward fee-for-service groups.

Given all these considerations and the additional difficulties that consumers are known to have in assessing technical quality of care (Donabedian, 1980), and in determining the relative costliness of different providers, it appears very unlikely that many people would attempt to find, and even fewer would succeed in finding, an equally qualified or better qualified, less costly, fee-for-service provider in response to higher copayments imposed through traditional insurance. For the few who are successful in the attempt, the technical quality of care they receive will be, by definition, either the same as they now receive or better. Whether the interpersonal aspects of care will be equally good will depend on whether efficiencies are achieved at the expense of amenities—which would lower quality—or whether, instead, providers compete on the basis of amenities, which would raise that aspect of quality.

There is also the possibility that consumers seeking lower prices will select providers who are less qualified. Examples include pharmacists and nurses and persons in other health occupations whom the consumer may know and consult informally. The advice provided by such persons is generally free. There is long-standing evidence that some people, especially those with lower incomes, use pharmacists in cases where they would otherwise see physicians if it were not for problems of cost and access (Koos, 1954; Galloway and Eby, 1971). When such people are given better coverage for physician services, they have been observed to decrease markedly their use of pharmacists for consultations about medical problems (Ricci et al., 1978). Other possible lower-cost substitutions include midwives for obstetricians, and podiatrists or chiropractors for orthopedic surgeons. Despite the strong opinions that are sometimes expressed on the subject, not much is actually known about the quality of care provided by these non-physicians as compared to that of physicians. In cases where the patient initially sees a nonphysician and subsequently goes to a physician for care, recourse to these substitutes may either have accelerated or delayed initiation of care. The implications for quality of care of such delayed or facilitated initiation are discussed in a later section.

In summary, we expect that the majority of consumers who retain traditional insurance coverage will continue to seek care from their regular physicians. To that extent, the quality of their care will be unaffected. A minority of consumers will be motivated to shop for care of lower cost, but we believe that most of them will have difficulty identifying lower-cost, fee-for-service providers who deliver care of a quality equal to or higher than the consumers would otherwise use. They are more likely to turn to providers who charge less but are also less qualified. However, there is insufficient evidence to predict the associated quality effects for this minority of consumers who will shop for lower-cost care.

Initiation and Continuation of Care Under Reduced Insurance. In addition to or, more likely, instead of turning to lower-cost providers of care, those who decide to retain traditional insurance may respond to higher cost-sharing provisions by using health services differently. The earlier evidence reviewed by Donabedian (1976a) shows that if deductibles and copayments are set high enough they will reduce the use of the services to which they apply. In that respect, the expectations of the

market-oriented proposals appear to be well-founded. Furthermore, cost-sharing provisions are likely to have differential effects:

Deductibles are most likely to have an effect on the initiation of care, and they may to some extent, though not invariably, be compensated for by higher utilization subsequent to initiation. Copayment appears to have an effect on initiation as well as continuation of care. All deterrent payments are likely to have differential effects according to type of condition and social class or income (Donabedian, 1976a).

Scitovsky and Snyder (1972) found that the introduction of coinsurance in a prepaid program resulted in greater decreases in the use of preventive services—particularly annual physical examinations—than in therapeutic care. Within therapeutic care there was a greater reduction in visits for “possibly minor complaints” than in visits for other services. “Possibly minor complaints” included warts, headache, earache, colds, acute pharyngitis, acute tonsillitis, acute respiratory infection, hay fever, indigestion, constipation, back pain, dizziness, palpitation, cough, and fatigue. Although the authors suggest that at least some of this reduction in use represents a reduction in unnecessary care, no systematic comparison was made of the appropriateness of the care provided before and after the introduction of coinsurance.

Similarly, the interim findings from the Rand Health Insurance Study, a large-scale controlled experiment related to cost-sharing in health insurance policies, show that those getting free care (no coinsurance) used about 50 percent more services than those having to pay the highest (95 percent) coinsurance rate (Newhouse et al., 1982). Unfortunately, the results of the portion of the study which examines the effects of different levels of coinsurance on health status have yet to be reported. Therefore, there is no basis for judging whether the care forgone as a result of coinsurance was necessary or not.

Even in the absence of direct evidence about the effects of cost-sharing on quality of care, some predictions about quality effects can be made. Because reductions in use of services resulting from increased cost-sharing are likely to be mostly in preventive care and for less serious, self-limiting conditions, some of the reductions in use will not alter the length of illness or immediate health outcomes. On the other hand, most persons with traditional insurance already face cost-

sharing, which affects their use of services. Higher cost-sharing levels should therefore result in a longer list of conditions for which they will delay seeking care or will not seek care at all. It is reasonable to expect that the conditions added to that list are more serious in the eyes of the consumer than those for which care is not already being sought. To infer that no reduction in quality will result, one would have to assume that the patient can and will in every instance only forgo care that would have been judged to be medically unnecessary. Such an assumption runs counter to the long-standing evidence that a substantial proportion of the population is not inclined to seek care for symptoms and conditions which, according to accepted medical opinion, require a physician's attention (Koos, 1954; Rosenfeld et al., 1957; Feldman, 1966; Goodrich et al., 1970; Aday et al., 1980). Therefore, it is inevitable that, as increases in cost-sharing reduce use of services, some of the care forgone will be for conditions for which medical intervention can alter the course of the disease and affect the eventual outcome. To that extent quality of care is reduced.

Similarly, for services that were formerly covered by insurance and are subsequently excluded from coverage in response to reduced subsidies for premiums, use can be expected to decline. To the extent that such services correspond to needed care, some harm to quality can be expected. To the extent that specific procedures that are known to be of no benefit are excluded from coverage, quality of care will improve (see Office of Technology Assessment 1978; 1980; Institute of Medicine, 1981).

In conclusion, it can be said that if raising cost-sharing levels is successful in reducing use of services, the reduction is likely to be primarily at the expense of preventive services and services for conditions that consumers consider to be less serious. The net effect on quality of care will depend on: 1) the extent to which certain services were already being forgone in response to the cost-sharing provisions in force prior to any increase and 2) whether copayments and exclusions are specifically directed at reducing or eliminating use of services that are believed to be of little value or even harmful. Overall, however, some decrease in quality of care will follow from reduced initiation for certain conditions and reduced use of preventive services.

We now turn to the effects associated with the other choice a consumer might make in response to reduced subsidies for health insurance premiums, namely, joining an HMO.

Effects on Quality When HMO Coverage Is Selected

Since reduced subsidization of health insurance premiums will stimulate consumers to attempt to spend less on health insurance of any kind, HMOs will be induced to offer more restricted benefit packages at reduced premium rates. They can do so by adopting one or more of the following strategies: 1) increase both production efficiency and clinical efficiency; 2) eliminate coverage for certain services, most likely those that are considered "optional," such as vision care, short-term psychiatric care, and drugs; and 3) impose cost-sharing features.

The effects on quality of care of being covered under such lower-priced HMO insurance will, of course, depend on the specific mix of strategies adopted. Efforts to increase production efficiency may alter the operations of an HMO in ways that affect quality of care. For example, some efficiencies may be achieved at the expense of increasing waiting times for appointments, in turn affecting technical quality of care by inhibiting either initiation or continuation of care. On the other hand, increases in clinical efficiency will, by definition, either increase quality with no increase in costs or maintain quality while reducing costs. Similarly, the nature of the services excluded from coverage and the services included under cost-sharing provisions will largely determine how and to what extent quality of care will be affected.

Not knowing in advance which specific strategies most HMOs will adopt obviously makes it difficult to predict ultimate effects on quality of care. Our expectation is that HMOs will respond to the demand for lower-priced insurance by trying to increase efficiency while at the same time eliminating coverage for at least some "optional" services. We also assume that HMOs will be inclined to institute cost-sharing provisions that go beyond the token payments now collected by some plans.

Another general consideration that is relevant to quality of care is the capacity of existing HMOs to absorb substantial enrollment increases and the capacity of the system to create new HMOs. There may be a lowering of quality if rapid growth over a short period of time outstrips the capacity of the HMOs to provide good care. This pressure on existing HMOs is not likely to be relieved, at least not in the short term, by the development of new HMOs, a notoriously slow and problem-ridden process (Luft, 1981).

The effects on quality of care of selecting HMO coverage in response to market-oriented policies will also depend on current insurance status. In what follows we examine these effects, first for those currently enrolled in HMOs and second for those currently covered by traditional insurance. The effects for people with no insurance who select HMO coverage will be discussed in a later section.

Effects on Current HMO Members. Those who are currently enrolled in an HMO and decide to continue in it might have an option between 1) paying additional out-of-pocket premiums so as not to alter their coverage and 2) accepting lower coverage in the form of cost-sharing and exclusions from coverage for services that previously were fully covered.

Those opting to pay additional out-of-pocket premiums to maintain the same coverage can be expected to receive care of the same quality as before. The quality may even be higher if the HMO, as part of its effort to compete with other insurance plans, increases clinical efficiency.

For those choosing lower coverage, some services will no longer be covered, and deductibles and coinsurance will apply to others. As a result, at least for some people and some services, initiation and continuation of care will be affected. Undoubtedly, some of the care not sought as a result of the changes will be care that was not necessary. On the other hand, there is some evidence that HMOs, especially prepaid group practices (PGPs), already constrain their supply of services and ration those services, although not through money prices but through waiting times and travel distance (Reinhardt, 1973; Luft, 1981). Further restraint on use through cost-sharing is all the more likely to bring about a reduction in the receipt of necessary care, increasing the probability that the net effect on technical quality of care will be negative.

Effects on New HMO Members. The effects on quality of joining an HMO depend on whether the HMO is an IPA or a PGP, and on whether a change in usual source of care occurs when the move is made.

One category of new HMO enrollees consists of those who join an IPA because they are following their regular physician into the association. In this situation, there is no change in the level of competence of the primary physician and there probably will be few changes in practice characteristics, such as location, level of amenities, referral patterns, and hospital privileges. However, the provider and

the patient will typically face new incentives and constraints in the IPA. In particular, depending on the level of premium paid, the consumer will probably have lower out-of-pocket costs, thereby increasing the propensity to initiate care. At the same time, the increased cost-consciousness on the part of the physician will reduce the provision of unnecessary care. However, it is conceivable that this conjunction of opposing forces will also result in conflicts between provider and client as to what is or is not necessary care, leading to some decrease in the quality of interpersonal care. In addition, some decrease in technical quality may result if increased cost-consciousness leads to not prescribing beneficial services. There will also be somewhat more external monitoring of the practice by the IPA, aimed principally at reducing unnecessary services rather than at assuring the provision of necessary services. On balance, mainly because there is no change in primary provider, there are likely to be relatively small quality-of-care effects for consumers who join an HMO in this manner.

A second category of new HMO enrollees consists of those who do not follow a practitioner into an IPA but instead change their usual source of care when they join an IPA as a preferred alternative to traditional insurance. In this case the quality effects of changes in incentives and constraints discussed above apply. In addition, the characteristics of the IPA physician must be compared to those of the previous physician. If previously the new enrollee did not view any provider as a regular source of care, the attachment to a physician in the IPA will enhance continuity of care and in that sense improve quality, unless the new physician's technical and interpersonal skills are lower than those of providers used previously. If, instead, the new member has chosen to discontinue seeking care from his or her regular physician in order to join the IPA, the interpersonal quality of that previous relationship must be called into question. In that respect, enrollment in the IPA can raise at least this aspect of quality, although the effects on technical quality will again depend on the skills of the IPA physician compared to providers seen previously. Given all the factors involved, it is not possible to predict whether IPA enrollees who establish a relationship with a new physician will receive care of better quality. However, because there is a change of primary physician, both positive and negative effects on quality of care may be larger than those discussed for consumers who follow their physician into an IPA. Unfortunately, it is especially difficult to make definitive

statements about quality of care in IPAs because it has not been the subject of much systematic study.

A final category of new HMO members is made up of those who join a prepaid group practice. Again, the effects of altered incentives and constraints discussed earlier apply, as do the effects of seeking care from a new physician. However, there are also important differences. The structure of a PGP provides greater quality-promoting possibilities related to selection of staff, availability of consultation, and informal and formal monitoring. A related consideration is the likelihood that physicians choosing to work in a group-practice HMO may differ in their motivation from solo-practice physicians, particularly in their preference for collegiality and consultation.

The issue of how care in PGPs compares to that provided in the fee-for-service (FFS) sector has been addressed more or less directly in dozens of studies, and has been the subject of several major reviews of the literature over the past fifteen years, including, in particular, those by Donabedian (1965, 1966), Roemer and Shonick (1973), and, most recently, Cunningham and Williamson (1980) and Luft (1981). Although this voluminous literature defies easy summarization, it is fair to say that on measures of technical quality PGPs have been found to provide care that is, for the most part, at least as good as that provided in FFS settings. There is, however, a concern that some of the savings achieved by PGPs in reduced hospitalization are the result of a tendency to skimp on surgical care (LoGerfo et al., 1979) or that, more generally, in PGPs "the emphasis on economy may have perhaps been overemphasized on occasion at the expense of quality" (Morehead et al., 1971). Quick et al. (1981) have also reported that the members of a large PGP began prenatal care later and were more likely to have fewer prenatal visits, in relation to accepted standards, than women in the general population. It is not known how prevalent such skimping is or how it affects outcomes. For example, Quick et al. (1981) report that despite the differences in initiation and use of prenatal care, the infant mortality rates in the PGP and the general population were comparable. Similarly, it is not known how much less unnecessary care is provided by PGPs as compared to FFS practices. Those gaps in our knowledge make it difficult to make any definitive statements about differences in technical quality of care between PGPs and FFS practices.

Another contrast that has been made between PGPs and FFS settings

concerns the quality of the interpersonal aspects of care. There is some evidence that patients and physicians are more unhappy with one another in PGPs than in FFS settings. PGP physicians complain about what Freidson (1973, 1975) calls "the demanding patient," who is seen as expecting too much care and wanting it for trivial complaints (Mechanic, 1975; McElrath, 1961). This probably reflects the tension created by a system in which initiation of care is facilitated for the client, while the provider has an incentive to limit subsequent utilization.

Patients moving from FFS providers to PGPs also face a tradeoff between the flexibility in setting up appointments coupled with long waits at the office that are characteristic of most FFS practices, and the longer waits to set up the appointment but shorter office waits that are more typical of PGPs (Tessler and Mechanic, 1975). To some, this is an additional source of dissatisfaction with PGPs and one which lowers at least to some degree the quality of interpersonal care. It should be noted, however, that some studies have found *overall* consumer satisfaction with PGPs to be comparable to that with FFS practices (Roemer et al., 1972), even though there is often strong dissatisfaction with certain specific aspects (see Luft, 1981).

Given all of the factors involved and the differences between IPAs and PGPs, it cannot be stated unambiguously what the effects on quality of care will be for a person who drops traditional insurance in favor of HMO coverage in response to a reduction in insurance premium subsidies. Predictions are particularly difficult to make because the studies of quality of care in HMOs conducted to date have for the most part evaluated the large, well-established PGPs. The hoped-for increase in the number of HMOs in response to market-oriented policies may consist of organizational types that are substantially different from the PGPs that have been studied.

Effects on Medicare, Medicaid, Low Income, and Uninsured Populations

Most of the market-oriented proposals make special provisions for Medicare beneficiaries and low-income populations, including those who are currently Medicaid recipients. These provisions include premium

subsidies, voucher systems, and cost-sharing which varies with income. Generally, the provisions are intended to encourage shopping for insurance coverage. In this subsection we examine the likely effects of these mechanisms on quality of care. First, we consider those who elect traditional insurance with copayments, and then those who join HMOs.

Insurance with Copayments

The effects of cost-sharing provisions on use of service are strongly related to income (Scitovsky and Snyder, 1972; Donabedian, 1976a; Luft, 1981). Lower income people are more likely not to initiate care, to delay initiation, and to reject services, all with potentially more negative implications for quality of care. Recognizing this tendency, some of the proposals relate cost-sharing levels to income. While theoretically appealing, this solution may be difficult to implement through voluntary health insurance. As Ginsburg (1980) has argued, to carry this out, private insurance companies would have to measure a person's income at the time the premium is set as well as at the time a claim is made, a task not possible under current statutes protecting privacy and one that additionally would entail relatively large administrative costs.

Assuming, however, that income-related cost-sharing levels can be put in place, their effects on low-income persons who choose such coverage are not easily predicted, especially for Medicaid beneficiaries, since Medicaid coverage differs from one state to another. Recent changes in federal law expand considerably the latitude states have for imposing cost-sharing on services provided to Medicaid recipients. A likely result is a widening disparity among states with respect to the magnitude of costs borne by Medicaid recipients. In addition, financial access to care for Medicaid recipients has always been subject to great variations across states depending on how severely a given state restricts its definition of the services covered under Medicaid (Muse and Sawyer, 1982). In states with relatively comprehensive coverage, the addition or expansion of cost-sharing provisions is likely to affect initiation and continuation in ways that are analogous to those discussed earlier for the insured population and with similar implications for quality of care. In states with very restricted coverage,

any adverse effects on quality of care resulting from the inhibiting effects of cost-sharing might well be compensated for by the broader coverage mandated for everyone in most market-oriented proposals.

One group whose potential benefits from the provision of insurance with income-related cost-sharing is less ambiguous includes those who have no public or private insurance coverage. Current estimates place this group at approximately 23 million (Carroll and Arnett, 1981). For these people, any insurance, even with cost-sharing features, will facilitate access to care—and thus contribute to the quality of care they receive—in spite of their likelihood of having a choice of providers that is restricted to those who tend to serve Medicaid and low-income populations (see Mitchell and Cromwell, 1980).

If, on the other hand, cost-sharing levels are not set in relation to income, the effects on the quality of care received by lower income groups will be more negative. For those who are covered by Medicaid, access and therefore quality will be compromised. For those not so covered, there would still be improvements in quality by virtue of having increased access to care, but the benefit would be lower. Most importantly, among those who have coverage to begin with, the effects on quality of care would be distributed inequitably across income classes, with those having lower incomes being more apt to forgo necessary care than those in the higher income brackets.

The effects of cost-sharing on Medicare beneficiaries are likely to be similar to those described earlier for the insured population, inasmuch as the provisions of Medicare Parts A and B resemble those of a standard health insurance policy with major medical coverage.

Joining HMOs

Some of the market-oriented proposals would actively encourage the enrollment of everyone in HMOs, including persons currently covered by Medicare and Medicaid. Unfortunately, the history of the relationship between HMOs and Medicaid and Medicare populations points to some difficulties. As Luft (1982) argues, HMOs are subject to a set of incentives which makes them shun certain high-use groups, in particular the poor and the elderly. At present, less than 2 percent of Medicare beneficiaries are enrolled in HMOs, and no satisfactory reimbursement scheme has been found to induce HMOs to enroll more Medicare beneficiaries (Trieiger et al., 1981). Although a larger

proportion of Medicaid recipients is enrolled in HMOs, substantial problems have arisen, as the much-publicized experience of the prepaid health plans in California exemplifies (D'Onofrio and Mullen, 1977). Also worrisome is the likelihood that existing "Medicaid mills," with their well-documented problems (Bellin and Kavalier, 1970; Rosenberg et al., 1976; Donabedian, 1976b; U.S. Special Committee on Aging, 1976) may respond to some of the market-oriented proposals by becoming IPAs. Therefore, although in general some improvement might be expected in the quality of care received by Medicaid recipients who enroll in HMOs—for the reasons described earlier in our discussion of consumer shifts to HMOs—this expectation may not be fulfilled if the HMOs are little more than old Medicaid mills under a new label.

Effects of Administrative Controls

The proposals discussed in this paper are quite different from the more purely free-market proposals, such as that of Friedman (1962), who favors abolishing professional licensing as it currently exists and would like it replaced with a certification program that is not a requirement for practicing as a health professional. By contrast, the proposals that concern us here would retain most existing regulations, and even add new ones, many of them with important implications for quality of care. In this section we discuss the more pertinent of these provisions.

Some of the proposals indicate that a "qualified plan" will have to meet specified "performance standards," including standards that relate specifically to providers (Enthoven, 1978). McClure (1978) favors imposing quality assurance mechanisms on competing health care plans, as long as other providers are also subject to them. Through these and similar provisions, most of the proposals favor retaining and even strengthening long-standing controls related to structural quality such as the licensing of facilities and personnel, as well as mechanisms aimed at the process of care, notably internal peer review and external monitoring. To the extent that these controls are effective, therefore, it can be expected that existing levels of quality would be maintained or at least would be less adversely affected than might otherwise be the case as a result of the other provisions in the proposals.

Similarly, the specification of a minimum set of benefits for all qualified plans has particular implications for quality. By including certain services it assures access to those services. By not including certain other services it may distort the decision-making of providers, thus violating the "integrity of the medical care process" (Donabedian, 1976a). This interference with clinical decision-making will lower quality of care in one of two ways. Either a needed service will be less likely to be provided because it is not covered by insurance or a suboptimal substitute that is covered will be used, resulting in care that is clinically inefficient. Nevertheless, the promulgation of a floor for insurance coverage will enhance quality for many who now fall below that minimum level of coverage. On the whole it is an important and necessary safeguard. Its presence as a "safety net" could do much to limit the adverse effects of unwise choices of insurance on the part of many consumers. How effective it is in this regard depends, of course, on how generously this "minimum coverage" is ultimately defined.

Most of the proposals include provisions for catastrophic or "stop-loss" coverage, which means that beyond a certain dollar amount of expenditures per year all costs for covered benefits are to be paid by insurance, with no cost-sharing. This provision represents a major extension over current coverage, since even those who have "major medical" coverage do not necessarily have stop-loss insurance as part of it. It has been estimated that approximately half the population is currently covered by catastrophic health insurance (Friedman, 1980). Even those who are covered, however, are subject to losing that coverage if the illness causes them to lose their jobs and, therefore, their job-related insurance (Feder et al., 1981). The universal availability of insurance for health care costs that exceed a given limit is likely to encourage people to initiate care more readily, especially in cases where the prospect of future high expenditures would otherwise have been a deterrent. More importantly, stop-loss coverage will encourage continuation of care for conditions that entail very high expenditures. In those ways quality of care is apt to increase for a large proportion of the population. On the other hand, catastrophic coverage may encourage greater use of treatments which are of no benefit to the patient and which therefore represent lower quality of care. The kinds of conditions that lead to catastrophic expenditures include many which, because they are refractory to treatment, present a special

temptation to try many different modalities of care, even in the knowledge that they are likely to result in no net improvement in health. Still, the net effect of introducing universal catastrophic coverage is likely to be improved quality, at least for the large proportion of the population that currently lacks such coverage and does not have the resources to shoulder on its own the burdens of catastrophic illness.

Some of the proposals are also predicated more or less explicitly on the expectation that implementation of the proposals will induce private insurance companies to compete with one another, and that in order to do so successfully the companies will impose stricter controls on providers, so as to contain expenditures and keep premiums at competitive levels. One control mechanism is the preferred provider arrangement, whereby providers establish closer ties with the insurance company in exchange for patients being channeled to them. Although this would allow insurance companies to monitor care more closely for appropriateness, it is likely that the focus will be on rooting out unnecessary care. That is beneficial for quality of care, but it does not address failures to provide needed care.

Another control mechanism available to insurers is refusal to cover certain services believed to be of no benefit to patients. The Blue Cross Association and the American College of Physicians are already cooperating in an effort to identify such procedures. In that sense, market-oriented provisions may only further encourage a process that is already underway (see Eisenberg and Rosoff, 1978). There is evidence that less intrusive measures also can have an effect; according to at least one recent study, physicians can be induced to reduce their use of apparently unnecessary diagnostic tests simply by being told about the costs of the tests (Cummings et al., 1982).

An alternative to the mechanisms just mentioned is to institute formal monitoring of care. It can be an extension of some of the mechanisms just discussed, or quite apart from them. To be effective, monitoring would need to be tied to reimbursement. A very structured example of such a mechanism is the pretreatment or preauthorization review which most dental insurance plans have instituted. Some see it as an effective tool that eliminates nonessential and harmful treatment (Friedman, 1975), while others consider it to be a distorting influence on the practitioner's decision-making and see in it a fatal flaw characteristic of cost-containment measures in general: the concentration on reducing costs in the short term, which only leads to

greater costs and greater pain and discomfort for the patient in the long run (Steinholtz, 1971). It is important to note that organized resistance by providers may greatly limit the methods and scope of any direct monitoring of the quality and necessity of care carried out by insurance companies.

In sum, then, the market-oriented proposals do not envisage doing away with most of the existing mechanisms for regulating and assuring quality of care. In fact, most of the proposals include provisions that would strengthen some of the regulatory mechanisms or even add to them. Since, however, the primary concern of all these provisions is still cost-containment, and since providers may be able to resist the more stringent of these controls, the effects of these provisions on quality of care are not likely to be as positive as their proponents may intend or hope them to be.

Summary and Discussion

Our examination of the likely effects of market-oriented proposals on quality of care shows that the net direction and intensity of the effects can be expected to differ for different groups. In this summary we focus on the effects that are particularly salient either because they apply to a large proportion of the population or because the effects themselves represent a major departure from current levels of quality of care.

Approximately two-thirds of the United States population currently have traditional health insurance that includes major medical coverage (Carroll and Arnett, 1981), although, as was noted earlier, such coverage does not necessarily include a catastrophic health insurance provision. The Medicare population can be added to this group because of the similarities in coverage. Most people in this group are likely to continue receiving care from their current providers so that there will be no change in provider competence. Therefore, the effects on quality of care for this group will primarily depend on choice of service. Because the market-oriented proposals will increase the amount of cost-sharing for this group, some reduction in initiation and continuation of care can be expected. To the extent that the care forgone includes medically useful services, the quality of care will suffer. The effects on initiation and continuation will be less negative for those

who retain their current provider and switch from traditional insurance to an IPA.

Although some of the proposals intend for large numbers of people to join HMOs, the available evidence suggests that only a small proportion of the population will do so. Based on what is known about quality of care in HMOs compared to that in FFS settings, the quality of care received by those who do join HMOs will be unchanged or may even improve. However, the quality of care in the HMOs that have been studied, mainly large PGPs, may be different from that of the kinds of HMOs that people would join.

The adoption of market-oriented policies which mandate that *everyone* be covered for a minimum set of services as well as for catastrophic expenses would have a major effect on the approximately 10 to 20 percent of the population that at present has either no health insurance at all or very limited coverage *and* would have difficulty qualifying for Medicaid. If the minimum set of benefits is reasonably comprehensive, this population would be given much enhanced financial access to care. Similarly, the large portion of the population with no catastrophic coverage would see its quality of care improve as a result of the introduction of universal catastrophic coverage, even though with increased access there may also be more inappropriate care provided.

Current HMO enrollees and Medicaid recipients are not likely to experience large changes in the quality of care they receive if market-oriented policies are adopted. However, the effects for Medicaid recipients will vary according to the specific provisions of the state in which they reside.

More positive effects overall could result if the proposals successfully induce the insurance industry to adopt policies aimed at decreasing inappropriate care. However, the experiences of Blue Cross plans and of Professional Standards Review Organizations (PSROs) so far do not suggest that, at least in the near term, dramatic results can be expected, even if the insurance industry responds as hoped.

The overall net effect will depend on the exact provisions enacted, and much could hinge on such issues as: the feasibility of instituting cost-sharing provisions related to income; the development of effective mechanisms that pay as much attention to the nonprovision of necessary care as to the provision of unnecessary care; the likelihood that consumers can and will become informed about the technical quality

and the cost-effectiveness of the care available from different providers; and the extent to which people are induced to join HMOs, and the characteristics of the HMOs that will be available to them.

Ultimately, the chief policy decision in devising a market-oriented proposal rests on how much emphasis should be placed on provisions that do not contribute to competition per se but instead aim at protecting or enhancing quality of care. The market-oriented proposals which include more controls directed at quality are also those that reflect less confidence in the viability of consumer sovereignty in medical care decision-making. The strongest advocates for such quality-enhancing proposals are likely to be those who believe that the current relatively low levels of quality of care should be raised. At the very least the market-oriented proposals must not damage quality on the average, nor make the benefits of quality more inequitably distributed than they are now. To make sure that this does not happen it is essential that all the best features of the current proposals be implemented simultaneously and as a whole. But beyond that, a constantly vigilant watch over quality must be the necessary companion of competition in the market for medical care.

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Acknowledgments: An earlier version of this paper was prepared for and supported by the Office of Technology Assessment, U.S. Congress. The suggestions and comments from the OTA staff, and particularly Jane Willems, are sincerely appreciated. The contributions of Hillary Murt and the helpful comments of S. E. Berki are also gratefully acknowledged. The opinions and conclusions expressed in this paper are those of the authors.

Address correspondence to: Leon Wyszewianski, Ph.D., School of Public Health, The University of Michigan, 109 Observatory Road, Ann Arbor, MI 48109.