



Editorial

Eight Recommendations for Maximizing the Return on Investment in External Quality Oversight

In a previous editorial, Palmer addressed the evolving impact of managed care on health care quality management in the United States and concluded that a meltdown was transpiring that represented a movement away from strict external quality of care oversight toward a paradigm of encouraging quality improvement through professional and competitive incentives [1]. Whereas many countries throughout the world may not have the quality improvement benefits (and liabilities) of the intense competition brought about by the evolution of managed care [2], the US marketplace experience provides the opportunity for consideration at an international level of the value of external regulatory oversight of quality of care. The purpose of this editorial is to consider a conceptual framework for an economic evaluation of external quality oversight to stimulate thinking at an international level regarding the return on investment of resources allocated to external quality oversight. These comments will be framed in reference to the largest external quality oversight effort in the US, the Health Care Financing Administration's (HCFA) Health Care Quality Improvement Program (HCQIP) [3–5] that currently allocates in excess of \$220 million per year from US taxpayers for 37 million Medicare beneficiaries who are the subject of the quality improvement efforts of the peer review organization (PRO) program. There is considerable uncertainty regarding the return on this investment from any economic frame of reference, including that of Medicare [4, 6,7]. This commentary provides a definition of quality of care that incorporates the conditions of perfect competition and concludes with eight recommendations that may be robust on an international basis with respect to maximizing the return on investment of resources in external quality oversight programs.

DEFINING QUALITY OF CARE

Identifying the implications and operation of an ideal market for health care services using the paradigm of perfect competition may inform an evaluation of the return on investment in health care quality assurance efforts, such as the HCQIP. Under perfect competition, the quality of care would be optimal (or, if not optimal,

dynamically self-adjusting toward the optimum) if the following four conditions prevailed in the market for health services [8]:

- (1) large numbers of buyers and sellers,
- (2) free mobility of resources,
- (3) undifferentiated products, and
- (4) symmetric information among buyers and sellers.

The market for health care services is remarkable in that all four of these assumptions of the perfectly competitive paradigm may fail. However, the condition that is most critical to the study of quality of care, and the one that may be driving the overall structure of the market for health care services (thereby causing the failure of the other three assumptions), is the fourth condition, symmetric information among buyers and sellers [9]. The market failure that results from the inability of consumers of health care services to assess the quality of care accurately is the economic justification for the licensure of health care providers [10]. Professional licensure, with its attendant limitation on the number of providers and mobility of resources, represents a further deviation from the paradigm of perfect competition.

The inability of consumers of health care to assess the quality of care accurately also sets up a principal-agent relationship between the consumer and the provider. As agents for the consumer, providers recommend, dispense and evaluate the quality of health care services. Optimally, the providers (as agents for the consumers) recommend and dispense the type and level of health services that the consumer would choose had the consumer been appropriately informed about the efficacy and quality of the available services. Since a provider may have a self-interest in some of the health care services required by the consumer, an imperfect agency develops between the consumer and the provider, and the consumer may not be offered the services that he would otherwise choose had he been fully informed. This imperfect agency results in efficiency losses in terms of variations in both the quality and quantity of care provided (the small area variations phenomenon). However, the professionalism of the provider and various external and internal quality assurance programs keep the self-interest of the provider from dominating the best interests of the consumer.

If the agency relationship between the consumer and the health services provider was perfect, and in the absence of other imperfections in any other relevant markets, the quality of care received by the patient would reflect the consumer's preference weighting for quality health care in the face of other consumption alternatives. This suggests that the definition of quality of care should incorporate a reference to consumer preferences. By considering the paradigm of a perfectly competitive market for health services with perfect agency, we would restate the US Institute of Medicine's definition of quality of care in the following way [11]:

Quality of care is the degree to which health services for individuals and populations are consistent with current professional knowledge and reflect the preferences of well-informed consumers with regard to the trade-off between increasing desired health outcomes and reducing other consumption alternatives.

This definition of quality of care has the added benefit of focusing on consumer preferences; thus, it is consistent with the philosophy of "focusing on the customer" that is central to the total quality management/continuous quality improvement approach to quality assurance. In addition to perfect agency and its focus on consumer preferences, the perfectly competitive market for health care services would have four additional characteristics: (1) there are few or no costs associated with operating the mechanism (transactions costs are low); (2) the perfectly competitive market is self-regulating and self-improving; (3) strategic behavior on the part of an individual agent is not beneficial to that agent; and (4) the mechanism is not excessively burdensome to the agents who are influenced.

THE HCQIP AS AN EXAMPLE OF EXTERNAL QUALITY OVERSIGHT

The HCQIP is the fifth version of review or oversight of the Medicare program. From its inception in 1965 through 1973, the Medicare program operated under no formal external review mechanism. In 1973, the US Congress enacted legislation to create the Professional Standards Review Organizations (PSROs). From 1965 through 1983, Medicare reimbursed providers based on billed charges. The role of the more than 200 regional PSROs throughout the US and its territories was to monitor providers in order to identify and control health care providers who were possibly overutilizing resources. In 1983, in response to an ongoing increase in costs that was threatening the solvency of the Medicare program, the US Congress changed the Medicare reimbursement mechanism. Within the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1983, the Prospective Payment System (PPS) was established. Under the PPS, hospitals are reimbursed through a fixed payment that is based on the patient's Diagnostic-Related Group (DRG), and there is an incentive for providers to "undertreat" or

provide too few resources in the care of patients. To counterbalance this problem, Congress reconstituted a review of the Medicare program by establishing the Physician Review Organizations (PROs). An external review of the Medicare program was carried out by the PROs through successive contracts, called the First, Second, Third, and Fourth Scopes of Work [5]. PROs are now engaged in the Fifth Scope of Work from 1996 to 1999 with a mandate to shift external oversight activities from an exclusive focus on hospital care to addressing quality of ambulatory care as well.

THE HCQIP COMPARED TO THE IDEAL QUALITY ASSURANCE METHODOLOGY

Jencks and Wilensky defined the goal and immediate objective of the HCQIP as follows: "to move from dealing with individual clinical errors to helping providers to improve the mainstream of care," and to create a situation in which "PROs will focus primarily on persistent differences between the observed and the achievable in both care and outcomes and less on occasional, unusual deficiencies in care," respectively [3]. This explicit goal and immediate objective do not provide an obvious basis for an economic evaluation of the HCQIP. The ideal quality assurance methodology would attempt to restore those attributes of the perfectly competitive paradigm that are lost as a result of the market failure described in the previous section. The following is an evaluation of the HCQIP from the standpoint of each of the attributes of the perfectly competitive paradigm.

Accounting for consumer preferences

Under our definition of quality of care, an ideal quality assurance methodology would account explicitly for the preferences of the well-informed consumer. Since the HCQIP does not explicitly take into account the preferences of consumers, it does not conform to the ideal. Some HCQIP efforts are beginning to include the role of consumer preferences, such as projects that focus on the use of breast conserving therapy for breast cancer patients.

Accounting for professional knowledge and judgment

The ideal quality assurance methodology would also account for professional knowledge and judgment. The HCQIP seems to conform to this ideal since the HCQIP foresees using optimal clinical practice guidelines in an attempt to shift and tighten the distribution of treatment modalities around these optimal practice guidelines. However, because competing practice guidelines are available for the same medical conditions and treatment interventions, we must evaluate the alternative guidelines with regard to optimal patient outcomes. The guidelines developed by medical subspecialties (as distinguished

from those derived from multidisciplinary efforts) may suffer from a conflict of interest similar to the one previously described to explain the market failure that results from asymmetric information [12].

Self-regulating and self-improving

The perfectly competitive market for health services would be self-regulating and self-improving. That is, any provider of health services that does not provide a sufficiently high quality of care would be driven out of the market by superior competitors, and investment in new improved techniques and technologies would be rewarded, and quickly adopted, to gain competitive advantage. Although the HCQIP is not self-regulating, it does require the specific and ongoing intervention of HCFA to remain in place, and it does have the potential to be self-improving. The cooperative improvement projects with the PROs that are being developed through the HCQIP could provide competitive advantages to those providers who are quick to assimilate successful initiatives. This could also result in residual benefits to health care consumers beyond the Medicare program. It may carry some degree of risk to those providers who do not effectively take up successful initiatives, as these providers may begin to lose patients to "higher quality" providers. One economic criterion for evaluating the HCQIP is the extent to which the cooperative improvement projects initiated under the HCQIP might provide competitive advantages to the participating providers.

Benefits from strategic behavior

Under the paradigm of perfect competition, agents or consortia of agents cannot benefit in the market through strategic behavior. It is unclear as to whether the HCQIP is capable of countering strategic behaviors on the part of consumers, providers, or PROs. Clearly, the HCQIP itself would be undermined by this type of behavior on the part of PROs. One of the most obvious PRO strategic behaviors would be the implementation of projects that would be relatively easy to complete.

Invisibility of the intervention

The last characteristic of the perfectly competitive paradigm that could be emulated by the HCQIP is that it should not be excessively burdensome to the agents being influenced. The perceived burden and intrusion of the previous PRO review programs substantially influenced the clinical community to press for a redesign of the Medicare quality oversight methodology. The successful implementation of the HCQIP has the potential to be relatively invisible to the providers being influenced. If the HCQIP cooperative projects can convincingly improve medical practices and create competitive advantages for cooperating providers, these providers are likely to embrace the program.

MEASURING THE COST-EFFECTIVENESS OF EXTERNAL QUALITY OVERSIGHT

Phelps and Mooney [13] provide important information for measuring the cost-effectiveness of external quality oversight in the United States. They have developed an index to generate a dollar-valued welfare loss that combines measures of resource use, the coefficient of variation in use rates across regions, and the rate at which the incremental value of a medical treatment changes as its rate of use changes. The top 25 medical items in 1987 generated a total annual efficiency loss of \$7 billion, or approximately 15% of total health care expenditure for that year. Given this analysis (combined with the theoretical ideal quality assurance and improvement mechanism), the most effective expenditure of resources for the HCQIP is likely to come out of analyzing the effectiveness of PRO efforts with medical interventions that generate the greatest welfare loss. It is clear, for example, that HCFA made a good choice in initiating the Cooperative Cardiovascular Project (CCP), as it addresses three of the top five items on the Phelps and Mooney list [3,13].

We believe that investment in external health care quality oversight should consider the four characteristics of the paradigm of perfect competition. In order to implement this concept, we recommend that this investment be directed toward initiatives that incorporate the following items into their project design:

- (1) A cost-accounting of each of the individual projects.
- (2) Review and discussion of consumer preferences as they relate to the specific topic.
- (3) Review and discussion of the clinical guidelines that pertain to the specific topic, with particular attention to any competing guidelines that may be present (i.e. subspecialty vs multispecialty guidelines).
- (4) Attention and concern for strategic behaviors that may undermine the goals of the individual projects.
- (5) Minimization of the burden of the project on the various participants.
- (6) Selection of projects based on the list of conditions or health care interventions that are associated with the largest efficiency losses in the particular population that is the setting for the project.
- (7) Implementation of projects in an experimental manner, ideally with random allocation, so that the effects of the quality oversight intervention can be disentangled from secular trends and to ensure that confounding factors are distributed by chance [14].
- (8) Cost-effectiveness assessment of each project.

Returning to the framework provided by Palmer [1], as the value of the various layers and components of external health care quality management oversight are considered by governments and other health care funders throughout the world, we can all benefit from reflecting on the advice of White, "Have a little bit of statistical

[and economic] compassion and take a look at the quantitative information before providing inadequate care or wasting millions of dollars" [15].

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