ARTICLES

Hospital Governance and Quality of Care: A Critical Review of Transitional Roles

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Quality has reemerged as a sentinel issue in the field of health care delivery. Hospitals in particular are being challenged by increasingly competitive market conditions and regulatory changes to produce high-quality care without raising health care costs. Moreover, hospital leaders face the additional challenge of developing policies,

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procedures, and incentives to improve quality within a domain that has traditionally been the province of highly autonomous, professionally trained physicians. Responsibility for developing and overseeing these efforts rests first and foremost with the hospital governing board, the organizational entity held legally accountable for quality of care.

Hospital boards currently fulfill their legal, accreditation, and regulatory obligations to ensure quality of care through oversight of quality assurance (QA) and other related activities such as medical staff credentialing and risk management. Recently, however, competitive pressures and regulatory changes have prompted boards to explore alternative approaches to quality assessment, such as the quality improvement (QI) practices used in the manufacturing and corporate service sector. Advocates of QI suggest that it has significant potential to enable hospitals and their boards to improve quality without increasing costs (White and Lee 1990; Casalou 1990; Sahney and Warden 1991). While it is beyond the scope of this review to attempt to validate or refute such claims, the frequency with which QI is being adopted by health services organizations is clearly increasing. Such changes raise several important issues regarding the role of boards in quality. Does QI supplant or supplement current board responsibilities for quality of care? Does QI change the domain of board activity with respect to quality? Does the introduction of QI alter governance structures and practices? And if so, how?

These questions are explored through an analytic framework derived from the literature on agency theory. In the first phase of the article, the framework is described and then employed to explain the evolution and effectiveness of the contemporary role of boards in quality of care. Particular emphasis is given to QA, the primary mechanism through which boards discharge their responsibility for quality. In the second phase of the article, the QI approach is described and the agency framework is used to illuminate the potential role of boards in QI activities. The article concludes with a discussion of several key issues boards are likely to face as hospitals shift the focus of their quality activity from QA to QI.

AGENCY THEORY AND GOVERNANCE

Much of the literature describes the relationship between governing bodies and organizations as an agency problem. Agency theory derives from the literature on financial economics and focuses on the theoretical problem of the relationship between incentives and contracts on the one hand, and organizational and individual outcomes on the other. The theory is germane in situations where one person or group,

the *principal*, engages another person or group, the *agent*, to perform some service on his or her behalf that involves delegating some decision-making authority to the agent (Jensen and Meckling 1976; Eisenhardt 1989). In modern corporations, characterized by a separation of ownership and control, governing boards act as surrogates for the principals or owners. In for-profit hospitals, of course, the principals are most often the stockholders. In not-for-profit institutions, the principals are embodied in the community that the hospital serves. As surrogates for the principals, hospital boards oversee the activities of hospital management and the medical staff, who serve as agents of the boards. Hospitals are thus conceived within the framework of agency theory as a bundle of contracts in which organizational members (boards, management, and medical staff) are involved in a nested or hierarchical set of agency relationships.

Agency theory assumes that organizational members have preferences for their own actions that do not necessarily align with those of other organization members (Jensen and Meckling 1976; Fama 1980; Fama and Jensenn 1983; Eisenhardt 1985, 1989). Managers' interests, for example, may diverge from those of principals in terms of choices managers make regarding effort, risk exposure, and time horizons (Walsh and Seward 1990; McLean 1989). Likewise, physicians' interests may diverge from those of principals in terms of resource utilization and purchase of new technology. Agency theory posits that in situations where goal conflict exists, agents are tempted to act in their own interests rather than in those of the principals (Jensen and Meckling 1976; Fama 1980; Fama and Jensen 1983; Eisenhardt 1985, 1989). Agency theory has been criticized for assuming that agents always have a preference for pursuing their own interests rather than those of the principals (Perrow 1986; Donaldson 1990). Agency theorists acknowledge that agents can, and sometimes do, engage in altruistic or "other-regarding" behavior (Eisenhardt 1989). Moreover, from a practical standpoint they contend that distinguishing those who are likely to act opportunistically in situations of goal conflict from those who are less likely to do so is often prohibitively costly in terms of the principals' time, energy, and financial resources. Under such circumstances, it is prudent for the principals to assume that all agents have a preference for pursuing their own interests (Barney 1990). In order to promote achievement of organizational goals, governing boards, as surrogates for the principals, are charged with the task of creating incentives that align the interests of hospital management and physicians with those of the principals (Eisenhardt 1989; Walsh and Seward 1990). To accomplish this task, boards have three means at their disposal: behavior-based contracts, outcome-based contracts, and social control mechanisms.

BEHAVIOR-BASED CONTRACTS

When boards or principals know exactly what agents do and how, contracts specifying desired behavior represent the most efficient means for aligning the interests of agents and principals. More often than not, however, boards or principals do not know exactly what the agents do. In circumstances of information asymmetry, boards or principals who reward agents based on agreed-upon job behaviors without confirmation of those behaviors face the risk of shirking or suboptimal behaviors (Dranove and White 1987; McLean 1989). In other words, when goal conflict exists between boards or principals and agents, agents prefer to act in ways consonant with their own interests, and thus may or may not behave as agreed.

Agency theory states that boards or principals possessing incomplete information have two options for reducing the risk of shirking (Eisenhardt 1985, 1989). One is to discover agents' behavior by investing in information systems such as additional supervision, budgeting systems, and reporting procedures. Such investments reveal agents' behaviors to boards or principals and make behavior-based contracts attractive, particularly if desired behaviors can be easily defined and measured. For example, a hospital board interested in lowering nosocomial (hospital-acquired) infection rates may discover that hospital and medical staff are not adequately washing their hands prior to patient contact. The board may not possess enough information to effectively monitor a behavior-based contract; however, the board could acquire such information by directing hospital management to improve the hand-washing measurement system by, for example, increasing infection-control supervision or altering reporting procedures. Investment in information systems offers boards or principals a powerful mechanism for obtaining desired behavior; however, purchasing the information necessary to effectively monitor behavior-based contracts can be expensive.

OUTCOME-BASED CONTRACTS

The second option in the case of incomplete information is for the board or principal to contract on outcomes of agents' behavior. Outcome-based contracts are particularly appropriate when desired outcomes can be easily defined and measured. Because outcome measures are surrogates for measures of behavior, outcome-based contracts are relatively inexpensive for principals to implement and monitor. For example, a hospital board interested in lowering nosocomial infection rates may find it prohibitively expensive for hospital management to

monitor the day-to-day hand-washing of all staff engaged in the delivery of care. Nevertheless, the board could, at much less cost, exert outcome-based control by directing management to establish, in conjunction with the medical staff, a threshold for infection rates, to invest in an outcome measurement system, and to base staff incentives and rewards to ensure compliance with the standard.

Outcome-based contracts curb the potential for agent opportunism by encouraging agents to exert effort toward the achievement of the board's or principals' goals; they do so, however, at the price of transferring risk to agents (Jensen and Meckling 1976; Eisenhardt 1985, 1989). The issue of risk arises because outcomes are only partly a function of behaviors: poor outcomes can result despite good efforts, and good outcomes can result despite poor efforts. Consequently, use of outcome-based control mechanisms rewards or penalizes agents for outcomes partially outside their control. When outcome uncertainty is low, the costs of shifting risk to agents are low. Hence, outcome-based contracts become more attractive to principals since they require less investment in information systems than do behavior-based contracts. Likewise, when outcome uncertainty is low, outcome-based contracts become more attractive to agents since they are less intrusive than management surveillance of day-to-day behavior. As uncertainty increases, however, it becomes increasingly expensive to shift risk to agents despite the motivational benefits of outcome-based contracts (Dranove and White 1987). Thus, in the case of incomplete information, principals and their surrogates face a trade-off between the cost of transferring risk to the agent, and the cost of measuring behavior (Eisenhardt 1985, 1989).

SOCIAL CONTROL MECHANISMS

An alternative to either outcome-based or behavior-based contracting is for boards or principals to align agents' interests with their own through social control mechanisms such as selection, training, and socialization procedures (Eisenhardt 1989). Social control mechanisms instill common values or goals and thereby achieve minimal divergence of preferences among organizational members. Consequently, agents engage in desirable behaviors regardless of whether their behavior is monitored (Eisenhardt 1985, 1989). For example, a hospital board interested in lowering nosocomial infection rates could promote adequate hand-washing by hospital and medical staff by directing hospital management to develop a training module on infection control and to institute a probationary period for physicians and newly hired staff. Social control mechanisms have the advantages of avoiding the transfer of risk to agents and alleviating the need for expensive forms of auditing and

surveillance. Nevertheless, rigorous selection procedures can increase labor costs by reducing the size of the available labor pool; further, intensive training and lengthy periods of socialization can be costly. Hence, boards or principals face a trade-off between the costs and benefits of social control mechanisms.

In the next section, we use the use the agency theory perspective to examine the evolution of the hospital board's responsibilities for quality of care. Following this discussion, we describe the two approaches to quality assessment, QA and QI, and show how each represents a different combination of the three control strategies outlined above. Finally, we conclude with an exploration of the issues that are likely to arise as the hospital board moves from QA to QI.

THE EVOLUTION OF THE BOARD'S ROLE IN QUALITY

The hospital board's contemporary role in ensuring quality of care has largely resulted from an expanding legal accountability. This accountability, in turn, has been shaped by the courts' incremental movement toward defining the board's relationships to hospital and medical staff as principal-agent relationships. Until recently, most hospitals were shielded from corporate liability by the doctrine of charitable immunity (Goldberg 1984; Orlikoff and Vanagunas 1988). As hospitals became more than places to bed and board the patients of physicians, however, they gradually lost their status of charitable immunity and began to have the principle of corporate liability applied to them. In *Glavin v. Rhode Island Hospital* (1879), for example, the court ruled that the hospital could be liable for some of the acts of its employees under the doctrine of *respondeat superior* ("let the master answer"). Specifically, hospitals could be liable for employees' "ministerial" or "administrative" acts but not for their "professional" or "medical" acts. With respect to the former, employees acted as agents of the hospital; however, with respect to the latter, employees acted not as agents of the hospital but as independent contractors. By extension, hospitals were also not responsible for the acts of nonemployees such as independent staff physicians, who also acted as independent contractors. Subsequent cases upheld both of these opinions (Goldberg 1984).

On the basis of these decisions, lawyers and doctors reached a common understanding that hospitals were not much more than specialized hotels or workshops where a doctor chosen by the patient could do as he or she saw fit without subjecting hoteliers or proprietors of the workshop to any liability for quality of physician care (Goldberg 1984).

This understanding endured until the New York State Supreme Court ruled in *Bing v. Thunig* (1957) that the doctrine of charitable immunity was no longer applicable to hospitals. Starting from the proposition that hospitals treat patients and do not merely procure professional employees to act on their own responsibility or provide facilities in which someone else may act, the court held that hospitals were liable for both the "administrative" and "professional" acts of their employees under the doctrine of *respondeat superior* (Goldberg 1984; Orlikoff and Vanagunas 1988; Burdett 1991). Although *respondeat superior* applied to the actions of "house staff" physicians, who were considered agents of the hospital, it did not apply to the actions of private staff physicians, who were considered independent contractors rather than hospital employees (i.e., agents).

Hospital corporate liability was further expanded through the doctrine of duty of care in the case of *Darling v. Charleston Community Memorial Hospital* (1965). The court not only affirmed hospitals' corporate liability under *respondeat superior* but also ruled a hospital could be held liable for injuries caused by private staff physicians' malpractice if "it knew or should have known" that the care being provided by a member of its voluntary staff was below acceptable quality standards (Orlikoff and Totten 1991). The *Darling* case represented a significant turning point in hospital corporate liability for two reasons. First, the court held that the hospital's duty of care was not defined simply by the customs of the community but also by the standards for hospital accreditation, state licensing regulations, and hospitals' medical staff bylaws. Second, the court ruled that although the board delegates to the medical staff the duties of selecting and retaining its own members, the medical staff nevertheless serves as the board's agent in fulfilling its duty of care. Hence, the hospital board is ultimately responsible for overseeing the medical staff and for monitoring the quality of care delivered within its walls (Jessee 1984; Orlikoff and Totten 1991; Burdett 1991).

Several post-*Darling* decisions have affirmed hospital boards' accountability for quality of care. In *Purcell and Tucson General Hospital v. Zimbelman* (1972), for example, the court found the hospital negligent because it failed to ensure that only competent professionals were on its staff. The hospital was held responsible for controlling medical staff privileges. Similarly, in *Gonzales v. Nork and Mercy Hospital* (1978), the court ruled that the hospital "knew or should have known" that care being provided by a member of its voluntary staff was below acceptable quality standards. Likewise, in *Corleto v. Shore Memorial Hospital* (1975), the court ruled that hospital trustees as well as the medical staff could be held liable if it could be shown that any one of them knew that a physician was not competent to practice but nonetheless had granted the

physician privileges. Finally, in *Johnson v. Misericordia Community Hospital* (1980), the court ruled that the hospital board could be held liable for failing to purposefully oversee physician certification. In sum, these post-*Darling* decisions make clear that boards are not simply legally accountable for the actions of their agents but must also take or direct action to improve quality or to correct quality-related problems (Orlikoff and Totten 1991).

In addition to these cases, the view espoused in *Darling* that hospital employees and the organized body of the medical staff serve as agents for boards has been embodied in statutory law and in regulatory requirements. Hospital licensure laws in all 50 states underscore the board's responsibility for quality and for overseeing the medical staff (Orlikoff and Totten 1991). Likewise, the federal government requires hospitals receiving Medicare reimbursement to comply with quality-related regulations set forth in the Conditions of Participation in the Medicare Program (Anthony and Singer 1989). Finally, the accreditation standards of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) require hospital boards to approve and maintain an integrated hospitalwide QA program and to actively oversee medical staff credentialing (JCAHO 1991).

As this discussion indicates, the contemporary role of hospital boards in ensuring quality of care has largely been imposed externally by regulatory, funding, or accreditation agencies. Boards are expected to enhance quality by actively participating in QA and other quality-related activities such as medical staff credentialing and risk management. In the sections that follow, the QA process is briefly described, the role of boards in these activities is discussed, and the strengths and weaknesses of QA practices are examined in light of the agency framework.

THE BOARD AND QUALITY ASSURANCE

QA encompasses the detection, evaluation, and resolution of problems directly related to patient care (Affeldt and Walczak 1984; Orlikoff and Totten 1991). QA activities may be conducted through a variety of organizational forms and structures; however, the ten-step monitoring and evaluation process that constitutes the technical core of QA is mandated by the accreditation standards of the JCAHO (1988, 1991).

In the context of QA, quality is operationalized as the adherence to acceptable standards of clinical care. Given QA's emphasis on clinical aspects of patient care, hospital boards are expected to delegate to medical and QA professionals' responsibility for conducting the bulk of QA

activities (JCAHO 1988; Orlikoff and Totten 1991). Despite such delegation, boards are required to participate directly in the development, monitoring, and evaluation of their hospital's QA program (JCAHO 1988, 1991).

DEVELOPING THE QA PROGRAM

Boards develop the QA program by directing hospital and medical staff to draft a plan that defines the objectives, organization, and scope of the QA program, as well as the mechanisms used to oversee the effectiveness of QA activities. Once drafted, the plan is then submitted to the boards for review and approval (JCAHO 1988; Orlikoff and Totten 1991).

MONITORING THE QA PROGRAM

Generally, boards do not become involved in the daily operations of the program; rather, they monitor by verifying that the monitoring and evaluation process is in place throughout the hospital and running smoothly. To avoid the potential for information overload, boards receive regular, quarterly reports on a small, selected set of quality indicators used by hospital and medical staff (Jessee 1984; Orlikoff and Totten 1991). Boards choose which indicators they wish to monitor by consulting their hospitals' mission statement and definition of quality of care. Boards then work with hospital and medical staff to set thresholds for each indicator based on national or local averages; clinical averages or acceptable averages published by professional organizations; or internally generated data developed by the QA department. Should a quality indicator cross the established threshold level, boards might take action by requesting more detailed information or explanations or by directing corrective action, additional resources to the area in question, or changes in policy and procedures. Board-level quality reports on these indicators are typically presented in a graphic or tabular format, enabling the board to focus on trends rather than on individual incidents (Jessee 1984; Orlikoff and Totten 1991). Reports may also include narrative descriptions of new problems, studies or assessments completed, actions recommended, and follow-up activities for the quarter (Jessee 1984).

EVALUATING THE QA PROGRAM

Last, boards are expected to participate in the annual review of the hospital's QA program (JCAHO 1988, 1991). Annual appraisal typically

includes an assessment of the monitoring and evaluation process to determine its effectiveness; a comparison of the written plan with QA activities that were performed; a determination of whether QA information was communicated accurately and to the appropriate persons, committees, or other groups; and a determination of whether identified problems were resolved and patient care was improved (JCAHO 1988; Bohr and Taylor 1989; Orlikoff and Totten 1991). Boards are also expected to evaluate whether the QA program has been implemented organizationwide and whether QA activities have been effectively integrated with the hospital's risk management program and medical staff credentialing procedures (JCAHO 1991; Orlikoff and Totten 1991).

QUALITY ASSURANCE IN AGENCY THEORY PERSPECTIVE

In agency theory terms, QA represents an outcome-based quality control strategy. Boards ensure quality of care through QA by basing incentives and contracts of clinical personnel on adherence to quality "standards," or thresholds, that define acceptable levels of clinical quality. These thresholds specify desired outcomes and function as surrogates for monitoring actual behavior of individual clinical providers (e.g., physicians, allied professionals). For example, relying on national norms, a board might approve a quality threshold of 2 percent for postoperative deep-wound infections. Clinical quality with regard to this indicator is considered acceptable if this threshold is achieved and maintained. If, however, infection rates exceeds 2 percent, clinical quality is deemed unacceptable and action is taken to identify individual providers who are outliers with respect to the norm. The clinical behavior of these providers is then subject to retrospective peer review, and if necessary, disciplinary or corrective action is taken (James 1989; Berwick 1990). Hence, the basis of quality control in QA is outcome-based control; actual behavior of clinical personnel is not directly monitored, although it is subject to retrospective examination (i.e., inspection) when quality thresholds are exceeded.

QA's emphasis on outcome-based control offers boards several advantages for ensuring quality of care. First, it enables boards to monitor and evaluate quality of care even without complete information about the day-to-day activities of the agents providing clinical services. Second, it offers boards a *relatively* inexpensive mechanism for exerting quality control. Costs involved in specifying quality indicators, developing thresholds, and establishing and maintaining an outcome-based measurement and control systems are by no means nominal; neverthe-

less, these costs do not match the investment of time and resources necessary to reveal day-to-day clinical behavior of all personnel involved in providing care. Finally, given the formative state of development of clinical pathways, clinical tasks and behaviors are not highly "programmable," a requirement for effective behavior-based control. Hence, reliance on outcome-based quality control strategies, such as QA, appears to be a reasonable response to the difficulties of specifying desired clinical behavior in advance.

Despite these advantages, QA's emphasis on outcome-based quality control poses several dilemmas for the board in its role as principal. First, QA places the burden of risk for uncertain clinical outcomes on the shoulders of individual physicians and allied professionals. Clinical outcomes frequently result from a complex interaction of people and support systems; however, QA is built on the assumption that clinical personnel generally, and physicians most centrally, are the sole determinant of patient care quality (Berwick 1990). Consequently, individual providers bear the risk of being penalized for outcomes that are partially outside their control. As James (1992) observes, such penalties can be extensive (reprimands, privilege restrictions, or licensing actions) or limited (requirements for further education, identification as a quality outlier to colleagues, or failure to receive real or perceived rewards that accrue to those whose outcomes are within established quality thresholds). Agency theory predicts that clinical providers likely respond to what appears to be an arbitrary system of punishment by becoming risk-averse and engaging in a variety of self-protective behaviors (Walsh and Seward 1990). For example, clinical providers might reduce the risk of being penalized by lowering expectations about acceptable levels of clinical quality through setting relaxed quality thresholds (James 1989; Berwick 1989). Alternatively, clinical providers might protect themselves by consciously or unconsciously distorting, filtering, or manipulating data used to monitor and evaluate quality (James 1989; Berwick 1989). Last, clinical providers flagged for intensive review might challenge the measurement system and the aims, techniques, and accuracy of the study that finds their performance inferior (James 1992). Such self-protective behavior represents a rational response by clinical providers to reduce the risk they bear for uncertain outcomes. Nevertheless, it fosters mistrust among hospital managers and quality professionals who, in turn, increase their surveillance, thereby generating even more self-protective behavior. Hence, QA's emphasis on outcome-based control inadvertently produces a "cycle of fear," which ultimately lowers QA's efficacy as a quality control strategy (James 1989; Berwick 1989; O'Leary 1991; Orlikoff and Totten 1991; Scherkenbach 1988).

Another serious shortcoming of QA is that it provides no incentive

for clinical providers to continuously improve quality of care (James 1989). Like most outcome-based control strategies, QA encourages clinical providers to exert effort toward the achievement and maintenance of quality targets; however, it does not provide clinical providers any incentive to exert additional effort once quality targets have been met. In fact, several health care quality experts contend that thresholds carry a subtle message that is hard to dispel: a threshold, by definition, represents an "acceptable" level of performance (Berwick 1989; James 1989, 1992). Hence, once a threshold has been met, the drive for further improvement can be greatly diminished (James 1989; Berwick 1989). Moreover, because of QA's emphasis on outcome-based control, the behavior of "good quality" providers is not directly examined. Hence, QA does not capture the kind of rich, detailed behavioral information that clinical personnel would need to transform "good enough" care into "the best possible" care (James 1992). Efforts by boards to improve quality of care by setting increasingly stringent quality thresholds can inadvertently lead to a considerable drop in morale among clinical providers (James 1992; Scherkenbach 1988; Berwick 1989).

Difficulties posed by QA's emphasis on outcome-based control are further compounded by the inability of hospital boards to independently assess clinical quality. Although ultimately accountable for ensuring quality of care, most hospital boards are composed primarily of outside directors who possess neither clinical skill nor extensive experience in the field of health care (Alexander 1990). Not surprisingly, board members generally report that their lack of clinical expertise makes them uncomfortable pursuing their responsibilities for overseeing quality (Orlikoff and Totten 1991; Koska 1990). Board members cannot independently determine whether hospital quality thresholds are appropriate, nor can they independently assess whether action taken by medical staff or QA professional(s) to correct quality problems and improve care is appropriate or sufficient. Consequently, board participation in QA tends to be ritualistic in nature: boards affirm the value of quality of care but do not actively participate in quality assessment and quality control. Rather, much of the quality-related activity of boards has been directed toward showing to regulatory and accrediting bodies that they are discharging their mandated responsibilities in a manner consistent with those requirements (Orlikoff and Totten 1991). Institutional conformity conveys the message that hospitals' QA programs conform in structure and process with externally imposed requirements; however, it does not necessarily mean that quality control activities are working effectively or efficiently.

CHANGES IN THE BOARD'S ROLE IN QUALITY

Many hospital boards continue to discharge their responsibilities for quality of care through QA activities; yet, an increasing number are exploring quality improvement (QI) practices as an alternative approach to quality assessment. This trend is due in part to greater sensitivity to the shortcomings of outcome-based quality control strategies (Berwick 1989, 1990; James 1989, 1990; O'Leary 1991). More important, however, hospital boards are adopting QI in response to increasingly competitive market conditions. With mounting pressure to maintain or improve quality in the face of reduced resources, hospitals have become more willing to look beyond QA for other ways to achieve their goals (Duncan et al. 1991; O'Leary 1991). Furthermore, boards are being encouraged to do so by a growing number of health care quality experts who argue that QI offers a potent strategy for providing high-quality care while containing rising health care costs (James 1989; Casalou 1990; King 1990; Sahney and Warden 1991).

While the adoption of QI largely appears to be an internally generated response to changing market conditions, accrediting bodies such as the Joint Commission are also encouraging boards to explore alternatives to QA. While not requiring the adoption of QI practices, the Joint Commission is nevertheless stimulating boards to educate themselves about QI approaches to quality assessment (Larson 1990; Koska 1991; O'Leary 1991). It is also simplifying its accreditation standards to make it easier for interested boards to adopt and implement QI practices. Finally, the Joint Commission is working with the American Hospital Association and other professional associations to develop QI information-sharing networks, seminars, and training materials.

QUALITY IMPROVEMENT

QI travels under a variety of names and acronyms including total quality management (TQM), statistical process control (SPC), continuous process improvement (CPI), company-wide quality control (CWQC), and continuous quality improvement (CQI). Although these approaches differ slightly, they share a customer-focused, quality-driven philosophy and process that relies on each member of an organization to build quality into every step of service development and delivery. The core idea behind QI is that service delivery systems can always be improved. Seeking quality improvement through the study of work systems and processes, focusing on group rather than individual

effort, and making the search for quality a continuous, organizationwide activity are basic principles of QI (Deming 1986; Juran 1988 1989; Ishikawa 1985). However, QI is more than a philosophy or vision. It employs specific tools, techniques, and approaches that can be used to systematically achieve quality improvement.

QI approaches to quality assessment typically conceptualize quality as meeting or exceeding customers' requirements 100 percent of the time (Deming 1986; Juran 1988, 1989; Ishikawa 1985; James 1989). A *customer* is any organization or individual who makes quality judgments about, or has expectations regarding, an output. In health care, customers can be classified into four major groups: (1) physicians, nurses, and other health care professionals; (2) patients and their families; (3) health care financiers and regulators; and (4) nonmedical employees and other internal customers (James 1989). To achieve high quality, production processes must conform to customer requirements (Deming 1986; Juran 1988, 1989; Ishikawa 1985; James 1989). A *production process* is a sequence of activities carried out by an individual or a set of people that results in the creation of an input for a subsequent production process (Juran 1989). Examples of processes include generating an invoice or admitting a patient. Conformance of production processes to customer requirements is achieved by *eliminating inappropriate* variation through the use of statistical tools, and by *continuously improving* the process through the use of the Plan-Do-Check-Act cycle (Deming 1986; Walton 1986; Scherkenbach 1988; James 1989).

Since many production processes span different departments, quality experts generally endorse the use of cross-functional teams (Ishikawa 1985; Walton 1986; Juran 1989). Given the emphasis on participatory work redesign, quality experts also recommend a human relations–oriented philosophy of human resources management (Ishikawa 1985; Deming 1986; Walton 1986). Deming's (1986) Fourteen Points, for example, enjoins management to "drive out fear," to "restore pride of workmanship," and to manage impartially using fact rather than intuition. Quality experts assert that organizations that adopt and implement QI often undergo nothing less than a major transformation in the ways they think about and accomplish their work (Ishikawa 1985; Deming 1986; Walton 1986; Juran 1988, 1989; James 1990).

Although QI practices were originally developed in a manufacturing environment, several quality experts contend that QI methods can be successfully applied to service delivery (Ishikawa 1985; Deming 1986; Walton 1986; James 1989). Juran (1988), for example, argues that services, like manufactured goods, are produced through processes, and those processes can be analyzed using universal, statistical quality control techniques. While Juran acknowledges that service outcomes are

more difficult to measure, due to the intangibility of the product and the interactive nature of service delivery, he argues that it remains conceptually feasible to identify customer requirements, to translate these requirements into behavioral routines and standards for personnel, and to monitor the process. Case studies of service organizations such as Florida Power and Light and Federal Express indicate that this conceptual possibility can be feasibly translated into empirical reality (Walton 1986; Spechler 1991). Moreover, several health care quality experts report having measurable success in applying QI practices to health care service delivery systems (Lynn 1991; Caldwell, McEachern, and Davis 1990; James 1990; Koska 1990; White and Lee 1990).

THE BOARD AND QUALITY IMPROVEMENT

The QI literature has grown considerably in recent years (Ishikawa 1985; Deming 1986; Walton 1986, 1990; Juran 1988, 1989; Spechler 1991). Much of this literature, however, focuses on the role of top management in establishing a "quality vision" and a "constancy of purpose." By comparison, the role of governing boards has received little attention. Nevertheless, given the extensive cultural and operational changes that typically accompany QI implementation, boards may be expected to play a central role in both facilitating and institutionalizing an organizationwide focus on continuous improvement.

Hospital board participation in QI is likely to be more extensive than its current involvement in QA, encompassing not only quality control, but also quality planning and quality improvement. To capture the expanded scope of board activity in QI, the following discussion is organized around three critical board functions—strategy, control, and service. In their strategic role, boards identify the organization's purpose, objectives, values, customers, and primary services (Zahra and Pierce 1989; Louden 1982; Shortell 1989). Through their control function, boards evaluate the performance of the organization and the chief executive officer (CEO) to ensure organizational viability and effectiveness (Zahra and Pierce 1989; Louden 1982; Gardner 1990). Through their service function, boards enhance the organization's reputation, establish contacts with the external environment, and give counsel to executives (Zahra and Pierce 1989; Louden 1982). The discussion concludes with an examination of the knowledge and information requirements for board activity in QI.

QI AND THE STRATEGIC FUNCTION OF BOARDS

Quality experts generally assign to top management the responsibility for formulating the organization's quality vision, mission, and strategy (Ishikawa 1985; Deming 1986; Juran 1988, 1989). By becoming personally and visibly involved in these activities, top management communicates the message to staff that QI is a top priority. Yet, the governance literature indicates that these activities also fall within the strategic function of boards (Zahra and Pierce 1989; Louden 1982; Shortell 1989). Given the importance that quality experts place on "leadership from the top," hospital boards may therefore be expected to work in conjunction with top management to facilitate and institutionalize the organization's commitment to continuous improvement.

The first step in fostering such commitment is to firmly establish the organization's quality focus by drafting a quality mission statement and communicating the message to staff (Deming 1986; Walton 1986; Juran 1988; James 1989). In this statement, the organization articulates its quality vision and defines outputs the organization plans to produce. Quality mission statements typically include five features that relate directly to the organization's management function—constancy of purpose, dedication to continuous improvement, focus on the customer, understanding of the product or service, and description of measurement systems to evaluate quality (Juran 1988, 1989; James 1990; Lynn 1991). Since many hospital mission statements contain only vague, general references about the importance of quality of care (Fritz 1989), hospital boards may be expected to revise their mission statements to explicitly focus on QI.

The next step in fostering a commitment to continuous improvement is to institute companywide QI training, beginning with the highest levels of the organization. Quality experts unanimously agree that organizational leaders must have a sound working knowledge of the fundamental concepts and methods of QI in order to personally and visibly provide quality leadership (Ishikawa 1985; Deming 1986; Heilig 1990; Walton 1986; Juran 1988, 1989). To acquire these skills, senior managers typically undergo a minimum of six months training prior to mobilizing for QI (Gitlow 1987; Walton 1986; *Quality Review Bulletin* 1992). Boards, too, require a sound grasp of the fundamental concepts and methods of QI if they are to actively participate in quality planning, quality control, and quality improvement. While their knowledge requirements may not be as extensive as those of senior managers, hospital boards may be expected nevertheless to undergo some form of intensive QI training.

Successful QI implementation not only requires extensive training, but substantial planning, budgeting, and monitoring (Ishikawa 1985; Juran 1988, 1989). Organizations engaged in QI typically form an organizationwide Quality Council to launch, coordinate, and monitor QI efforts (Deming 1986; Walton 1986; Juran 1989). Council responsibilities include establishing the quality goal selection process, establishing the team selection process, providing resources (e.g., training, diagnostic support), assuring that quality goals are implemented, establishing measures relevant to quality goals, providing for progress review and coordination, providing for recognition, and revising the reward system (Juran 1988, 1989).

Quality experts recommend that Council membership be drawn primarily from the ranks of top management (Ishikawa 1985; Walton 1986; Juran 1988, 1989). Yet, several of its responsibilities fall within the purview of boards' strategic functions, in particular those concerning the development of the basic infrastructure for strategic quality planning. Hence, board members may be expected to actively serve on the Quality Council. In smaller organizations, the entire board might be involved; in larger organizations, however, boards might send representatives to the Council. Membership on the Quality Council not only permits board members to become personally involved in the strategic planning process but also communicates to staff that the board and management are in full agreement that quality is a top priority.

Through their membership on the Council, board members are also likely to participate in the formulation of strategic quality goals. Unlike current business planning, strategic quality planning proceeds through extensive participation of "grass-roots" personnel (Walton 1986; Juran 1988, 1989). Briefly, the planning process unfolds as follows. The QC invites all personnel to submit nominations for the organization's annual quality goals. The QC screens the nominations by consulting the organization's quality mission statement and by judging nominations against such criteria as return on investment (ROI), amount of potential improvement, degree of urgency, ease of technological solution, and probable resistance to change (Juran 1989). The Council makes its final determination of which goals will be incorporated into the current year's business plan and officially publishes the list of selected goals, thereby giving them legitimacy. Each goal is then "deployed" by assigning to a departmental or cross-functional team the responsibility for identifying tasks that, if performed, would meet the project's goals, and for determining the amount and type of resources needed for goal achievement. The Council and the team then negotiate over these resource requests until a balance is reached between the value of meeting the goals and the cost of doing so. The team then

further "deploys" the quality goal by subdividing the goal, assigning these subgoals to other teams, and negotiating with these teams until specific tasks are identified. This process continues until these tasks are allocated to teams of process owners who have the knowledge and the skill for their accomplishment.

It should be evident from this description that the bulk of strategic quality planning is done at levels below upper management (Juran 1988, 1989). Hence, board members serving on the Council are not likely to be involved in those aspects of strategic quality planning involving the "deployment" of quality goals. Nevertheless, board members may be expected to actively participate in the formulation of quality goals.

QI AND THE CONTROL FUNCTION OF BOARDS

Quality experts usually assign to the Quality Council the tasks of assuring that quality goals are implemented, establishing measures relevant to quality goals, and providing for progress review and coordination. Yet hospital boards are ultimately accountable for assuring the quality of care delivered by and within the institutions they govern. Hence, boards may be expected to participate actively in the Council's strategic quality control activities. In smaller hospitals, board and Council quality control may be virtually indistinguishable. These activities include assessing and evaluating the organization's quality planning, quality control, and quality improvement systems. In larger hospitals, a two-tiered system might be used, in which board representatives participate in the Quality Council's quality control process and the board as a whole receives reports from both its representatives and the CEO.

Through their participation on the Quality Council, board members engage in strategic quality control using the basic tools of reporting and auditing. Quality experts indicate that strategic quality control typically proceeds as follows (Ishikawa 1985; Juran 1988, 1989): as part of the "deployment" process, the Council and the cross-functional teams assigned responsibility for achieving quality goals work together to develop both units of measurement and methods for collecting data. Following completion of these tasks, the Council receives monthly or quarterly report packages from each cross-functional team documenting the progress of QI efforts. Report packages provide a comparison of actual performance to strategic quality goals in the form of statistically analyzed quantitative data (based on agreed-upon units of measurement and presented in tabular or graphic format). Reports may also include narratives on matters such as threats, opportunities, and other pertinent events. For larger organizations that use a two-tiered system of strategic

quality control, the Council might submit summaries of report packages to the board as a whole.

Board members participating in strategic quality control use the statistically analyzed data, in conjunction with narrative data, to guide future quality planning and QI activities (Juran 1989). If statistical analysis reveals unstable production processes, board members on the Council employ process diagrams and Pareto charts to identify special causes and to direct quality planning and resource allocation. If organizational processes display only common variation, board members on the Council encourage greater conformance to customer requirements by soliciting nominations for quality improvement projects. Thus, board members engaged in strategic quality control utilize performance data to control work processes, not the behavior of individuals *on* the basis of outcomes; rather they attempt to control work processes *through* the measurement of outcomes (Ishikawa 1985).

Through their participation on the Council, board members evaluate the organization's quality planning, quality control, and QI systems by conducting annual or semiannual quality control audits. Unlike the narrower, technical audits carried out by process owners, quality control audits have a broader business focus. Quality control audits typically encompass an appraisal of the policies, objectives, organization, scope, and effectiveness of the organization's QI effort. Quality experts strongly recommend that the CEO and other Council members personally and visibly participate in the quality control audit (Ishikawa 1985; Walton 1986; Juran 1989). Such personal participation by organizational leaders not only increases the likelihood that action will be forthcoming but communicates to the entire organization that quality is a top priority.

The control function of boards not only embraces strategic quality control but also includes monitoring and evaluating performance of the CEO. In other words, boards are not only responsible for determining what quality goals would be in the best interests of stakeholders, but also for inducing top management to pursue these goals. Quality experts contend that commitment to QI typically demands substantial modifications in the organization's incentive system so that quality-related performance may be recognized and rewarded (Deming 1986; Juran 1988, 1989). Juran (1989), for example, argues that if goals are revised but the reward system is not, then staff receive conflicting signals and tend to follow the priorities indicated by the reward system. Hence, boards may be expected to integrate QI objectives into the incentive contracts of CEOs and use quality-related measures in CEO performance evaluation. These issues will be discussed in greater detail in a later section of the article.

QI AND THE SERVICE ROLE OF BOARDS

Although the bulk of the nominations for strategic quality goals emerge from grass-roots personnel, boards can also serve as an important source of nominations. Because of outside directors' linkages to the external environment, boards represent a key interface with those external customers that Juran (1988) calls the "vital few," which consists of a relatively small number of customers, each of whom is of great importance. By contrast, the "useful many" encompasses a relatively large number of customers, each of whom is of modest importance. For hospital boards, the vital few includes government regulators, third party payers, local employers, community leaders, physicians, upper managers, and labor union officials. The useful many includes patients, nonprofessional employees in nonsupervisory positions, middle managers, and nonphysician professional employees.

The quality needs of the useful many are typically identified through "marketing research" tools and techniques, such as sampling, questionnaires, interviews, and conferences. By contrast, the quality needs of the vital few are typically identified through individual contact. Boards could serve as a vital source of strategic quality goal nominations by initiating contact with the vital few, identifying their perceptions of quality needs and translating those perceptions into quality goals. Boards might use several methods for contacting the vital few, including visiting each customer to secure that customer's perception of needs, conducting an in-depth review of proposals with a sample of the customers, and convening a conference of a few such customers at a time to discuss in depth their perceptions of their needs (Juran 1988). Regardless of which method is used, contacts with vital few customers are likely to require careful planning in terms of identifying questions to which answers are needed, soliciting customers' nominations for agenda topics, and sending the agenda out in advance (Juran 1988). To accomplish this planning, boards may be expected to work closely with senior managers on the Quality Council, perhaps by forming a customer-contact committee.

In addition to nominating strategic quality goals, boards can also serve by promoting their organization's reputation for quality. As spokespersons, board members can call the attention of key market segments to the particular service or product features the organization has improved. Board members render an additional service by reducing the gap between the service that various constituencies perceive and what they expect (Parasuraman, Zeithaml, and Berry 1985; Garvin 1988).

Last, boards can serve as a useful source of advice with regard to

QI. As the number of manufacturing and corporate service organizations engaged in QI increases, a greater proportion of board members are likely to possess relevant knowledge and experience (King 1990). Boards may be expected to assist the Council by calling its attention to trends in quality assessment and QI implementation observed during outside contacts.

QI AND THE INFORMATION REQUIREMENTS OF BOARDS

QI approaches to quality assessment are likely to change the knowledge and information requirements of boards. With respect to strategic quality planning, boards must have a thorough knowledge of the philosophy and theory of QI in order to participate in the development and execution of the strategic quality goal nomination process. Moreover, to participate in strategic quality goal selection, boards also need information regarding the criteria against which nominations will be judged (e.g., ROI, degree of urgency, cost of poor quality, ease of technological solution). Board members on the Quality Council may or may not be involved in designing the information systems necessary to acquire, store, and retrieve such data.

With respect to strategic quality control, boards require information about performance and process capability of the organization's functional and cross-functional work processes. Obtaining such information will likely entail supplementing the outcome measurement system used in QA with information systems designed to measure, collect, and analyze data on organizational processes. Board members on the Council may or may not participate in the development of these information systems; nevertheless, they must have a working knowledge of the statistical tools and methods used in QI in order to interpret the information these systems generate. For example, board members must be able to read control graphs, Pareto charts, and process ("fishbone") diagrams. Further, board members participating in quality control audits are likely to need a far greater understanding of the organization's quality planning, quality control, and quality improvement processes than they currently require to evaluate QA monitoring and evaluation processes.

Finally, with respect to QI, boards need to know which of the organization's customers are among the vital few and must acquire information about their product or service requirements. Since contact with the vital few is likely to become an important part of the service function of boards in QI, board members may be expected to be actively

involved in the development of information systems designed to measure, collect, and analyze data concerning the vital few's quality needs.

A critical point emerging from this discussion is that QI does not come free (Juran 1988, 1989); rather, acquiring such extensive knowledge and information demands considerable financial investment. Although QI is not considered to be capital intensive (Juran 1989), the costs involved nevertheless confront boards with an additional information requirement: the need for estimates to compare potential ROI in quality improvement with potential return from other opportunities for investment. Boards can develop these estimates on the basis of recently completed QI projects or on the basis of data from published studies (Juran 1989).

QI IN AN AGENCY PERSPECTIVE

Using the agency framework, three substantive differences are noted when comparing the board's role in QI relative to QA. First, under QI, relative emphasis on social, behavior, and outcome controls employed by the board shifts to place greater importance on social control. Second, agency accountabilities are defined to focus less on individual managers or physicians and more on collectivities of individuals comprising systems or processes that contribute to quality of care. Finally, the scope of the board's activity under QI is expanded beyond the narrow parameters of externally mandated programs such as QA into a broader array of internal and external functions. Each of these differences is discussed below.

In agency theory terms, the principle control strategy of QI is that of social control. Boards engaged in QI attempt to align preferences of agents with those of principals by fostering a common set of values regarding the importance of continuous improvement. Boards seek to minimize goal divergence through a variety of social control mechanisms, including intensive selection, training, and socialization. For example, boards and top management engaged in QI may revise the organization's mission statement to focus explicitly on QI and may equip themselves to demonstrate personal, visible quality leadership by undertaking extensive QI education and training. Likewise, through leadership of the Quality Council, boards and top management institute organization-wide QI to ensure that all employees learn the values, concepts, and techniques of QI (Deming 1986; Walton 1986; Juran 1988, 1989). Boards and top management sustain the focus on continuous improvement by providing resources for regular retraining and refresher courses (Deming 1986; Scherkenbach 1988). Finally, senior

managers personally introduce new employees to the organization's quality mission and current QI effort (Walton 1986; Juran 1989; Caldwell, McEachern, and Davis 1990; White and Lee 1990).

By instilling a common set of values regarding QI, boards increase the likelihood that hospital and medical staff will pursue the interests of the principals regardless of whether their behavior is monitored (Eisenhardt 1985, 1989). Social control enables boards to shift the focus of control in QI from outcomes attributable to individual agents to performance and capability of production processes (Berwick 1990). This is tantamount to saying that under QI, the agent is no longer defined as an individual manager or physician but a system or set of processes that embrace multiple individuals in a collective endeavor. Such a focus is consistent with the QI proposition that individual performance is the result of a complex interaction of people and support systems (Deming 1986; Scherkenbach 1988; James 1989). Moreover, since responsibility for exerting control over production processes rests with process owners, the focus of board activities in QI shifts from exercising control over agents to creating an institutional context that fosters quality leadership, sustains constancy of purpose with respect to QI, and removes organizational barriers to continuous improvement.

Although social control strategies are the primary means by which boards engaged in QI align the preferences of agents with those of the principals, behavior-based control strategies also play an important role in QI (Scherkenbach 1988). The QI approach to quality assessment uses a specific set of methods and statistical tools for achieving QI objectives. Because QI tasks are "programmable"—capable of definition and measurement—behavior-based control strategies can be effectively used to encourage agents to engage in desirable quality-related behavior. For example, boards and top management could encourage teamwork among process owners by directly observing cross-functional teams in action, measuring the cooperative behavior and leadership demonstrated by team members, and incorporating these measures into promotion decisions (Scherkenbach 1988).

Finally, outcome-based control strategies play an important, albeit secondary, role in encouraging agents to exert effort toward QI objectives (Deming 1986; Scherkenbach 1988; Juran 1989). Outcome-based control strategies enter into QI principally through the use of performance evaluation of individuals; however, the manner in which performance evaluation is conducted in QI differs greatly from the manner in which it is conducted in QA. Individual performance in QA is judged in reference to previously established numerical goals or work "standards" (e.g., quality thresholds); clinical personnel whose outcomes exceed thresholds are subject to penalty, while those whose outcomes meet or

beat thresholds incur reward. By contrast, individual performance in QI is assessed in light of performance and capability of production processes. Statistical techniques are used to determine how much variation in performance across individuals is the product of a stable production process (i.e., "common" variation), and only those who consistently show evidence of "special" variation receive merit raises or additional training (Deming 1986; Scherkenbach 1988). Hence, performance evaluation in QI eschews the arbitrary, dichotomous "standards" used in QA, thus enabling boards to avoid several of the negative consequences associated with outcome-based control strategies.

Two critical issues emerge from this discussion. First, application of QI and the concomitant switch in emphasis from outcome-based control to social control change the board's information needs with respect to CEO performance evaluation. Second, given its expanded scope, implementation of QI is likely to introduce significant changes in the board's agency relationship with the CEO, medical staff, and community. Challenges posed by these two interrelated issues are examined below.

THE BOARD AND QI IMPLEMENTATION

Three factors unique to the field of health care pose significant challenges for hospital boards seeking to implement QI—a high rate of CEO turnover, an organized body of professionals who are not employees, and a high degree of regulation and external scrutiny. To a large extent, the success of the QI approach to quality assessment in health care depends on the ability of boards to effectively manage their relationships with the CEO, the medical staff, and the external environment.

BOARD-CEO RELATIONS

Quality experts repeatedly underscore the importance of top management participation in QI (Ishikawa 1985; Deming 1986; Juran 1988, 1989). Because QI typically demands extensive cultural and operational changes, upper managers must personally commit themselves to continuous improvement, demonstrate "constancy of purpose," and take a visible leadership role in QI efforts. Moreover, case studies provide empirical support for the contention that the success of QI implementation hinges on the leadership of a committed, charismatic CEO (Walton 1986; White and Lee 1990; *Quality Review Bulletin* 1992).

Given the importance of strong, stable leadership in the CEO posi-

tion, high rates of hospital CEO turnover represent a serious challenge for boards interested in QI. Statistics indicate that the annual rate of hospital CEO turnover climbed to 24.5 percent in 1987 and has been increasing at a rate of 4.5 percent annually since the early 1980s (Wesbury, Williams, and Caver 1989; Bills 1990). Some proportion of these turnovers are undoubtedly beneficial for both the hospital and the CEO. Nevertheless, chronic instability in the CEO position can negatively affect a hospital's QI efforts in two ways. First, frequent CEO successions make it difficult to maintain a quality focus and a constancy of purpose. In addition, chronic instability discourages incumbent CEOs from making difficult, unpopular, or risky decisions concerning QI implementation that, in turn, may further impede efforts to demonstrate leadership from the top and constancy of purpose. In light of such high rates of CEO turnover, boards represent a primary mechanism or force for ensuring the continuity of a hospital's QI focus (*Quality Review Bulletin* 1992). The challenges of recruiting, developing, and retaining the kind of leadership talent required to maintain constancy of purpose throughout a five-to ten-year QI campaign, underscores the board's role in building strong, supportive board-CEO relationships.

The hospital governance literature indicates that a primary factor in CEO turnover is a lack of shared vision between board and CEO (Chapman-Cliburn 1988; Fritz 1989; Koska 1989). Hence, boards seeking to institutionalize QI may be expected to pursue a variety of avenues for creating and sustaining a shared quality vision. One avenue is the hospital mission statement (James 1989; Larson 1990). The mission statement explains why a hospital exists, what services it will provide, what type of patients it will serve, and what its role will be in the community (Fritz 1989; Wesbury, Williams, and Caver 1989). In addition, the mission statement provides the foundation for all decisions in strategic planning (Fritz 1989). Hence, boards and CEOs might create a shared quality vision by revising the mission statement to include an explicit focus on QI. Boards and CEOs might sustain this vision by routinely consulting the quality mission statement in the process of strategic quality planning.

Alternatively, boards can instill a common set of values regarding QI through social control strategies such as socialization, education, and training. Boards and CEOs might initially create a shared quality vision by participating together in intensive QI education and training. Boards and CEOs might sustain their vision by routinely participating in refresher courses, QI conferences, and training seminars. Alternatively, boards can attempt to create a shared quality vision through the social control strategy of selection. As part of their control function, boards are responsible for hiring and firing the CEO (Zahra and Pierce 1989;

Louden 1982). If the current CEO proves reluctant or resistant to pursuing QI, boards have the option of relieving the current office holder and hiring a new CEO who shares their quality vision and believes in the value of continuous improvement.

By creating a shared quality vision, boards increase the likelihood that CEOs will pursue QI whether or not their behavior is monitored. Yet, boards are expected to monitor CEO performance under the accreditation standards of the Joint Commission (1991). Moreover, evaluating CEO performance is an essential part of the control function of boards (Zahra and Pierce 1989; Louden 1982). Hence, boards may be expected to supplement the social control strategies mentioned above with two additional control mechanisms—formal employment contracts and performance evaluation. These two mechanisms help boards and CEOs sustain a shared quality vision by enabling them to define and clarify expectations and priorities (Umbdenstock and Hageman 1984; Gardner 1990; Ewell 1990; Koska 1990). With respect to QI, these expectations and priorities are likely to flow directly from principles stated in the quality mission statement. Further, these two control mechanisms reduce CEO turnover by providing greater employment security, which in turn encourages CEOs to pursue longer-term strategic quality objectives without concern for capricious action on the part of boards should a short-term decline in performance occur (Alexander 1990; Umbdenstock and Hageman 1984).

It is important to note, however, that the way in which boards use these two control mechanisms is likely to change as hospitals move from QA to QI. Specifically, boards are more likely to use them as behavior-based rather than outcome-based control strategies. Currently, boards contract with CEOs to perform a set of agreed-upon numerical goals and then annually evaluate CEO performance by judging whether or not these goals have been achieved. Hospital governance experts generally recommend this approach to performance evaluation (Koska 1989; Gardner 1990); many quality experts, however, emphatically counsel against it (Ishikawa 1985; Walton 1986; Deming 1986; Scherkenbach 1988). Individual performance, they argue, is the product of a complex interaction of people and support systems. This form of outcome-based performance evaluation is inappropriate because CEOs are rewarded or penalized for outcomes partially outside their control. Also, this form of outcome-based performance evaluation is counterproductive because CEOs are likely to reduce the risk they bear for uncertain outcomes by engaging in self-protective behavior. Boards engaged in QI may be expected to deemphasize outcome-based CEO performance evaluation in favor of behavior-based evaluation.

Behavior-based CEO performance evaluation criteria will likely

focus on the quality of leadership CEOs demonstrate in pursuing QI objectives. The QI literature provides considerable detail about the kind of top management leadership behavior required for successful QI implementation (Ishikawa 1985; Deming 1986; Walton 1986; Juran 1988, 1989); hence, to some degree, CEO leadership behavior is "programmable" – that is, capable of definition and measurement. Nevertheless, desirable leadership behavior in response to unexpected or unique circumstances is, and will likely remain, impossible to specify in advance. Boards are therefore likely to evaluate CEO leadership behavior through a mix of objective and subjective criteria. Effectively monitoring such a contract places new information demands on boards (Eisenhardt 1985, 1989; Baysinger and Hoskisson 1990). Specifically, boards require rich, detailed information about the day-to-day leadership behavior of CEOs. Boards may be expected to acquire such information by participating in the quality planning, quality control, and quality improvement activities of the organizationwide Quality Council.

BOARD-MEDICAL STAFF RELATIONS

A second unique factor confronting hospital boards seeking to implement QI is the presence of an organized body of professionals who are not employees. Strictly speaking, the relationship between the board and physicians is an agency relationship: as surrogates for the principals, boards engage physicians to perform some service on their behalf that involves delegating some decision-making authority. However, because medical staff members are not formally part of the hospital, its members are not subject to the same administrative controls as hospital staff. In fact, the only formal linkage between the medical staff and the hospital is the board itself. Boards are the only body internal to the hospital that have legally sanctioned responsibility to oversee the activities of the medical staff. Boards engaged in QI bear the responsibility for showing the constancy of purpose and leadership for quality that quality experts typically assign to upper management. Hence, board involvement in QI implementation may be expected to go beyond simply monitoring and evaluating quality of care to include active promotion of the value of continuous improvement.

Although boards have the ultimate authority to grant, revoke, or limit clinical privileges, boards are unlikely to use credentialing as a primary mechanism for encouraging physicians to participate in QI activities. Because admitting physicians may have privileges at several hospitals, they are less dependent on privileges granted by any single hospital. Boards could inadvertently place their hospitals at risk by using credentialing mechanisms to exert outcome-based control or

behavior-based control. Physicians who are reluctant to participate in QI activities can effectively resist doing so by simply taking their patients elsewhere. While not precluded from using credentialing to promote medical staff involvement in QI, boards may nevertheless be expected to rely primarily on social control strategies to attract physician interest in QI activities.

Boards involved in QI implementation are likely to promote a common set of values toward quality by overtly demonstrating their commitment to QI. For example, by actively serving on the organizationwide Quality Council, board members might communicate to medical staff members that QI is a top priority. Board members might also communicate their commitment to QI through membership on various medical staff committees. For instance, board members on the medical staff credentialing committee might encourage the selection of physicians who positively value QI or have previous experience in clinical quality improvement. Board members on medical staff committees might also subtly introduce QI concepts and methods into discussions regarding chronic problems that medical staff members face (*Quality Review Bulletin* 1992). Finally, boards can communicate their commitment to QI by keeping the medical staff informed about progress in QI efforts through use of board-management-medical staff retreats.

Boards are also likely to instill a common set of values regarding quality by creating an institutional context that fosters leadership for QI among medical staff members themselves. For example, boards might encourage interested medical staff members to participate in QI education and training seminars, or encourage interested medical staff members to participate in clinical quality improvement teams. Further, boards might invite interested medical staff leaders to actively participate in the strategic quality planning activities of the organizationwide Quality Council (Walton 1986; Shortell 1991; *Quality Review Bulletin* 1992). Boards engaged in QI are likely to discover, however, that physicians have only limited time to participate in hospital QI activities. Empirical data from case studies suggest that getting nonsalaried physicians to devote time to clinical quality improvement activities is a serious challenge (*Quality Review Bulletin* 1992). Boards engaged in QI may be expected, therefore, to take active steps to recognize those physicians who devote their time and energy in pursuit of clinical quality improvement and even consider offering modest financial incentives to further encourage physician participation.

Health care quality experts suggest that not all medical staff members respond positively to QI (Kralovec 1990; Merry 1990; *Quality Review Bulletin* 1992). Some view the call to serve on QI teams and participate in QI activities as a threat to their autonomy and decision-making authority.

Likewise, some view QI as yet another attempt to "control" the practice of medicine. Finally, despite the fact that a growing number of physician leaders have publicly granted legitimacy to the introduction of industrial QI methods into health care, some nevertheless see this development as coming from outside the profession and, hence, view QI with both caution and skepticism. Since not all physicians are likely to respond with equal enthusiasm, board efforts to encourage physician participation in QI are likely to target those physicians who (1) have a longstanding, positive relationship with the hospital, (2) admit a large number of patients, or (3) have either an open mind about or a genuine enthusiasm for QI. Boards may be expected to encourage participation among skeptical physicians by demonstrating that systemic organizational weaknesses have a real and direct effect on their ability to practice optimally (Heilig 1990; Merry 1990). In other words, boards might reach out to skeptical physicians by involving them first as customers and suppliers rather than as elements of the production system. By making improvements in underlying systems that are high on physicians' priority lists, boards may be able to convince these physicians that QI works (Heilig 1990; Merry 1990; *Quality Review Bulletin* 1992).

BOARD-EXTERNAL RELATIONS

A third challenge confronting hospital boards engaged in QI is the high degree of regulation and external scrutiny found in the health care sector. External supervision undoubtedly fulfills an important purpose in ensuring quality of patient care. Nevertheless, multiple inspections by agencies using somewhat contradictory rules, operational definitions, and reporting formats consume critical resources that instead could be used to improve quality. Hospital leaders involved in QI recommend that all external agencies that oversee hospital activities explore how they might work together to improve quality (*Quality Review Bulletin* 1992). Many are supportive of the efforts of the JCAHO to transform accreditation standards and the multiple inspection system. Although boards currently do not have as much influence on health care policy, these comments may signal the beginning of a more proactive stance.

Boards engaged in QI are likely to have a direct influence on hospital-community relations through their service function. Boards can perform an important service for the organizations they govern by offering strategic quality goal nominations based on their contacts with those external customers that constitute the vital few. By defining quality as meeting or exceeding customer requirements, boards involved in QI may be expected to actively promote a greater sense of partnership vis-à-vis local employers and community leaders.

Further, hospitals involved in QI may also be expected to promote greater collaboration among hospitals and health care organizations themselves. Hospital leaders engaged in implementing QI report that they gain more by sharing information and ideas with their colleagues than by competing alone (King 1990; *Quality Review Bulletin* 1992). Similarly, several health care organizations, including Hospital Corporation of America, Harvard Community Health Plan, and Health Care Forum, have formed QI networks that offer health care leaders the opportunity to meet to exchange ideas, develop collegial relationships, and advance the state-of-the-art in QI (King 1990).

Finally, there is some evidence to suggest that QI will challenge boards to think about the effect of their organizations both "upstream" and "downstream" in their community's health care system (*Quality Review Bulletin* 1992). The emphasis in QI on building quality into every step of the processes appears to encourage hospitals to place greater emphasis on prevention and early detection of health care problems (*Quality Review Bulletin* 1992). Hospitals will undoubtedly continue to concentrate on acute care delivery in response to the economic incentives of the current payment system. In the long term, however, hospitals engaged in QI may be expected to shift the focus of their activities from simply providing acute care to enhancing the health status and quality of life of the community at large.

SUMMARY AND DISCUSSION

This article used an agency theory perspective to explain and critique the role of hospital governance in quality of care. The board's role in QA was first presented to establish a point of contrast with more recent developments in QI and to illuminate the transitional problems faced by boards in converting from QA to QI as the primary quality framework in hospitals.

Specifically, we argued that the introduction of QI into the health care sector will change the role of boards in quality. For hospital boards engaged in QI, quality will become less of a compartmentalized concern and more of a strategic, mission-oriented focus. Further, board involvement in QI will eclipse the narrowly defined emphasis on outcome-based quality monitoring found in QA; instead, boards will become active participants in strategic quality planning, quality control, and QI. Moreover, this move toward a strategic focus and a broader scope of activity will be motivated less by externally mandated, legal and accreditation requirements and more by competitive conditions and values of the institution.

We also proposed that the introduction of QI will change the object of boards' control function. Hospital boards engaged in QI will focus less on the performance of individual providers and more on the performance and process capability of systems of care. Accompanying this change will be a shift in the board's principal control strategy from outcome-based control in QA to social control in QI. By instilling a common set of values regarding quality improvement and by emphasizing behavior-based measures in performance evaluation, boards engaged in QI can avoid the risk transfer to clinical providers that currently subverts the intent of QA practice.

We further posited that the adoption of QI will change both the nature and the scope of boards' knowledge and information requirements. The more active, broad-based participation of boards in QI than in QA demands that board members have a sound working knowledge of QI philosophy, principles, methods, and statistical tools. Furthermore, board involvement in strategic quality planning, quality control, and quality improvement calls for information not only about clinical outcomes, as in QA, but also about organizational outcomes and processes, customer requirements, quality planning and quality improvement systems, and more.

Finally, we indicated that QI implementation will alter boards' agency relations with top management and physicians. Specifically, boards will develop closer ties with the CEO and the medical staff in response to their expanding information requirements and changing control strategy. In other words, the demands of QI and its emphasis on systems or processes of care will require greater coordination and cooperation among these three historically distinct centers of power in hospitals. The concept of integrative leadership, currently being espoused by the JCAHO, is consistent with the breakdown of barriers and distinctions between management, governance, and medical staff in hospitals: "We've been in an era of great attention to the proper demarcations between governance, management and medical staff roles . . . but we are moving into a new era of far less emphasis on those demarcations. Successful institutions will see leadership as a critical mass that brings together components from governance, management, the medical staff, and patient services" (Chapman-Cliburn 1988).

The transition from externally mandated quality responsibilities to internally generated, proactive quality strategies stresses the importance of leadership as a critical board function. This leadership role derives, in part, from the board's position as the nexus for connecting elements necessary to planning, implementing, and institutionalizing a viable QI effort in the hospital. First, the board may play a central role in preserving the continuity of QI efforts in light of the frequent turnover among

top managers in hospitals. Second, the board provides an important context and source of support for risk-taking and change in QI efforts. This suggests that the board must take purposive action to extend its function beyond simply fulfilling its fiduciary role to preserve the assets of the institution. Specifically, the board must provide deliberate, clear incentives for hospital medical staff and management to assume risk, to alter traditional roles, and to transfer authority and power to those instrumental in the processes contributing to high-quality care. Finally, the hospital board must reassess its relationship to the community it represents by conveying a clear message that in the competitive climate of the 1990s, good health care is likely to be based on achieving higher levels of quality of care and service at costs that are reasonable and competitive with those of other providers. To the extent that the board embraces such a vision for the hospital, it is also incumbent on the board to communicate this vision to the community it represents and, in turn, to convey the needs of the community to the hospital. The board, in other words, must reaffirm its traditional accountabilities to its most important constituency while at the same time changing the content of this responsibility to emphasize continuity and accountability of purpose in QI.

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