

# Total quality management in health: Making it work

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*Many health organizations are trying total quality management (TQM). This approach represents a total paradigm shift in health care management and presents a series of potential conflict areas in the way health organizations are managed. These areas include TQM's participatory approach versus professional and managerial authority, collective versus individual responsibility, quality assurance and standards versus continuous improvement, and flexible versus rigid objectives and plans. This article reviews the areas of conflict and suggests a number of action guidelines for the successful implementation of TQM.*

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Interest in total quality management (TQM), a major managerial innovation, is running high. The Joint Commission on Accreditation of Healthcare Organizations (Joint Commission) has placed its "agenda for change" squarely within the philosophical context of TQM.<sup>1</sup> The Hospital Research and Educational Trust of the American Hospital Association has recently published a report to help hospitals "organize for, communicate about, monitor and continuously improve all aspects of health care delivery."<sup>2(p2)</sup> This report is part of a three-year quality improvement initiative sponsored by fifteen hospital systems and alliances.

TQM, first developed in the United States and successfully implemented in Japan, is obviously receiving serious attention by U.S. health service organizations as they try to improve quality with fewer resources.<sup>3-5</sup> A growing number of hospitals and health maintenance organizations (HMOs) are implementing TQM. Some will succeed; many will fail. This article argues that TQM represents a fundamental paradigm shift in health care management and explores a series of potential conflicts between TQM and the way that health care institutions normally are managed. A number of action guidelines are suggested to better ensure that TQM fulfills its potential and functions effectively within health service organizations.

## TQM AS A PARADIGM SHIFT

Total quality management is a conceptual approach different from quality assurance (QA) and quality inspection and runs counter to many underlying assumptions of professional bureaucracies. It calls for continuous and relentless improvement in the total process that provides care, not simply in the improved actions of individual professionals. Improvement is thus based on both outcome and process.

Batalden et al.<sup>6</sup> outline what the health leadership must learn to implement TQM successfully.

- Management must learn the meaning of quality, including an understanding of the importance of

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the customer, and that there are multiple customers in the production process.

- Top management must sponsor and encourage the continuous improvement of quality, including the wise use of teams that can work together effectively to improve systems and of other processes, including group processes and organization and system change skills.
- Management must learn the meaning of statistical thinking: how to speak with data and manage with facts; how to take the guesswork out of decision making; how to reduce variation and unnecessary complexity through the use of the seven standard tools of data analysis and display (cause-and-effect diagram, Pareto chart, histogram, scatter diagram, flow chart, run or trend chart, and control chart); and how to link the results of the use of these tools with appropriate management action.<sup>6</sup>

TQM demands that change be based on the needs of the customer, not the values of the providers. It requires the meaningful participation of all personnel and a rapid and thoughtful response from top management to suggestions made by participating personnel. Management is no longer able to stifle the suggestions of personnel by requiring additional study or by requiring that all decisions be reviewed by a higher level of management.

TQM is more than a change in values and responsiveness by top management. It requires rigorous process flow and statistical analysis, evaluation of all ongoing activities, and the recognition and application of underlying psychosocial principles affecting individuals and groups within an organization. It requires accepting the fundamental assumption that most problems encountered in a health care organization are the result of not errors by administrative or clinical professionals, but the inability of the structure—within which all personnel function—to perform adequately.

An obvious conflict is between the relentless inquiry of TQM and the established norms of professional autonomy. This is not merely a conflict between administrators and clinical professionals: It is a fundamental challenge to the way all professionals think about quality, evaluate and regulate themselves, and gain and protect their professional domains and autonomy. TQM does not respect existing professional standards; it is continually demanding new ones.

TQM places primary emphasis for problem characterization on the system rather than the individual. Deming<sup>7</sup> estimates that 85% of errors introduced into a

process are the result of problems with the system rather than the type of random errors and mistakes introduced by individuals. This runs counter to the prevailing assumption in health services that a problem is a result of one individual's error rather than of the larger structure or system within which the individual functions. For example, one of the authors was hospitalized briefly last summer and experienced a number of scheduling and coordination difficulties that unnecessarily complicated the stay. In an effort to provide constructive feedback to management, the author described his experience and displeasure to a staff member, suggesting that these problems could be improved, if not eliminated. A few weeks later at a social occasion, the supervisor of one of the departments involved approached him and started asking questions such as, "What did the person look like? Was the employee short or tall? I checked the records the day you were in, and the person who was on duty was the one least likely to do that." Unfortunately, the normal response to complaints is to "take names and kick butts."

Similarly, at a recent executive training program, a group of midlevel managers was asked to consider programmatic issues such as "Why does it take one to two hours to get a discharged patient from the floor to the front door?" Obviously, the solution to this problem lies in coordinating several departments, and the group members agreed that they could resolve the problem. However, they argued that upper management had not asked them to solve the problem. They knew it was a systems problem, but they felt responsible for managing only their own functions, not a system; therefore, the problem continued.

Finally, TQM challenges the prevailing model of who the customer is. The customer in TQM is not only the patient, but also the many users of a department's output. Here again, the criterion is not whether or not the work meets professional standards, but whether the user, often a member of a different profession, is satisfied with its timeliness and utility.

The reality is that both models—TQM and the professional bureaucracy—must be accommodated if TQM is to make a difference in health care organizations. For example, Galbraith<sup>8</sup> outlines the importance of the professional model in handling the flood of technical information that medical research has developed. He suggests that specialization is a way of handling information overload, especially in the absence of other information-processing alternatives such as a common management information system or lateral linkages for information coordination. In fact, one can see TQM as a

methodology for developing lateral linkages in the health care organization that transfer information between disciplines as needed. It is a powerful method of lateral technology transfer in the traditionally highly compartmentalized organization.

**CONFLICTS BETWEEN THE TWO MODELS**

The nature of the organizational change required to implement TQM can be outlined by contrasting the two models and evaluating points of conflict (see Figure 1). While they are not mutually exclusive and while the observed points of conflict will vary between organizations, each of the models requires explicit recognition.

**Individual versus collective responsibility**

The professional model places the responsibility for performance squarely on the individual professional. As described by Mintzberg, "the Professional Bureaucracy...hires duly trained and indoctrinated specialists—professionals—and then gives them control over their own work."<sup>9(p.349)</sup> He goes on to state that such control means that the professional works independently of colleagues but closely with clients. If the professional makes a mistake, then that professional is primarily liable for damages. If the error is blatant, a QA committee, and the professional society in the very worst cases, sanctions the individual. Only in the most

grievous cases is the organization itself at risk for damages.

The TQM model focuses on the system. If errors or problems occur (e.g., if individuals were not properly trained, key information was not transferred, or procedures were not adequate to the variety of possible situations), the TQM model focuses on the process, not the individual provider. To correct problems and errors, a group—usually interdisciplinary—of individuals in the organization is asked to assume ownership of each process and joint responsibility for its improvement.

**Clinical versus managerial leadership**

In the health service organization, a continuing source of conflict is the relationship between the various levels of administrative management and the clinical

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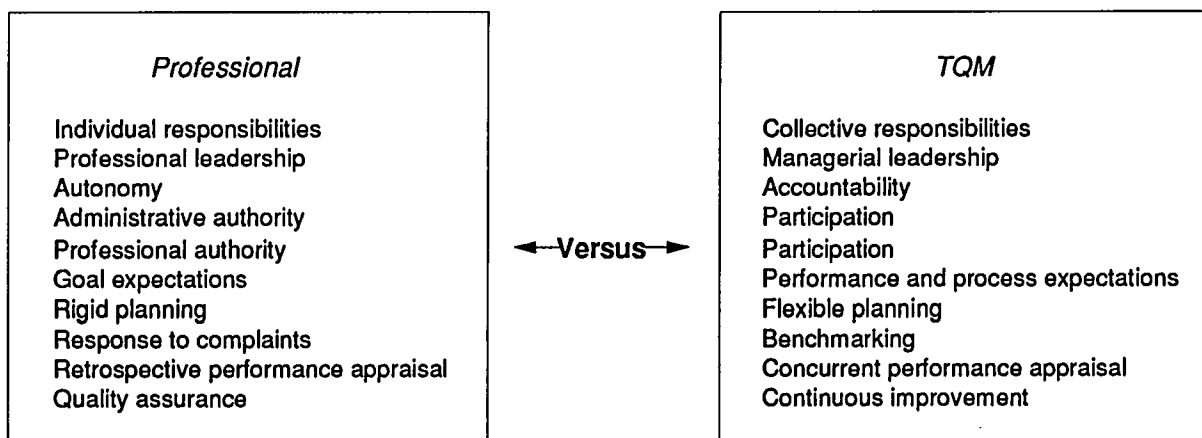
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professional leadership. At a time when the management is trying to gain more control over the clinical

**FIGURE 1**

**AREAS OF CONFLICT BETWEEN TWO ORGANIZATIONAL MODELS: PROFESSIONAL AND TQM**



professional in the face of pressures for cost-containment purposes, TQM comes along and demands that management take a more participative approach. Managers are required to involve clinical professionals in the decision-making process, leaving it up to them to solve quality problems as they arise. Yet, while this is a participative program, it is clearly a managerial initiative. Paradoxically, participation may be perceived as a threat to professional autonomy while at the same time contributing to individual and group autonomy.

#### Autonomy versus accountability

Autonomy is central to the clinical professional model. Under this model, clinical professionals have the special privilege of freedom from the control of outsiders. This privilege is justified by three claims:

1. Unusual degrees of skill and knowledge are involved in clinical professional work, and administrative professionals are not equipped to evaluate or regulate it.
2. Clinicians are responsible, and they may be trusted to work conscientiously without supervision.
3. Clinical professionals themselves may be trusted to undertake the proper regulatory action on those rare occasions where an individual does not perform work competently or ethically.<sup>10</sup>

Clinical professionals are thus suspicious of managerial actions in the areas of cost control and QA, and TQM may look like another in a progression of management steps designed to reduce their professional autonomy. TQM is a technique that is likely to increase personal autonomy in undertaking task-oriented change. It does not, however, respect professional autonomy as much as it respects personal autonomy. At the same time, it demands that clinical professionals hold themselves accountable for both outcome and process performance on a continuous basis.

#### Administrative authority versus participation

TQM, through the use of quality circles, puts responsibility for quality control in the province of the front-line managers and employees. Quality circles are small groups of employees from the same area who work on a range of problems to increase productivity and efficiency. Maintaining quality no longer means taking names and booting bottoms; it means monitoring and teaching employees to monitor their own performance and taking corrective action.

#### Professional authority versus participation

The TQM approach diffuses responsibility for quality among the members of the team responsible for the delivery of care. The criteria are not necessarily those selected by physicians and other professional groups. TQM emphasizes that criteria are selected by the users of the output. It was best described by the director of a major teaching hospital, who defined his objective in starting a TQM program as wanting to "make this a customer-driven instead of a doctor-dominated hospital." Teams are likely to be multidisciplinary, and the creativity and worth of every team member must be respected equally. This has been reported frequently as a perceived threat to the status of middle managers. The same is quite likely to be the case with high-status professionals.

#### Goal versus process and performance expectations

The usual expectation in health care is that one has an objective goal for every act; that there is a "gold standard" for care. This means that each activity has a protocol for behavior and an expected outcome, and that the protocol remains in effect until a technological change makes it obsolete. That is not the case with TQM. The objective for TQM is one of continuous improvement. While this is not totally foreign to health care (e.g., the history of organ transplants has been one of continuous improvement), the hospital does not measure the success ratios of many of its basic procedures, such as getting the discharged patient out the door more quickly.

#### Rigid versus flexible planning

A major teaching hospital tried forming quality circles and, like many other hospitals, developed a series of major cost-saving actions. As might be expected, these proposals often had associated capital requirements, and the hospital had already planned its capital investments for three or more years. The proposals were not implemented quickly, and the quality circles lost interest.

TQM requires that management be responsive to quality improvement suggestions. New priorities are necessary, and they must be addressed aggressively through flexible, ongoing planning rather than through rigid, preprogrammed activities.

TQM includes a concept called *benchmarking* of products and processes. This involves comparing current activities and performance against the best of the com-

petition, the idea being to develop a product and process that significantly betters the competition. This implies several changes to existing approaches in health care, where the primary stimulus for change is the recognition of a problem vis-à-vis the established norm. First, TQM explicitly acknowledges that there is a competition to be studied and surpassed. Second, it recognizes the customer's experience as the basis of comparison. Third, it expects that the organization and its processes should be improving all the time, regardless of whether or not a complaint is registered or a problem identified. It means that the accepted way of doing things does not last long. It requires continuous growth and learning on the part of everyone, no matter how old or how educated.

#### Retrospective versus concurrent performance appraisal systems

Most performance appraisal systems are based on setting goals and then meeting them. TQM appraisals focus on gaining skills to contribute to the process of quality improvement. Therefore, the reward system is based on contribution to a team effort to improve outcomes rather than on whether specific set objectives have been met. If TQM is in effect, the objectives will be changing almost daily: as some are achieved, new ones are immediately set. This case illustrates the concept of TQM.

A European company won a contract to deliver headlamps to a Japanese car manufacturer. The initial contract allowed 50 defective lamps per 100,000. The lamp manufacturer modified its process to meet that standard painlessly. The next contract called for 20 defective lamps per 100,000. The lamp manufacturer managed to meet that too, so the next contract called for 5 per 100,000. Once again, the supplier struggled and met the new requirement. The next contract called for 10 per 1,000,000. This time the lamp manufacturer complained, "Why didn't you ask for that standard the first time?" "We didn't know what you could do, when we started," the Japanese replied.

The concept of Kaizen,<sup>11</sup> or "continuous improvement," is what drives a TQM program. No matter how well one does, one should be preparing and attempting to do better.

#### Quality assurance versus continuous improvement

The underlying premise of QA has been to identify human errors in the process, to follow established protocols, and to search for failures to meet the gold

standard. This is the traditional Joint Commission approach: Either the standard is met or it is not. TQM emphasizes system errors and the continuous nature of improvement. Moreover, it requires that improvement be the responsibility of all personnel, not just those designated as "QA" personnel. Fortunately, the new Joint Commission standards are planned to reflect the TQM approach, emphasizing a process for continuous improvement rather than a go versus no-go measure.

#### PREPARING FOR CHANGE

The implementation of TQM requires that administrative and medical managers mediate areas of conflict. How well management functions during the transition will depend on its ability to follow the action guidelines presented below.

##### Action 1: Redefine the role of the professional

Most health care organizations have hired professionals on the basis of their possession of technical skills and standards certified by the training programs from which they were hired. Management has had relatively little control over professionals once they are hired, so they must have the right work habits, standards, and methods when hired. It has been assumed that the possession of this training and these work habits would lead to decision making that would meet the gold standard for an extended period of time.

The new set of decision-making skills required by TQM will have to include not only technical skills, but also the ability and flexibility to be guided by a quest for continuous improvement. This requires fundamental skills for statistical analysis of procedures and the ability to work with and in multidisciplinary teams. In essence, the routine tasks of the physician, nurse, and other providers will have to include basic epidemiology, statistics, and a variety of group process skills.

##### Action 2: Redefine the corporate culture

Americans tend to look for the quick fix, the home run, and the Nobel Prize. While TQM may yield a home run early on, the basic philosophy is one of incessant change, the hitting of lots of singles, and the tortoise over the hare. Imai observes that Westerners are concerned with performance, while Easterners are concerned with both performance and process.<sup>11</sup> The Eastern philosophy calls for continuous employee training to assist with continuous improvement. This means that there must be a change in what Kilmann<sup>12</sup> refers to

as culture, management skills, team-building strategy, structure, and reward system. Failure to address each in a systematic effort will greatly limit the implementation of TQM.

### Action 3: Redefine the role of management

In TQM, the manager becomes a symphony conductor, orchestrating the independent actions of a variety of professionals and project-oriented teams. This change really modifies current leadership roles at the top, middle, and bottom of the management hierar-

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chy.<sup>13</sup> The top managers will do less of the decision making, leaving it to lower and middle levels of management to make the majority of the decisions, often on a consensual basis among the departments involved. The role of top management, then, is to manage the culture and to allocate resources to support the change process. Top management will have to establish a planning process that is flexible enough to adapt to the propositions that the TQM process develops. Top management will have to be the spokespersons for the clients who are not represented in the system, especially the patients. Middle management has responsibility for monitoring the process of TQM and authorizing the implementation of the process changes that are identified for improvement of both quality and cost. Front-line management acquires the key role in TQM. The first-line manager has to lead the process and at the same time give people enough room to make it work. All levels of management must be evaluated as role models for TQM, and top managers have especially key roles in modeling, teaching, and providing feedback as part of the TQM process.

### Action 4: Empower the staff to analyze and solve problems

The most important challenge for management is to empower the staff to gather data, analyze it, and make recommendations. This involves convincing the staff that it is safe to collect data and do something with the results. This means that management must overcome

status barriers; must be diligent in convincing people to try out statistical quality control techniques, making sure that people get rapid feedback to their proposals; and must be diplomatic. Supervisors also have to act as liaisons if problems turn out to have multiple causation (as they so often do). They have to be able to see the system in a systems way, focusing not first on their own units but on a component in a complex system. Most of all, they must all be supporters of the massive social changes that TQM can require.

### Action 5: Change organizational objectives

The organization's objectives need to be expressed in terms of both performance objectives and process objectives. This means that programs will have to set their own quality objectives period by period as they develop the capacity to measure, follow, and modify their own processes.

### Action 6: Develop mentoring capacity

The professionals and the managers will both perceive the changes as risky to implement and threatening to their professional identity. They will need models of behavior to follow and mentors with whom they can discuss their plans and feelings about the risks involved. Senior executives who are convinced of the importance of TQM are going to provide advice and support. In fact, in one industrial organization, a criterion for promotion among mid- and upper-level managers is how subordinates judge their abilities to function as role models.

### Action 7: Drive the benchmarking process from the top

The hardest process step will be the benchmarking process, a process that must be led from the top of the organization. Top management is the group responsible for assessing the outside environment. They have the capacity to identify the best performance of competitive organizations and compare internal operations with these high-performance organizations. This will not happen effectively without strong leadership from the top down.

The unit of analysis for benchmarking is critical. It is not just "Do we have the best radiology department in the country?" It is also "Do we give our patients the best experience? Do we serve the attending physicians better than anyone else? Are we making fewer processing errors and fewer delayed reports than last month, and are we working to make this the best in the world?"

**Action 8: Modify the reward system**

The reward system of health care is constrained to a high degree by professional status and prerogatives. The health care institution, however, must reserve some rewards for those who cooperate most wholeheartedly and effectively. The rewards are most likely to be psychic rather than financial payments. They can effectively include travel, entertainment, employee recognition (best used for teams), and vacation time. For example, one major U.S. company that is very successful at TQM has eliminated all financial awards in its suggestion system. It now gives books on how to improve job performance and trips to continuing education programs instead. The ideal reward system should reward both performance and process development.

**Action 9: Go outside the health industry for models**

Xerox Corporation of Stamford, Connecticut, has been one of the most successful adherents of TQM. TQM has helped the company to thrive in the highly competitive copier market and to compete well enough to recover some of its market from the Japanese. David T. Kearns, Chairman and Chief Executive Officer of Xerox, has suggested that the next benchmark for Xerox copiers after Japanese copiers is the telephone, with its attributes of both high reliability and low cost. Health managers should not hesitate to go outside of the health industry for its models of consumer-driven quality. The obvious future targets are highly successful consumer service organizations such as Walt Disney, American Airlines, Marriott, and American Express.

**Action 10: Set realistic time expectations**

The process of adopting and institutionalizing TQM, like all organizational change processes, takes time under the best of circumstances, most likely three to five years. It is likely to take longer in a large, complex organization like a teaching hospital. People will have to start with a realistic estimate of the time required. Two types of time are required—hours of input by already busy managers and professionals and calendar time required to implement the program. The latter is illustrated even in the case of a very tightly controlled organization such as Xerox, where new issues concerning TQM institutionalization continue to surface five years after implementation. For example, employee evaluation systems were not changed to include management commitment and role modeling for TQM, and college employment recruiters were not using TQM-

related selection criteria until shortly before the firm received the Malcolm Baldrige Prize in 1989 in recognition of its successful implementation of TQM.

**Action 11: Make the TQM program a model for continuous improvement**

The cases cited above highlight possibilities for using the TQM program to model a continuous improvement orientation for the total organization. Those who are responsible for program oversight must consciously challenge the TQM staff to suggest improvements in the program and respond rapidly and effectively. The professionals will be especially sensitive to any gaps between what is preached and what is practiced by those associated with this program. They have already seen many programs come and go in recent years, and they must be convinced that management is serious about TQM. Here actions will truly speak louder than words.



Health service organizations are facing new challenges, challenges that require a new look at how and why resources are organized and managed. The expectations are high for TQM. A recent survey by Peat, Marwick, Main & Co. of Chicago reports that 69% of institutional providers and 78% of physicians, purchasers, and third party payers believe that the cost of poor quality is so great that quality improvement should pay for itself.<sup>14</sup> Industrial organizations have reduced their operating expenses by 20% to 40%. If health care organizations can do half as well, quality improvement programs will have a major impact on the field.

TQM represents an approach with a great deal of potential, yet it presents some basic conflicts with underlying norms and expectations that guide professional bureaucracies. While the conflict exists, the problems are not intractable and, if recognized, represent opportunities not only to improve quality of care but also improve the system designed to provide quality care.

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