

# Interactions of Quality Improvement with Other Approaches in Healthcare

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## Abstract

### **1. Introduction to Quality Improvement in Healthcare**

Quality improvement (QI) is an approach to the continuous study and improvement of the processes of providing health care services to meet the needs of the patient and others. It uses a variety of methods such as facilitation, formal or informal teams, benchmarks, and audits with feedback, coupled with more quantitative methods such as attribute and control charts, statistical process control, and structured experiments or designs to explore and possibly reduce variation, i.e., to define and address any changes. Based on the industrial engineering paradigm, QI focuses on systems, structures, and processes, and the latter determine to a great extent the desirable as well as undesirable outcomes.

The intended beneficiaries of QI are the individuals involved in healthcare. QI's impact on health system performance depends on the organization's culture. The challenge is to incorporate QI into every role of healthcare. Continuous improvement is essential for organizational performance. The committee identifies six aims for standardization and patient-centeredness.

### **Methods**

We analyzed research and explored programs to create a typology for healthcare quality improvement. We selected four programs for in-depth study and developed a data collection instrument for interviews. We interviewed staff responsible for program design and collected background information. We pilot tested the instrument and conducted additional interviews. The study had to be flexible due to program complexity.

### **Conclusion**

Drawing from all these examples and the abundance of information in the other chapters in this report provides an opportunity for a number of general conclusions concerning quality

improvement and the development of theory and methods. The familiar concerns about evaluation and its relationship to quality improvement work are revisited. The general lesson is that methods improvements in fieldwork and program evaluation can be mutually supporting, provided that thought is given to the practical difficulties. Although this chapter used case studies and syntheses of quality improvement work as its starting point, some of the final conclusions are as much directed at what health services research can do. Familiar issues of the difficulty of measurement, the complex structural issues of professional organizations and the hierarchy as types of overall organization, and the complexity of interactions must remain central features of health services inquiry into quality of care. But the desire for interventions in situations identified as difficult can usefully suggest other parallel investigations.

## **Introduction**

Many diverse medicine improvement movements are currently all "loosely tied" together in attempting to achieve improvements in care across the entire spectrum of both cost containment and patient health enhancement. These local and regional demonstrations of excellence have not generally led to widespread systemic change. Quality improvement efforts have just begun in most healthcare institutions, but already these efforts are recognized by healthcare researchers to cross over and intersect with most of the other approaches. Experts both in the management of organizations and in the management of hospital administration have recognized the "competitive" failures in American healthcare and indicated the directions for solutions. Corporate stance regarding cost containment in general, and healthcare costs in particular, is only now providing the "leverage" to resist and support improved quality. This action was taken in order to justify the hospital administrators' claim that cost containment can nearly universally occur concurrently with other measures to make actual care better. The "new quality movement" has just begun; it will go through birth pangs as have other movements in response to such drivers as cuts in public or private funding, increases in the cost of healthcare, a new era of competition in the business world, new demands of the public, or the challenge of low-cost imports. These bright, budding quality improvement programs each hold promise toward each other and with other movements. Those who are knowledgeable in this area are cautioned to "grab a spot on the lifeboat now" when "life-threatening waves" approach. Economic analysis must be applied to help guide the application of appropriate radical changes and must be thoroughly involved in guiding the resulting quality enhancement changes. The challenges to students of quality are enormous. Public calls for an inquiry into the management of healthcare quality have increased over the last 15 years in relation to the demands of the public and the capabilities of technology.

### **1.1. Definition and Importance**

What is quality improvement and how does it differ from other approaches to improving healthcare? Most discussions of quality improvement contrast it with research and with administrative activities such as regulation and payment. Quality improvement is often affirmed as a legitimate and important element of healthcare's improvement system. This paper examines the similarities and contrasts of quality improvement with several other approaches to improvement that have been and are being used in healthcare. These include, among others, research, administration, financial incentives, and report cards. Unlike some earlier discussions, this one focuses on the interactions and roles of interaction.

Quality improvement is a systematic approach for reducing variability and for implementing changes that lead to better patient outcomes. Variability in general and particularly unwarranted variability in processes and outcomes of care are prime objects for understanding and elimination by the method of quality improvement. But decreases in variability or increases in general in clinical performance may be achieved by research or by changes in financial incentives as well as through quality improvement. All three methods have roles to play, but they are not the same roles. Their particular strengths and weaknesses advise separate, but interacting, deployment.

## 2. Overview of Other Approaches to Improving Healthcare

A wide variety of methods and approaches may be employed in the attempt to improve the care of individuals and populations. To provide the reader with a context for understanding these methods and their interactions, and to create a base of knowledge for understanding the remainder of the monograph, a broad overview is useful. A common element in many of these approaches is the use of many different types of information to identify systems changes and to stimulate the changes needed to bring about improvement. Today, more than almost any time in the past, a variety of methods are available and are at work in healthcare. They include the way healthcare is structured, the way reimbursement rules are used, the way measurement affects what people do, the way studies are designed, and finally, the ways people are managed and do their jobs.

Practice guidelines are statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options. Practice guidelines are developed to optimize the health care of people with specific conditions. Wellness approaches are directed at the case-adjusted, population health need, and programmatic actions that focus on the ways in which health care consumers—namely, patients and their families—can become both healthier and better able to maximize the benefit from the care that is provided to them. Concerns with wellness are illustrated by the many efforts to teach both providers and consumers about the effective prevention strategies that are necessary to address common clinical problems, especially those that are common, dangerous, and costly, but often preventable.

### 2.1. Patient Safety Initiatives

There are multiple reasons why projects that aim to achieve benefits from the application of the methods of improvement science, directed at improvements in the quality of care that patients receive, might have patient safety as a major or minor objective. This is especially true in healthcare where, due to the factual nature of the provision of care, the differences between projects frequently become blurred. For example:

Patient safety is explicitly seen as a primary characteristic of healthcare quality, where serious adverse effects upon patients could include unnecessary pain, clinical complications, mental anguish, financial or social inconvenience, and the experience of care not meeting the needs or expectations of patients and their significant others. In its extreme form, this is seen as causing actual harm, including physical or mental impairment beyond the normal norms of clinical care, and permanent or temporary impairment leading to a change in the patient's medical condition and physical or subjective symptoms, disease, and the potential for illness.

### 2.2. Evidence-Based Practice

Both evidence-based practitioners and QI experts perform systematic literature reviews, although for different reasons. The evidence-based practitioner seeks to determine the best approach to diagnosis, investigations, or management of a health condition, using a systematic search to find all available evidence and then using explicit coded criteria independently applied by at least two researchers to assess the quality of that evidence—that is, the study's internal validity, importance of its findings, and the external validity of the findings. It is based on empirical reasoning, and it is often organized at a national or, in some instances, international level, due to the need for large scale in order to deliver credible studies. However, like all QI, its results must be interpreted and modified according to context and the reactions of the community expected to implement findings. It must also consider the perceptions of communities and other local evidence, such as patients' perceived and expressed needs, clinical experience, and so on.

## 3. Intersections and Synergies between Quality Improvement and Other Approaches

Quality improvement in healthcare shares many elements with intervention research, implementation science, and other areas closely related to healthcare practice and management. In some respects, these intersections represent duplication of effort. In others, though, the similarities offer opportunities for harmonizing what are now somewhat disparate disciplines and for synergies that could greatly accelerate the production of useful knowledge and its more

general uptake. This paper considers in slightly more detail some of the more important intersections and areas where such synergies could occur.

Quality improvement in healthcare is aimed at transcending the rhetoric of high-quality and patient-centered healthcare, going beyond the usual barriers to change, and ensuring that they are globally applied, that their effects are tracked in a continuous and adaptive fashion, and that any actions or insights appear adaptational. Quality improvement seeks to deploy evidence-based practices in such a way that every patient can rely on the fact that their care meets recognized standards and is relevant to their disease and to their personal and cultural goals and preferences.

### **3.1. Shared Goals and Objectives**

I have previously reviewed quality improvement and its relationship with current health care management and human resource theories and practices, as well as with clinical problem-solving approaches to meeting hyperacute, acute, sub-acute, chronic, and terminal patient and family needs relative to optimal health outcomes for those patients. I have introduced management improvement, physician work redesign, and team training programs, and observed them in action relative to clinical problem-solving at the clinical micro-level of care in an effort to move beyond quality improvement. My goals in sharing these experiences are to tabulate both the support and the conflict, and generalize intersections and interactions across improvement approaches relative to an effort to raise observations and questions about such a micro-level aspect of valid inferences from quality improvement research comparing formal systems known to exist at one improved micro-level with a control group of systems that are less well known.

I have examined both the potentially subordinated business and clinical objectives of management improvement designs to determine whether the outcomes have a chance to converge. I have also tried the reverse by initiating the quality improvement project to investigate whether the interests of the two design levels can remain in parallel. Any mechanism that can be established to encourage, support, and further explore these directions is likely to lead to successful strategies for the transfer of quality improvement from research to practice at the joint business and clinical levels of a modified micro-system.

### **3.2. Collaborative Strategies**

The third category of integrative strategies applies the principles of collaboration and cooperation. Strategies in this category transform the way care is delivered by redefining or enhancing the interactions between the many different components of the health care system. With better management practice external to the practice providing health care to the patients, expert management is viewed as an additional resource available to help manage processes of care. Both stress the importance of learning from or benchmarking successful healthcare organizations. With the collaborative strategies, on the other hand, the emphasis is on transforming the organization of the health care system to facilitate collaborative practice among all the providers who manage the care of individual patients. RN can be classified in the first category, ER more in the second, and chronic care management programs can be classified primarily in this third category.

Health Information Technology (HIT) as an Enabler of Collaboration asserts that health information technology (HIT) acts primarily as an enabler of amalgamation by collecting and sharing data needed to track the longitudinal care processes associated with the care of specific groups of patients with particular chronic conditions. However, prior research has indicated that electronic enhancements are most useful when they are an integrated component of team-based face-to-face care, rather than as a replacement for the personal relationships among participants in that team's local community of practice. Research has also indicated that technology designed primarily for other functions was not as useful in interdisciplinary long-term complex care projects. HIT's clinical support tools can be used in the context of marshaling interdisciplinary expert support by helping clinicians find and make effective use of external experts.

#### 4. Challenges and Limitations in Integrating Quality Improvement with Other Approaches

Challenges in implementing quality improvement in practice include the time and complexity of the required process, competition with a perception of the more pressing demands of the day-to-day care process, and concerns about harm. A range of factors also limit the extent of tools at any one time. These challenge proponents who argue for using a hierarchy of tools and recognize that even good tools may not be implemented widely. Yet the depth of commitment and profound nature of the change that is required to implement quality improvement across the whole care system may not be widely put into practice. This may reflect the time required for effective implementation, including money and the time and complexity of training professionals to use it with the skills of the facilitators, who are typically experts in quality improvement exercises, and the full participation of the care team. There may appear to be more pressing demands in health care in addition to those described above, including personal and clinical targets. Finally, a complete implementation of quality improvement often expands the focus of the goals of the health care team beyond doing the task at hand, helping practice teams achieve quality outcomes for both their chronic and preventive care as requested, and is designed to draw attention to new and other preventable problems that may arise over time in any patients seen on a particular day. Participants work in multidisciplinary teams consisting of clinical and support staff who are trained using cycles, project extension skills, time management, reflective learning techniques, group decision-making, and team organization strategies. The system is designed to support the autonomous, informed actions of prepared teams.

##### 4.1. Resource Allocation Issues

An explicit problem of resource poverty is not widely recognized in quality circles, and its consideration spoils the party atmosphere in the view of some observers. Quality, it is believed, does not (or should not) cost money—not at least in the aggregate. Excellent quality—often associated with the best outcomes—might even save money. Resources, it is assumed erroneously, are unlimited. Many of the non-financial resources that are required, however, for successful efforts at continuous improvement in quality are unquestionably scarce—especially skills and people. This belief in the limitless availability of essential complementary inputs seems singularly at odds with the conventional resource management perspective that needs to ration goods and services and/or the distribution of cash to pay for them when the supply is exhausted. Resource constraint is of particular concern in the context of interim goals. At the aggregate level associated with the tasks of healthcare managers, financing authorities, and policy participants, the active demand for quality of care makes for a situation in which there are other important and often urgent activities—all of which need protection from claims upon the same pool of resources. Frittering quality improvement resources on unimportant things or underutilizing the resources would be just wasteful and inefficient; therefore, it would be incompetent. Prioritizing opportunities for improvement would inevitably become a principal task of quality improvement planning. Thus, if the beliefs of almost every quality theorist are to go to the expense and effort of defining and measuring quality in order to be able to assess and monitor it, they must be at all justified to exploit that virtue. Healthcare managers have to be prepared to prioritize.

##### 4.2. Resistance to Change

Quality improvement often necessitates system change. Systems theory has shown that system change is resisted by some individuals or parts of a system. Change can generate anomalies, uncertainty, and potential power shifts, which can lead to phenomena such as blame and sacrifice. Resistance to change is defined as the overt or covert individual or collective struggle to maintain current conditions or the status quo. While some prevalence studies in general settings like academic management and hospitals report significant resistance to change, the health services literature rarely recognizes this phenomenon. Discussions of barriers to research utilization or knowledge transfer may be seen as part of this less well-recognized area. There is growing recognition that barriers need to be overcome.

There are five categories of general barriers to quality improvement: motivational, structural, external, operational, and institutional. Within healthcare, specific factors have been pointed to as sources of resistance to change in quality improvement programs: incompatible goals, limited resources, administrative resistance, lack of professional autonomy, lack of clinical relevance, resistance to standardization, tendency to individuality, technical uncertainty, misuse of information, differing organizational paradigms, organizational memory, professional jealousies and turf issues, and fear. There then appears to be a minor underlying recognition of this concept of resistance to change within healthcare. (Jones et al., 2021)(Tomson et al.2021)(Flechsigs et al.2022)(Adhikari et al., 2020)(Basu et al.2022)(Kouhizadeh et al.2021)

## 5. Conclusion and Future Directions

This chapter has sought to identify and describe ways in which various forms of healthcare quality improvement (QI) interact with other approaches. It proposes that the concept of liberative tensions is a useful way of understanding and managing such interactions. After providing definitions of other approaches and their rationales, it describes tensions arising from interactions with micro and meso QI before outlining research considerations. A central question it addresses is whether QI is in tension with attempts to promote the interests and values of healthcare stakeholders. Clearly, addressing this is important if future efforts to improve healthcare value are to be successful.

The issues discussed in this chapter have profound implications for the nature of, and the processes involved in, healthcare policy change. Although the chapter concludes by suggesting several future research directions, including continuing exploration of the concept of liberative tensions, these implications are not fully addressed. Fundamental challenges involving blurred boundaries, value clashing, contested frames, and power distribution in healthcare systems will continue to resist easy solutions. Their consideration is important because the dominant frame guiding both the settings and processes involved in healthcare reform will continue to be costs and benefits.

## References:

- Jones, M. D., Hutcheson, S., & Camba, J. D. (2021). Past, present, and future barriers to digital transformation in manufacturing: A review. *Journal of Manufacturing Systems*. [researchgate.net](https://www.researchgate.net)
- Tomson, M., Kumar, P., Barwise, Y., Perez, P., Forehead, H., French, K., ... & Watts, J. F. (2021). Green infrastructure for air quality improvement in street canyons. *Environment international*, 146, 106288. [sciencedirect.com](https://www.sciencedirect.com)
- Flechsigs, C., Anslinger, F., & Lasch, R. (2022). Robotic Process Automation in purchasing and supply management: A multiple case study on potentials, barriers, and implementation. *Journal of Purchasing and Supply Management*, 28(1), 100718. [sciencedirect.com](https://www.sciencedirect.com)
- Adhikari, M., Ghimire, L. P., Kim, Y., Aryal, P., & Khadka, S. B. (2020). Identification and analysis of barriers against electric vehicle use. *Sustainability*. [mdpi.com](https://www.mdpi.com)
- Basu, N. B., Van Meter, K. J., Byrnes, D. K., Van Cappellen, P., Brouwer, R., Jacobsen, B. H., ... & Olsen, S. B. (2022). Managing nitrogen legacies to accelerate water quality improvement. *Nature Geoscience*, 15(2), 97-105. [vu.nl](https://www.vu.nl)
- Kouhizadeh, M., Saberi, S., & Sarkis, J. (2021). Blockchain technology and the sustainable supply chain: Theoretically exploring adoption barriers. *International journal of production economics*, 231, 107831. [e-tarjome.com](https://www.e-tarjome.com)