

**QUALITY IMPROVEMENT IN PRIMARY CARE PRACTICE:
THEORY AND PRACTICE**

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There is clearly a large quality gap between what we know and what we do, both in our hospitals and in our offices.^{1 2} The indicated course for our offices, however, remains mysterious. The most recent study concludes, “Strategies to reduce these apparent deficits are needed.”³

Indeed they are. When our primary care practice five years ago decided to pursue an explicit agenda for quality improvement (QI – used here to indicate any efforts to improve quality rather than any specific method), we found no articles in the literature offering a roadmap, nor have any appeared since. If only we could treat a practice similarly to the way we treat a patient – take a history, do a physical examination, order tests, make a diagnosis, and proceed with well-established plans for prevention and treatment! But quality science has not yet provided office practices with the equivalent of even routine vital signs⁴, let alone a diagnostic outline, an overall index of practice quality,⁵ or established modes of action.

As our practice faced the issue, therefore, we asked our own questions and arrived at our own strategy. There probably cannot be a single roadmap for all practices, because practices differ widely in abilities, needs, visions, patient populations, and organizational structures.⁶ But all practices seeking QI will need to ask the same questions we did: “What should we aim at?”; “What modes of action can we adopt?”; and “What are our constraints?” They will then have to craft an agenda that suits their particular practice.

We have found some answers: three quality sectors to aim at, two distinct modes of action to employ, and three basic constraints to accommodate. We were then able to construct a strategy that met our needs, and that has enabled us to improve our quality continuously ever since. Although we have no pretensions to being a “model practice,” we have without question improved out quality through our QI efforts. We offer here our thoughts and experience as a useful step in answering the proffered question, “What practical QI strategies can a primary care practice adopt?”

OBJECTIVES, MODES OF INTERVENTION, AND CONSTRAINTS

Pay for Performance

Pay For Performance (P4P) is the most conspicuous current embodiment of QI.⁷ A practice will be tempted to target the P4P goals and call that effort their entire QI program.

P4P originates from health care payors, administrators, and researchers seeking to distinguish degrees of quality among plans and practices, and to stimulate QI efforts. Quality has always been difficult to conceptualize and measure even on a research basis, and objective measurements of practice quality have never been routinely available. To finesse this difficulty, P4P cleverly seeks to infer quality by using claims submissions to match diagnoses and reimbursable procedures. For example, P4P matches the age of a patient with total immunizations billed for, or an emergency department visit coded as asthma (implying chronic asthma out of control) with a pharmacy claim for inhaled corticosteroids.

The efficacy of P4P, however, is unsubstantiated. It is true that the elements of care P4P measures are themselves significant. But “P4P programs are being implemented in a near-scientific vacuum. There is scant evidence about the appropriate focus, effectiveness, and the general circumstances in which they may work best.”⁸ Measurement by claims data is itself questionable, since their correlation to chart data is only fair,^{9 10} and needs rechecking by the clinical office.¹¹ The elements measurable by claims data comprise only a small sample of what a practice does.¹² The results of this small sample probably do not indicate the general state of quality for a practice.¹³ A singular concentration on improving P4P scores (“teaching to the test”) might “crowd out” more important pursuits.^{14 15 16} In sum, because many of the P4P measurable elements are important, and because scoring well might yield a financial bonus, it would not be

bad for a practice to aim at P4P elements. But because of the drawbacks, P4P is too thin a reed upon which to build a practice's entire QI program.

Three Sectors of Quality

In contrast to P4P, the basic definitions of medical quality provide a wide array of objectives for QI. The most obvious definition is biomedical: *The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.*¹⁷ A second definition addresses the manner in which care is provided: *timeliness, patient-centeredness, safety, effectiveness, efficiency, and equitableness.*¹⁸
¹⁹ These qualities would apply both to (a) how clinicians function (tending to labs and X-rays promptly, involving patients in decisions, etc.) and (b) how the office as a whole functions (waiting times, respect from staff, etc.)

A wider third definition encompasses the caring and community roles of medicine: *How well a practice helps its patients and the community.* Caring for the patient includes counseling, befriending, understanding, and empathizing. It also includes the spiritual depth clinicians experience and then bring to their patients.²⁰ Community-oriented activities range from sitting on community boards to assisting in community development.^{21 22}

Accordingly, just as the practice of medicine is neither narrow nor simple, QI objectives need to be wide and varied. While a practice may excel in one area, its overall functionality could well be compromised by shortcomings in another.

Two Modes of Intervention

Many QI interventions have been suggested.^{23 24} They can be divided into two basic modes. *Professional Enhancement (PE)* aims to improve the knowledge, skill, and motivation of the

clinician. *Systematic Reengineering* (SR) aims to improve the operating mechanism of the practice within which the clinician performs.

Clinicians tend to think in terms of PE.^{25 26} Examples are pursuing continuing medical education, recertifying,²⁷ assessing clinical performance,²⁸ seeking to be reflective,²⁹ seeking the hidden meaning behind patient visits,³⁰ and continually trying to detect disease early from small clues. Clinicians remember when a stray piece of medical knowledge led to a clever diagnosis, or when even in the midst of a busy schedule they were patient and made an important diagnosis.³¹ They recall the meaning they bring to some patients' lives, and vice-versa. These are the traditional core characteristics of the high quality clinician.

Health services researchers and administrators, by contrast, tend to think in terms of SR. SR comes from the context of QI in industry, where establishing regular procedures decreases variability, with the mantra "do-it-once-do-it-right."³² The SR approach finds recurrent stereotypic situations within medicine's endless complexity that can be choreographed for standard execution with low variation, and hence higher quality. SR then introduces changes in how the system operates by introducing such elements as care plans, flow sheets, forms, and reminders. The goal is to imbed the clinical team in a system that makes it easy, rather than a constant challenge, to do the right thing at the right time. For systems engineers, the clinician is sometimes thought of as a standard commodity. "Ranking (of personnel) is a farce. Apparent performance is mostly attributable to the *system* that the individual works in, not to the individual himself."³³

A practice should recognize and use both approaches. Some say that SR is inevitably superior,³⁴ but the stereotypic situations that SR attacks are by their very nature more easily measured than the qualities PE aims at -- human relations, complex diagnoses, unique situations, and judgments as members of adaptive organizations.³⁵ Sometimes SR will be appropriate -- narcotics control is better handled by a computerized check-in, check-out system than by education on the harms of

addiction. But other objectives require PE --- empathy is better improved by education and reinforcement than by signs on the wall saying “We Care.” Both matter: the quality of the clinician, and the system in which he or she operates.

Three Constraints, and Possible Solutions

If there were not severe constraints on primary care QI, such programs would be popping up everywhere, but even academic faculty practices are “in an infancy stage” of QI.³⁶ The constraints can be summed up as: cost and effort; organization; and measurement.

Cost and Effort

Organizations run two kinds of costs. *Routine costs* are the expected costs of maintaining effort, which in QI would include fulfilling CME requirements, attending hospital meetings to maintain privileges, or reviewing employee performance. *Investment costs* involve more substantial efforts to upgrade and improve services. An example would be setting up a new system actually to deliver to patients the 162 separate points of advice that the American Academy of Pediatrics recommends that a pediatrician impart over the course of pediatric care.³⁷ Although idealism dictates investing for better care, realism demands a way to recoup the costs of a substantial investment by enhanced revenue, particularly in primary care where time and capital is so scarce.^{38 39 40}

Recouping QI investment costs is particularly difficult because of the well-known difference between innovation in medical care and other fields.⁴¹ Higher quality care is often invisible to patients and others, payment is usually set by insurance and thus fixed, and attracting additional patients or visits is of little aid to clinicians already in scarce supply and as busy as they can be. Thus, investing in QI is often likely to reward patients with improved care, but to penalize practices with unrecoverable investment costs.

Assuming a fee-for-service environment, three strategies for solution suggest themselves: (1) adopt changes that are low-cost, thus not requiring additional reimbursement; (2) discover changes that are billable or that achieve bonuses and thus support themselves; and (3) find innovations that produce a joint product – for instance, a change that simultaneously improves quality and efficiency, thus enabling a practice to improve revenues indirectly. Examples are suggested in the practical agenda below.

Another possible solution (4) would be to convince either patients themselves or insurance companies to pay higher rates for better quality. The concierge care movement might succeed for more affluent patients at the expense of the equitability criterion. This is probably the only way that longer visits, which some think is the surest way to better quality, can be supported. Unfortunately, reports of insurance companies honoring higher quality with improved payments (except P4P) are infrequent.

Organization

A sustained QI effort requires organizational coherence and leadership to analyze, plan, coordinate and communicate. Yet most small groups (groups of six or fewer deliver 2/3 of primary care in the United States) are not tightly organized,⁴² and few clinicians are trained in management and quality science. Most practices will yield to the traditional debilitating conceit of practitioners that only patient care should be compensated, and that administration is nothing but “pushing paper.” Some idealistic clinicians will enroll themselves as a “champion” of a QI project once, or perhaps twice, but without appropriate recognition, the champion’s QI leadership will inevitably recede.

By the same token, QI in office operations may require a sophisticated practice manager to envision and introduce programs, collect and analyze data, and manage personnel with changing

roles. But such managers are scarce, and hospitals, specialists, and multispecialty practices are more financially able than primary care practices to obtain their services.

The solution to this problem may be radical – the practice may need to make a leap of faith to invest in itself to become better organized. Making this investment for the purpose of QI might seem unprofitable, but improved organization may yield byproducts that repay the investment. Better-run practices can make clinicians more productive, or enable them to employ profitable mid-level clinicians, or to expand to additional offices and extended hours, or to negotiate more successfully with insurance companies. Better-run practices may improve their own internal morale, and attract more talented graduating physicians and staff. Thus, investing in organization to effect QI may yield other positive results.

Measurement

Measurement ensures validity of accomplishment and motivates personnel,⁴³ but many quality characteristics are essentially immeasurable, and utilizing research methods of quality evaluation such as extensive chart review could be so burdensome as to jeopardize the larger QI enterprise.

The key to solving this problem is not demanding more than the evidence will give. The objectives need to be chosen according to how important they are and not how measurable. “Not everything that counts can be counted, and not everything that can be counted counts.”⁴⁴ Some objectives (e.g., compassion) are not easily susceptible of measurement. Some are *prima facie* appreciated (e.g., preprinted prescriptions for improving safety.) Others are obvious (e.g., a newly-empty waiting room subsequent to improved office check-in procedures.) Yet others can be measured with effort (e.g., immunization completeness.) The practice must realize that the end is improvement rather than elegant measurement, so if measurement is possible, good, but if too difficult, clever approximations are acceptable.

SETTING THE PRACTICAL QI AGENDA

A practical agenda can be addressed once a menu of possible objectives is generated (e.g., Figure One.) Practice management and leadership capabilities will condition feasibility. Initial QI meetings with clinicians and staff can yield a valuable if impressionistic assessment of strengths and weaknesses, and simultaneously accrue both direction and support. Such collaboration can forward an important latent goal: producing a “*Culture of Quality*” in the practice, so that both clinicians and staff hold the value of quality constantly and prominently in mind. This *Culture of Quality* might itself be an important conditioner of progress and success.

The choice of objectives needs to be strategic. Early successes would be encouraging. PE solutions can be enjoyable rather than a necessary burden, and SR solutions make clinicians work easier if they are built-in rather than added-on. What follows here is one version of an initial agenda:

(1) *Easier to accomplish objectives.* In a group the best learning may come from one another, so providing opportunities to share their ongoing PE activities (CME, hospital committee memberships) will magnify individual efforts. Practice meetings to present cases, discuss conferences attended, and hear specialist presentations are enjoyable and low-cost. Mutual chart review sessions, where a small group of clinicians review each other’s charts, reinforce good documentation and high-quality workups, and encourage routine collaboration on cases. An in-practice listserv can provide another route for in-practice clinical. Although difficult to measure and variable in effectiveness,^{45 46} these steps promote learning and a Culture of Quality.

SR interventions can also be easy. Preprinted prescription forms with 50 medicines with doses listed promote safety and good documentation.

(2) *Directly remunerated objectives.* P4P objectives can be listed and discussed at practice meetings (PE). Billing programs can match age and immunization status, or diabetes diagnosis to latest visit (SR). Both P4P rewards and additional visits yield payments. (Planning needs to match P4P payments to cost of effort, since the latter might exceed the former.)⁴⁷

(3) *More profound reengineering projects.* Important SR efforts are producing templates (e.g., Figure 2) and handouts for stereotypic visits. Templates and handouts replace the oral-aural method with writing (and oral-aural reinforcement.) Implementing these new programs demand skill, time, and effort, but they reduce variability and thus improve quality. Increased efficiency is an important joint product. Well checkups are stereotypic visits, and thus perfect objectives for these interventions. Simple sick encounters such as wheezing and rhinitis are also excellent candidates. Because of their visibility to patients, these interventions make a positive market impact. Informal polling and chart review are sufficient to measure the effects of these innovations.

(4) *Office services objectives.* While clinicians pursue their objectives, office staff can pursue patient service objectives. Office timeliness can be improved by measuring “Total Visit Time,” defined as time from arrival to departure. Simple measurement and feedback to office managers can lead to roadblock identification, training and supervision. Telephone effectiveness can be measured by stooge calls, and improved by subsequent feedback and manager supervision.

(5) *Humanitarian and community services objectives.* Accepting Medicaid patients and hiring ethnically diverse staff contributes strongly to equity. Compassion can be improved by group meetings and informal leadership (PE), and by practice policies such as requiring patient counseling by an office manager before dismissal for disruptive behavior (SR).

The Electronic Health Record (EHR)

Few readers will fail to reflect on the applicability of EHR's to these QI projects – for chart review, reminders of practice guidelines, use of templates, etc.⁴⁸ Since no one doubts that EHR's will soon be ubiquitous, it is tempting to assume that the road to QI lies through EHR's. Should adoption of an EHR then be the first step to QI?

We think not. Introducing EHR's is currently expensive and risky, offers little financial upside, and thus violates the primary rule of investment, that it should pay for itself.^{49 50 51} Many wonder why “the doctor should be asked to invest in medical record systems when primary systemic beneficiaries are elsewhere?”⁵² It is doubtful that one marginal business case (EHR) will facilitate another marginal business case (QI).

Especially at this early stage of EHR development, their contribution to quality remains in question.^{53 54} Many electronic QI functions can be provided by a standard computerized billing system. Most QI steps will be translatable to EHR's when they appear, and indeed having them in a paper-based practice first will facilitate their later use with an EHR. QI therefore can be pursued prior to the large enterprise of introducing an EHR to a practice. Above all, EHR's should not be viewed as a substitute for QI.

IS QI POSSIBLE IN PRIMARY CARE?

Idealism will probably always be the strongest motivator for QI in primary care. The question is, can QI be reasonably introduced under ordinary business conditions? Upon close examination, it seems apparent that with modest expansions of administrative and leadership capacities, QI can be sustained as a practical and responsible enterprise in a primary care practice.

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