

QUALITY REVIEW: PART II

The Quality Journey

Daniel G. Tobin, MD, FACP

Dr. Tobin is president of the SGIM New England Region and assistant professor of medicine at Yale University School of Medicine.

Many define quality in medicine as practicing to the fullest extent of current professional knowledge, which is best exemplified by familiarity with randomized controlled trials (RCTs). Yet the RCT as a gold standard is a very recent phenomenon, and facility with available RCTs is a poor marker of quality.

The first RCT was published in 1948 by the *British Medical Journal*—a landmark study titled “Streptomycin Treatment of Pulmonary Tuberculosis.”¹ By 1966, approximately 100 RCTs were published each year.² The physician of 1960 could truly have read every RCT ever published!

Fast-forward to 1995, when more than 10,000 randomized controlled trials were published annually;² as of March 2012, the Cochrane Library lists more than 670,000 such publications in its Registry of Controlled Trials.³ The most brilliant contemporary physician cannot hope to master such a daunting database. Does this imply that we are destined to provide deficient care?

Clearly, there is more to medical quality than simple knowledge of the facts. The American College of Medical Quality defines medical quality as “the degree to which health care systems, services, and supplies for individuals and populations increase the likelihood for positive health outcomes and are consistent with current professional knowledge.” The focus on processes and systems is critical to quality improvement (QI) and suggests that QI is best conceived of and taught as a verb (i.e. a process) instead of a noun.

The Accreditation Council for Graduate Medical Education (ACGME) has attempted to integrate QI into postgraduate medical education through its Practice-Based Learning and Improvement (PBLI) and Systems-Based Practice (SBP) core competencies—both of which are quality improvement concepts. Although such concepts can be taught through didactic (e.g. lectures, journal clubs) and applied (e.g. morning report, morbidity and mortality conferences) methods, the resident-driven QI project remains the cornerstone of experiential QI teaching. Many permutations of QI projects have been used successfully, but effective projects all share a fundamental philosophy—system analysis and improvement.

Paul Batalden, MD, famously noted that “every system is perfectly designed to achieve exactly the results it gets”—the so-called first law of health care improvement. By extension, if the outcomes achieved are not the outcomes desired, the failure likely rests with the process. Yet many trainees have little understanding of the processes at play in their clinical microsystem. Rather than troubleshoot every inefficiency, trainees with busy schedules and infrequent episodes in the outpatient clinic develop expertise in the art of the workaround. A workaround is best conceived as the active neglect of latent errors that subsequently fester in a system buried under layers of management and undetected or ignored technology failure.

The problem with workarounds is that they only work until they don't. Failed workarounds are in-

evitable and result in medical errors; this is the point where the blame game gets played. Errors are part of the human condition, but system analysis can minimize the risk of preventable adverse events. Step 1 then is a philosophical shift from a culture of blame to a culture of safety that emphasizes system review and improvement over quick fixes and pointed fingers. Step 2 is developing an awareness of the resources and processes currently in place with all of their strengths and flaws.

A comprehensive system survey is essential when conducting a QI project, but the project itself is best conducted as a focused, easily measurable rapid cycle of change. After picking an objective and conducting a system survey, data must be gathered (i.e. patient surveys, chart audits), synthesized, and analyzed. Only once this has been done can a quality improvement intervention really begin.

The Plan-Do-Study-Act model (PDSA cycle, a.k.a. the Deming Wheel or Shewhart Cycle) provides an excellent framework for the next phase. Planning encompasses defining objectives and developing a practice improvement strategy. “Do” is when the plan is implemented and data are collected on its impact. During the “study” phase, the team compares actual results against expectations and analyzes where they differ. “Act” refers to correcting the process to better achieve the objectives the next time around. At this point, the cycle starts again.

Like the horizon, medical quality is something we journey toward but
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can never truly reach. Systems can always improve, understanding will always mature, and humans will always be imperfect creatures. Providing “quality care” is not really a definable aim; embracing mistakes as opportunities for change, committing to a culture of safety, and having the courage to journey to-

ward improvement is the true goal. As Jean Giraudoux wisely pointed out, “Only the mediocre are always at their best.”

References

1. Streptomycin treatment of pulmonary tuberculosis. *BMJ* 1948; 2(4582):769-82.
2. Chassin MR. Is health care ready for six sigma quality? *Milbank Quarterly* 1998; 76(4):565-91.
3. Cochrane Library Website. Available at www.thecochrane-library.com. Accessed March 14, 2012.

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