

Can We Finally Conquer the Problem of Medical Quality?

The Systems-based Opportunities of Data Registries and Medical Teamwork

There Is a Critical Relationship between Large-scale Clinical Data Registries, Analysis of Clinical Practice Variation, and Outcomes Improvement

The phenomenon of large differences in treatment, cost, and outcomes in contemporary medical practice is well-known to the general public, business, and medical communities, and is generally associated in some indistinct fashion with medical quality.^{*1-2} However, to relate these differences more precisely to the concept of medical quality, it is important to reach a consensus on what medical quality actually is, or should be. The concept of “quality” originated in industry with efforts to decrease variation in manufactured products, principally initiated by Walter Shewhart’s concept of statistical process control.³ Similar efforts to decrease variation in medical practice outcomes are likewise critical to the concept of medical quality, but have been hampered by (1) a lack of understanding of the fundamental link between outcomes variation and medical quality improvement, (2) physicians practicing with an individualistic, artisan-like approach in a fragmented medical practice environment, and (3) individual physicians and individual institutions relying on their own practice outcomes data for quality improvement.⁴⁻⁶ The Society of Thoracic Surgeons National Database, the



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American College of Surgeons’ National Surgical Quality Improvement Program (NSQIP), and the American Society of Anesthesiologists Anesthesia Quality Institute’s National Anesthesia Clinical Outcomes Registry (NACOR) exemplify the efforts of organized medicine to approach quality improvement through the use of large-scale data registries, and recent editorials in this journal have highlighted the importance of using clinical data registries, including analysis of clinical care variation, for the purpose of improving clinical outcomes.^{7,8}

We Are Increasingly All on the Same Team

As healthcare systems consider opportunities for cost containment and quality improvement, the

lowest-hanging fruit is often related to the delivery of surgical services, principally through decreasing surgical length of stay, incidence and severity of perioperative complications, and rate of readmission. However, meaningful performance improvement in these areas is dependent upon surgical *team* practice and an institutional *systems* approach, rather than on autonomous physician practice.⁹⁻¹¹ Accomplished soloists must transition into members of a well-orchestrated symphony. Although systems-based team practice has been the norm for many years in a few institutions, such as the Mayo Clinic and the Cleveland Clinic, the current, rapid evolution of U.S. surgical practice into physician teams practicing in integrated healthcare delivery systems is driven by three factors: the growing preference of young physicians to work as employees of large medical group practices or healthcare systems, the coalescence of individual healthcare institutions into large, integrated healthcare systems, and the emphasis of

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* Carey J: Medical guesswork: From heart surgery to prostate care, the health industry knows little about which common treatments work. May 29, 2006. http://www.businessweek.com/print/magazine/content/06_22/b3986001.htm?chan=gl. Accessed March 10, 2012.

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This editorial is part of an editorial series on the emerging role of data registries in advancing clinically integrated medical practice.

the Patient Protection and Affordable Care Act on accountable care organizations and bundled care payments in preference to traditional fee-for-service care.^{†12,13} Ideally, surgical outcomes registries should reflect these changes in the delivery of surgical services by placing emphasis upon the outcomes of surgical teams practicing in integrated healthcare systems, rather than on the results of individual physicians or individual medical specialties. A national health information network, combining clinical and administrative data, may facilitate more comprehensive quality analysis.¹⁴ The Michigan Surgical Quality Collaborative and its patient outcomes registry is an example of physicians, hospitals, and a commercial health insurance payer working successfully together to improve surgical care.¹⁵ In addition, the concept of the surgical home promoted by the American Society of Anesthesiologists provides an ideal template for the role of anesthesiologists in the future of surgical and procedural services delivery.¹⁶

How Do We Unlock Additional Value in Anesthesia Services?

As early as 2005, the American Society of Anesthesiologists' Task Force on Future Paradigms of Anesthesia Practice recognized the rapid evolution of surgical care, urging our specialty to acknowledge and adapt to these changes and avoid the inevitable consequences of becoming trapped in a professional *status quo*.¹⁷ ANESTHESIOLOGY has selected four peer-reviewed editorials to highlight opportunities and threats to our specialty as we deliberate a transition from a predominant emphasis upon operating room anesthesia care to a more expansive approach in assuming leadership and management of invasive procedural services delivery in integrated healthcare delivery systems—the surgical home concept. These editorials provide compelling impetus for anesthesiology's leaders in clinical practice, education, and research to drive the transition of our specialty into the future of surgical and invasive procedural care delivery.

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† The Patient Protection and Affordable Care Act of 2010. <http://democrats.senate.gov/pdfs/reform/patient-protection-affordable-care-act-as-passed.pdf>. Accessed May 10, 2012.

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