

# Enhanced Recovery After Surgery: Is It Time to Drive Patient-Reported Outcomes Through Robust Measurement?

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The Institute of Medicine defines 6 domains of health care quality, 3 of which being safety, effectiveness, and patient-centered care.<sup>1</sup> As part of the National Quality Strategy, the overarching aim is to provide better, more affordable care for the individual and the community.<sup>2</sup> This can be accomplished through the development and assessment of measures that matter, including those that are important and meaningful to the patients themselves. These measures can drive both the national aims as well as the local quality improvement. As the National Quality Forum defines, a patient-reported outcome (PRO) is any report on the status of a patient's health condition that comes directly from the patient, without interpretations of the patient's response by the clinician or anyone else.<sup>3</sup> PROs are increasingly being used to evaluate and improve patient care and experience.

Enhanced recovery protocols (ERPs) are evidence-based pathways that have been created to improve the care, outcomes, and efficiency for patients in the perioperative setting.<sup>4</sup> Such protocols have been associated with reduced complications and improved efficiency as well as are touted to be patient centered with improvements in recovery of function earlier than traditional approaches to surgery. In this issue of the *Anesthesia & Analgesia*, a group of thought leaders and content experts in ERP have developed a consensus statement on the application of PROs to ERP, which should facilitate improvement in instituting change in surgical care.<sup>5</sup>

Change is difficult in medicine, but a key to driving change may be measurement. The American College of Surgeons National Surgical Quality Improvement Program

uses a proven and validated approach to benchmark perioperative care, including process measures, risk-adjusted outcomes, and most recently, PROs.<sup>6</sup> With institution of the National Surgical Quality Improvement Program quality improvement and measurement program, there have been dramatic improvements in care and outcomes over time.<sup>7</sup> While measuring risk-adjusted outcomes has been performed for decades, there is less experience with the routine and broad use of PROs. In this regard, some groups are taking important steps to elucidate how PROs might be better applied to result in better care and outcomes for the individual and community.

To date, ERP and enhanced recovery after surgery have focused on studying hospital length of stay and rates of complications as a means of engaging hospital and providers in the adoption of new care paradigms. It has been suggested that earlier discharge and greater patient engagement lead to earlier return to function and greater patient satisfaction.<sup>4</sup> To this end, the Agency for Healthcare Research and Quality is supporting a broad initiative to help implement enhanced surgical recovery protocols, in concert with the American College of Surgeons and Johns Hopkins University. Called the "Improving Surgical Care and Recovery" program, evidence-based protocols and database registries are being used to implement, evaluate, and improve care in 1000 plus volunteer hospitals across many different operative procedures.<sup>8</sup> This is a multidisciplinary effort on the provider side, and the effort importantly includes patient input through PROs.

Other efforts are also being undertaken. For example, the Perioperative Quality Initiative (POQI) is a multidisciplinary group that is dedicated to defining a core set of outcome measures for the perioperative period.<sup>9</sup> Through a Delphi method, the members of the POQI group evaluated a set of potential PRO measures of functional recovery within an ERP framework. While some of the identified PRO scales had been developed and validated in the perioperative period, the other notable scales were developed outside of the perioperative period and have only been studied in a limited number of perioperative patients and scenarios. Altogether, additional data are needed to determine which and to what extent these scales have discriminatory ability to identify differences either between specific protocols or in outcomes. It is clear that future work is needed to determine whether these scales can really help drive improvement via ERP.

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A key question is how best to use PROs. It will be important to determine how these measures can be incorporated into clinical dashboards. Quality improvement research has both similarities and differences compared to clinical trials, and we must apply new techniques like dissemination and implementation science to understanding how data can be used in clinical practice.<sup>10</sup> PROs have been used in a number of studies to define the course of surgery. In addition, patient satisfaction measures have been incorporated into the Hospital Consumer Assessment of Healthcare Providers and Systems, but functional assessment has only recently been included. With development of programs like bundle payments, it is increasingly common for orthopedic surgeons to assess functional recovery. Are we ready to routinely assess recovery in other surgical procedures?

While most patients and patient advocacy groups are seeking greater utilization of shared decision-making for surgery, it is a complex process that generally starts much before the operation.<sup>11</sup> Weighing the risks versus benefits of a surgical procedure, given the patient's underlying comorbidities, is becoming increasingly important—and a process in which shared information and alignment of patient and treatment goals need to be measured. This should probably occur from perspectives of both provider and patients. Certainly, more work needs to be performed in this arena.

In summary, PROs in many areas of health care need to be evaluated. There is much work to be performed in this area, including defining the meaningful clinical areas, developing metrics that are low burden and feasible, and identifying how to reasonably implement their use in a generalizable way. Using PROs to enhance already proven and successful protocols, like enhanced recovery after surgery, might be a good place to start. The POQI group has given us a framework to accelerate this process.<sup>2</sup> ■■

**DISCLOSURES**

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**Contribution:** This author helped with critical review and revision of the manuscript.

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