

# American Society for Enhanced Recovery: Advancing Enhanced Recovery and Perioperative Medicine

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As the population ages, the increasing surgical volume and complexity of care are expected to place additional care delivery burdens in the perioperative setting. In this age of integrated multidisciplinary care of the surgical patients, there is increasing recognition that an evidence-based perioperative pathway is associated with the optimal outcomes. These pathways, collectively referred to as Enhanced Recovery Pathways, have resulted in shortened length of hospital stay, reduced complications, and variance in outcomes, as well as earlier return to baseline activities. The American Society for Enhanced Recovery (ASER) is a multispecialty, nonprofit international organization, dedicated to the practice of enhanced recovery in perioperative patients through education and research. Perioperative Quality Initiatives were formed whose intent is to organize a series of consensus conferences on topics of interest related to perioperative medicine. The journal affiliation between American Society for Enhanced Recovery and *Anesthesia & Analgesia* will enable these evidence-based practices to be disseminated widely and swiftly to the practicing perioperative health care professionals so they can be adopted to improve the quality of perioperative surgical care. (*Anesth Analg* 2018;126:1870–3)

As noted in a recent “update and year in review” editorial in *Anesthesia & Analgesia*,<sup>1</sup> the Journal has established a new affiliation with the American Society for Enhanced Recovery (ASER), and a corresponding new section entitled Perioperative Medicine, which was previously combined under Ambulatory Anesthesiology and Perioperative Management. Tong J. Gan is serving as the Executive Section Editor of this new section. Other members of the editorial board dedicated to this new section include not only anesthesiologists, but also surgeons.

Founded in 2014, ASER is a multispecialty, nonprofit organization, with an international membership, which is dedicated to the practice of enhanced recovery in perioperative patients through education and research. Enhanced recovery, and by extension, ASER, are experiencing a period of tremendous expansion and growth, as is evidenced by the widespread implementation of Enhanced Recovery

Pathways (ERPs) in hospitals and health systems around the world.

One of the critical elements for successful implementation of enhanced recovery and ERPs is a multidisciplinary approach. To achieve its goals, it takes a team effort that includes active, ongoing participation by anesthesiologists, surgeons, nurses, hospitalists, and other allied health professionals, as well as hospital and health care system administrators. Unlike most professional societies, a unique feature of ASER is its diverse, multiprofessional, multispecialty focus, encompassing members from each of the stakeholder groups involved in the patient’s perioperative journey.

## THE ROLE OF PERIOPERATIVE MEDICINE IN MODERN HEALTH CARE

Elective surgery represents a major proportion of health care expenditures in the United States, with over 36 million surgical procedures being performed annually as recently as 2012.<sup>2</sup> Estimates in the US project growth in the population over 65 years of age from 15% to 21.0% by 2040.<sup>3</sup> As the population ages, both surgical volume and complexity of care are expected to increase (Figure 1).<sup>4</sup> Given that elderly patients with comorbidities, including frailty, are at substantial risk for poor surgical outcomes and the need for prolonged rehabilitation, which will place additional care delivery burdens in the perioperative setting.<sup>6,7</sup>

A large cohort study in Europe of over 46,000 patients undergoing inpatient noncardiac surgery showed a wide variation in intensive care resource allocation and mortality among countries, with an average mortality of 4%.<sup>6</sup> In the United States, the rate of surgical intervention for the same diagnostic conditions can vary up to 10-fold, even for Medicare patients.<sup>8</sup> There is clearly a wide variation in provision and outcomes for similar surgical procedures around the globe, especially in programs that lack standardization.

Surgeons are ultimately responsible for the patient’s surgical journey and outcomes—they are the point of initial

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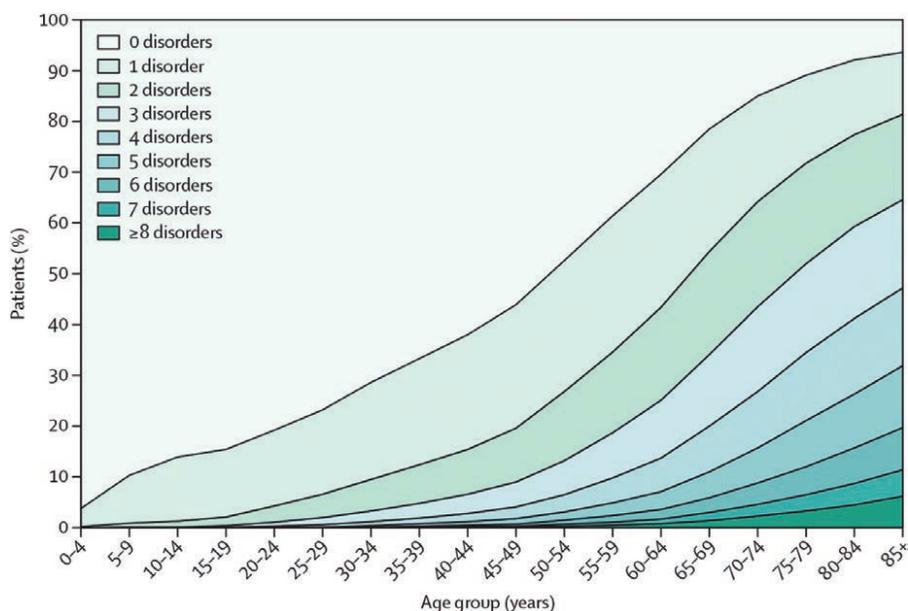
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**Figure 1.** The percentage of patients with comorbidities with increasing age.<sup>5</sup>

patient referral and contact, perform the surgical procedure, and follow the patient throughout the postoperative recovery. However, as surgical volumes and complexity expand with the aging population, time constraints on surgeons will become increasingly challenging. Inevitably, when surgeons are occupied, additional personnel and resources are needed to deliver point-of-care nursing and other perioperative care, as well as to make medical decisions for surgical patients.

There is increasing recognition that an evidence-based perioperative pathway is as important as the surgical procedure itself for achieving optimal outcomes in both elective and emergency general surgery.<sup>9,10</sup> The advent of ERPs has not only shortened length of stay, but also reduced variance in outcomes.<sup>11</sup> Now that many centers have 5–10 years of outcomes data, there is growing evidence that the impact of rapid recovery is not just a short-term reduction in complications but a downstream improvement in health-related quality of life and life expectancy.<sup>12</sup> Enhanced recovery care pathways really are enhancing recovery. The basis is likely multifactorial. The reduction in complications will improve quality of life and life expectancy.<sup>13,14</sup> Patients undergoing cancer surgery who recover quickly are more likely to start their next treatment of chemotherapy.<sup>15</sup>

While translational research is needed to elucidate the cellular and physiologic mediators of ERP in patients undergoing major surgery, we can take a pragmatic approach—just as we do not fully understand the mechanism of action of anesthetic agents but use them every day because they work. We are entering an age of integrated multidisciplinary care for surgical patients, founded on comprehensive perioperative pathways, starting at the point of surgical referral with medical, nutritional, psychosocial, and cardiopulmonary reserve optimization, continuing with evidence-based perioperative components and accelerated recovery and rehabilitation.

### PERIOPERATIVE QUALITY INITIATIVE

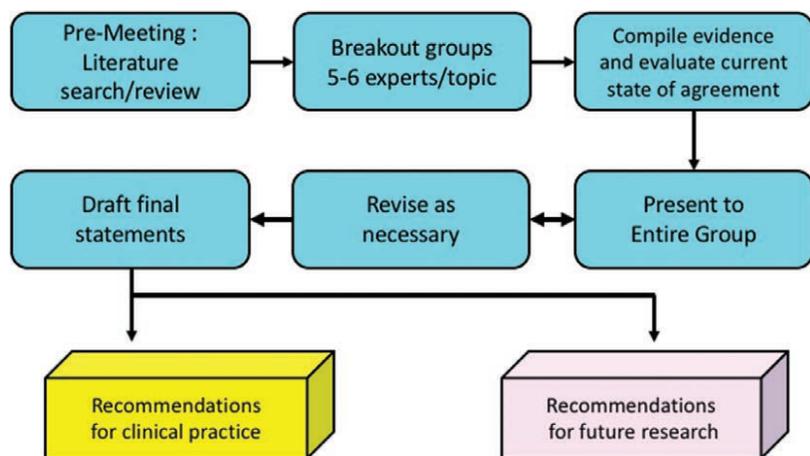
This issue of *Anesthesia & Analgesia* contains 3 articles submitted by ASER in affiliation with the Perioperative Quality Initiative (POQI). Founded in 2016, POQI is an international,

multidisciplinary nonprofit organization, whose intent is to organize a series of consensus conferences on topics of interest related to perioperative medicine. Each consensus conference will aim to provide an objective, measured distillation of the literature pertaining to the chosen topics, and then to produce a consensus statement that interprets the available data, identifies unanswered questions, and most importantly, offers recommendations to improve patient care.<sup>16</sup> These recommendations have been presented in a way that they can easily be adopted and implemented into clinical practice.

The POQI methodology is based on that of the long-standing Acute Disease Quality Initiative consensus conferences, which has been described in detail elsewhere.<sup>17,18</sup> Briefly, each POQI conference reviews 3–4 topics related to perioperative medicine. The topics are selected by the POQI Board and the conference directors based on the potential for developing clinical practice guidelines to improve patient care. Workgroups consisting of a chair, cochair, and several members are assigned to each topic.

During the preconference phase, each workgroup reviews the literature, generates a bibliography of relevant studies, and identifies a list of key questions to be addressed in the final article. A series of summary statements and recommendations are developed and graded based on the United Kingdom National Institute for Health and Care Excellence grading system for strength of recommendations.<sup>19</sup>

The POQI conference itself is an intensive 2- or 3-day interactive conference where members are encouraged to debate and question the important issues in each topic. The conference agenda is divided into plenary sessions, where the preconference and later conference findings and deliberations are presented, debated, and refined; and breakout sessions, where workgroups address the issues in their assigned topic area (Figure 2). The conference organizers' role is to facilitate and moderate the plenary sessions and to circulate among the breakout groups to direct discussion when appropriate. During the conference, key statements are presented and revised until all members agree on a final version. If consensus cannot be reached, this is documented in the article.



**Figure 2.** Perioperative Quality Initiatives consensus process.

Postconference, each workgroup finalizes a consensus statement for publication in a peer-reviewed journal. The final articles are reviewed by all delegates before submission, and after publication, the articles and figures are made available on the POQI website, <http://poqi.us/>.

Importantly, the methodology is different from a systematic review or Cochrane analysis, as it combines some aspects of evidence appraisal with expert opinion. We believe that this combined approach produces a consensus statement that is different from, yet complementary to, a systematic review.

For example, a Cochrane analysis on a topic such as perioperative blood pressure management or management of acute kidney injury may conclude that there is “insufficient evidence to make a recommendation.” This is useful and helps investigators and clinicians to realize gaps in the literature; however, it does not necessarily help make important decisions about patient care—decisions that cannot wait until large, prospective, randomized controlled trials are completed.

A POQI consensus statement on the same topic would acknowledge the limitations of the available literature, produce practical recommendations for patient care based on the current literature that are agreed on by the panel of experts attending the conference, and offer recommendations to aid future research. An example of this is the risk, injury, failure, loss of kidney function, and end-stage kidney disease (RIFLE) criteria that were proposed by Acute Disease Quality Initiative-2 to standardize research into acute kidney injury, and have been validated, used, and refined by investigators extensively over the past 15 years.<sup>17</sup>

ASER has supported the first 2 POQI consensus conferences. POQI-1 focused on ERPs for colorectal surgery<sup>16</sup> and produced published consensus statements on perioperative fluid management,<sup>20</sup> optimal analgesia,<sup>21,22</sup> prevention of postoperative infection,<sup>23</sup> and measurement to maintain and improve quality.<sup>14</sup> POQI-2 explored 3 topics that we believe deserve further attention within ERPs: nutrition; patient-reported outcomes; and management of postoperative gastrointestinal dysfunction. The 3 resulting articles are published in this issue of the Journal, under the new section, now appropriately entitled “Perioperative Medicine.”<sup>24–26</sup> We welcome submissions from all professionals involved in perioperative medicine—from nurses, nutritionists/dietitians to physicians and managers.

Perioperative medicine is the foundation on which non-surgical management of the surgical patient rests and is the cornerstone for successful ERPs. It is here to stay—whatever its current and future name. It is a vital new specialty in the delivery of high-quality surgery with optimal outcomes and overall recovery. It should be embraced by patients, surgeons, anesthesiologists, hospitalists, nurses, allied health professionals, health care administrators, medical insurers, and governmental agencies alike. Optimal recovery, not simply mortality, is our new, shared ultimate goal for the surgical patient. ■■

#### DISCLOSURES

**Name:** Tong J. Gan, MD, MBA, MHS, FRCA.

**Contribution:** This author helped prepare the article and approved the final article.

**Conflicts of Interest:** T. J. Gan is a consultant for Edwards, Merck, Mallinckrodt, and Medtronic.

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