Evidence in Perioperative Care

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KEYWORDS

• Perioperative • Evidence-based practice • Systematic review

KEY POINTS

- Perioperative care is comprised of three care areas: preoperative, intraoperative, and postoperative care.
- Given the vulnerable status of the perioperative patient, coupled with the complex nature of these areas, EBP and clinical decision-making must be rooted in high-quality evidence for safe and effective patient and family care.
- EBP is comprised of three critical elements: patient and family preferences, clinical expertise, and best available evidence.
- Systematic reviews provide the highest quality of evidence.

INTRODUCTION

Perioperative care encompasses a wide array of disciplines, providers, and patient interactions and is typically divided into three care areas: (1) preoperative, (2) intraoperative, and (3) postoperative care. Peri means "around" in Greek, and perioperative areas wrap themselves around the patient's operative experience to safely care for and guide the patient and family through the entire perioperative continuum.[1] Although these care areas may not be geographically dispersed (because some patients are prepared and recovered in the same area where the procedure occurred), they are considered three distinct phases of care, whereby different clinical objectives are met and unique skills are required for each phase. However, because phase of care is frequently associated with phase I and II recovery,[2] the term "care area" is used throughout this article to refer to preoperative, intraoperative, and postoperative care.

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A hallmark of perioperative care is interdisciplinary collaboration, because there are front-line clinicians who directly interface with the patient and family, but also scores of staff who help to support the safe movement of the patient and family through the care trajectory. The disciplines of surgery, anesthesia, nursing, pharmacy, respiratory therapy, rehabilitative specialists, laboratory, and radiology technicians, among many other allied health members, all intersect in the perioperative arena.

In addition to the direct care clinicians and support staff, numerous consultants and specialists also have a role in providing perioperative care to patients undergoing surgery and anesthesia. Use of consultants is seen throughout all phases of perioperative care: preoperatively for risk stratification and optimization; intraoperatively for diagnostic and therapeutic consultation; and postoperatively for patient management, rehabilitation, and long-term planning. Finally, the importance of patients' families cannot be overlooked as an important source of support, especially preoperatively and postoperatively. As a system, the perioperative environment is the gestalt of a complex system in which multiple pieces work in tandem to accomplish a common goal.[3]

That most patients move across three care areas during the course of their surgical procedure speaks to this complexity, along with all of the moving clinicians, equipment, and handoff communications. For that reason, the number one driving force in perioperative care is patient safety. The activities of all individuals providing care, making decisions, and ultimately interacting with the patient and family need to be based on the premise that reduction of risk and optimizing outcomes are the overarching goals.[4]

Despite the complexity in perioperative areas, evidence-based practice (or EBP) is no different than EBP in other areas. Some evidence is more rigorous and higher on the evidence pyramid compared with other types of evidence. Systematic reviews are widely held to be the highest form of evidence and when conducted well, a systematic review identifies, critically appraises, and synthesizes the best available evidence for a specific clinical question to improve patient and family care and to guide decision-making and policy.[5] The use of systematic reviews as evidence in informing health care decisions is not a novel concept; however, the frequency of its use has increased tremendously in the past 5 years.[6] A properly executed systematic review contains the following defining features:

- A well-defined question
- An a priori protocol guiding the review
- Clear and specific inclusion and exclusion criteria
- Transparent and reproducible search strategy
- Assessment of methodologic quality for included studies
- Data assimilation strategies congruent with methodology
- Clear and robust recommendations for practice

There are several public and private sector organizations that produce systematic reviews, including the Cochrane Collaboration, Campbell Collaboration, and the Joanna Briggs Institute (JBI). The Cochrane Collaboration produces systematic reviews of health care interventions based on quantitative evidence, and the Campbell Collaboration produces systematic reviews on the effects of social interventions based on quantitative evidence. JBI, however, has a more pluralistic view of evidence and produces systematic reviews of health-related practices and interventions based on quantitative and qualitative evidence.

JBI was founded in 1996 and is an international not-for-profit, research and development arm of the School of Translational Science based within the Faculty of Health