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Enhanced recovery after surgery programs: How much do perioperative nurses know?

Enhanced recovery after surgery (ERAS) protocols have been shown to improve recovery and reduce patients' risk of morbidity and mortality[1]. Some researchers have noted 30 to 50 per cent reductions in post-operative hospital length of stay[2–4], reductions in surgical site infections[5] and decreases in admission costs[6–9]. Over the past two decades, ERAS protocols have been developed to cater to the specific needs and nuances across surgical specialties and subspecialties including general surgery (e.g. breast, hepatobiliary, colorectal and upper gastric surgeries), neurosurgery and gynaecological, orthopaedic and vascular surgeries[2,6]. ERAS protocols cover the entire surgical journey, including pre-admission, pre-operative, intra-operative and post-operative phases in the pathway[2].

ERAS protocols

ERAS protocols are multi-component and no single component by itself will improve patient outcomes in surgery. Individual components within each phase of the surgical pathway vary, depending on the surgery type.

ERAS components in the pre-operative phase include providing and/or managing nutritional support, smoking cessation and control of alcohol intake, counselling, pre-operative selective bowel preparation and carbohydrate loading. During the intra-operative phase, components include minimally invasive (keyhole) surgery, minimalisation of drains, temperature control and antibiotic administration before incision. Finally, during the post-operative period ERAS components including clinical interventions to prevent nausea and vomiting, early removal of drains and tubes, multimodal opioid-sparing pain control, early mobilisation, early oral intake of fluids and post-discharge follow-up are implemented[2,10].

Given that ERAS protocols encompass the entire surgical care pathway, a whole-of-team approach – involving surgeons, anaesthetists, nurses and allied health professionals – is imperative if the protocols are to be implemented successfully across a health service.

But how much do perioperative nurses know about ERAS protocols? To answer this question, we undertook a national survey.

The study

From July to November 2023, we undertook an online survey to describe and compare surgeon, anaesthetist, perioperative nurse and surgical ward nurse perceptions of ERAS protocols[11]. Our research team included perioperative and clinical nurse researchers, a surgeon, an anaesthetist and two health consumers.

Following ethics approvals and endorsements for each professional college, we actively recruited practitioners from surgery, anaesthetics, perioperative nursing and surgical ward nursing who were currently practicing in Australia. The sample comprised fellows and members of four professional organisations – the Royal Australasian College of Surgeons

(RACS), the Australian Society of Anaesthetists (ASA), the Australian College of Perioperative Nurses (ACORN) and the Australian College of Nursing (ACN).

The questionnaire we used was adapted to suit the Australian context from one developed by Beal et al.[12] in the United States of America. Our questionnaire included 28 items related to knowledge and beliefs about ERAS, learning preferences and future planning, and 14 demographic questions about age, sex, role, specialty, experience etc. Response options for ERAS knowledge and beliefs were based on 5-point Likert scales of agreement ('very unknowledgeable' to 'very knowledgeable' and 'strongly disagree' to 'strongly agree').

Results

A total of 178 respondents replied to the survey, including 116 (65.2%) nurses, 36 (20.2%) surgeons and 26 (14.6%) anaesthetists. Although over half the respondents reported being 'knowledgeable' about ERAS protocols, group differences were statistically significant, with nurses' scores being much lower than surgeons and anaesthetists scores (see Figure 1).

A greater proportion of surgical ward nurses reported they were knowledgeable to very knowledgeable about ERAS protocols compared to perioperative nurses (see Table 1). However, there were fewer surgical ward nurse respondents in our survey, and there was no statistically significant association between knowledge level and the two nursing groups.

There were significant differences between nurses' responses to beliefs about the benefits of ERAS protocols (e.g. I believe ERAS protocols improve patient care)[12]. Nurses reported lower levels of agreement than their surgeon and anaesthetist counterparts for most of these statements. For learning preferences, just over 70 per cent of nurses compared with 40 per cent of surgeons and 56 per cent of anaesthetists reported a lack of information about ERAS protocols as a barrier to gaining knowledge about ERAS. These results may be indicative of the extent to which ERAS protocols are implemented across Australian health services.

Table 1: Comparison of perioperative nurse and surgical ward nurse self-reported knowledge

	Perioperative nurses (N=100) n (%)	Surgical ward nurses (N=16) n (%)
Very unknowledgeable	28 (28.3%)	2 (13.3%)
Fairly unknowledgeable	23 (23.2%)	2 (13.3%)
Neutral	11 (11.1%)	4 (26.7%)
Knowledgeable	34 (34.3%)	5 (33.3%)
Very knowledgeable	3 (3.0%)	2 (13.3%)

Missing: perioperative nurses n = 1, surgical ward nurses n = 1

Barriers and enablers to ERAS implementation

Our survey respondents reported barriers to ERAS protocol implementation such as lack of knowledge and support by senior clinicians and managers, organisational culture, patient complexity, lack of resources and lack of ability to adapt the content of ERAS protocols to the local context[12]. Similar reasons have been reported by other researchers in this area[13,14].

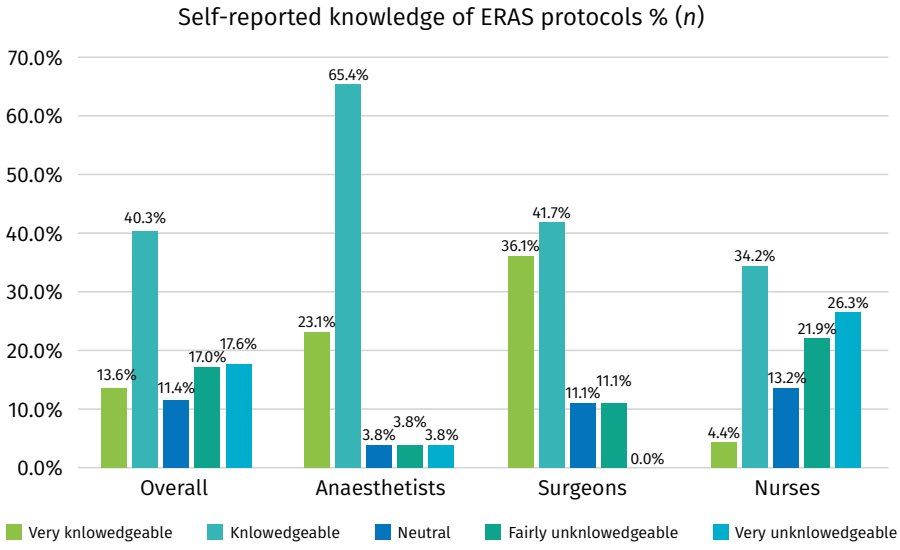

Figure 1: Survey respondents reported knowledge levels of ERAS protocols[12]

Despite the proven benefits of ERAS protocols, an evidence–practice gap exists in their widespread adoption[16]. In a 2020 editorial published in the *Journal of Perioperative Nursing*, Duff attributed some of the challenges to implementing ERAS protocols to the fragmentation of surgical care; that is, the care provided in the perioperative department operates independently of the surgical care provided in pre-admission clinics and the surgical wards. However, the surgeon is the 'common denominator' across the surgical care pathway and is thus well-positioned to lead the implementation of ERAS protocols[16].

Surgeons as implementation leaders

Surgeons play a critical role in the successful implementation and sustainment of ERAS protocols. Their leadership in this care pathway is essential because they:

- possess clinical expertise and have a constant presence along the continuum of surgical care
- can coordinate interdisciplinary teams
- can influence protocol adherence
- play a spearhead role in the education and training of others in the team
- are well positioned to advocate for resources
- are focussed on data collection and analysis to enable monitoring of outcome measures.

Surgeons' leadership in the implementation process can also contribute to increasing nurses' knowledge of and engagement in ERAS protocols.

Where to now?

Although the sample size of our survey was insufficient to allow generalisation, our survey results indicate that perioperative and surgical ward nurses lack basic knowledge about ERAS and its benefits. Moreover, nurses from various health services we are affiliated with in Queensland have anecdotally reported that they were unaware of any exposure they have had to ERAS or its implementation.

Thus, we must target nurses' educational needs, as they play a pivotal role in the success of ERAS due to their continuous interactions with patients throughout the perioperative journey.

The success or failure of ERAS in enhancing patient outcomes depends on the quality of its implementation efforts. To effectively embed and sustain ERAS protocols in practice, health care leaders must focus more on using knowledge translation methods that address the barriers identified in this editorial. Without this, it is unlikely that ERAS protocol benefits will be realised in practice.

Indeed, there is much work yet to be done in Australian hospitals.

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