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Evidence-based practice in perioperative nursing: Barriers and facilitators to compliance

Abstract

Evidence-based practice (EBP), in combination with clinical expertise and patient values and wishes, enables delivery of exceptional patient-centred care. Providing our perioperative patients care that is informed by best evidence has been proven to provide a safer and higher standard of care.

Best evidence forms the basis for standards and guidelines for nursing practice published by organisations such as Australian College of Perioperative Nurses (ACORN), Australian and New Zealand College of Anaesthetists (ANZCA) and Australian Commission on Safety and Quality in Health Care (ACSQHC). While perioperative nurses strive to provide the best possible care for their patients there is sometimes a 'mismatch' in the clinical environment when nurses revert to the use of tradition-based practices rather than providing care that has been based on best evidence that would be safer for their patients. The reasons for this are complex and involve, in part, a lack understanding of research and evidence, and a lack of time.

As higher education and a deeper understanding of and appreciation for research and evidence has been shown to enhance the uptake of evidence-based perioperative practice, good nursing leadership, encouragement and resources are needed to spearhead education in this vital area.

This discussion paper will present some of the barriers and facilitators to the provision of evidence-based care in the clinical environment. However, while researching this topic revealed a significant quantity of low-level research that provided similar findings, there was a paucity of rigorous high-level research. This indicates the need for further research in this vital area.

Keywords: perioperative, nurses, evidence-based practice, barriers, facilitators, implementation

Introduction

Evidence-based practice (EBP) may be defined as 'the practice of delivering exceptional patient-centred care by understanding and transitioning the best scientific evidence into practice and combining that knowledge with clinical expertise and patient values and wishes'.¹ Clinical practice should therefore be firmly grounded in EBP which would then be a vehicle for establishing a culture of safety and enhanced patient outcomes, in turn reducing the health care budget.²

However, it is not uncommon for nurses to use tradition-based practices rather than providing care that has been based on best evidence.

It is known that understanding research and being involved in research studies is explicitly linked to, and a positive variable in, nurses' adoption of EBP.³ For this reason, this paper will look at both adoption of EBP and involvement in research activities. Similarly, this paper includes approved standards and guidelines as 'evidence' used

by perioperative nurses because these publications are informed by scholarly literature and research studies. Approved standards and guidelines include those published by Australian College of Perioperative Nurses (ACORN), Australian and New Zealand College of Anaesthetists (ANZCA) and Australian Commission on Safety and Quality in Health Care (ACSQHC).

The Nursing and Midwifery Board of Australia, under Standard 5: Develops a plan for nursing practice, states that 'The registered nurse uses assessment data and best available evidence to develop a plan'.^{4, p.5} In a stirring editorial from ACORN's Journal Editor, Professor Jed Duff,⁵ perioperative nurses are reminded that while EBP is the gold standard of patient care, many of the practices performed in the perioperative domain remain based on tradition. This often occurs even when robust evidence is available but is not utilized fully in our clinical practice.⁵

Unlike many other specialty nursing groups, perioperative nurses have the advantage of specific evidence-based standards to guide their daily practice. *The New ACORN Standards*⁶ contain evidence-based practices and procedures for safe patient care; however, for a range of complex reasons, these are often not followed.⁵

This discussion paper will look at three of the barriers and two facilitators to adoption of EBP in an effort to improve understanding and increase the regular use of evidence in our daily perioperative practice. This will be presented under the emerging themes from the literature and recommendations for perioperative nursing will be provided.

Discussion

EBP is known to enhance patient outcomes, embed a culture of safety and decrease overall health care costs.⁷ Specialist clinical perioperative nursing knowledge and practice is informed by evidence-based standards, in particular the clinical volumes of *The New ACORN Standards*.⁶ ACORN has been publishing guidelines and standards for perioperative practice since 1977; however, despite having these standards at our disposal, they are often not updated or strictly followed. In their study into retained surgical items, Warwick et al.⁸ found that contributing factors to items being left inside patients after surgery included, but were not limited to, non-adherence to hospital policies, procedures, processes and guidelines. These findings are consistent with Jiang et al.⁹ who reported that perioperative nurses lacked evidence-based knowledge and acceptance of evidence-based information.

There are many barriers and facilitators to implementing and sustaining EBP. Following extensive reading and analysis of the available literature, thematic analysis was undertaken and the following themes emerged: 'lack of time and increased workloads', 'lack of research and evidence knowledge', 'resistance to change culture', 'positive leadership' and 'culture of learning'. The first three themes are barriers to EBP implementation, the last two are facilitators.

Lack of time and increased workloads

In their paper about developing a practice improvement tool, Tschannen et al.¹⁰ discussed time constraints and creation of heavier workloads in the context of EBP. After long and tiring shifts, perioperative

nurses have difficulty finding the time and energy to read journals about new evidence.¹⁰ More recent research conducted by Hines et al.¹¹ echoed these findings revealing that participants in their study were reluctant to commit the time to reading long research articles. In 2022, Yoder et al.¹² also revealed that lack of time for research was also a barrier to implementation and sustainability of EBP. This finding may be explained by Nilson et al.¹³ who remind us that changing from current practices to new EBP takes time and increases workloads.

However lack of time also has implications in the clinical setting as both Lin et al.¹⁴ and Halberg et al.¹⁵ found nurses admitted that to save time they would seek nursing practice guidance from more senior nurses in place of referring directly to hospital, state or national standards or guidelines. Seeking guidance from senior nurses instead of perusing evidence-based standards and protocols was also found to be due to nurses' inability to source and understand research articles, protocols and guidelines effectively on their own.¹⁶

Lack of research and evidence knowledge

Similarly to lack of time, a lack of deeper knowledge and clinical skills was also a variable in driving nurses to seek advice from more senior colleagues rather than accessing evidenced based information.¹⁰ This problem may then be compounded when senior nurses advocate using older tradition-based practices rather than current EBP.¹⁴

Salient research conducted in 2016, revealed that the two individual nursing characteristics that were related to adherence to EBP were having post graduate qualifications (OR 1.69, 95% CI 1.07–2.6, p=0.02)

and previous nursing research experience (OR 1.9, 95% CI 1.6–2.4, $p=0.01$).³ Some senior nurses (without university level education) may have had little exposure to research articles and limited understanding of research terminology and connections between research and EBP.¹² This lack of knowledge about research and research terminology often creates barriers when reading standards and searching literature to verify that best available evidence is actually being used when implementing EBP.¹⁷

Further, a lack of knowledge and confusion about research contributing to EBP may lead to cognitive dissonance.¹⁸ Cognitive dissonance may be defined as a state of having inconsistent thoughts, beliefs or attitudes, and often occurs when new information conflicts with the existing knowledge and beliefs.¹⁸ Nursing practices become ingrained into one's psyche and become 'sacred cows', potentially obstructing adoption of EBP.¹⁸ This then may lead to acceptance of tradition-based practices, reversion to what is easier or established practices because that is the way it has always been done^{7,19} rather than following the evidence that would provide safer patient outcomes.

The language of guidelines and protocols has been described as unclear, ambiguous, inconsistent and confusing, and the documents difficult to find.^{10,17,20,21} Unfortunately the flow-on effect may be a barrier to safe and high-quality nursing care.¹² When guidelines, research articles and standards are difficult to find and understand, nurses revert to their old practices, or use their peers as a source of practice knowledge.¹⁴ In contrast to this, research by Smith-Miller²² ($n=139$) found that clear standards, guidelines and research articles

make implementing EBP easier, indicating that improving adoption of EBP is an attainable goal. Ralph²¹ also made this assertion suggesting that making standards, guidelines and research articles less 'intellectual' enables reading and facilitated EBP implementation in nursing practice. ACORN heeded this advice and made its standards easier to follow and more accessible to clinical perioperative nurses, when the standards were updated in 2023.⁶

Resistance to change

Resistance to change is a consistent barrier to implementation and sustainability of EBP as the basis for patient care.²³ Resistance to change may be effected by several factors, including fatigue, particularly where there are too many changes and those changes are ineffectively managed.^{13,24} While research has also revealed that controlling and perfectionist personality traits are closely aligned with resistance to change,²⁵ nurses with positive personality traits were shown to be more receptive to change in practice.²⁶ Çakiroğlu and Seren²⁵ found that even nurses who did not show resistance to change, and were accepting of EBP, were generally negative about change that was created by ineffective policy makers, nursing managers and or hospital managers. This highlights the importance of good leadership.

Positive leadership

Competent and clear leadership is seen as a facilitator of EBP implementation and sustainability.^{13,17} One leadership style that is presented positively in the discourse on EBP, change and sustainability is transformational leadership.^{27,28} Transformational leadership is characterised by democratic decision-making, effective teamwork, clarity of the role of managers,

sourcing natural leaders as a leadership strategy and empowering nurses.^{16,17,27} Transformational leadership is a leadership model that has been found to empower nurses to use EBP.^{16,28}

In a study by Bianchi et al.¹⁶ findings revealed that EBP in combination with low nurse–patient ratios facilitated more EBP. Leaders who were willing and able to provide time for education, research and implementation of new practices, could facilitate sustainability in EBP.^{12,16} Leadership can also provide an environment with change management techniques to prepare nurses to be accepting of EBP which may enrich sustainability of standards and safety and quality in care of patients.²⁹ Leaders can also support nursing staff to understand the typical emotions associated with change of practice³⁰ and facilitate EBP by establishing cultural changes that are necessary for supporting on-going updates to nursing practices as new evidence comes to light.^{13,22} In addition to supporting EBP implementation, effective leadership also needs to support a culture of learning.²⁴

Culture of learning

A culture of learning is important to EBP implementation and sustainability.¹² In a cross-sectional study Cline et al.³¹ reported a statistically significant result ($p = 0.001$) whereby nurses felt they did not have enough authority to change patient care practices; however, this would improve with supportive mentors and education. A culture of learning encourages the process of de-implementation of tradition-based practices¹⁸ and also encourages nurses to seek out the latest EBPs and disseminate these new practices.⁷ As a flow-on effect, this dissemination of new knowledge with colleagues can also stimulate

further discussions about changes in practice ensuring patients continue to receive care based on EBP.^{7,24,31} A culture of learning also supports nurses to gain ownership of changes in practice and increases levels of participation.³²

A culture of learning may include attending conferences, further education of staff, in-services, journal reading clubs and teaching staff how to read and understand research articles, guidelines and standards.¹⁶ A study by Yoder et al.¹² found nurses who were educated to a masters level or higher had significantly greater EBP competency scores ($p = 0.001$) compared to other participants. These findings are consistent with those of Duff et al.³ who reported that the top two individual reasons for adherence to EBP were previous research experience and having postgraduate qualifications. Other factors related to nursing workplaces that contribute to adherence to EBP were having access to the internet (OR 2.04, 95% CI 1.3–3.0, $p=0.001$) and provision of ongoing EBP education (OR 1.6, 95% CI 1.1–2.5, $p=0.01$).³

Recommendations for perioperative practice

To increase EBP in perioperative patient care it is recommended that:

- evidence-based standards are used to guide perioperative nursing practice
- education is provided to assist nurses to read and understand research and the importance of compliance with evidenced-based standards and guidelines
- workloads allow for nurses to inform themselves about recent research and attend educational events, and funding is provided to support attendance at educational events and further study

- nursing leadership effectively supports nurses to embrace change and contribute to a culture of learning.

Conclusion

It is very clear that nursing practice based on best evidence has been shown to improve patient safety by providing a higher standard of care. Perioperative nurses strive to provide the best possible care for their patients; however, there is often a 'mismatch' in the clinical environment when nurses revert to the use of tradition-based practices, rather than providing care that has been based on evidence and would be safer for their patients.

This paper has discussed lack of time and energy for learning, lack of knowledge about research and EBP, and resistance to change as interrelated barriers to the adoption of EBP. On a positive note, effective leadership and a culture of learning can facilitate adoption of EBP by allowing time and resources for nurses to gain more education and embrace change.

Evidence-based care provides a higher standard of patient care but requires an investment of time and finances to support its acceptance. It is recommended that rigorous, high-level research be undertaken in this vital area. In addition, research into the fiscal ramifications of funding more support for EBP and the cost of poorer patient outcomes may be warranted.

Perhaps it is time to look at evidence-based care as an investment for our personal health care needs as we are all possible future perioperative patients who want best care for ourselves and our family members.

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