

Evidence-based Practice in Perioperative Nursing: a Literature Review and Suggestions for Change

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Nursing is fundamentally caregiving, certainly the public view of nurses is that they are bedside caregivers. However, the social context of nursing is changing. Traditionally nurses have been viewed as being "practical rather than academic, subservient and, in Florence Nightingale's day, saintly, sanitary and feminine" (Hicks, 1996). Now, as education in nursing and nursing professionalism have developed there is an increasing recognition that nurses need evidence that their nursing care procedures are based on fact not tradition. Nurses need evidence that their procedures are effective and are the most appropriate, and in these days of fiscal restraint are also the most economical (Hicks, 1996).

Evidence-based practice, that is, practice that is based on objective research, is now widely recommended to the nursing profession (Barnsteiner, 1996; Beyea & Nicoll, 1997a; Hicks, 1996; Kitson et al., 1996; Cavanagh & Tross, 1996, Mottola, 1996;

Simpson, 1996; Thomas, 1996). It may seem obvious that nurses should use procedures that are well established and rational, and yet it has been identified (Hunt, 1996) that sometimes nurses do not use well established research results, and that, at the same time, nurses support practices and developments that have no sound research base or have even been shown to be detrimental to patients. This indicates that attention must be given to the knowledge gap that exists between nurses' good intentions and actual day-to-day practice (Thompson, 1996). This paper will present an overview of the research utilization process, with specific attention given to suggestions for encouraging evidence-based practice within the perioperative environment.

Role of the Perioperative Nurse

The perioperative nurse has responsibilities that have been clearly defined as those nursing duties carried out by the professional nurse in the three phases of surgical patient care: preoperative, intraoperative, and postoperative (Gillette, 1996; Von Post, 1996). The general public may still hold the image of perioperative nurses as surgical technicians or as handmaidens to surgeons, focusing on positioning, draping or prepping of the surgical patient (Gillette, 1996). Although the technical tasks are duties of the

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Abstract

Evidence-based practice (nursing practice that relies on information generated from the results of scientific research) is widely recommended as the method of nursing practice of the future. This is particularly the method of choice in perioperative nursing. In this article the literature on evidence-based practice is reviewed with particular emphasis on the role of the perioperative nurse, research utilization, and barriers to evidence-based practice. Suggestions for change to promote evidence-based practice are also outlined.

perioperative nurse there is also an extensive knowledge base required on the provision of patient-centered care as well as explicit roles and responsibilities for perioperative nurses in regard to evidence-based practice (Beyea & Nicoll, 1997a; Gillette, 1996; Simpson, 1996). Introducing "evidence-based" into practice involves new responsibilities:

1. A responsibility to improve procedures based on evidence.
2. To gather evidence by evaluating current practice and also new procedures.

Nurses, by virtue of the fact that they are doing nursing work, are in the best position to recognize nursing problems. In addition, nurses are deeply interested in solving nursing problems (Baumgart, 1996). However, there are some important elements involved in getting staff nurses to become aware of or to utilize research (Castledine, 1996). Staff nurses, such as the perioperative nurse, require a level of education (i.e. baccalaureate degree) or exposure to special training course in the understanding and application of research (i.e. a post registration course or staff development program) that teaches the nurse how to read critically and evaluate research studies (Lacey, 1996; Mottola, 1996). Often nurses at an undergraduate level are not sufficiently prepared in critiquing research reports to provide informed judgments about using research findings for nursing practice (Mottola, 1996). Armitage (1990) also found that nurses required significant preparation before they had the skills to implement evidence-based practice.

"Nursing staff still lack certain required skills before research utilization can take place. Education in these areas is of vital importance. A questioning attitude needs to be fostered, together with critical reading skills. Where there are differences of opinion, nurses sufficiently familiar with research material have the confidence to argue their point with others." (Armitage, 1990, p. 13)

Increasingly more staff nurses have gained exposure to research either through undergraduate education or through continuing education courses enabling them to translate research findings into practice protocols (Baumgart, 1996; Barnsteiner, 1996; Mottola, 1996). Most countries have implemented the initiative of "project 2000" in which the objective is to promote a higher education in nursing, and the hope is that this will introduce into the workplace scholars with a critical attitude (Baumgart 1996; Mulhall, 1997). However, there is a danger that the "research-practice gap" (Mulhall, 1997) causes nurses educated within

the university system to quickly revert to non critical and non discerning behavior once in the workplace (Mulhall, 1997). The more hopeful outlook is that as more highly educated nurses enter the workplace the gap will close and a discerning attitude will become common.

Research Utilization

Nursing research has been cited by many authors to be vital to the development of expert nursing practice as well as to the provision of quality care (Castledine, 1996; Lacey, 1996; Mottola, 1996; Thompson, 1996). Utilizing research is complex and not just a simple task, initially, the nursing unit must have a positive attitude towards research and interest from the staff (Cavanagh & Tross, 1996). A number of components are needed to establish a research-based practice within nursing care. Components described by Barnsteiner (1996) are: work settings promoting the use of knowledge, structures and systems that encourage and support nurses in accessing knowledge, and nurses who consider alternatives to current practice. Cavanagh and Tross (1996) suggest that nurses must be able to read and critique research, review and identify research in their own practice area to obtain a research knowledge base, to take that research knowledge base and create a protocol that is useable in the clinical area and to evaluate the protocol assessing whether it is being used as expected. Thompson (1996) stated that there is a significant gap, "a culture gap" (p. 191) between practicing nurses and nurses in academia and Mulhall (1997) refers to a similar gap. For example, many practicing nurses do not read academic journals (Cavanagh & Tross, 1996). This is a reason, one of perhaps many, that influences the acquisition of knowledge about research findings. Suggestions to narrow the gap between theory and practice include: time and resources to facilitate learning, access to library data bases, links to academic support, and a stronger leadership within nursing units that encourages critical appraisal, change management, and implementation of technology skills (Thompson, 1996).

Barriers to Evidence-Based Practice

For change to happen examination of the barriers inhibiting the utilization of research information in clinical practice is important. There are several barriers cited throughout the literature (Cavanagh & Tross, 1996; Hicks, 1996; Hunt, 1996; Mottola, 1996; Simpson, 1996). The barriers encompass issues including lack of available time to access the informa-

tion, lack of available research findings and lack of administrative support. Simpson (1996) groups these barriers into terms of attitudes, resources and support. Attitude includes all beliefs and assumptions nurses have about evidence-based practice, this may include the professional nurses' role and their ability to find, read and use research evidence in practice (Simpson, 1996). Resources are all those barriers that include time, availability, usefulness and access to information. This may include resources in the form of support groups, education or consultants to help nurses to improve their understanding of research material and ultimately perhaps to use the information in practice (Simpson, 1996). Lastly, support refers to the institutional and administrative cooperation to facilitate the use of evidence-based practice (Simpson, 1996). Included in this would be time needed during the working shift to implement evidence-based changes and to evaluate those changes.

Although implementing the use of evidence-based practice seems to be the preferred road to the future, one must also apply such an approach with a little caution (Newman, 1996). The results of a given piece of research cannot be assumed to be applicable across cultures or countries; some evidence may have little or no relevance to specific recipients of care (Newman, 1996). However, this does not mean that nurses should not embark on projects to utilize relevant research findings. Maintaining the status quo, continuing to implement non-researched procedures, may be a greater risk than those that may be encountered by directing good research into practice. Using poor research results or non-researched opinions is hazardous to the patient who may be subjected not only to harm but also to the loss of effective care as nurses use their energy and resources in wasteful or inefficient directions (Hunt, 1996).

The shift in practice from one that is based on tradition to one that is based on evidence is bound to be a difficult one for nursing (Simpson, 1996; Hicks, 1996). Nursing has been a profession valued for its doing rather than for knowing, for its rituals rather than for critical evaluation, and it is a fact that the majority of nurses function well without the direct and ongoing benefit of research results (Simpson, 1996). It must also be recognized that the value of evidence-based practice is a fashionable assumption. Nevertheless, it seems logical that it is better to work on the basis of evidence than on the basis of opinion.

There is also a risk that evidence-based practice will be taken over by new more fashionable trends before the nursing community has had the time to

properly establish a way of working that is evidence-based (Hunt, 1996). Hunt also stresses the need for practitioners to be able to assess the utilization and relevance of evidence-based practice, it is necessary that "we as individuals and the organizations we work in understand and overcome the barriers to research utilization so that we do not have the same barriers as we have had in the past" (Hunt, 1996).

Suggestions for Change

The following suggestions for change are developed from the literature as well as from personal involvement during a six week special studies course in perioperative nursing. The objective of all suggestions is to encourage the spirit of inquiry in nurses, and to help nurses become accustomed to thinking about health research literature and how it might be applied to their practice.

All nurses, whatever their field of specialty have a responsibility to value and recognize research. All nurses do not need to do research on a formal level; however, all nurses should be able to read and interpret relevant research concerning their area of expertise as well as to identify areas in which development or research is needed.

Nurses must be taught how to use research. Many authors have pointed out that nurses need to be taught evaluative techniques and to understand statistical treatments that are used in research reports (Beyea & Nicoll, 1997b; Cavanagh & Tross, 1996; Csokasy, 1997; Thompson, 1996). A nursing area such as the O.R. can creatively encourage such an educational milieu by implementing a few innovations. A number of innovations have been documented to lead to positive changes in knowledge and nursing practice (Barnsteiner, 1996; Cavanagh & Tross 1996; Csokasy, 1997; Mottola, 1996) these are:

1. A journal club or seminar series.
2. Research newsletters.
3. A research bulletin board.
4. Nursing administration and clinical nurse specialist support in the areas 1-3 above.
5. Access to the Internet, especially to online journals such as The Online Journal of Knowledge Synthesis for Nursing published by Sigma Theta Tau International.

Journal clubs create an arena for reading, discussion, critiquing and exploration of research publications. This is important since the first step to translating research knowledge into practice is learning how to read research reports (Beyea & Nicoll, 1997b). The

weekly inservice meetings at the University of Alberta Hospital for example are very well attended by the O.R. staff; such a forum as this is an excellent opportunity to allow staff to read research articles. For example, a 20 minute presentation of relevant topics from research publications with a 10 minute discussion can be presented by nurses on a rotation basis.

An accurate and informed interpretation of research reports is essential; to achieve this, access to experts to assist with the reading and the critique of health literature would be useful. Expert opinions may be obtained from an advanced practice nurse or a clinical nurse educator, or through partnering with local faculty (Barnsteiner, 1996; Csokasy, 1997; Mottola, 1996).

Most nursing units have computers, but there is no access to the Internet. Internet connection would allow online journals to be read, and searches to be made of the journals available on any data base. Access to the Internet at the nursing unit would also allow nurses to use features such as *Listservs* which allow one to pose practice questions and offer information on new nursing practices (Barnsteiner, 1996).

Conclusion

In a fiscal climate of severe restraint and downsizing it is important that nursing adopts practices that are efficient and based on evidence. There is no area of nursing in which this is more important than in the O.R. If the perioperative nurse cannot work at the evidence-based level then she/he may well be replaced by single-function technicians. It is to be hoped that the suggestions for encouraging evidence-based practice will advance perioperative nursing.

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