

# Guest Editorial

## Bridging Evidence-Based Practice and Research

Annette M. Bourgault, PhD, RN, CNL

I have had the privilege of practicing critical care nursing in 2 countries, Canada and the United States. Although these health care systems and their impact on our professional and personal lives are different, they have evidence-based practice (EBP) in common. The formal EBP movement originated at McMaster University in Canada as evidence-based medicine,<sup>1</sup> and has grown to be an integral part of our clinical practice to optimize patient outcomes, improve care quality, and contain costs.<sup>2-4</sup> Although EBP should include patient values and preferences to individualize care,<sup>3,5,6</sup> often this goal can become challenging because of communication barriers with acutely ill patients. Everything we do in clinical practice should be guided by the best research evidence, rather than professional opinion alone.<sup>5</sup> Therefore, clinicians need to bridge the gap between the development of new research knowledge and the translation of research into clinical practice.

Critical care nurses, along with an interdisciplinary team, have opportunities to be involved at multiple stages of the EBP continuum. Our scope

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of practice in critical care is vast, yet we must remain flexible to meet the changing complexity of our patients' needs.<sup>7</sup> Clinicians have a responsibility to maintain knowledge and competency in their specialty area to provide high-quality and safe care based on the best available evidence.<sup>7</sup> The AACN *Scope and Standards for Acute and Critical Care Nursing Practice* identifies expected competencies for EBP, research, and clinical inquiry.<sup>7</sup> Competencies include, but are not limited to, formulating clinical questions, critical appraisal of the evidence, synthesizing quality evidence, implementing practice change, evaluating outcomes, disseminating information, and sustaining a culture of EBP.<sup>7</sup> These competencies speak to the translation of evidence into practice.

Implementation science, also known as knowledge translation, research utilization, or dissemination science,<sup>8</sup> involves more than just being knowledgeable about clinical practice and implementing new and exciting technologies. Implementation science is a field that explores the continuum of EBP, focusing on the systematic process of how to implement evidence into clinical practice and how to evaluate that process.<sup>9</sup> Critical care nurses are frequently involved with the implementation of research into clinical practice; for example, using multifaceted intervention strategies to decrease central catheter-associated bloodstream infection<sup>10</sup> and ventilator-associated pneumonia.<sup>11</sup> We have celebrated numerous EBP achievements. Can you remember at least 1 patient who was saved by avoiding a complication such as a hospital-acquired infection?

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An emerging area of implementation science is the concept of de-implementation (stopping, reducing, or substituting a practice).<sup>12-15</sup> De-implementation may be necessary when a practice is tradition based, has negative outcomes, or is not cost or resource effective.<sup>12</sup> Clinicians are encouraged to question clinical practices to ensure they are based on evidence and do not cause harm to the patient.<sup>16</sup> The Choosing Wisely initiative identified 25 practices that should be questioned by nurses and patients. This initiative challenged us to look at the evidence and use clinical judgement before practicing the way that we have always done it.<sup>17</sup> Although de-implementation terminology may be new, many of us have had experience with de-implementation processes, such as decreasing the use of urinary catheters to minimize risk for catheter-associated urinary tract infection.<sup>18</sup> However, because of psychological biases we sometimes attach to our practices, undoing a process may not be as simple as just reversing the implementation process.<sup>19,20</sup>

As mentioned, some of our practices lack high-quality research evidence, such as tradition-based practices, new emerging practices, and new devices. Clinicians use critical thinking and clinical judgment to devise practice plans for short-term solutions. But what about long-term solutions? Gaps in the research evidence are frequently identified by clinicians, students, educators, and researchers. Recommendations are often suggested in presentations and research articles to perform additional or more rigorous research. Who will perform this important research to advance critical care nursing practice? A shortage of doctorally prepared nurses exists in the United States. The majority of doctoral nursing students are between the ages of 45 and 54 and have a limited number of years left in the workforce.<sup>21</sup> Ideally, early career nurses would train as nurse scientists and would develop programs of research over a period of many years. Who better to perform critical care research than an expert critical care nurse clinician who is also trained as a researcher? Have you ever considered a role in research development? High-quality research evidence is a necessary component for successful EBP.

As we approach the New Year, it is often a time of self-reflection. Some of us may be thinking about making New Year's resolutions. Have you considered a professional resolution for the New Year? Maybe you are inspired to learn more about EBP or research? Do you have any

opportunities to become involved in an implementation project on your unit? How about a de-implementation project? Unit-based and institutional practice councils are a great way to become involved and learn more about EBP. Consider getting involved in a research project in your workplace. You may want to explore opportunities to become involved in the planning phase and/or collect data as a research nurse. Your clinical expertise will be invaluable to assist with the design of clinically based research projects. If your institution has a Center for Nursing Research, consider reaching out to see if there are any opportunities to participate.

Beyond contributions to EBP or research in the clinical setting, will this be the year you further your academic education? All nursing degree programs, including RN-BSN, MSN, and a doctorate, will enhance your knowledge of EBP. Several doctoral degrees are available in nursing; 2 of the more common degrees are Doctor of Philosophy (PhD) and Doctor of Nursing Practice (DNP). PhD programs train nurse scientists to develop new research evidence,<sup>22</sup> and DNP programs train nurses to become experts in knowledge translation in the practice setting.<sup>23</sup>

After completing my initial nursing education at a community college in Canada (comparable to an associate degree), I thought I had reached my career goals after I attained RN licensure and secured employment in a large, academic intensive care unit (ICU). Little did I know that I would return to school for 3 additional degrees (RN-BScN, MScN, and PhD). My first research idea came to me while working a night shift as a staff nurse in the ICU; it led to a collaboration with an interdisciplinary team and completion of a small pilot study in the ICU. This experience inspired me to begin my journey of research development. I also continue to learn and grow in my understanding of implementation science. The development of research evidence alone is not enough to change practice.

Most health care professionals are already involved with EBP and work diligently to provide the best care possible. For those looking for new opportunities, I hope I have provided some ideas to ponder. Every step of the research and EBP continuum is critical to our overall success in health care. Any contribution that individual nurses make to providing evidence-based care is a step in the right direction. As critical care nurses, we continue to work as part of an interdisciplinary team to

provide the best evidence-based care possible to achieve positive patient outcomes.

All the best for the holiday season and the New Year! **CCN**



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- Information/Position-Statements-White-Papers/Nursing-Research. Accessed October 7, 2018.
22. American Association of Colleges of Nursing. PhD Education. <https://www.aacnnursing.org/Nursing-Education-Programs/PhD-Education>. Accessed October 7, 2018.
23. American Association of Colleges of Nursing. Fact Sheet: The Doctor of Nursing Practice (DNP). 2017. <https://www.aacnnursing.org/DNP/Fact-Sheet>. Accessed October 7, 2018.

#### References

1. Evidence-Based Medicine Working Group. Evidence-based medicine: a new approach to teaching the practice of medicine. *JAMA*. 1992; 268(17):2420-2425.
2. Melnyk BM, Fineout-Overholt E, Giggelman M, Choy K. A test of the ARCC[c] model improves implementation of evidence-based practice, healthcare culture, and patient outcomes. *Worldviews Evid Based Nurs*. 2017;14(1):5-9.
3. Melnyk BM, Gallagher-Ford L, Long LE, Fineout-Overholt E. The establishment of evidence-based practice competencies for practicing registered nurses and advanced practice nurses in real-world clinical settings: proficiencies to improve healthcare quality, reliability, patient outcomes, and costs. *Worldviews Evid Based Nurs*. 2014;11(1):5-15.
4. Wallen GR, Mitchell SA, Melnyk B, et al. Implementing evidence-based practice: effectiveness of a structured multifaceted mentorship programme. *J Adv Nurs*. 2010;66(12):2761-2771.
5. Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. *Clin Orthop Relat Res*. 2007;455(1):3-5.
6. Guyatt GH, Haynes RB, Jaeschke RZ, et al. Users' guides to the medical literature: XXV. Evidence-based medicine: principles for applying the users' guides to patient care. Evidence-Based Medicine Working Group. *JAMA*. 2000;284(10):1290-1296.
7. American Association of Critical-Care Nurses. *AACN Scope and Standards for Acute and Critical Care Nursing Practice*. Aliso Viejo, CA: American Association of Critical-Care Nurses; 2015.
8. Khalil H. Knowledge translation and implementation science: what is the difference? *Int J Evid Based Healthc*. 2016;14(2):39-40.
9. Grimshaw JM, Eccles MP, Lavis JN, Hill SJ, Squires JE. Knowledge translation of research findings. *Implement Sci*. 2012;7(50):1-17.
10. Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med*. 2006; 355(26):2725-2732.
11. Parisi M, Gerovasili V, Dimopoulos S, et al. Use of ventilator bundle and staff education to decrease ventilator-associated pneumonia in intensive care patients. *Crit Care Nurse*. 2016;36(5):e1-e7.
12. Prasad V, Ioannidis JP. Evidence-based de-implementation for contradicted, unproven, and aspiring healthcare practices. *Implement Sci*. 2014;9(1):1-5.
13. Upvall MJ, Bourgault AM. De-implementation: a concept analysis. *Nurs Forum*. 2018:1-6.
14. Niven DJ, Mrklas KJ, Holodinsky JK, et al. Towards understanding the de-adoption of low-value clinical practices: a scoping review. *BMC Med*. 2015;13:1-21.
15. Helfrich CD, Rose AJ, Hartmann CW, et al. How the dual process model of human cognition can inform efforts to de-implement ineffective and harmful clinical practices: a preliminary model of unlearning and substitution. *J Eval Clin Pract*. 2018;24(1):198-205. doi:10.1111/jep.12855.
16. Flynn Makie MB, Rauen C, Jones K, Fisk AC. Continuing to challenge practice to be evidence based. *Crit Care Nurse*. 2015;35(2):39-50.
17. American Academy of Nursing. Twenty-five things nurses and patients should question. 2017. <http://www.aannet.org/initiatives/choosing-wisely>. Accessed October 7, 2018.
18. Rodgers SE. The extent of nursing research utilization in general medical and surgical wards. *J Adv Nurs*. 2000;32(1):182-193.
19. Scott IA, Elshaug AG. Foregoing low-value care: how much evidence is needed to change beliefs? *Intern Med J*. 2013;43(2):107-109.
20. Ubel PA, Asch DA. Creating value in health by understanding and overcoming resistance to de-innovation. *Health Aff*. 2015;34(2):239-244.
21. American Association of Colleges of Nursing. AACN position statement on nursing research. 2006. <https://www.aacnnursing.org/News>