

### Editorial

## Implementing evidence-based practice to develop nursing curriculum

Higher education is a critical component of society's culture and knowledge that plays an important role in the society's political and economic development. Higher education worldwide is changing and so too is nursing education, in particular, at tertiary level. The change in what and how we teach our future nursing generation depend largely on the country's needs for health care services for the increasing ageing population with increasing burden of chronic diseases. With these changes, the requirements for nursing practice call for health care professional to implement current best evidence interventions in making sound clinical decisions.

Fundamental preparing of nurses for the requirements for practice depends on their educational preparation. While there has been consensus on the importance of evidence-based practice (EBP), discussions on how to embed EBP as an educational paradigm and the inclusion of this as a standard in nursing curricula is limited. Although curriculum change is a slow process, we as nurse educators and leaders could guide the directions of nursing curriculum development that would inculcate EBP in our teachers and students alike.

When we are at a time for obtaining accreditation of our nursing curriculum, we need to ask ourselves what our current nursing curriculum looks like. Do we still have a curriculum following the traditional way where contents are basically skill-based, competency-directed? What are the units or modules that we need to change? What would our aims and objectives look like? What would be our teaching and assessment strategies? Who will be our future students and what graduate outcomes do we need to achieve? What theoretical framework are we going to adopt to guide our curriculum? These are basic questions that we need to consider when developing a nursing curriculum. Providing EBP is a trend that can strengthen the delivery of safe and

effective nursing care. Therefore, the responsibility of preparing nursing graduates for this role becomes the responsibility of nurse educators and the curriculum that incorporates evidence-based nursing as its core element and the framework and strategies that supports these.

Educating the future nurse is a daunting task for nurse educators. The beginning knowledge in biological and psychological sciences, nursing theories, patient care competencies, legal and ethical issues in nursing and other university and accreditation board requirements must all be considered essential knowledge and skills. The current nursing curriculum is heaving with these contents, thus leaving little time for reflection, debate and research experience. However, contemporary health care organizations expect graduate nurses to be able to critique existing practices and make evidence-based changes to improve patient outcomes (1). Innovating strategies to incorporate EBP in the curriculum will need new methods of teaching and assessing students to develop in them critical reflection and decision-making skills by incorporating creative and interactive strategies that make theory more relevant to practice (2). EBP projects should be part of the requirements of the curriculum and extrapolated in the essential competencies for EBP in nursing (3). Coordination and cooperative experiential activities could be used to stimulate critical thinking through interdisciplinary team collaboration thus encouraging and supporting interprofessional education further.

In developing an evidence-based curriculum, the Institute of Medicine, for example, identified five core competencies for health care professionals within the 21<sup>st</sup> century health care system which nursing profession could be adopted: (provide patient-centered care, work in interdisciplinary teams, use EBP, apply quality improvement, and use informatics (4). To achieve all these competencies, it was suggested that

spiraling the curriculum structure is needed as a constructivist approach to learning the increasing complex learning activities in the curriculum structure (5). In the spiral curriculum framework, teaching and assessment strategies are designed to engage, motivate, and promote students' understanding of the content of the curriculum by enhancing transfer of EBP knowledge to practice settings. Nursing curriculum must also step away from simply teaching students how research is conducted but must reflect the use of evidence into practice to enhance EPB integration into the curriculum overall content and aspirations.

Debates have also been occurring how EBP pedagogy can be threaded throughout the undergraduate nursing curriculum and in particular how to foster critical thinking skills and how to instill knowledge of EBP procedures (6, 7). In schools of nursing in the United States, for example, the undergraduate curriculum was redesigned to assist students in their development of beginning knowledge and skills in EBP by carefully leveling the EBP content in three nursing science courses. Teaching and learning methods were revised not only to include lectures, group work, classroom practice, and interactive simulated approaches but also role modeling in class and the adoption of models for implementing EBP (8, 9). Evaluation of learning outcomes was determined through objectives tests, literature search projects, classroom participations, and critical appraisal of primary research report assignments. They found that the success in leveling EBP in the curriculum were the involvement of national nursing experts, carefully designed course objectives and activities that were complementary, building from one course to the next without unnecessary overlap, and ensuring fully incorporating EPB concepts both in the classroom and clinical area.

Hand in hand with developing the nursing curriculum is planning the clinical practicum of students. In the United Kingdom, it was suggested that an innovative clinical practicum is needed to integrate EBP by revising the curriculum. In the former curriculum model, the students were enrolled in courses that focused progressively on the nurses' role in providing pa-

tient care and in the final year, students were expected to synthesize the previous curricular knowledge to patient groups. In the revised curriculum, the goal was to expose students to opportunities that encouraged them to use EBP and develop skills and confidence in incorporating EBP into their daily clinical practicum (10). The results of the evaluation of this new approach to clinical practicum showed that students benefited in developing skills and appreciating the essential component of EBP in nursing practice. The health care institution also benefited by knowing that there will be a pool of nursing graduates with fresh, creative talents that will change and shape the future of nursing practice (10).

However, there are a number of barriers why EBPs are not embedded in the curriculum. The most critical barriers are the inadequate EBP knowledge and skills of teachers (11), negative attitude towards EBP (12), lack of EBP mentors to work with teachers (13), inadequate resources and support from administrators, insufficient time due to high teaching load, and staffing shortages (14). Overcoming these barriers is basically putting in place how to support staff in ensuring the EBP is embedded successfully in the curriculum. The EBP paradigm needs to be communicated, discussed, and implemented by all involved in the undergraduate nursing program. Without the spirit of cooperation and shared undertaking, implementation of EBP within the context of caring and preparing nursing students will never materialize.

Nursing education in universities is here to stay. Curriculum change requires planning involving nursing experts and other academic experts within and outside the university and most importantly, cooperation among the staff and an acceptance that curriculum change is important to advance the nursing discipline into a new level. The role of the deans of schools of nursing in creating the context for implementing and sustaining EBP in the curriculum is a challenging task. By creating a supportive environment with adequate financial and human resources, nurse leaders could be a significant force to shape the school of nursing culture. The first step is for the nurse leader to believe that transformative EBP curriculum is possible and have the empowering

skills to build the confidence among the teaching staff. We have to think of our role in preparing our nursing students' to their future role to meet the demands of the health care services for knowledgeable and confident nurses who can work independently and take an active role in adapting EBP to meet the needs of patients.

Professor Violeta Lopez  
Director of Research,  
Alice Lee Centre for Nursing Studies,  
Yong Loo Lin School of Medicine,  
National University of Singapore,  
Singapore  
**Email:** nurvl@nus.edu.sg

### References

1. Heye ML, Stevens KR. Using new resources to teach EBP. *J Nurs Educ* 2009; 48(6): 334-9.
2. Thompson C, Aitken L, Doran D, Dowding D. An agenda for clinical decision making and judgment in nursing research and education. *Int J Nurs Stud* 2013; 50(12): 1720-6.
3. Stevens KR. Delivering on the promise of EBP. *Nurs Manage* 2012; 43(4): 19-21.
4. Committee on the Health Professions Education Summit. *Health professions education: A bridge to quality*. Washington, DC: National Academies Press; 2003.
5. Ross AM, Noone J, Luce LL, Sideras SA. Spiraling evidence-based practice and outcomes management concepts in an undergraduate curriculum: a systematic approach. *J Nurs Educ* 2009; 48(6): 319-26.
6. Moch SD, Cronje RJ, Branson J. Part 1. Undergraduate nursing evidence-based practice education: envisioning the role of students. *J Prof Nurs* 2010; 26(1): 5-13.
7. Veenema TG. An evidence-based curriculum to prepare students for global nursing practice. *Nurs Health Care Perspect* 2001; 22(6): 292-8.
8. Bloom KC, Olinzock BJ, Radjenovic D, Trice LB. Leveling EBP content for undergraduate nursing students. *J Prof Nurs* 2013; 29(4): 217-24.
9. Lotz KS. The ABCs of evidence-based practice. *Teaching and Learning in Nursing*, 2010; 5(3): 95-7.
10. Brancato VC. An innovative clinical practicum to teach evidence-based practice. *Nurse Educ* 2006; 31(5): 195-9.
11. Hussein AHM, Hussein RG. Nursing educators' knowledge, skills in evidence-based practice and their critical thinking skills: self-report study. *Journal of Education and Practice* 2014; 5(27): 86-94.
12. Stichler JF, Fields W, Kim SC, Brown CE. Faculty knowledge, attitudes, and perceived barriers to teaching evidence-based nursing. *J Prof Nurs* 2011; 27(2): 92-100.
13. Roe EA, Whyte-Marshall M. Mentoring for evidence-based practice: a collaborative approach. *J Nurses Staff Dev* 2012; 28(4): 177-81.
14. Melnyk BM. Strategies for overcoming barriers in implementing evidence-based practice. *Pediatr Nurs* 2002; 28(2): 159-61.