

Educating Nurses: A Call for Radical Transformation—How Far Have We Come?

Three years ago, the Carnegie Foundation for Advancement of Teaching National Nursing Education Study launched *Educating Nurses: A Call for Radical Transformation* (hereafter referred to as *Educating Nurses* or the Carnegie Study) (2009) as part of Carnegie's Preparation for the Professions Program. Since then, it has been met with enthusiastic responses, many of which are examples of curricular and pedagogical changes in schools of nursing in the United States and Canada. The 3-year point is a good time to stop and reflect on the progress in upgrading and transforming nursing education. I hope this editorial will further the dialogue and encourage more systematic, formal evaluations of the influence of the national Carnegie Foundation studies of education in the professions, in general, and in nursing, in particular, including these questions: How are we doing in closing the practice–education gap, and how are nurses being better prepared to meet today's complex health care needs and improve the health of society? How are we doing in preparing students in (a) the cognitive apprenticeship; (b) the practice apprenticeship and clinical reasoning; and (c) ethical comportment and formation?

My co-authors on *Educating Nurses: A Call for Radical Transformation* (2009) and colleagues, Molly Sutphen, Vickie Leonard, and Lisa Day, who continue to present in national and international conferences and consult with schools of nursing, have reported back exciting news on innovative responses to the findings and recommendations of *Educating Nurses*. In addition, four major collaborative partners—the American Association

of Colleges of Nurses, the National Council of State Boards of Nursing, the National League for Nursing, and Sigma Theta Tau—have been actively engaged in efforts to disseminate and implement the Carnegie Study recommendations (*Educating Nurses*). *Educating Nurses* has now been translated into Norwegian and Japanese and is currently being translated into Korean; these translations are creating lively cross-cultural dialogues, even during the translation phases. The following are impressions of the influence of the study and actual examples of innovations.

Several states, including Arizona, Minnesota, Michigan, and Washington, have implemented initiatives to transform nursing education, influenced by the Carnegie Study. An increasing number of baccalaureate programs, including the University of Pennsylvania's program, have introduced nursing seminars in the first 2 years of college to help students begin forming their nursing identity, character, and skills and better understand how the prerequisites and general education requirements will be used in their nursing practice. The first-year and second-year students are introduced to clinical assignments to help them begin to develop their nursing clinical imagination, formation of habits of thought, and skilled know-how and to better understand how the prerequisites in the sciences and humanities are relevant to nursing practice. These first 2 years are being used to upgrade and enrich the natural and social sciences for the current levels of scientific knowledge required in nursing practice.

Many schools of nursing are engaged in curriculum revisions in response to the

evidence presented in *Educating Nurses*. For example, the University of Pennsylvania is now in the first year of implementation of a new curriculum that seeks to integrate nursing practice use of science in the first 2 years of prerequisite science courses. For example, Health Assessment is integrated into the Anatomy and Physiology course. I observed the nurse faculty team teacher demonstrate how knowledge of anatomy and physiology of bone joints is integral to Health Assessment. The Chemistry course introduces students to relevant unfolding case studies enabling them to use newly gained knowledge on diffusion of gases in a case of Decompression Sickness (DCS, or Bends) experienced in deep sea diving, as well as fluid shifts between intracellular and extracellular spaces, acid-base balance, and other conditions. Pathophysiology and Pharmacology are taught together to integrate knowledge acquisition and knowledge use in relation to drug actions and interactions and in order to introduce students to assessing patients' responses to medications.

Many innovations are being seen in clinical education, as a result of the work of Drs. Christine Tanner, Paula Gubrud-Howe, and Mary Schoessler and their colleagues in the Oregon Consortium for Nursing Education, as well as the Carnegie Study, as faculty bring new approaches to their clinical assignments. For example, faculty have developed clinical assignments with an in-depth integrative learning focus, rather than total patient care. Clinical groups may be assigned to patients with similar clinical problems, such as each student being assigned to hemodynamically unstable

patients or patients with electrolyte imbalances. The students would partner with the nurse caring for these patients but primarily focus on the particular clinical issue to be studied for the day (e.g., hemodynamically unstable patients). The students in their clinical debriefing group would then report and compare what they learned about caring for different patients with similar clinical problems. The Carnegie recommendation to improve and enhance interprofessional education and collaborative team work is also being addressed on several fronts, with real progress from the focused programs funded by the Josiah Macy Jr. Foundation.

Stemming from multiple sources, including the Institute of Medicine and the Robert Wood Johnson Foundation reports, community college nursing programs and baccalaureate programs are developing more timely and seamless progressions from the associate's degree in nursing (ADN) to the baccalaureate and master's levels. Policy and accreditation attention are being given to the excessive amounts of time and credits required to complete an ADN. The Oregon Consortium for Nursing Education's integrated ADN to Baccalaureate Program is a model that is being redesigned and implemented throughout the country to address the lack of ease and time involved in going on for advanced degrees in nursing.

In line with the Carnegie Study recommendation, and in response to the practice–education gap, many hospitals and health science campuses have instituted nurse residency programs as a way of increasing patient safety and providing time to guide students in learning in-depth, specific patient population knowledge, as well as the local practice and procedural knowledge embedded in particular health care delivery settings. This growing movement to provide clinical residencies for every new graduate nurse addresses the critical need to augment the shortage of clinical experience in undergraduate programs. However, lacking in these undergraduate programs and in most staff education programs in hos-

pitals are (a) situated coaching to assist nurses in moving from competent levels to expert levels of clinical reasoning and (b) patient response-based practice, in which therapies are astutely titrated and adjusted according to physiological changes in patients.

As a follow-up to the Carnegie Study, a Web site for faculty development, curriculum design, domain-specific pedagogies, and teacher education in graduate nursing schools, called EducatingNurses.com (<http://www.educatingnurses.com>), has been introduced and provides videotaped teaching resources, curriculum development, and other teacher training resources. On the Web site, the excellent teachers in the *Educating Nurses* book are presented teaching in their classes and in reflective interviews on their teaching, along with student appraisals of their teaching. The goal of the Web site is to answer questions and provide resources for transforming curricula and for creating a forum for teachers to share educational innovations, questions, and issues in nursing education. Another Web site, NovicetoExpert.org (<http://www.NovicetoExpert.org>), has developed an online learning system that includes evidence-based nursing and multiple unfolding case studies so knowledge acquisition and knowledge use are integrated and frequently updated. On this Web site, deep learning occurs, as the most frequently encountered and highest morbidity and mortality diseases and injuries are taught, rather than an ever-increasing amount of encyclopedic survey knowledge typically presented in textbooks.

What have not yet been addressed are the recommendations that require a national effort. For example, the recommendation to upgrade science prerequisites for nursing education and to situate prerequisite science teaching in the practice of nursing have been addressed within individual schools, but national standards and the convening of science and nurse educators to better situate and standardize content and pedagogical approaches to science prerequisites has yet to happen. The innovative curriculum

and pedagogical changes at the University of Pennsylvania are exemplary and perhaps serve as a starting point for extending this kind of national planning. It is hoped that at the 5-year and 10-year formal evaluations and anniversaries of the publication of *Educating Nurses: A Call for Radical Transformation*, more focused research on domain-specific nursing pedagogies and curriculum approaches will be evident to help diminish the current practice–education gap.

In the 3 years since the publication of *Educating Nurses: A Call for Radical Transformation*, curriculum changes, increased emphasis on clinical reasoning, and nursing domain-specific pedagogies are burgeoning. The lasting influence depends on faculty, practicing nurses, administrators, and students continuing to creatively and actively respond to the changes called for in this study and the current challenges in nursing education and practice. It is hoped that in 10 years we will be able to say that the practice–education gap has been eradicated by a transformation in nursing education and practice residencies that address the complexity and challenges of today's nursing practice. Nurse educators, practicing nurses, and nursing administrators jointly hold the excellence of nursing education in their hands. No longer can we place all the responsibility for education in higher education or in practice environments in isolation of one another.

Reference

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