Opening the Dialogue: What Counts?

For years, many rules have existed around continuing education. Some things count, others do not. Precise ways exist for measuring the number of contact hours that can be allocated for specific activities that are expected to have documentation about objectives, learning strategies, content, and speaker preparation. This approach has served us well for many years. Then, along came some research that suggested, at least to the second author of this editorial, that we may need to rethink how we attribute credit for learning. This research made the second author rethink not only how we teach some things, but also how we should acknowledge individuals’ participation in learning activities. As a devotee of repetition, the second author invited the first author to participate in this editorial because she is the one who led the group in this discovery of new information about repetition and how we learn.

The need for nurses to develop competencies for practice is well established, but strategies for maintaining those competencies and developing expertise are often lacking in our educational programs for students and nurses alike. There has been much emphasis on critical thinking, clinical reasoning and judgment, and other higher-level thinking skills in nursing, but what about psychomotor skills? Developing and maintaining competence in those skills are equally important for safe and effective practice. The instruction of psychomotor skills in nursing is inadequate in many settings because learners do not have an opportunity to practice skills repetitively with feedback on performance, which is critical to developing expertise. Often, students and nurses observe a demonstration of a skill, practice it until they can perform it without errors, and are assessed on their competency. With accurate performance, they are “checked off” on the skill, but what counts is whether they maintain their competence and can perform the skill without errors and in a reasonable amount of time when needed in the clinical setting.

This is the issue with cardiopulmonary resuscitation (CPR): nurses and other health care providers may only practice CPR when they recertify. However, performing CPR every 1 or 2 years is not enough to maintain competency because research has shown that CPR skills deteriorate rapidly if not used or practiced (De Regge, Calle, De Paepe, & Monsieurs, 2008; Einspruch, Lynch, Auferheide, Nichol, & Becker, 2007; Smith, Gilcreast, & Pierce, 2008). Skills are lost quickly if not used, which is a problem in situations in which individuals receive education on how to perform skills but may not have to use the skills for an extended period of time. When skills are not used or practiced for 1 year, individuals retain only 8% of their original skill level (Arthur, Bennett, Stanush, & McNelly, 1998). This is the problem with CPR: when practicing on a general unit, in a clinic, or in a similar setting, nurses may have limited opportunity to use their CPR skills, but when needed, they have to perform CPR accurately and immediately.

Knowledge of this research provides guidelines about CPR instruction: nurses, other health care providers, and laypeople need to practice their CPR skills frequently. It may be that a few minutes a month is all that is needed to maintain those skills. The first author, along with two colleagues, conducted a study on CPR skill retention with 606 nursing students. At baseline they were trained in CPR through either the American Heart Association’s (AHA) HeartCode™ Basic Life Support (BLS) course, which is computer-based, or a 4-hour AHA BLS for Healthcare Providers course. After passing the course, students’ compression and ventilation skills were measured using a Resusci Anne® SkillReporter™ manikin. Students were then randomly assigned to a practice or a control group. In the practice group, students practiced...
their CPR skills on voice advisory manikins, which provided automated feedback (e.g., telling students to “compress faster”), for 6 minutes a month for 1 year. Students in the control group had no additional practice of CPR after their initial training, similar to how CPR and many other skills are taught in schools of nursing and health care settings.

With brief but frequent practice, students maintained their competence for the full year of the study, and most students increased their proficiency in CPR skills. What about the control group? Consistent with other research, without practice, students did not retain their ability to perform CPR. The ventilation skills of students in the control group deteriorated by 3 months after their initial training and continued to degrade over the year of the study. Of even more concern, students in the control group did not retain their ability to compress with an adequate depth (Oermann, Kardong-Edgren, & Odom-Maryon, 2011). When their compression depths were reassessed at 1 year after passing their BLS course, the mean compression depth was only 36.5 mm ($SD = 7.7$ mm), far below the depth of 51 mm or greater recommended for adults (Berg et al., 2010). Chest compressions are critical to blood flow during CPR, and compressions need to be deep and at a rate of 100 per minute or greater.

In another study, clinicians brought a cart with a portable manikin/defibrillator to the bedside for staff in the pediatric intensive care unit to practice their CPR skills. The sessions were typically less than 5 minutes and were effective in helping nurses and other providers maintain their skills (Niles et al., 2009). In a follow-up study, the researchers found that with brief but frequent bedside training (low dose, high frequency), more than 75% of the participants maintained their competence and could perform quality CPR at the 6-month retesting (Sutton et al., 2011). Instructor-led training appeared to improve skill retention better than automated feedback with manikins.

Taken as a whole, these studies have demonstrated that brief, frequent practice allows nurses, other health care providers, and students to maintain their competence in CPR skills. *What counts* is the ability to perform a skill when needed, and nurses cannot reach that level without using the skill or practicing it periodically. There is enough evidence to support changing how we teach skills in nursing. Brief practice of psychomotor skills can be integrated in simulations or be part of ongoing educational programs (5 minutes may be all it takes), or we can “bring the instruction” to the learner, allowing staff to practice their skills on the unit at a time convenient for them. Practice can be independent and self-directed or guided by an instructor. It is time to turn our attention to psychomotor learning and base our teaching of skills on the evidence that is available. The goal is competent performance, and the key is practice. It is the practice that counts for competence. Should it not count as continued professional development?

**REFERENCES**


