Using Simulation to Assess Chemotherapy Competency

Paula M. Muehlbauer, RN, MSN, AOCNS®, Mary Beth Parr, MSN, RN, CNS, and Allison K. Perkins, MSN, RN, ACNS-BC

Simulation with lifelike mannequins is used in schools of nursing and hospital-based education as a method of teaching clinical content, enhancing clinical skills, applying theory to practice, and validating competency. It provides a safe learning environment to enhance nurses’ clinical judgment and critical thinking skills in an increasingly complex care environment. Simulation can be used in the practice setting with experienced nurses to teach or reinforce complex information and allow the learner to practice without devastating consequences. Medical-surgical units in some institutions have dedicated beds for patients with cancer but may not be a full oncology unit. Evaluating chemotherapy and biotherapy competency is difficult when extensive time periods exist between chemotherapy administrations. One method for assessing annual chemotherapy competency is to use simulation.

Simulation in Education

Human patient simulation (HPS) is used in learning exercises that closely mimic real life in nursing and medical education and hospital practice. Simulation integrates adult learning theory into an interactive educational session (Kuhrik, Kuhrik, Rimmus, Tecu, & Woodhouse, 2008; Nehring & Lashley, 2009; Su & Juestel, 2010). Simulation, including virtual reality and low- and high-fidelity mannequins, was introduced into nursing education in the 1970s, with noted increase in use in the past 10 years (Nehring & Lashley, 2009). A systematic review of the literature from 2000–2010 found that simulation can be used to create a learning environment to support development of knowledge, skills, and attitudes. However, Norman (2012) noted that a lack of literature related to conveyance of these outcomes to the clinical setting. The International Nursing Association for Clinical Simulation and Learning (INACSL) developed the Nursing Skills and Clinical Judgment Model that incorporates specific concepts into simulation, including participant ability to use psychomotor skills, problem solving, use of clinical reasoning, and, at the