An Innovative Simulation for Teaching Debridement to Nurse Practitioner Students

Nurse practitioner (NP) national competencies serve as a blueprint for curriculum development. The independent practice competency for adult-gerontology primary care nurse practitioners (AG PCNP) and family nurse practitioners (FNP) includes entry-level NPs demonstrating safe practice procedures common to primary care clinical practice settings (National Organization of Nurse Practitioner Faculties, 2013, 2016). For example, the AG PCNP competencies list wound debridement as one common primary care procedure (National Organization of Nurse Practitioner Faculties, 2016). To achieve expert performance of wound debridement skills, students need structured activities designed to develop mastery as part of a deliberate practice model (Harris, Eccles, Ward, & Whyte, 2013).

Patients exhibiting a pressure injury, formerly known as a pressure ulcer or decubitus ulcer, are frequently treated by primary care providers in the outpatient setting. Wound beds that contain devitalized, necrotic tissue (eschar) and retard wound healing must be removed. Sharp debridement is superior to topical debriders and can often be performed in a clinic or nursing home. However, sharp debridement is an invasive procedure that should be learned in a controlled setting.

At The University of Alabama at Birmingham, faculty created an innovative simulation to teach debridement to AG PCNP students enrolled in their final semester of study. The simulation experience was designed for students in a distance-accessible course who were attending an on-campus intensive workshop. To simulate a patients’ skin, instructors purchased smoked ham hocks from a local butcher. The outer layer of the ham hocks was the same texture as eschar. Using a scalpel blade with handle (#11 or #15) and forceps with teeth, students learned how to separate the thick outer layer from the softer inner layer of meat. As students peeled back the outer layer, they experienced the feel of separating thick eschar from healthy skin.

This simulated activity was also used to teach irrigation and packing of wound tunneling. To create a simulated pus, instructors mixed together oatmeal, water, and yellow or green food coloring and injected it into the superior opening of the smoked ham hock. Faculty instructed students to fill a 10- or 20-cc syringe with sterile water or normal saline. After removing the needle, students irrigated the superficial opening until all pus was removed, then they loosely packed the area with packing strip. Students wore eye shields, a gown, and gloves to better authenticate the experience.

Feedback for the debridement simulation was overwhelmingly positive. Students felt that the simulation provided an authentic hands-on experience and gave them a chance to practice wound debridement without fear of injuring a patient. They stated that the activity was a fun way for them to practice skills together in a live setting—something they rarely experience in their distance-accessible courses. The faculty realized they did not need to use high-tech tools to teach important skills to students, but they needed to think creatively about how to simulate patient conditions using common materials.

References

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