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Nurses Can Play Critical Role Preventing Medical Device-Related Injuries
CU Nursing professor and student co-author Critical Care column addressing how to prevent pressure injuries that harm thousands and cost billions of dollars annually

AURORA, Colo. (June 20, 2023) – Hospital-acquired pressure injuries, hurt approximately 2.5 million hospital patients every year, leading to 60,000 deaths and cost an estimated \$27 billion, according to a column co-authored by a professor and a student at the University of Colorado College of Nursing at the Anschutz Medical Campus.

The Critical Care column, [“Preventing Medical-Device-Related Pressure Injuries,”](#) was published in the Journal of PeriAnesthesia Nursing, says that hospital-acquired pressure injuries (HAPIs) are preventable, particularly if nurses and other medical professionals know the risk factors and take precautions. If a patient is over age 65, common risk factors include impaired sensory perception, skin moisture/incontinence, limited mobility, poor nutrition, existing medical issues like diabetes or high blood pressure, and the use of medical devices during surgery. Research shows that when medical devices are used on patients, they are 2.4 times more likely to develop HAPIs than those without devices.

The paper was co-authored by Mary Beth Flynn Makic, PhD, RN, a professor and specialty director of CU Nursing’s Clinical Nurse Specialist program, and Marie Grace Cuaycong, Maj. USAF, MPH, RN-BC, a clinical nurse specialist student at CU Nursing.

Tissue damage and the formation of a pressure injury can be caused by the use of medical devices including tubes, splints, catheters, and neck collars. Up to 45% of all hospital pressure injuries occur during surgery. So, perianesthesia nurses – those who care for patients undergoing or recovering from anesthesia or sedation during surgery – play an important role in monitoring and preventing medical device-related pressure injuries (MDRPIs).

“Despite the introduction of new technology and prevention strategies, the occurrence of HAPI is still on the rise,” Dr. Makic and Cuaycong say in the column. According to the authors, “the longer the patient is in the operating room, the greater the risk of developing” a pressure injury. Because medical devices can cause external force when applied to a patient’s skin for an extended period of time and restrict blood flow, they should be “correctly sized and shaped” for the patient and securely fastened. The authors add, “nurses should shift the

device's position regularly and patients should be checked frequently for signs of a pressure injury developing, such as redness, swelling and skin dryness.”

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