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Patrick Alridge
Richard.alridge@vcuhealth.org

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Using Silicone Mesh to Mitigate Forehead Pulse Oximeter-Related Pressure Injuries

R. Patrick Alridge, BA, RN, CWON
Wound Care Team, Virginia Commonwealth University, Richmond, VA

Background

- Pulse oximeter probes on the forehead are used to obtain O2 saturation readings
- Silicone mesh is used beneath wet-to-moist dressings and negative pressure wound therapy sponges to prevent adherence of the product to the wound bed
- Medical device-related pressure injuries (MDRPI) were occurring on the forehead despite rotating the probe more frequently than manufacturer guidelines

Methods

- Implemented application of silicone mesh under the forehead probe
- Monitored accuracy of pulse oxygenation readings before and after placement of mesh
- Continued to rotate pulse oximeter probe with mesh every 2 hours per unit protocol

Results

- Application of silicone mesh under the forehead pulse oximeter probe eliminated this medical device-related pressure injury in the Cardiac Surgery Intensive Care Unit (CSICU)
- Pulse oximeter medical device-related pressure injuries were reduced from 11% (2012-2017) to 0% (2018- present) in the CSICU

Silicone mesh barrier led to 100% reduction in forehead pulse oximeter related pressure injuries

VCU Pulse Oximetry Sensor Decision Tree*

* Above image is a portion of an internal reference document utilized by our ICUs which describes the process and product use at VCU Medical Center. No endorsement of these products is given.