Eliminating Medical Device-Related Pressure Injury from Blood Pressure Cuffs During Continuous Blood Pressure Monitoring

Lisa Owens, MSN, RN-BC, CWOCN; Hillary Stamps, BSN, RN; Tonnie Warfield, BSN, RN, CWOCN
Mercy Medical Center, Baltimore, Maryland

Background

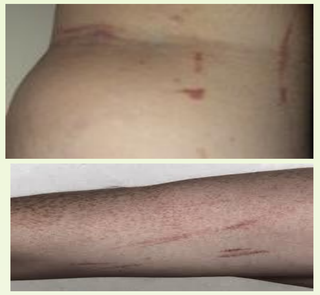
From March 2013 through July 2013, an increased trend in blood pressure (BP) cuff medical device related pressure ulcers (MDRPU) in the Perioperative department was identified. The Perioperative department was asked to investigate the incidents. Each case was reviewed and a detailed report was created, analyzed, and returned to the core interdisciplinary team.

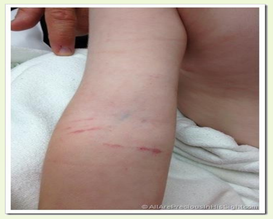
Objectives

- To eliminate the incidence of MDRPU caused by the BP Cuffs in the Perioperative Setting.
- Evidence had established that supporting a better practice required an adjustment in conventional clinical practice[1].
- Additional research revealed a protective interface between the skin and device had shown to reduce MDRPU in acute care settings[2].

Methods

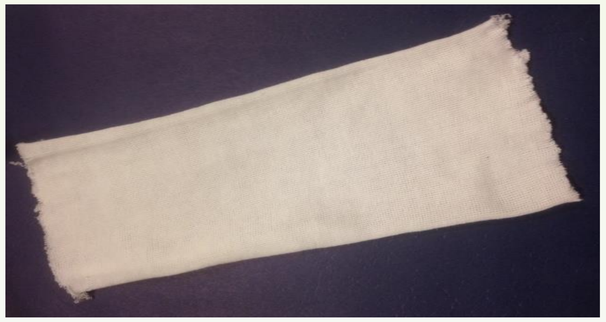
To utilize Evidenced-Based Practice (EBP) to determine a method to eliminate the incidence of MDRPU caused by BP Cuffs in the Perioperative Settings.





Blood Pressure Cuff Pressure Ulcers – Examples ONLY
NOT MMC PATIENTS

Evidence suggested a cotton polyester stockinette sleeve needed to be implemented as a protective interface between the skin and the BP cuff during surgical cases.



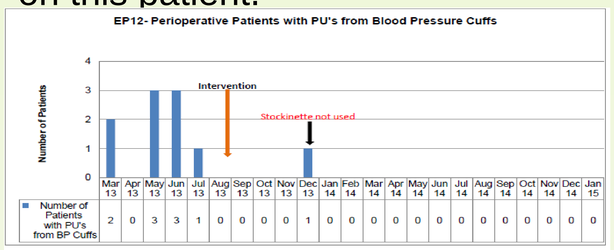
Measures

Once the method was created an AIIMM project (Assess, Improve, Implement, Measure, Maintain) was established to monitor progress and outcomes.

MERCYRN
EXCEPTIONAL CARE. EXTRAORDINARY NURSES.
1-866-MercyRN (tollfree) www.MercyRN.com

Results

There were no incidents for four months. However, in December, 2013 there was one occurrence of a MDRPU from a BP cuff in the OR. The review of this case revealed the sleeve was not used on this patient.



This incident re-focused the members of the Perioperative Skin Committee on educating the entire Perioperative Team and the use of the stockinettes was diligently monitored in attempts to ensure a zero rate of MDRPU related to the BP cuffs. From January 2014 through April 2015, there were no MDRPU related to the BP cuffs in the OR and the AIIMM project entered the Maintenance phase.

Discussion

After its implementation, the persistent use of stockinettes under BP Cuffs has eliminated the presence of MDRPU related to BP Cuffs.

As a result, it is recommended any monitored areas utilize the stockinettes on all of their patients to prevent the incidence of MDPRU caused by BP Cuffs.

Conclusion

This interdisciplinary collaboration has resulted in the performance improvement initiative being a success.

This low-cost, evidence-based quality improvement practice change had a positive outcome on the quality of patient care and resulted in eliminating device-related pressure ulcers caused by BP Cuffs.

Due to this project's success, the information has been disseminated to several areas, including the Critical Care Unit. Subsequently (when the stockinettes are used) no MDRPU related to the BP cuffs have been reported in any area since the initiation of this practice.

Acknowledgement

Eugene Grosvenor, MD
Kristy O'Neill, BSN, RN, CPAN
Melanie Becker, BSN, RN, CNOR
Perioperative Skin Committee Members

References

Baharestani, M. (2013). Medical device related pressure ulcers: The hidden epidemic across the lifespan. *National Pressure Ulcer Advisory Panel*. Retrieved from; http://www.npuap.org/wp-content/uploads/2012/01/7-Final-Baharestani-Medical- Device-Related-Pressure-Ulcers-1The-Hidden-Epidemic-Across-the- Lifespan.pptx.pdf

National Pressure Ulcer Advisory Panel – NPUAP (2009). Prevention and treatment of pressure ulcers: Clinical resource guide. Retrieved from; www.npuap.org