Quality Improvement of Resident Assessment of Pressure Injuries in Patients with a Spinal Cord Injury

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Background

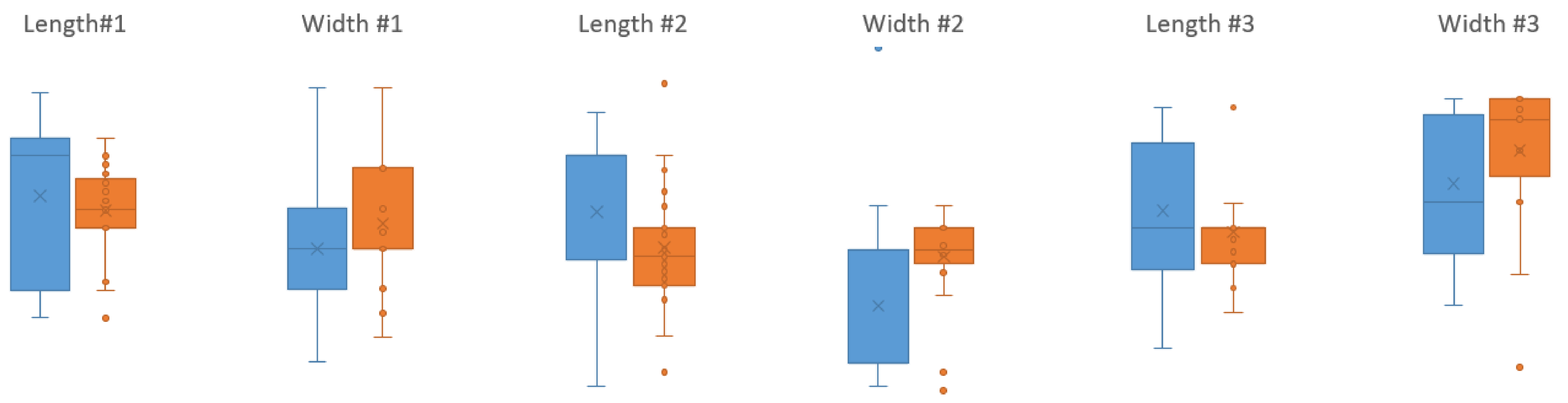
Patients with a spinal cord injury are at risk for developing a pressure injury[1-2]. Assessment of a pressure injury by healthcare professionals includes determining the size of the wound[3]. Several different methods can be employed for measuring the size of a wound including digital and manual techniques[4]. Manual measurement of the size of a pressure injury is the most common but may have variability in the approach used over time or by different individuals[5]. It is the purpose of this project to determine the variability of pressure injury size measurement, education of a single standard for measuring a pressure injury, and assessment of improved reliability among professionals assessing pressure injuries.

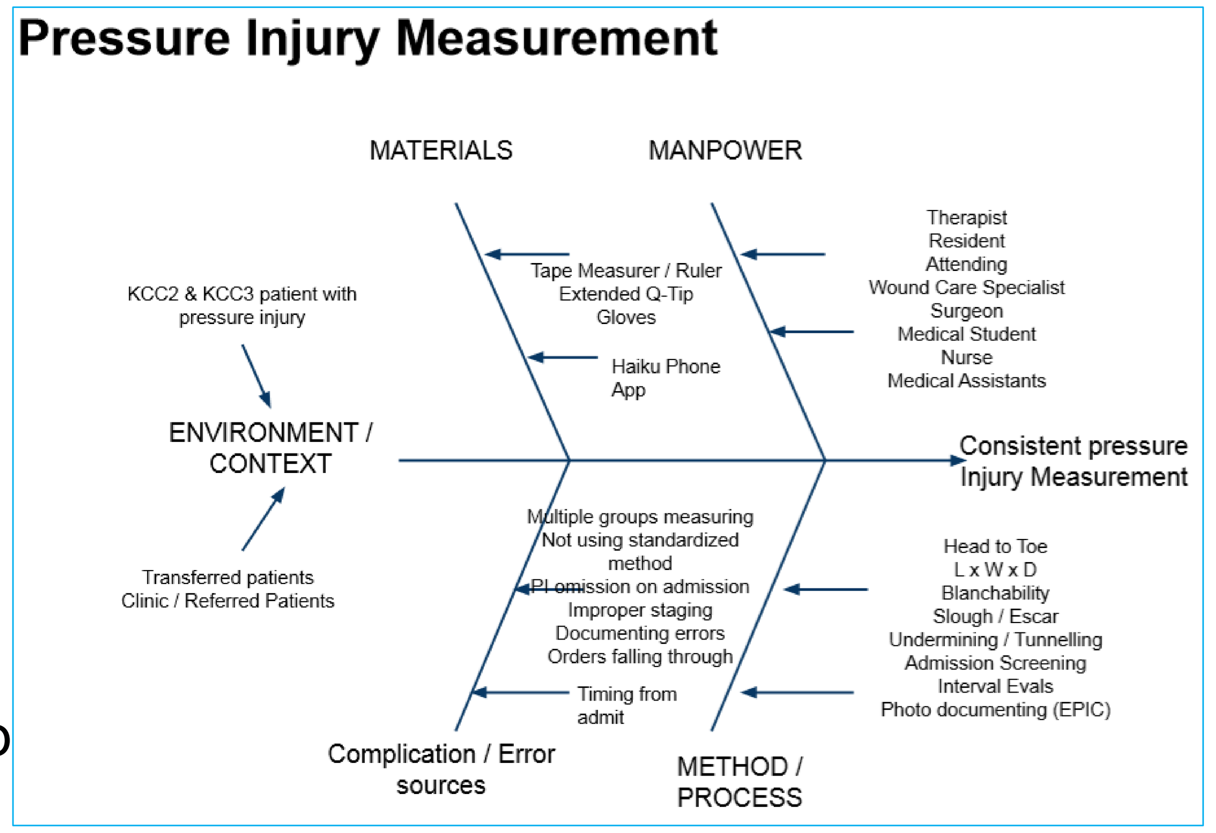
Methods

Physical medicine and rehabilitation residents, attendings, physical therapists, bedside nurses, wound care nursing, and the nurse manager were included in determining the current standards and practice of pressure injury assessment. A fishbone diaphragm was used to determine current barriers and challenges to assessing the size of a pressure injury of a patient with a spinal cord injury. Physical therapists who participate in pressure injury assessment, residents who rotate on the unit, attendings who admit patients to the unit, and registered nurses working on the rehabilitation unit were asked to measure three pressure injuries on a plastic model for length and width without any further instructions. The authors provided written instructions for the definition of the measured length and width of a wound and then required participants to watch a short video produced by the authors on measuring the length and width of a wound(https://photos.app.goo.gl/H59nd6o4H8STWSoy6) . Residents were asked to repeat the length and width measurements of the three pressure injuries after reviewing the definitions and watching the short video.

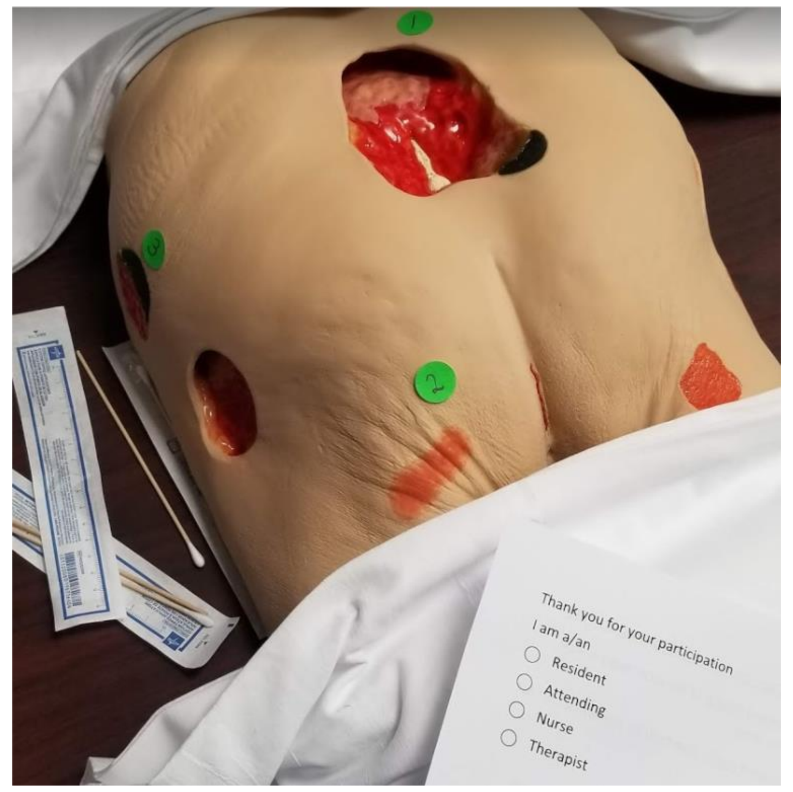
Results

For each of the three wounds the length, width, and area where used to calculate the mean, variance, Interquartile Range, and standard deviation on initial wound measurement and again after education with written instructions and viewing the educational video. Interquartile range narrowed, variance decreased, and standard deviation decreased in all values calculated except for Wound #3 width and area. F-test was calculated on variance before and after wound care measurement education. The F critical value was used from a standard table with 24 degrees of freedom. F-test showed significant reduction in variance between wound #1 and #2 length measurement and wound #2 width measurement. Overall wound measurement became more consistent after education in writing and with video demonstration of wound care length and width measurement.





Fishbone diagram use for QI project



Plastic Model used for pressure injury assessment

Conclusion

Education increases consistency in measuring a pressure injury and decreases variability in length and width of wound care assessment. Ongoing efforts should focus on continued education to make sure all members of the team have one consistent method for the assessment of pressure injury length and width.

References

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