Automated Patient Repositioning Improves Quality, Safety and Satisfaction for Both Patients and Caregivers

Angela Becker, RN MSN NE-BC, Caroline Pritchard, MSN RN CDE,
Judi Godsey, PhD MSN RN

BACKGROUND

- The Bureau of Labor Statistics reports that approximately 35,000 healthcare workers suffer on the job back, neck and shoulder injuries each year
- The majority of these injuries result from boosting patients up-in-bed 10-20 times each day when gravity causes them to slide down in bed
- NIOSH recommends manually lifting only 35 lbs of weight
- ANA National Healthcare Worker Protection Act re-introduced into Congress in 2015 outlining the shift to a zero manual lifting strategy
- Manual boosting creates a physical injury risk and an uncomfortable and potentially embarrassing experience for the patient
- HAPIs are considered a preventable injury that have been clinically associated with a lack of frequent boosting as a result of increased interface pressures as the patient slides down in bed (Hermans & Call, 2015)
- New technologies and approaches to caring for patients must be sought to keep healthcare workers and patients safe

PROJECT OBJECTIVE

The primary objective of this research project was for Bon Secours St. Francis Hospital (BSSF) to obtain caregiver and patient feedback/perceptions of safety, efficiency and satisfaction associated with the use of an automated patient repositioning (APR) technology (see image below), a device that allows a caregiver to boost a patient up-in-bed with the push of a button compared to traditional manual boosting.

A secondary objective of this research project was to organize, correlate and compare the quantitative and qualitative results with an identical research project with the same protocols, methods and instruments utilized and completed by The Christ Hospital Health Network (TCHHN).

METHODS

Design:

- A replication study using electronic surveys and shared data collection procedures was designed by TCHHN and utilized by BSSF to collect both caregiver and patient feedback

Setting:

- TCHHN is a 555 bed, acute care, non-profit hospital system located in Cincinnati, Ohio
- BSSF is a 204 bed, acute care, non-profit hospital system located in Charleston, South Carolina

Population:

- BSSF chose to replicate the study population used at TCHHN which included intervention and control groups of both caregivers and patients from medical surgical settings

Instrument:

- Electronic survey instruments were used by both TCHHN and BSSF for data collection and subsequent interpretation

Intervention:

- TCHHN shared their IRB approved research protocol, informed consents, data collection tools, electronic survey access and e-mail invitation documents with BSSF
- TCHHN assisted BSSF with the preparation of all study documents to make them specific to their institution
- BSSF applied for and obtained IRB approval
- Survey links (for caregivers) and paper surveys (for patients) were created by TCHHN and shared with BSSF in order to support the data collection process
- Continuous communication between TCHHN and BSSF occurred throughout the research project to ensure consistency for final comparison and interpretation of the data and results

RESULTS/OUTCOMES

This research project produced the following main finding:

- There was consistent and positive feedback on automated versus manual boosting from caregivers and patients at both TCHHN and BSSF as illustrated in the below graphs

Other noticeable outcomes from the two projects included:

- **0 caregiver injuries** from boosting at both TCHHN and BSSF in areas since implementation of the automated repositioner
- **0 HAPIs** at both TCHHN and BSSF in areas since implementation of the automated repositioner
- Multiple positive patient and family comments about the comfort of automated repositioning at both TCHHN and BSSF in areas where implemented

CONCLUSIONS AND FUTURE IMPLICATIONS

- Project collected comparable data between TCHHN and BSSF that showed consistent and positive feedback from both caregivers and patients about automated versus manual boosting
- Nursing practices and protocols could be standardized and implemented to ensure caregivers boost a patient up-in-bed every time they walk into the patient's room
- Consider future expansion or facilities where multi-site replication studies/projects similar to this could be conducted