

# Reduction in Patient Handling Injuries by Promoting a Culture of Safety and Use of Air-Assistive Technologies

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## Background

- A 26-bed medical-surgical unit at a large academic medical center averaged one to two staff injuries per year related to patient handling.
- This increased to six staff injuries related to patient handling in the first nine months of 2019.
- The unit's mobility specialist also observed that staff were not utilizing the available patient handling equipment.
- Spearheaded by the mobility specialist with support from unit and service leadership, a performance improvement project was created to investigate the cause for the increase in staff injuries.
- With the national average cost of a workers' compensation claim related to patient handling > \$15,000 and indirect costs increasing the total cost of injuries by 2-4 times that amount (OSHA, 2013), it was imperative that this unit look at why these injuries had dramatically increased and why staff were not utilizing available equipment.

## Objectives

- Decrease musculoskeletal injuries among unit staff related to boosting and repositioning patient handling activities
- Improve staff compliance with patient handling equipment to better align with our hospital's Minimal Lift Policy by the development and maintenance of a unit safe patient handling (SPH) culture with a comprehensive, evidence-based SPH program

## Methods

- A PDSA Model was utilized to decrease staff injuries related to patient handling and move toward a culture of safety.
- Looking at historical injury data, the problem was identified.
  - A literature review was used to identify best practices of using air-assistive technologies to boost and reposition patients in bed.
  - Staff were surveyed to identify barriers to utilizing the air-assistive technology (AAT).
  - Interventions focused on increased safety awareness, equipment availability, education, and unit policy changes based on best practices.

## Data

### Initial Staff Survey Results: 20 respondents (45% response rate)

- 100% of respondents know where to find AAT, if not already under patient
- 85% of respondents are very confident utilizing AAT and air canisters
- Only 10% of respondents reported 'always' using the AAT according to policy
- Less than half (45%) of respondents were 'very comfortable' asking peers to use the AAT
- Time and equipment barriers were the most frequent reasons for not using the AAT
- Additional comments: 8/11 expressed support for promoting SPH and use of the AAT. 3/11 were related to patient characteristics or equipment limitations

## Findings/Results

### Root Causes with Solutions:

Non-adherence to established best practices:

1. Change in boosting, repositioning, and transferring practices over time. *Increased awareness and provided staff education about benefits of air-assistive technologies: during morning safety briefs and staff meetings (Aug 2019).*
2. Traditional practice (draw sheets) still easily accessible. *Eliminated draw sheets from unit linen par (September 2019)*
3. Air canisters were not easily accessible (low quantity). *Increased number of air canisters on the unit so each room has one (November 2019)*
4. There wasn't a good place to store all of the air canisters in the patient rooms. *Installed trays on computer stations in each patient room to store air canisters (November 2019)*
5. Some staff members feel uncomfortable asking their peers to utilize the air-assistive technologies. *Unit champions and positive reinforcement of behaviors to help encourage culture shift*
6. Air-assistive technology mats can bunch up under the patient or slide out from under the patient after or between uses *Trial new AAT to help alleviate bunching/sliding. (Trial, February 2020. Approved for usage. On hold due to Covid-19)*

Since project implementation, there have been no staff injuries related to patient handling on Unit 6-1400 (from Fall, 2019 to Jun, 2021). Based on increases in supply requests, staff are utilizing more air-assistive technologies. Post-implementation survey results to identify staff satisfaction have been delayed due to additional COVID-19 pandemic responsibilities.

## Conclusions/Applications to SPHM Practice

- Reflecting on the project, having direct staff input was instrumental to its success of moving toward a culture of safety.
- The physical changes (e.g., draw-sheet removal and adding equipment) were fairly simple compared to changing staff attitudes toward using the equipment.
- Consistent and repetitive messaging and education regarding the importance of safety is helping to change the culture.
- With end-user buy-in, leadership support, and a mobility specialist champion to spearhead change and keep it fresh, a culture change is occurring and fewer staff are getting injured.
- This medical-surgical unit is now a model for other units on how to encourage staff to use SPH techniques and equipment, involve staff in policy changes and implementation, and consistently holding each other accountable for keeping themselves and their patients safe.
- Future direction of the project will include dissemination and expansion of its best practices, allowing for improvements throughout our facility to decrease staff injuries related to patient handling.
- There are also plans to provide a post-survey to staff but this is currently on hold due to added responsibilities related to COVID-19.

