Preventing Pressure Injuries through Innovation
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Background
- Hospital-acquired pressure injuries (HAPIs) are a significant problem worldwide, increasing morbidity and mortality for millions of people
- HAPIs are associated with 60,000 deaths annually in the U.S.
- For patients: increase length of stay, increase risk of infection, decrease quality of life
- For organizations: increased workload, increased cost of care, and decreased reimbursement are adverse outcomes for nurses and healthcare organizations

Purpose & Specific Aims
Purpose: 7-week pilot to evaluate the effectiveness of a turn dashboard for patients at risk of developing HAPIs
- Aim 1: Decrease HAPIs
- Aim 2: Increase turn compliance
- Aim 3: Determine usability of dashboard

Intervention: Turn Dashboard

Methods
Design: Pre-intervention/ post-intervention pilot
Setting: 20-bed adult medical-surgical unit
Sample: Adult medical-surgical patients at risk for skin breakdown
Measures: HAPI counts, turn compliance (%), Systems Usability Scale (SUS)
Analysis: Descriptive, Fisher’s Exact Test, Chi Square, Mann-Whitney-U

Results

Aim 1:
- Pre-intervention, 4/61 patients (6.6%) developed HAPIs
- Post-intervention: 0/19 patients (0%) developed HAPIs
- Statistical analysis not conducted due to small sample size

Aim 2:
- Mean turn compliance increased by 2.4%
- Median turn compliance increased by 8.3%
- Mann-Whitney U test indicated the results were not statistically significant
- U (Pre-intervention)=61, N=61

Aim 3:
- Mean SUS rank percentile conversion was 58.3 (SD 14.6)
- Inconsistent answers for most questions
- Most respondents felt the dashboard was cumbersome to use
- Did feel confident using dashboard and would use frequently
- Comments included:
  - More training needed on use
  - Need for auto-refresh feature

Discussion
- Incorporating a dashboard allows staff to quickly identify which patients need to be turned but does not ensure patients are turned
- Real-time, automatic tracking is needed to significantly impact turn compliance and enhance workflow
- Decrease in HAPIs cannot be attributed to the dashboard due to confounding factors
- Nurses perceived the dashboard to have a low usability with a mean SUS rank percentile of 58.3

Limitations
- Post-intervention group smaller than the pre-intervention group
- Low response rate to the SUS survey: Only 3 nurses completed
- Pilot unit became COVID-19 unit during implementation, changing patient census
- Only one auditor: recommend at least two for consistency

Conclusion
- Adding technology to robust pressure injury prevention intervention bundles can assist in decreasing HAPIs by increasing turn compliance
- Implications for Practice:
  - Dashboards that automatically track turns significantly increase turn compliance compared to this project’s intervention
  - Technologies, such as dashboards, can improve other nurse sensitive indicators, such as falls, or catheter associated urinary tract infections
- Future Projects/ Research: focus on different patient populations

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