Preventing Pressure Injuries through Innovation Alainna Crotty MSN, APRN, AGCNS-BC, NE-BC, Dr. Michelle Felix DNP, CRNP,

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Background

- • Hospital acquired pressure injuries (HAPIs) are a significant problem worldwide, increasing morbidity and mortality for millions of people¹
- HAPIs are associated with **60,000** deaths annually in the U.S.^{2,3}
- For patients-increase length of stay, increase risk of infection, increase pain, increase mortality, and decrease quality of life^{4,5,6}
- For organizations-Increased workload, increased cost of care, and decreased reimbursement are adverse outcomes for nurses and healthcare organizations^{6,7}

Purpose & Specific Aims

Purpose: 7-week pilot to evaluate the effectiveness of a turn dashboard for patents who are at risk of developing HAPIs

- Aim 1: Decrease HAPIs
- Aim 2: Increase turn compliance
- Aim 3: Determine usability of dashboard

Intervention: Turn Dashboard

	UNIT	•	BED T	DODID T	BRADEN_RISK T		START_TIME T	FLOWSHEET_DONE T		ROW_COLC
Т	ie.	т	Τ.	T	т	T	т	T	Τ.	
	SE		5E-10A		18				4:7:39	RED
	5E		5E-9A		18				24:1:39	RED
	5E		5E-10A		17				0:3:0	RED
	5E		5E-14A		18				0:8:0	RED
	5E		5E-20A		9				0:2:0	GREEN
						Met	ho			

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-

Results

OR T ORDER_STOP_TIME T

Demographic characteristics	Pre-	Post-	Р
Demographic characteristics	Intervention	Intervention	1
	(N = 63)	(N=21)	
Age, mean (SD)	79.46 (12.41)	75.33 (16.56)	.230ª
Braden Score, mean (SD)	14.16 (2.51)	14.9 (2.76)	.253 ^a
Length of Stay, mean (SD)	11.09 (9.71)	15.4 (24.94)	.252 ^z
Gender, n (%)			
Male	37 (58.7)	11 (52.4)	.611 ^b
Female	26 (41.3)	10 (47.6)	
Type of Admission, n (%)			
Medical	52 (82.5)	17 (81.0)	.609 ^c
Surgical	10 (15.9)	3 (14.3)	
Neuro	1 (1.6)	1 (4.8)	
Race, n (%)			
Black	25 (39.7)	8 (38.1)	.899 ^c
White	25 (39.7)	8 (38.1)	
Asian	2 (3.2)	0(0)	
Hispanic	1 (1.6)	0 (0)	
Inspanie			

^{b=}Chi square

^c=Fisher's Exact Test

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 (Npre-intervention=61, Npostintervention=19)=620.50, z=.464, p=.643





im 1:

- Pre-intervention, 4/61 patients
- (6.56%) developed HAPIs
- Post-intervention: 0/19 patients (0%)
- developed HAPIs
- Statistical analysis not conducted due to small sample size



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

- confounding factors
- rank percentile of 58.3

- patient census

- **Implications for Practice:**

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Society, 20(4), 309-315. 10.1177/1751143718804682 [doi]

Acknowledgements & References

The authors of this project would like to acknowledge Ms. Malisa Gomez, MAJ India Stover, Ms. Kimberly Tapia, and LTJG Elohor Okoko as well the nurses and stakeholders who helped make this project successful. The views expressed in this presentation are those of the authors and do not necessarily reflect the official policy of the Department of Defense or the U.S. Government. Acauired Pressure Ulcers/Injuries (HAPU/I) Prevention. https://www.centerfortransforminghealthcare.org/en/improvement-topics/hospital-acquired-pressure-ulcers-prevention e, J., & Song, M. R. (2018). Predictors of hospital-acquired pressure ulcers among older adult inpatients. Journal of Clinical Nursing, 27(19-20), 3780-3786. https://10.1111/jocn.14600 [doi] 5. Padula, W. V., & Delarmente, B. A. (2019). The national cost of hospital-acquired pressure injuries in the United States. International Wound Journal, 16(3), 634–640. https://doi.org/10.1111/iwj.13071 2016). Preventing Pressure Injuries. Quick Safety, 25, 1-4. https://www.jointcommission.org/-/media/deprecated-unorganized/imported-assets/tic/system-folders/ioint-commission

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SCHOOL of NURSING

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^{8,9,10,11}

Decrease in HAPIs cannot be attributed to the dashboard due to

Nurses perceived the dashboard to have a low usability with a mean SUS

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

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

• Dashboards that automatically track turns significantly increase turn compliance compared to this project's intervention^{8,9,10,11}

• 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