



Leveraging Novel Technology to Decrease Hospital-Acquired Pressure Injuries

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BACKGROUND

- Hospital-Acquired Pressure Injuries (HAPI) are costly¹ and have risen (10%) while other Hospital-Acquired Conditions (HAC) have decreased by 17%².
- Similar to published rates³, hospital survey suggested that the compliance rate with 2-hourly turns was in the 60%'s and that gaps in documentation existed, which could open the facility to litigation by California Department of Public Health (CDPH).
- Routine repositioning is strongly associated with HAPI reduction³, and the 2019 International Guidelines recommend using cueing technology (CT) to increase adherence to turn protocols.⁴

PURPOSE

To assess the impact of wearable technology that cues staff on both turning frequency and required turn-angle magnitude on the rate of HAPI.

METHODOLOGY

- A multi-disciplinary nurse-lead team managed and executed the pilot.
- Funding was sought from the hospital's philanthropic arm at the facility.
- Success criteria were set as achieving a minimum of 50% HAPI reduction, 60% reduction was identified as stretch goal.

METHODOLOGY CONT.

Implementation

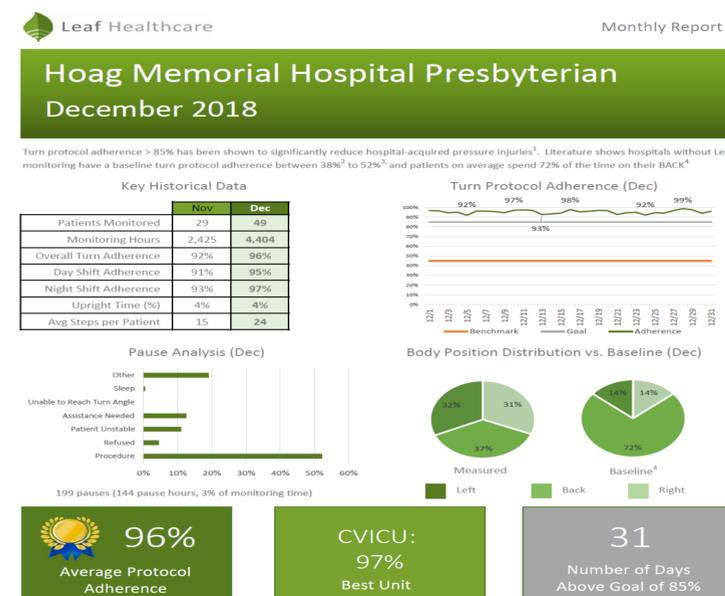
- Patient wearable, wireless monitoring system was implemented on the CCU and CVICU units.
- Automatic monitoring and documentation of all turns-in bed and chair- were initiated per the following criteria:
 - Minimum 20-degree lateral turn angle in bed; 10-degree tilt in chair
 - Minimum 15-minute tissue recovery time between turns
 - 2-hour turn frequency
 - Staff received hands-on education on how to safely and adequately reposition patients



Data Collection

- A baseline turn protocol adherence study was completed before the pilot.
- Daily and monthly reports provided feedback on the turning program to measure progress.
- HAPI and unit census data was collected for the Pilot period and for the same period previous year.
- Staff were surveyed on their perceptions regarding the effect of the CT on their workflow and communication.

RESULTS



Monthly reports provided feedback.



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RESULTS CONT.

	Baseline	Pilot
Total Unit Patient discharges	809	875
# Patients Monitored		231 (26%)
Turn Protocol Adherence	67%	95%
Increase		41%
HAPI Incidence %	2.97%	0.46%
HAPI Reduction %		84.6%
Chi-square		15.6477
p-value		<.0001

- HAPIs were reduced by 85%; the difference was statistically significant.
- Pilot produced an estimated return on investment (ROI) of \$389,480 in harm avoidance.
- Program was continued after the pilot and was expanded to another campus.
- Staff reported that wedges provided adequate offloading when compared to hospital pillows

CONCLUSIONS

- Using cueing technology has a significant impact on HAPI rates in Critical Care Units.
- Nursing leadership support and involvement were vital for pilot funding, approval and staff acceptance.

REFERENCES & ACKNOWLEDGMENTS

