

Title: Optimizing patient turning resources by using a novel wearable technology.

Authors: Margaret Doucette, DO, Stephanie Adams, RN, Kelsey Cosdon, RN, Kattie Payne RN PhD. VA Medical Center, Boise Idaho.

Category: Information/Education report (Quality improvement project)

Background

Patient turning is mainstay of pressure ulcer prevention.¹² Prior studies have estimated compliance rates between 30%³ and 66%.⁴⁵⁶

Methods

Wearable monitoring system[†] shown to improve turn compliance⁶ was implemented on 27-bed medical/surgical unit. Two-hour turn protocol was assigned to all patients per unit protocol.

Results

Sixty-nine patients (mean Braden 19.4, min 13, max 23) were monitored over 31 days for 3287 hours.

Average turn compliance was 90.3%. Least compliant times coincided with shift changes, high patient admit days and medication delivery.

Patients with high Braden scores (19-23) repositioned up to 42 times per hour. Lower Braden scores were associated with fewer hourly repositionings.

Project Outcomes

The data provided evidence to exclude patients with high mobility/activity subscores from turn protocol. Compliance by hour of day indicated that clustering certain nursing tasks would improve staffing effectiveness and compliance. Monthly compliance data was adopted as quality metric.

† Product notation: Leaf Patient Monitoring System, Leaf Healthcare, Pleasanton CA

¹ AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, HCUPnet, Nationwide Inpatient Sample, 1993-2006

² National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.) Cambridge Media: Perth, Australia 2014.

³ Bours GJJ, Halfens RJG, Abu-Saad HH, Grol RTP. Prevalence, prevention, and treatment of pressure ulcers: Descriptive study in 89 institutions in The Netherlands. *Research in Nursing and Health* 2002; 25: 99–110.

⁴ Lyder CH, Preston J, Grady JN, Scinto J, Allman R, Bergstrom N et al. Quality of care for hospitalized medicare patients at risk for pressure ulcers. *Arch Intern Med* 2001;161:1549-54.

⁵ Gunningberg L. Are patients with or at risk of pressure ulcers allocated appropriate prevention measures? *Int J Nurs Pract* 2005;11:58-67

⁶ Schutt S, Tarver C, Pezzani M. Advancing pressure ulcer prevention efforts: Innovative technology improves compliance with patient turning protocols. Abstract. ANCC Magnet 2014.