Background

Although patient turning is the mainstay of pressure ulcer prevention, it has been well established that compliance to turning protocols is poor and varies from 38%-66%. This performance improvement and practice innovation project was designed to improve our understanding of patient movement and to optimize patient turning on a busy 27-bed medical/surgical unit, where patients are prescribed a 2-hour turning protocol.

Methods

An FDA-cleared, wearable wireless patient monitoring system (Leaf Healthcare, Pleasanton, CA) was deployed on the unit. The system continuously monitors patient movement and records all patient turns. Individualized turning parameters could be prescribed for each patient. Visual cues indicated when a turn was due and the turn clock automatically reset for any turns (including patient self turns) that met prescribed angle and tissue decompression thresholds.

Results

3,287 hours of position data were gathered from 69 patients over 31 days. Braden scores were recorded on all patients. Average turn protocol compliance was 90.3% but varied widely throughout a 24-hour period.

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Periods of lower compliance coincided with shift changes, typical patient admit times and medication delivery times. Highest compliance was found in patients with Braden scores of 19-23 and below 14 (92%). No patients below 13 were monitored during the time period. Patients considered at mild risk (15-18) had the lowest turn compliance (79%), which supports literature claims that patients’ level of mobility is generally overestimated by nursing staff.

The project outcomes section includes insights on the benefits of using technology to assist with turning protocols and highlights improvements in patient care and staff efficiency. The project outcomes also emphasize the importance of adjusting staff levels during periods of high nursing demand to improve patient care.

References