Mitigating Pressure Injury Exposure Through LEAF's Innovative Wearable Sensor Technology

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Healthcare facilities exposed to pressure injury litigation too often fail to defend patient malpractice claims because they cannot prove that caregivers provided reasonable turning and repositioning to prevent skin breakdown and deterioration. The modern defense of pressure injury claims focuses upon demonstrating that a patient's comorbid health conditions and risk factors alone resulted in unavoidable skin impairment. The problem with the defense strategy as currently implemented is that facilities often fail to prove that caregivers provided reasonable turning and repositioning in response to the heightened needs of patients prone to pressure injuries. Peer-reviewed and regulatory standards require facilities to prove the implementation of reasonable care in response to comorbid risk factors to demonstrate that a wound was clinically unavoidable. However, too often facilities fail to meet the standard of establishing the provision of reasonable care by failing to routinely, systematically, and accurately document turning and repositioning consistent with a patient's needs.

The LEAF pressure injury wearable sensor addresses this litigation problem by corroborating patient turning and repositioning through automated technology that captures offloading without the need for caregivers to document their care. The LEAF sensor offers an innovative technological pathway for demonstrating the provision of reasonable turning and repositioning without increasing the documentation responsibilities of nursing staff.

THE PROBLEM POSED BY PRESSURE INJURY LITIGATION

Hospital-acquired pressure injuries (HAPI) are one of the most common hospital-acquired conditions and have higher annual mortality than falls, adverse drug events, ventilator-associated pneumonia, and central line-associated bloodstream infections combined.[1] While hospital quality improvement programs have made great strides in reducing all other hospital-acquired conditions, the latest government data shows that HAPIs have continued to increase.[1] In a recent survey, U.S. nursing professionals reported that pressure injuries have further continued to rise during the COVID-19 pandemic, during which pressure injury prevention efforts such as turning and repositioning have been suboptimal.[2]

Besides being costly and non-reimbursable, facility-acquired pressure injuries are also one of the most litigated issues in healthcare.[3,4] Two-thirds of plaintiffs receive payments at an average of more than $200,000 per paid claim.[5]

AVOIDABLE VS. UNAVOIDABLE PRESSURE INJURIES

The National Pressure Injury Advisory Panel (NPIAP) recognizes that some pressure injuries are unavoidable. In its 2010 white paper, the organization defined a pressure injury as unavoidable if "the provider evaluated the individual's clinical condition and pressure ulcer risk factors; defined and implemented interventions consistent with individual needs, goals, and recognized standards of practice; monitored and evaluated the impact of the interventions; and revised the approaches as appropriate."[6]

The NPIAP further clarified unavoidability in a 2014 white paper by emphasizing that while comorbid conditions can contribute to a pressure injury, a patient's risk factors alone should not be the sole determinants of unavoidability.[7] Rather, the NPIAP indicates that facilities must thoroughly assess the documentation of preventative measures implemented to determine whether a pressure injury was unavoidable.[8,9]

Also, in the acute care setting, a pressure injury may be deemed unavoidable if the patient's condition rendered the delivery of pressure injury prevention clinically unsafe; for example, if the patient was hemodynamically too unstable to tolerate position changes. For hemodynamically unstable patients, the latest pressure injury Guideline recommends frequent, small position shifts when the patient does not tolerate full position changes.

THE TURNING AND REPOSITIONING DOCUMENTATION IN PRESSURE INJURY CASES

The standard of establishing the existence of an unavoidable wound under the NPIAP standard requires proof of implementation of reasonable care, including turning and repositioning. However, research has shown that turning/repositioning protocols, in general, have a low staff adherence,[10,11] in many cases, less than 60%.[12,13] Further, turning and repositioning is mostly documented manually and when time allows. In a recent study examining nursing documentation regarding patient repositioning events, the mean time between documented turns averaged 6.6 hours and ranged between nursing units from 3.8 to 12.1 hours.[14]

Repositioning documentation that reflects preventative care not being provided per facility protocol is problematic when defending a healthcare facility during pressure injury litigation. Plaintiffs' attorneys who endeavor to prove pressure injury claims capitalize on these documentation gaps to argue that the healthcare staff failed to provide reasonable care. Also, absent any proof of reasonable turning and repositioning, healthcare facilities cannot meet the established standards for pressure injury unavoidability.

End-of-shift documentation often leads to incomplete, sporadic, and unreliable proof of reasonable patient offloading. The documentation of turning and repositioning events should therefore ideally take place in real time and include the position to which the caregiver repositioned the patient. If caregivers cannot reposition the patient on time per facility protocol, the record should document the reason for a delayed repositioning, *i.e.* other bedside or nursing procedures such as the placement of central lines or enteral feeding requiring a semi-recumbent position, or periods of hemodynamic instability during which the patient can tolerate only small incremental position shifts.[15]

CAN TECHNOLOGY HELP?

Manual documentation is resource-intensive and takes as much as 25% of nursing time away from direct patient care.[16] On average, critical care nurses enter more than 600 manual data points into electronic health records per 12-hour shift.[17] New technologies, however, can ease this burden by automatically documenting patient position and mobility events while providing visual cues to nursing staff that remind them which patients have been immobile past their repositioning protocol and therefore need mobility assistance.

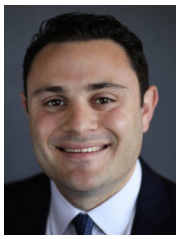
The LEAF Patient Monitoring System has been shown to be effective in increasing compliance to patient repositioning protocols[10,11,13] and reducing facility-acquired pressure injuries.[18,19,20] The system provides real-time visual repositioning reminders to staff based on patient movement. Patients wear a small adhesive sensor on their torso, which sends color-coded patient position data to dashboards and nursing computers located on the unit. The system also interfaces with electronic health records to automatically document patient mobility events. In a 2022 study about repositioning documentation,[14] the system increased the number of documented turning and repositioning events by 165% compared to manual documentation methods.

SUMMARY

Pressure injuries are one of the most common lawsuits in healthcare.[5] While nursing homes are the most common targets for pressure injury litigation, hospitals are defendants in almost a quarter of all pressure injury lawsuits.[4]

Although many pressure injuries can be avoided with good clinical practice, many are unavoidable. The most common misperception among clinicians is that unavoidability can be determined based on patient acuity, comorbidities, and other risk factors. However, the current guidance from NPIAP and CMS is that unavoidability can only be determined if appropriate preventative measures were implemented. In order to mount an effective defense, diligent charting of interventions and preventative measures is required. From a legal perspective, documentation of patient turning and repositioning events is often suboptimal, which provides an area for plaintiffs' attorneys to exploit. The LEAF Patient Monitoring System has been shown to improve compliance with patient turn protocols and provide more complete documentation of repositioning events through automated technology that captures patient repositioning, while at the same time, imposing no additional documentation requirements upon the caregiver. The objective of implementing the LEAF technology in healthcare settings is to reduce a facility's litigation risk, reduce pressure injury incidence, and improve patient and family satisfaction.

FOR ANY FURTHER INFORMATION OR QUESTIONS, PLEASE CONTACT:



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