

REDUCING FALL RISK WITH LED LIGHTING

Falls are often tracked and trended throughout the healthcare continuum. Quality metrics and measures are commonly reported through performance improvement and benchmarking. These methods are used to help reduce the risk of patient harm which may result from falls. Care planning encompasses reviewing ways to decrease falls through assessment, mobility planning, assistive devices, physical and/or operational therapy, and observation.

WHY ARE FALLS THE LEADING CAUSE OF INJURY RELATED DEATH?

According to the Centers for Disease Control and Prevention (CDC), falls are the leading cause of injury related deaths for people ages 65 and older. This is because falls may occur during the evening hours and may be due to confusion, agitation, fatigue, disease process or Sundowner's Syndrome.

WHY ARE FALLS SO COSTLY?

Falls result in expensive costs because the medical attention needed to assist with patient falls could lead to costly medical care and diagnostic testing such as X-Rays, MRIs, and hospital admissions. The economic impact of falls is immense, with fatal falls estimated to cost \$754 million, and non-fatal falls \$50 billion annually (Florence et al., 2018).

FALL RISK REDUCTION TIPS

Researchers at the Mount Sinai Light and Health Research Center are building evidence to support Medicare/Medicaid coverage for in-home use of an effective lighting system (Jones, 2023). These systems use visual-cue lighting to help reduce falls among older adults by illuminating lights around patient and resident door frames. This is helpful

because it allows the patients to see where they are and where they are heading, for example the restroom. The lighting helps with ability to see the call light, reach for the TV remote control, grab a sip of water, and/or phone if they want to make a call. Providing the patients with this guidance may also relieve feelings of stress or anxiety as they regain clarity from being awakened.



Additionally, this allows staff members to perform frequent rounding without putting the light on overhead, which may accidentally startle or awaken the patient causing additional fear, anxiety and/or confusion. Just like hand off communication at shift change, automatically turning lights on at 7pm and off again at 7am would be a great way to manage patient care seamlessly throughout the night.

COMBATING FALLS WITH LED LIGHTING

According to Grant et al. (2022), upgrading the lighting system to ambient lighting, allows the incorporation of higher intensity blue-enriched white light during the daytime and lower intensity lighting overnight. This has proven to be effective low-cost, low-burden, fall prevention strategies that have reduced fall risks in senior living. Blue-enriched, higher-intensity light exposure during the day can improve alertness, cognition and subsequent nighttime sleep, while blue-depleted lower intensity light exposure at night can help facilitate sleep. This is a great way to help reduce falls within your organization all while following the [National Patient Safety Goals](#) of decreasing falls and fall risk which applies to all assisted living, home care, and nursing care centers.

SUMMARY

When you think about the difficulty of the average senior patient or resident trying to rise from a bed or seat, imagine how lighting can help with balance and purposeful movement. Proper lighting can improve human health, productivity, and safety, while creating an immediate positive impact on patient wellbeing.

References

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