

## **VIDEO MONITORING TECHNOLOGY AS THE FALL PREVENTION**

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Patient falls statistics are alarming. According to Centers for Disease Control and Prevention (CDC) (2016a), "Every second of every day in the United States an older adult falls, making falls the number one cause of injuries and deaths from injury among older Americans." Amongst older Americans, falls remain the number one primary cause of injuries, as well as death from injury (CDC, 2016b). Moreover, this statistic is equivalent to 29 million falls, 3 million emergency department visits, 800,000 hospitalizations, and 28,000 deaths (CDC, 2016b). Additionally, falls are a major safety issue in any setting - at home, at work, on the street, in hospitals, and long-term care. According to the Agency for Health care Research and Quality (AHRQ) (2013), every year between 700,000 and 1,000,000 falls happen in the hospital setting. Many programs and interventions to prevent falls and fall-related injuries have been created and tested.

The video monitoring (VM) technology represents a new way to address the challenge of avoiding falls by providing additional fall risk intervention, assisting with maintaining patient safety and helping to decrease fall rates. These VM systems include the capability of communication with the patient in the form of two-way remote dialogue to cue patients to stay in bed and alerting nurses if needed.

The study was conducted to examine the effect of video monitoring technology as the fall prevention intervention to reduce falls in high-risk fall patients. In this study, the independent variable is the intervention - video monitoring technology - whereas the dependent variable is a number of falls that were sustained. The historical fall rate data was used as the baseline data. After the implementation of VM systems, the following data was collected - the number of falls, numbers of patient days on 4 inpatient units (Stroke unit 40 beds, Brain Injury unit 28 beds, Comprehensive Medical unit 36 beds, and Spinal Cord Injury/Multitrauma unit 36 beds) at the University of Maryland Rehabilitation & Orthopaedic Institute. A number of falls was collected through the risk management system, patient days was collected using the admission system. The fall rate was calculated utilizing a number of falls and patient days, as the Falls per 1,000 Patient Days.

VM technology, although a novel and relatively-untested technology, has been shown to be effective in reducing falls in all four units.