

Case Study: Reducing Falls While Improving Staff Efficiency in Skilled Nursing Through Innovative BedSense Technology

Categories:

- ◆ Reduced Response Time
- ◆ Reduced Incidences
- ◆ Increased Resident/ Staff/Family Safety and Satisfaction
- ◆ Increased Peace of Mind
- ◆ Improved Outcomes
- ◆ Reduced costs
- ◆ Person-Centered Care
- ◆ Better Night's Rest

About the Organization

Organization Name:

Motion Picture & Television Fund

Main Contributor:

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Organization Type:

Residential Care Facilities for the Elderly (RCFE) and Skilled Nursing Facility with an ambulatory Memory Care unit

Organization Description:

Since 1921, the Motion Picture & Television Fund (MPTF), a 501(c)(3) charitable organization, has been committed to the well-being of the men and women in the entertainment community.

Project Description

In 2022, MPTF initiated a pilot program in its memory care unit using the cutting-edge BedSense App technology from Momo Medical. It empowers overnight care teams with real-time data, minimizing intrusive room checks and ensuring residents enjoy undisturbed rest. Targeted goals for the first year of the pilot included training on the new BedSense App for 85% of staff, a 25% reduction in falls, and 60% of the staff favorably rating this intervention.

Safety Technology Category

Fall Detection and Prevention

System Embodiment

Momo BedSense

Internet-connected bed sensors together with the BedSense App show live and historical insights on smart devices carried by nursing staff. The actionable insights allow staff to be at the right place at the right time to prevent incidents and to quickly detect changes in residents' conditions. The care staff now know who needs their help, can prioritize their work, and provide person-centered care.

Business Model

Based on the results of the pilot program, MPTF is working to make the Momo Medical BedSense the standard of care throughout its skilled nursing facility. Maintaining residents' safety and quality of life aligns with MPTF's mission. The cost of this intervention is anticipated to be offset by the reduction in fall-related costs and liability.

Implementation Approach

The Momo BedSense app was introduced by the Department of Innovation and launched with approvals from administration, the director of nursing, and the Medical Quality Review Committee. Introduction and input from staff began a week before the bed sensors were installed and training was comprised of in-person demonstrations.

Evaluation metrics were established to include occurrence reports of fall-related incidents, CMS CASPER reports, staff interviews, and staff satisfaction surveys.

To allow the care staff to have a complete overview of all their residents and adopt a more efficient way of working, the Momo BedSense was installed on every bed in the memory care unit. The live overview in the Momo App accurately shows the resident's conditions. Notifications are sent to the phone when the resident is getting up, often up to a minute before they leave the bed.

A two-week period of concurrent use with the original bed sensors was planned to give staff the opportunity to gain familiarity and trust with the Momo technology. During this initial period, training and support were provided by the Innovation Department and Momo Medical to all three shifts. At the end of the second week of dual sensors, the original sensors were removed. Innovation staff and nursing supervisors checked in with staff regularly to assess any questions and concerns. Momo Medical provided ongoing support through periodic overnight phone calls with the staff on the floor.

Outcomes

The Momo Bedsense app pilot was initiated on the MPTF 40-bed skilled nursing memory care unit at the end of the third quarter of 2022. Significant results included fall reduction, reduced response time, increased peace of mind, and improved care.

The advantages of the Momo BedSense include:

- ◆ The BedSense App provides a live overview of all the residents. This empowers nursing staff to prioritize care, making more efficient use of their time.
 - ◆ Staff has peace of mind by knowing who is in bed safely and soundly and who may need assistance.
 - ◆ A better night's rest for residents, resulting in better behaviors during the day.
 - ◆ The BedSense app is programmable to address each resident's risks and needs, thus ensuring health equity and person-centered care while minimizing false alarms.
- ◆ Notifications are sent when a resident is about to get up, up to a minute before the resident actually leaves the bed.
 - ◆ The BedSense reduces staff response times by alerting staff through smart devices wherever they are about a resident at risk. Staff can respond directly to the situation without first having to go to a centralized location to learn which room the alarm is originating from.
 - ◆ The BedSense app provides historical insights into residents' sleep-wake patterns to inform care plans and detect early changes in conditions.

A 35% decrease in all falls in the memory care unit has been seen since the implementation of the BedSense. This exceeded the initial goals and expectations. Also, the overall fall rate/1,000 patient days in all skilled nursing units fell from 4.12 in 2022 to 2.76 in 2023.

Reducing falls was very important, but improving staff satisfaction was also a significant outcome. 100% of the memory care staff were trained in the use of the BedSense app and smart devices. Of 19 individual staff satisfaction surveys, 95% rated the Momo bed sensor devices favorably in terms of making their jobs easier, helping them to do their jobs better, and improving resident care.

"The Momo phone is good in the way it tells you what the resident is doing: in bed or out of bed or trying to get up."

"Our team loves using the Momo app. The notifications are helpful and we are able to assist those who need it most in time, while not disturbing those who are sleeping. The app is easy to use and speaks for itself."

The Momo app helps to prioritize care and know where the care staff is needed. This empowers the staff to provide person-centered care by assisting those residents who are at risk while letting the other residents sleep. An efficient workflow was adopted and (hourly) rounds no longer disturbed sleeping residents. This resulted in increased peace of mind and reassurance for staff, as well as a better night's rest for the residents.

Additional benefits to the use of the BedSense app were identified by nursing supervisors who were able to see resident bed-related fall-risk activity and staff response in real time from the computer in the nursing office. The continuous activity-related data collection contributed valuable information to post-fall analysis such as the resident's sleep-wake patterns, changes to bed mobility, and staff response times.

Challenges and Pitfalls to Avoid

Devices that fit in a pocket can accidentally be removed from the unit. It is important to obtain staff buy-in for keeping the smart devices charged and present on the unit. Facilities should develop a method of handing off the smart devices from shift to shift. At MPTF, a clipboard by the charging station for the smart devices facilitates nursing staff signing the devices out at the beginning of their shift and back in at the end. There are only enough devices on the unit to provide one for each of the on-shift staff at any one time. A missing device does not go unnoticed for longer than a day.

Lessons Learned/Advice to Share with Others

Transitioning from a conventional alarm system to smart technology requires recognition of the potential for staff discomfort during the transition phase. Investing the time and providing multiple opportunities for group and 1:1 education and feedback sessions promotes a successful adoption. Early staff involvement also contributes to a greater buy-in.

Given the exceptional outcomes, MPTF aspires to implement the BedSense in its other skilled nursing units. Moreover, there are several additional benefits to the Momo technology that MPTF has not yet fully implemented, but is planning to do soon:

- ◆ With an oncoming shift's ability to look at historical sleep/rest data for individual residents, there is an opportunity to proactively respond to the possibility of an increased risk of falls secondary to a poor night's sleep.
- ◆ Using BedSense data to prevent pressure-related injury as residents' movements in bed including turning and repositioning can be tracked in real time and historically. The app will notify staff when a resident is due for repositioning.
- ◆ Additional BedSense data can provide insights into peak hours and bedtimes. This can be used for care planning and staffing occupancies.
- ◆ Referring to Momo dashboard data could help to assure the family that the resident did sleep all night in bed, even though the resident had reported being up all night.