STANLEY
Healthcare

Application Note:

Patient Safety Monitoring

Easily Track Patient Health and Comfort with an Innovative, Cost-Effective, Touch-Free Solution

Challenges

Every day, long-term care facilities and hospitals face tough realities in maximizing the quality of care and outcomes for residents and patients who are limited in mobility or need careful monitoring while at rest. Traditional approaches have struggled to keep pace with the rising demands on our healthcare system, and have had limited success reducing patient falls, pressure ulcers, and other health risks.

A recent study concluded that on average, 16.7% of patients develop pressure ulcers in skilled nursing facilities. Hospital patients also develop pressure ulcers at an alarming rate. The cost of treating each pressure ulcer in a skilled nursing facility costs an average of $7,000; in a hospital, the cost can reach up to $50,000. According to the CDC, 11 million Americans over the age of 65 experience a fall each year with 1.6 million ending up in the emergency room for treatment, with each treatment costing an average of $19,600. Furthermore, poor sleep quality has been directly correlated with a higher risk of stroke and heart disease.

In an age of connected care, technology enables healthcare professionals to provide more efficient and affordable care regardless of setting. The STANLEY Healthcare Patient Safety Monitoring Solution allows caregivers to provide a more informed level of care anywhere, anytime.

Solution

The Patient Safety Monitoring sensor mat, placed under virtually any mattress, continuously detects presence, motion, and trends in heart rate, and breathing rate. Data is automatically transmitted to the HIPAA-compliant cloud platform for analysis. Caregivers receive status and alerts on mobile devices such as a smartphone, Apple iPod touch® and iPad®, or on a PC. STANLEY Healthcare Patient Safety Monitoring improves both safety and individual care planning for long-term care residents and patients by capturing:

• Position changes
• Bed exit
• Sleep patterns
• Vital sign trends
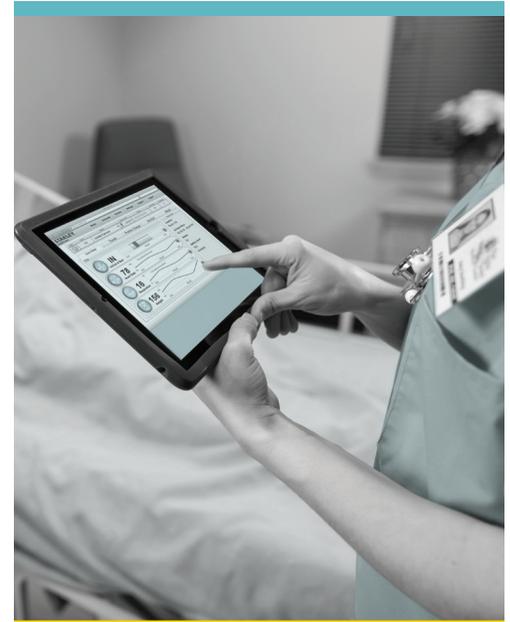
Benefits

• Improves safety and clinical outcomes through continuous capturing and reporting of:
  – Position changes
  – Bed exit
  – Sleep patterns
  – Vital sign trends

• Obtains reliable information to individualize care planning and take proactive intervention

• Ensures quality of life with non-invasive and touchless monitoring

Elegant, non-obtrusive and simple to install and use, and it has become an important tool to help our caregivers provide immediate care when needed, allowing our residents to live more independently.

- Alex Candalla
Executive Director
The Terraces of Los Gatos
San Jose, CA

How It Works

Using the STANLEY Healthcare Patient Safety Monitoring Solution, healthcare professionals and caregivers can monitor a group of people at all times while performing their daily duties whether in an acute, post-acute, or long-term care setting. The solution is an effective, easy-to-use tool for position change validation, for monitoring bed exits in support of fall prevention programs, and for automated documentation that can save hundreds of staff hours per month. Clinicians can also review long-term trend data for adverse sleep patterns, heart and breathing rate trends and overall sleep quality. Solution components include:
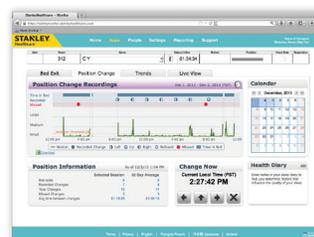
- **Biometric Sensor:** Self-inflating sensor mat with USB cable connected to the network device.
- **Cloud platform:**
  - **Daily Reports** feature personalized charts for number of bed exit events, position changes with biometric verification, trends in heart rate and breathing rate, motion and sleep quality;
  - **Trends Reports** show weekly, monthly and yearly trends for heart rate, breathing rate, motion, sleep quality, sleep debt and sleep patterns compared to 30-day moving averages.
- **EMR/EHR Integration:** Application Programming Interface (API) for integration with existing electronic health records and clinical research programs.
- **Secure Wireless Reporting:** Real-time monitoring and alerts from mobile devices or PC.
- **Mobile Applications:** Monitor multiple people wherever you are. Mobile applications are available for smartphones, iPod touch®, iPad® and iPhone®.

> *The clever part is that the patient isn't connected to any wires.*
>
> *- InformationWeek Healthcare August 2013*

Solution Highlights

- Enables caregivers to record position changes, see the duration since the last position change and receive automated reminders for the next position change

- Tracks in and out of bed events

- Monitors nightly sleep quality by comparing sleep duration, restlessness, nightly heart rate and breathing rate to long-term trends

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