

# Early Detection of Patient Deterioration Using Novel Monitoring System



**EarlySense**  
Proactive Patient Care

## Overview

*Patient safety for chronically ill Spinal Cord Injury patients in the hospital is an ongoing challenge. The SCI Center incorporated a novel technology system to detect early patient condition changes and reduce adverse events.*

## Objective

Describe the EarlySense Monitoring System (ESMS) and discuss its benefits for early detection of patient deterioration in a Spinal Cord Injured (SCI) Medical/Surgical inpatient population.

## Participants/Methods

EarlySense provides continuous monitoring of heart and respiratory rate through non-contact technology.

Two Spinal Cord Injury med/surg units with similar patient populations were compared during the twelve month period from February 2013 through February 2014 (n=932). This pre implementation data was collected to create a baseline of clinical indicators. During the twelve month period from February 2014 through February 2015 (n=1,150), post implementation data was collected and evaluated in comparison to baseline.

## Outcomes

*Effect of Safety Initiatives*

67%



*Medical Response Team (MRT) Activations decreased*

50%



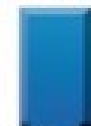
*Code Blue Activations decreased*

40%



*ICU Transfers decreased*

83%



*Mortality following MRT/Code Blue Activations decreased*

Enrolled patients were continuously monitored for heart rate (HR) and respiration rate (RR).

## Conclusions

Clinically significant reduction of MRT/Code Blue activations, ICU Transfers, and Mortality was noted among patients on the SCI unit using EarlySense Monitoring System (ESMS).

Poster Presentation

