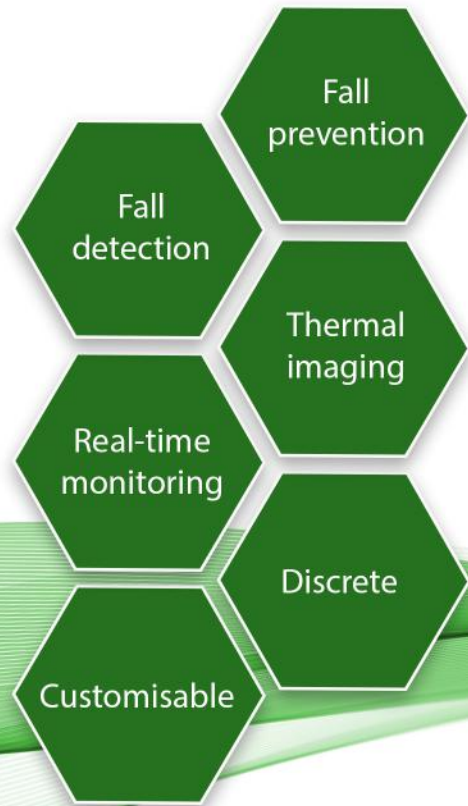


SAFE

System to Avoid Fall Events



SAFE - Falls Prevention Monitoring System

SAFE is a new system designed to automatically alert carers when a patient is in a position that could pose a risk of resulting in a fall. This could be when the patient is getting in or out of bed for example.

SAFE uses a small thermal sensor placed in a discrete enclosure above the patient's bed. A built-in computer analyses the patient's heat trace relative to the edges of the bed and determines the classification of the patient's position.

The SAFE system communicates this position in the form of a coloured icon to indicate the level of risk identified.

Carers can set individual sensitivity levels for patients to customise the system and reduce the number of false alarms.

SAFE system sensor unit



- + *Discrete enclosure attached to ceiling above the patient's bed*
- + *Enclosure contains low resolution thermal camera and small processing unit*
- + *Power supplied and data communicated through single cable*

How does SAFE work?

The low-resolution thermal sensor in the SAFE system enables silent, 24/7 monitoring without intruding on the privacy of patients and care staff.

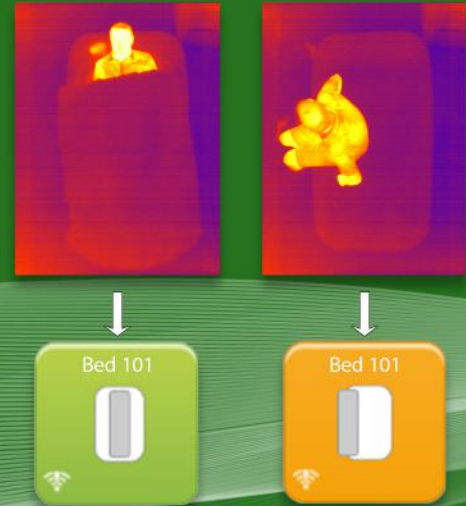
The thermal sensor can “see” in complete darkness, which significantly reduces the need for visual inspections at night-time, which can interrupt patients’ sleep.

The built-in computer can recognise 4 pre-defined positions and translate those into coloured icons to indicate the patients’ current position and immediate risk level.

The SAFE system works even when the patient is under a blanket as long as the head is still visible.

SAFE is designed as closed loop system, and it does not need to integrate with other systems.

Examples of thermal images* and icons

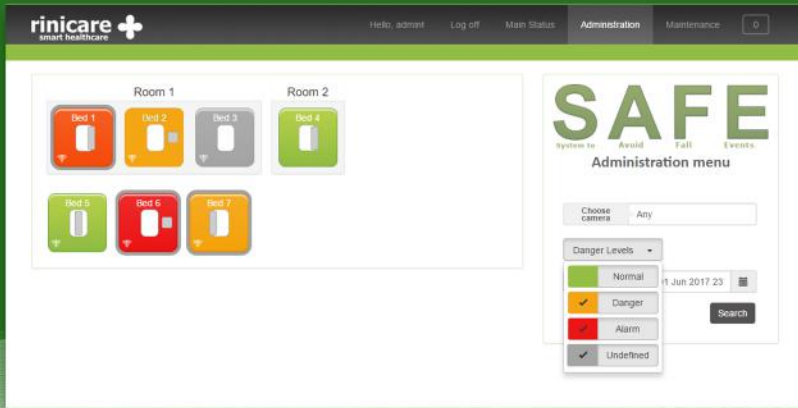


- + Green icon = patient in a safe position
- + Orange icon = patient in an unsafe position

**Thermal images enhanced and colorised for clarity*

SAFE User Interfaces

The SAFE user interface is easy to use and any alarms are displayed on both the PC screen and on the connected mobile devices to allow fast response.



The sensitivity for each SAFE system can be set to suit each patient's individual risk level, which helps to reduce the number of false alarms.

SAFE can identify 4 general positions: Inside the bed (safe), sitting on the edge of the bed, standing next to the bed, and fallen to the floor.

The patients' positions relative to the beds are displayed in real-time on the screen, which is updated every second.

All alarms are immediately forwarded to mobile devices with the SAFE app.

Users can acknowledge that they are reacting to an alarm with one press on the screen (Either PC or mobile device) to avoid that all staff respond to the same alarm.

Why SAFE?

SAFE works in both daylight and darkness
Low maintenance and service
Second-by-second reporting

24/7
monitoring

Ideal for multiple settings
Also detects empty beds
Reassures patients and carers

DETECTS
bed-exits

Protects
PRIVACY

No patient identification
Thermal imaging, non-optical
Low resolution for anonymity

SAFE

Simple menu options
No I.T. expertise needed
Admin menu easily accessed

EASY to use

BESPOKE
risk settings for
each patient

Easy menu to set risk level
Promotes patient freedom
Reduces alarm fatigue

Prevents
FALLS

Detects potentially dangerous positions
Fast reporting increases prevention
Customisable alerts sent to carers

Importance of Falls Prevention

In-Patient

In a standard 800 bed UK hospital there are, on average, 24 in-patient falls per week. With under-reporting, the true figure may even be higher than this. 22% of these falls are from hospital beds meaning 5 patients a week fall from their bed causing injuries. SAFE can directly help reduce this figure by giving hospital staff advanced warning of potential fall events. By reducing the number of in-patient falls experienced from beds, the great strain on hospital resources will also be alleviated as patients can return home sooner and healthier resulting in greater patient satisfaction.

Out-Patient

With approximately 1 in 3 over 65's falling at least once a year, and 1 in 2 over-80's, SAFE has a huge role to play in the community. This problem will only become exacerbated with a globally ageing population as, between 2015 and 2030, the over 60's group are expected to grow by 56% from 901 million to 1.4 billion. Be it in nursing homes, care homes or private residential settings, SAFE can help keep elderly and vulnerable people from falling from their beds and requiring treatment and even hospitalisation.

Cost

Falls cost the UK's NHS over £2 billion per year with in-patient falls directly costing over £15 million per year. This does not take into account the in-direct effects of falls such as associated illnesses and increased community care. SAFE combats this problem by reducing falls in a positive cost-benefit model by helping hospitals and the wider care community to be vigilant and responsive to potential fall events. Ultimately, SAFE is the next step forward in falls prevention which not only helps patients directly but also relieves the associated costs on healthcare providers.

Rinicare's Mission Statement

"To become the leading provider of state-of-the-art technological solutions for healthcare applications, enabling our customers to benefit from advanced remote healthcare solutions and patients to enjoy an improved quality of life."

Who we are

Rinicare Ltd is a UK based SME that brings state-of-the-art technological solutions for healthcare applications. Research solutions provided by Rinicare utilise the latest information and communications technologies and provide a solid foundation for enhancing its users' quality of life. Ultimately, Rinicare's goal is to design innovative, hospital grade medically certified technologies aimed at both improving patient outcomes and alleviating pressure on healthcare budgets.

Healthcare systems

Healthcare providers around the world face the challenge of maintaining sustainable healthcare systems in light of an ageing population and continuously increasing costs. Rinicare's approach to addressing these challenges is based on a collaborative effort with end users, including University Hospital of South Manchester to design advanced wireless communications, innovative prediction algorithms and enhanced software technology solutions.

Our partners

Through our technology partnership with Rinicom Ltd., Rinicare Ltd benefits from ground-breaking technologies for professional security applications, which contribute to the reinforcement of Rinicare's integrated solutions.



rinicare⁺

smart healthcare

Rinicare Ltd develops state-of-the-art technological solutions for healthcare applications. Research solutions provided by Rinicare utilises the latest information and communications technologies and provides a solid foundation for enhancing its users' quality of life. Ultimately, Rinicare's goal is to design innovative, hospital-grade, and medically certified technologies aimed at both improving patient outcomes and alleviating pressure on healthcare budgets.

