

# Falls management solution

## Why is a falls management solution important?

Each year in the UK, up to one in three (3.4 million) over 65s suffer a fall, costing the NHS an estimated £4.6 million a day, with the total cost amounting to £1.7 billion per year.<sup>1</sup>

Falls remain a major cause of injury and death amongst the over 70s and account for more than 50% of hospital accidental injury hospital admissions.<sup>1</sup>

Hip fractures, the most common serious injury resulting from a fall, affect approximately 60,000 people per year in the UK and result in up to 14,000 deaths.<sup>2</sup>

<sup>1</sup> [www.ageuk.org.uk/latest-press/archive/falls-over-65s-cost-nhs](http://www.ageuk.org.uk/latest-press/archive/falls-over-65s-cost-nhs), Age UK, 2010

<sup>2</sup> Older People's Experiences of Falls and Bone Health Services (England), Royal College of Physicians, 2008

## What is a falls management solution?

A falls management solution consists of a range of non intrusive telecare sensors that offer a comprehensive way of managing a person's risk of falling 24 hours a day, 365 days a year, enabling many vulnerable people to remain living independently and to reduce the level of injury sustained.

Individual sensors are chosen and configured according to the needs of the individual. For example, a falls solution can be constructed so that the service user doesn't need to wear any devices. Solutions can be tailored for individuals living in their own homes, with or without an onsite carer, or for people living in extra care facilities with staff present 24 hours a day.

Telecare falls management solutions can negate the need for regular checks to be made on the person at risk of falling, enhancing their privacy and independence, reducing the pressure on carers and making best use of resources. They can also provide confidence to the user that help will be at hand should they fall, thereby encouraging activity and improving mobility.

## Who is it for?

Falls management solutions are ideal for:

- Older or disabled people who are becoming progressively less stable
- Individuals who have been discharged from hospital and require additional support
- People working alone
- People with medical conditions such as epilepsy or diabetes



All the reassurance you need

**Tunstall**

*Each year in the UK, up to one in three (3.4 million) over 65s suffer a fall, costing the NHS an estimated £4.6 million a day, with the total cost amounting to £1.7 billion per year.*

At the heart of the solution is either the Lifeline Connect, Lifeline Connect+ or Communicall Connect which monitor all the telecare sensors within the falls solution. Once a sensor detects a possible problem, a call is automatically raised to either the scheme manager or monitoring centre, where the client's details and type of alarm call are instantly provided.

Two way speech is established via the Lifeline Connect, Lifeline Connect+ or Communicall Connect, allowing reassurance to be provided and to determine the best course of action. Where an onsite carer is available in a small property, the telecare sensors can raise an alert via the CareAssist pager.

As well as the telecare sensors automatically raising an alarm in the event of a fall, the fall detector can also be used to easily summon help from anywhere in the home at any time simply by pressing the button.

## Features and benefits

**Transmission to Category 1 radio receiver** - ensuring that signals from sensors are received for ultimate reliability, essential where life critical solutions are used.

**Plug & Play registration** – allows radio sensors to be easily assigned to the Lifeline home unit or Communicall system enabling service providers to respond to their clients' changing needs.

**Flexibility** – the solution can be tailored to meet the needs of individual client circumstances in order to provide high levels of practicality and protection against the effects of a fall being undetected.

**Automatic low battery warnings** – ensuring optimum operation at all times.

**Comprehensive falls management solution** – providing 24 hours a day, 365 days a year protection for ultimate falls management in the home.



Lifeline Connect



Communicall Connect



CareAssist



# Telecare sensors

## Fall detector

The latest generation of fall detectors offer peace of mind for anyone concerned about summoning help if they should fall. Tunstall offers a choice of two fall detectors to suit individual circumstances.

The waist worn fall detector can be worn on a belt or in a discreet pouch, and uses a sophisticated, two-stage detection process to identify a fall. The detector senses both impact and angle and will emit a buzzing noise to alert the wearer that it is about to raise an alarm call. The alarm call can be cancelled by the user at this point, but if they fail to do so the detector will raise an alert via the Lifeline Connect, Lifeline Connect+, Communicall Connect or CareAssist pager.

Tunstall's wrist worn fall detector, VitalBase<sup>FALL</sup> by Telecom Design, automatically senses if the user has fallen and remains immobile and will automatically raise an alert via a Lifeline Connect, Lifeline Connect+, Communicall Connect or CareAssist pager. Like the waist worn fall detector it also has an ergonomic button which the wearer can press to call for help at any time.

## Bed/chair occupancy sensor

An unobtrusive pad is placed on or under the mattress, which detects when a person has left their bed during the night, and can be configured to gently raise the bedside lamp as they do so to minimise the risk of falling due to poor visibility. Should the person fail to return to their bed within a preset time the sensor will raise an alert, thus avoiding the possibility of them spending hours on the floor without assistance, but avoiding the need for intrusive checks. The chair occupancy sensor works in a similar way and will raise the alarm if a person leaves their chair but fails to return for an extended period of time.

The virtual bed/chair absence sensors\* provide additional benefits by combining information from multiple sensors. For example, using PIRs it can detect a person is still active within the property and therefore avoid generating an alarm despite them not returning to their bed or chair within the allotted time. The virtual bed/chair absence sensors also provide the ability to remotely change time settings via the monitoring centre when client's needs change, reducing service costs.

## PIR (Passive Infra Red) detector

PIRs detect movement, or monitor for inactivity, in a defined area. When employed as part of a falls solution a PIR can be set to raise an alert if it fails to sense movement in a room for a prolonged period of time. The alarm will be raised with an onsite carer, scheme manager or monitoring centre who can establish whether the service user is at risk of harm.

## MyAmie personal radio trigger

The MyAmie is a small, discreet personal radio trigger which allows the user to raise an alarm call in an emergency. This can be worn on a cord around the neck, on the wrist with a wide or narrow strap, on a belt clip or attached to a key ring.

## Pull cord

The pull cord can be positioned anywhere in a room in order to provide a means of calling for help, and can be especially useful if the user has fallen and is not wearing a fall detector or personal radio trigger.

## Pressure mat

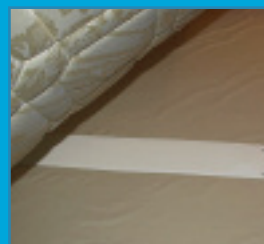
The pressure mat can be used to detect inactivity, for example placed under a mat or carpet and will raise an alarm if no movement is detected in a particular area for a length of time. It can also be used to notify an onsite carer if the user enters a high risk area, for example the top of the stairs.



Fall detector



Wrist worn fall detector



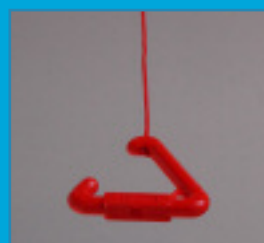
Bed/chair occupancy sensor



PIR (movement detector)



MyAmie personal radio trigger



Pull cord



Pressure mat

\*Requires a Lifeline Connect+

# Technical details

## Standards

EMC:	EN55022: 1998, ETSI EN301-489-1:(2000-08) Class 1
Safety:	EN60950:2006
Radio:	ETSI EN 300 220-2:2010
CE:	Compliant
Social alarm:	EN50130-4:1995 + A1:1998
Design, Manufacture, Installation and Service:	ISO9001: 2008

## Fall Detector

Weight:	75g
Dimensions:	75 x 53 x 28mm (WxHxD)
Radio Frequency:	869.2125 MHz
Radio Range:	Up to 50 metres (typical)
Battery Type:	? AA (ER14250)
Operating Temp Range:	0-45°C
Part number:	68005/49

## VitalBase<sup>FALL</sup> Detector

Weight:	35g
Dimensions:	46 x 38 x 12mm (LxWxD)
Radio Frequency:	869.2125 MHz
Radio Range:	Up to 50 metres (typical)
Battery Life:	2 years (non replaceable)
Operating Temp Range:	5-40°C
Part number:	67605/16

## PIR (passive infra red)

Weight:	109g
Dimensions:	60 x 90 x 45mm (WxHxD)
Radio Frequency:	869.2125 MHz
Radio Range:	Up to 50 metres (typical)
Battery Life:	2 years
Battery Type:	CR123A
Operating Temp Range:	-10°C to +50°C
Environmental Humidity:	95% maximum
Battery Disposal:	In accordance with current legislation
Part number:	67005/45

## Bed/Chair Occupancy Sensor

Weight:	800g
Control Unit:	95 x 160 x 35mm (WxHxD)
Bed Sensor Mat:	103 x 762 x 3mm (WxLxD)
Over Mattress:	245 x 762 x 3mm (WxLxD)
Chair Sensor Mat:	30 x 30 x 7mm (WxLxD)
Radio Frequency:	869.2125MHz
Radio Range:	Up to 50 metres (typical)
Battery Type:	4xAA Batteries
Battery Life:	2 years
Operating Temp Range:	-10°C to +55°C
Battery Disposal:	In accordance with current legislation
Part numbers:	
Control Unit:	41005/13
Under Mattress Bed Sensor Mat:	D4106009A
Over/Under Mattress Bed Sensor Mat:	D4106011A
Chair Sensor Mat:	D4106010A

The bed/chair sensor consists of a Control Unit and either a bed mat or chair mat depending on whether bed or chair occupancy is to be monitored.

*The bed / chair sensor should be programmed using a PDA programming kit - Part number: 41005/27*

## Virtual Bed/Chair Absence Sensor\*

Part numbers:	
Universal Sensor:	41005/30
Under Mattress Bed Sensor Mat:	D4106009A
Over/Under Mattress Bed Sensor Mat:	D4106011A
Chair Sensor Mat:	D4106010A
Double bed adapter**	S2204351

\* Requires Lifeline Connect+

\*\*Allows 2 bed sensor mats to be connected to the universal sensor

# Tunstall

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