



Telecare – supporting independent living

Telecare builds upon the benefits offered by traditional Personal Emergency Response System (PERS) services to further enable seniors to remain living safely at home. It consists of various unobtrusive sensors placed around the home linked to a telecare enabled PERS unit, such as a Caresse, and monitored 24 hours a day, 365 days a year by a monitoring center, allowing action to be taken quickly should an incident occur.

The range of sensors provides greater reassurance and protection of service users by monitoring for fire, flooding, natural gas, high and low temperatures, falling, inactivity, burglary, bogus callers and many more.

The use of telecare has shown the following benefits;

- **Reduced delayed discharges**
- **Avoided the need for some hospital visits**
- **Significantly reduced the length of stays in nursing and residential homes**
- **Produced significant care provision savings**

How does telecare work?

Telecare sensors send automatic alarm calls to the monitoring center therefore ensuring that alarm calls are raised even when the user is unable to press their pendant or alarm button on their PERS unit. When an alarm is raised by a telecare sensor, it sends a signal to the Caresse which in turn alerts the monitoring center where operators are

immediately provided with the service user's details, the telecare sensor that raised the call and its location within the service user's home. This enables the operator to react quickly to the situation and follow procedures to provide the appropriate response. Telecare is therefore a more enhanced offering and helps to monitor for a wide range of potentially dangerous situations.

Why is it needed?

The population around the world is aging with the number of people aged over 80 in the United States estimated to more than treble from 9.3 million (2000) to 33.7 million in 2050.

US population by Age

Year	70 -74	75 – 79	80+	Total 70+
2000	8.85m	7.43m	9.3m	25.58m
2025	16.04m	12.27m	15.57m	43.88m
2050	17.5m	15.07m	33.7m	66.27m

Source: US Census Bureau www.census.gov, population in millions

As a result the prevalence of age related conditions is continually increasing with conditions such as dementia, diabetes, hearing and visual impairments and age related accidents such as falls becoming more widespread. This means that there is an increasing pressure to provide care outside of hospital settings and in the home.

All the reassurance you need

Tunstall

Helping seniors to live with dignity and

Telecare consists of various unobtrusive sensors placed around the home, monitored 24 hours a day, 365 days a year by a monitoring center, and



Fall Detector

Automatically detects a serious fall and raises an alert. Also encompasses a pendant.



Flood Detector

Provides an early warning by raising an alert of potential flood situations in the user's home.



PIR Motion Sensor

The PIR is a wireless motion sensor that monitors for activity, raising a call when the service user has been inactive during a critical period of the day. It can also be used to detect for intruders when the user is away from home.



Smoke Detector

The radio smoke detector raises an instant alarm call if it detects smoke, ensuring any potential fire situations are always responded to.



Temperature Extremes Sensor

Detects low, high or rapid rate of rise of temperature within a property and rises an appropriate alert.



Medication Reminder

Provides effective solutions to support medication compliance. The Caresse+ can be configured to give up to 6 reminders a day.



Wandering Client Sensor

Provides an early warning by alerting that the user has left their home and not returned within a predetermined time parameter, ideal for people with dementia and their care givers.



Over the whole UK, telecare could save in the range of 9 million bed days or 20% of all Acute care beds with savings in the order of £5 billion.

and safety in the comfort of their homes

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Caresse range

The Caresse and Caresse+ are the intelligent heart of the telecare monitoring system. They connect to the telephone line and automatically dial the monitoring center or personal care givers to provide two way speech and information about the telecare event.

They are designed to protect people living in their homes, apartment, condominiums or retirement residences. The units can be used to raise an alarm call from any of the telecare sensors including the pendant or by pressing the large red alarm button on the unit. For more information on the Caresse range, please see the data sheet.



Pressure Mat

24 hour monitoring of inactivity or intruders, dependent on individual needs.



Bed/Chair Occupancy Sensor

Provides an early warning by alerting that the user has left their bed/chair and not returned within a predetermined time period. The sensor can also control a bedside lamp via X10.



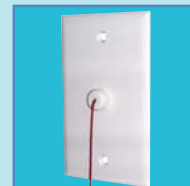
Enuresis Sensor

Placed between a mattress and a sheet, this sensor provides immediate warning on detection of moisture to allow effective action to be taken.



Pull Cord

Strategically placed around the home, the pull cord can be used to raise a call for help.



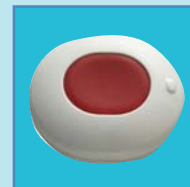
Stove Sensor

Fitted on a stove to turn the power off after a period of time.



Bogus Caller Button

Fitted near a door, this discreet button can be used to call for assistance when a stranger requests entry into a user's home.



Radio Output Module

Connects to other compatible devices to enable them to transmit wireless radio signals to the Caresse units, eliminating the need to hard wire such sensors.



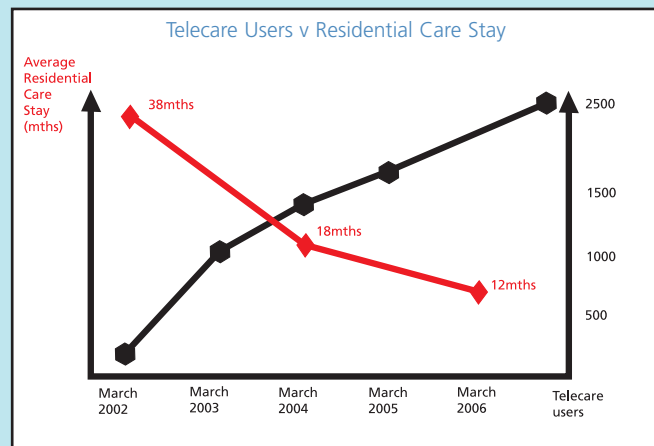
Extrapolated into the US market, this would represent approximately \$55 billion.

How does it help?

Telecare has proven itself in the UK, where the experience has shown benefits to clients and care givers, enabling people to remain living independently in their own homes or to return home from hospital earlier than would otherwise be possible. A number of telecare services have shown significant benefits including;

West Lothian (Scotland) – as the number of telecare users has increased, West Lothian has experienced a marked decrease in the average length of stay in residential care homes from 38 months in 2002 to just 12 months in 2006 with a resultant 70% reduction in residential care costs. The use of telecare has also helped:

- Reduce the average package of care by 3.02 hours per week per client, saving £30 per week per intensive home care client.
- Reduce the delayed discharge rate to 1.64 per 1,000 over 65s, 40% less than the Scottish average.



Northamptonshire Safe at Home Dementia Project – a 21 month comparator trial between 233 telecare service users and 173 non telecare service users. Key outcomes;

- Relatives and care givers confirmed that they were less stressed
- Non telecare service users were 4 times more likely to enter residential care.
- Telecare services showed a net equivalent saving of £1,504,773 over the 21 month period

Carlisle Intermediate Care Project - a project involving 553 clients to prevent admission to hospital and speed up discharge.

- 80% of clients either avoided going to hospital or were discharged early, saving a minimum of 447 bed days saved, saving the equivalent of 64 weeks at £850 per week, £54,400 in total. This also gave the Acute Trust the equivalent of 64 week's extra capacity.

Extrapolated over the whole UK, telecare would save in the range of 9 million bed days or 20% of all Acute care beds with savings in the order of £5 billion.

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As a result of these studies, the UK Department of Health (DoH) and Government is now actively promoting the application of telecare and has committed significant funding to help ensure that telecare is provided as part of mainstream care services.

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Tunstall is a founder member of the Continua Health Alliance

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Tunstall Canada, 7540 Bath Road, Mississauga, Ontario L4T 1L2 CANADA
Tel: 904-677-1144 Fax: 905-677-1121 Email: sales@tunstallamerica.com


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