Tunstall

Enabling independent living

Assistive Technology that makes a difference

Paul Eden
Senior Account Manager
Tunstall Healthcare

Tunstall

Enabling independent living

Our vision is of a world where people have the freedom to live life to the full in a place of their choice.

General thoughts on technology

They need to be user friendly

Everyone is different, some people see them as intrusive, others view them as another way to stay as independent

Can offer families peace of mind

Seemed a good idea, but you would need to get used to it

It should be introduced earlier in order for people with dementia to be able to be involved in the decision making and to have the opportunity to familiarise themselves with the technology

Direct feedback from the Alzheimer's Society Service User Review Panels

Tunstall

What difficulties do you think could be made easier by technology?

Alarms and sensors for independence

Peace of mind and reassurance

Feels a bit like 'Big Brother' is watching you

It's like having someone to come and stand by you

Medication dispensers

This would be really useful – I always find it difficult to remember whether I've taken my tablet

Safer Walking Technologies

It might be nice as it would be like someone walking alongside you, able to lend a hand if you got lost

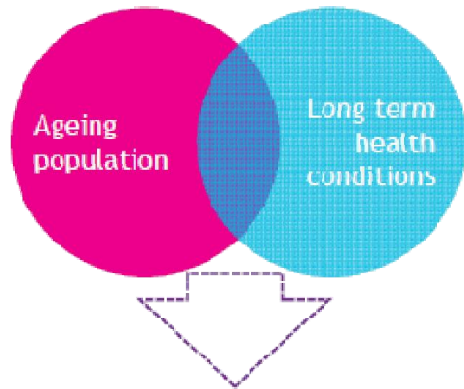It would be like being watched, someone keeping an eye on you

Direct feedback from the Alzheimer's Society Service User Review Panels

Tunstall

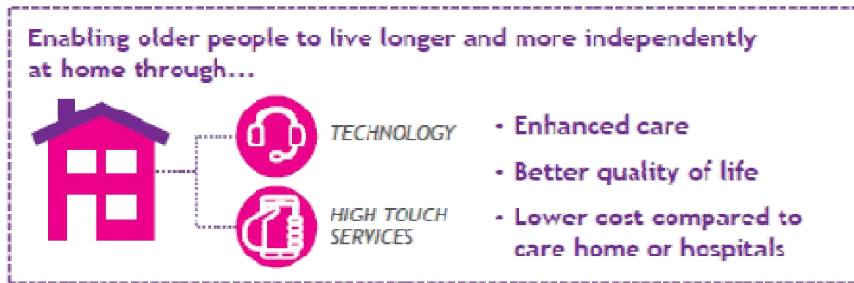# Society is facing increasing health and social care challenges

Technology is key to addressing these:

CHALLENGES

Globally, society faces a growing challenge of caring for its populations at an affordable cost

Ageing population

Long term health conditions

Tunstall is helping to address this challenge

Enabling older people to live longer and more independently at home through...

TECHNOLOGY

HIGH TOUCH SERVICES

- Enhanced care
- Better quality of life
- Lower cost compared to care home or hospitals

TECHNOLOGY-ENABLED SOLUTIONS

Market changes are creating increasing opportunities for technology-enabled care

Growth in IP-connected users, and the emergence of an 'Internet of Things'

New models of care, driven and supported through Managed Services

Increased provision of Healthcare in the home through Remote Patient Monitoring and Support
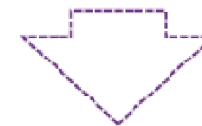
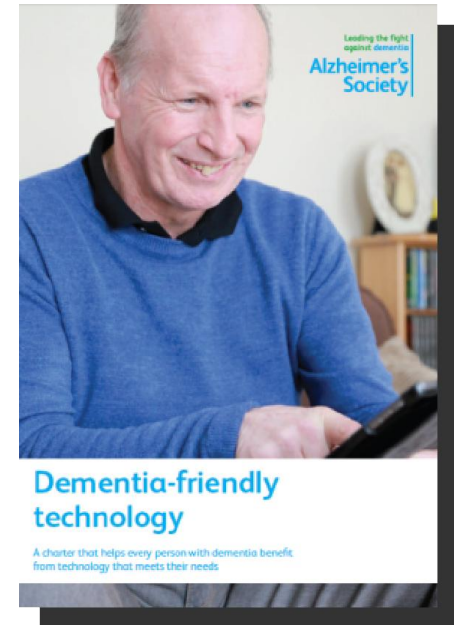*New models of care will become the norm, with technology playing a key role as an enabler*

Tunstall

Dementia-friendly Technology Charter

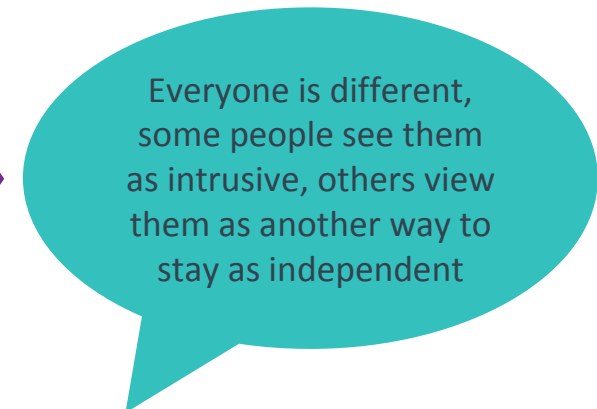**Chair of the Alzheimer's Society dementia friendly technology task and finish group**

- Unique knowledge from diverse range of organisations involved in dementia care
- Unprecedented access to people living with dementia – learning about living with dementia and their thoughts on how technology could help

Charter aims

- Enable every person with dementia to have the **opportunity to benefit** from **technology appropriate** to their needs
- To outline and encourage high level principals and best practice for those organisations providing services to people with dementia

First year ambitions

Charter published and communicated	Work towards having all CCGs*, local authority and housing commissioners signed up	All service and technology providers signed up

www.alzheimers.org.uk/technologycharter

Everyone is different, some people see them as intrusive, others view them as another way to stay as independent
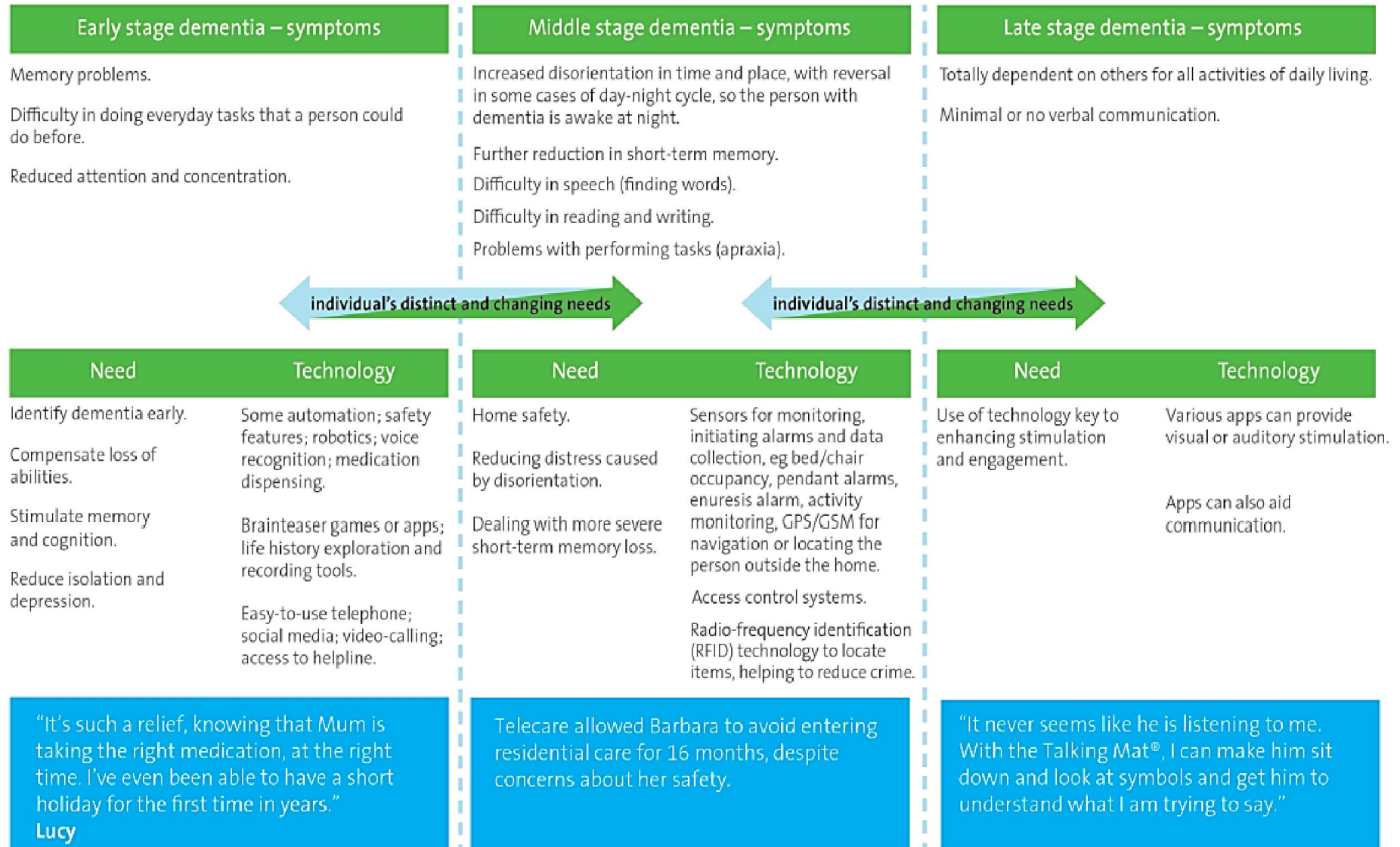
Dementia-friendly Technology Charter contributors

- Alzheimer's Society service user review panels
- ADASS West Midlands Telehealthcare Network
- Advanced Digital Institute
- Alzheimer's Society
- Association of Directors of Adult Social Services
- Bournemouth University, Dementia Studies Unit
- British Assistive Technology Association
- BT
- Bury Council
- Children's Charities' Coalition
- City University London
- Design Council
- Doncaster Dementia Strategic Partnership
- Halton Borough Council
- Hertfordshire County Council
- Just Checking
- Local Government Association
- London Borough of Croydon, AZTEC Centre
- London Fire Brigade
- Mid Cheshire Hospitals NHS Foundation Trust
- National Museums Liverpool
- NHS England
- NIHR Dementia and Neurodegenerative Diseases Research Network (DeNDRoN)
- One Voice for Accessible ICT Coalition
- Public Health England
- Registered Nursing Home Association
- Sanctuary Supported Living
- South London and Maudsley NHS Foundation Trust
- Stockport Council
- Telecare Services Association
- trueCall Nuisance phone call blocking
- Tunstall Healthcare
- University Hospitals Birmingham NHS Foundation Trust
- Westminster Rehabilitation Services Central London Community Healthcare NHS Trust

Understanding people's needs to identify the right technology solution

Although every person with dementia will have different needs, it is possible to identify technology that may be useful in a number of broad circumstances.

Early stage dementia – symptoms	Middle stage dementia – symptoms	Late stage dementia – symptoms
Memory problems.	Increased disorientation in time and place, with reversal in some cases of day-night cycle, so the person with dementia is awake at night.	Totally dependent on others for all activities of daily living.
Difficulty in doing everyday tasks that a person could do before.	Further reduction in short-term memory.	Minimal or no verbal communication.
Reduced attention and concentration.	Difficulty in speech (finding words).	
	Difficulty in reading and writing.	
	Problems with performing tasks (apraxia).	

← **individual's distinct and changing needs** →   ← **individual's distinct and changing needs** →

Need	Technology	Need	Technology	Need	Technology
Identify dementia early.	Some automation; safety features; robotics; voice recognition; medication dispensing.	Home safety.	Sensors for monitoring, initiating alarms and data collection, eg bed/chair occupancy, pendant alarms, enuresis alarm, activity monitoring, GPS/GSM for navigation or locating the person outside the home.	Use of technology key to enhancing stimulation and engagement.	Various apps can provide visual or auditory stimulation.
Compensate loss of abilities.		Reducing distress caused by disorientation.			
Stimulate memory and cognition.	Brainteaser games or apps; life history exploration and recording tools.	Dealing with more severe short-term memory loss.	Access control systems.		Apps can also aid communication.
Reduce isolation and depression.	Easy-to-use telephone; social media; video-calling; access to helpline.		Radio-frequency identification (RFID) technology to locate items, helping to reduce crime.		

"It's such a relief, knowing that Mum is taking the right medication, at the right time. I've even been able to have a short holiday for the first time in years."
Lucy

Telecare allowed Barbara to avoid entering residential care for 16 months, despite concerns about her safety.

"It never seems like he is listening to me. With the Talking Mat®, I can make him sit down and look at symbols and get him to understand what I am trying to say."

Safety risks should be assessed at every point in the journey

Types of dementia-friendly technology

Safety

- Preventing falls
- Detecting gas leaks and floods
- Fire alerts
- Remove risk of wandering
- Personal alarms
- Interoperation of care networks

Co-morbidities

- Preventative health monitoring
- Blood pressure tests
- Medication management
- Integrated care records between health and care
- Vital sign monitoring
- Physical check-ups

Enhancing

- Social connection through interoperable networks
- Carer support
- Nutritional management
- Information on the quality of care
- Memory stimulation
- Regular physical checks

Relationships

- Connecting families

Tunstall

Technology that could help if…

You are worried about your **memory**

'My family tell me my memory is getting worse and I often feel frustrated, but I still want to be able to live my life. My daughter helps me a lot, but she has her own children to think about as well. How can technology help us?'

A dementia clock
This clock provides a simple visual aid to differentiate day from night. Location devices and memo minders are very helpful.

Tablet based apps
Apps on a tablet provide key tools to keep busy and stay in touch with friends and family.

Activity monitoring system
An activity monitoring system shows your daily routine and reassures your family that all is well.

Find out more about how technology can help you and your family at:
alzheimers.org.uk/technologycharter

Helpline number: **0300 222 1122**

Alzheimer's Society acknowledges the support of Tunstall in producing this infographic

Alzheimer's Society | Leading the fight against dementia

uk.tunstall.com

Tunstall

Technology that could help if...

You are worried about **falling**

'I've just been in hospital following a fall. It got my wife really worried and she wonders how we'll cope. Can technology help when I get home?'

Fall detector
A fall detector will send an alert to his wife or a 24-hour response centre should he fall.

Movement Sensors
A sensor that can detect both movement and lack of movement.

A bed sensor
A bed sensor will alert his wife if he leaves the bed at night and does not return within a short period of time, indicating a possible fall.

Find out more about how technology can help you and your family at:
alzheimers.org.uk/technologycharter

Helpline number: **0300 222 1122**

Alzheimer's Society acknowledges the support of Tunstall in producing this infographic

Alzheimer's Society | Leading the fight against dementia

Tunstall

Technology that could help if…

You are worried about your **safety**

'I live by myself and want to keep it that way. My daughter and her family are close by but she worries about me forgetting things. What can I do to stay safe and independent if my GP says I have dementia?'

Property exit sensor
A property exit sensor will send a warning if she walks out of the house unexpectedly or at night.

Smoke detector
A monitored smoke detector will summon an immediate response should there be a fire.

Safer walking detector
An alarm that provides SOS calls and Safety zone monitoring so you can be found if lost or disorientated.

Find out more about how technology can help you and your family at:
alzheimers.org.uk/technologycharter

Helpline number: **0300 222 1122**

Alzheimer's Society acknowledges the support of Tunstall in producing this infographic

Alzheimer's Society | Leading the fight against dementia

Tunstall

Technology that could help if...

You are worried about how to manage **more than one health condition**

'As well as dementia, I have heart disease and diabetes. I have regular visits from carers and from a nurse to manage my conditions.

I have always done the cooking in our house, but I'm scared that I'll forget to turn the gas off or burn myself. Is there something that can help me?'

A telehealth system

A telehealth system checks vital signs at home, and sends a response to the doctor if conditions deteriorate.

Environmental sensors

A gas detector installed in the kitchen will ensure an alert is sent if the gas is not switched off. A temperature extremes sensor alerts if there is a potential fire or if it gets too cold.

Medication reminder

A medication reminder will send prompts to take the right pill at the right time

Find out more about how technology can help you and your family at:
alzheimers.org.uk/technologycharter

Helpline number: **0300 222 1122**

Alzheimer's Society acknowledges the support of Tunstall in producing this infographic

Alzheimer's Society | Leading the fight against dementia

Tunstall

Technology that could help if...

You are living in a care home and worried about **falling and other safety issues**

- There are ten times more hip fractures in care homes than in other environments.

- Approximately 40% of hospital admissions from care homes follow a fall.

- Many falls occur when getting up from or into a chair or bed unaided.

Should any of the sensors below detect a possible problem, a member of staff would be notified of the nature and location of the incident on a portable handset, enabling them to respond swiftly. These can also help at home;

Bed and chair occupancy sensor

This specially designed pressure pad fits under the mattress or chair cushion and provides an early warning by alerting that the user has left their bed or chair and not returned within a pre-set time period.

Movement sensor and fall detector

The movement sensor detects if movement or inactivity has occurred. The fall detector will automatically generate a call for assistance if it detects a fall.

Enuresis sensor

Placed between the mattress and sheet, this sensor provides immediate warning on detection of moisture, allowing effective action to be taken, promoting dignity and independence.
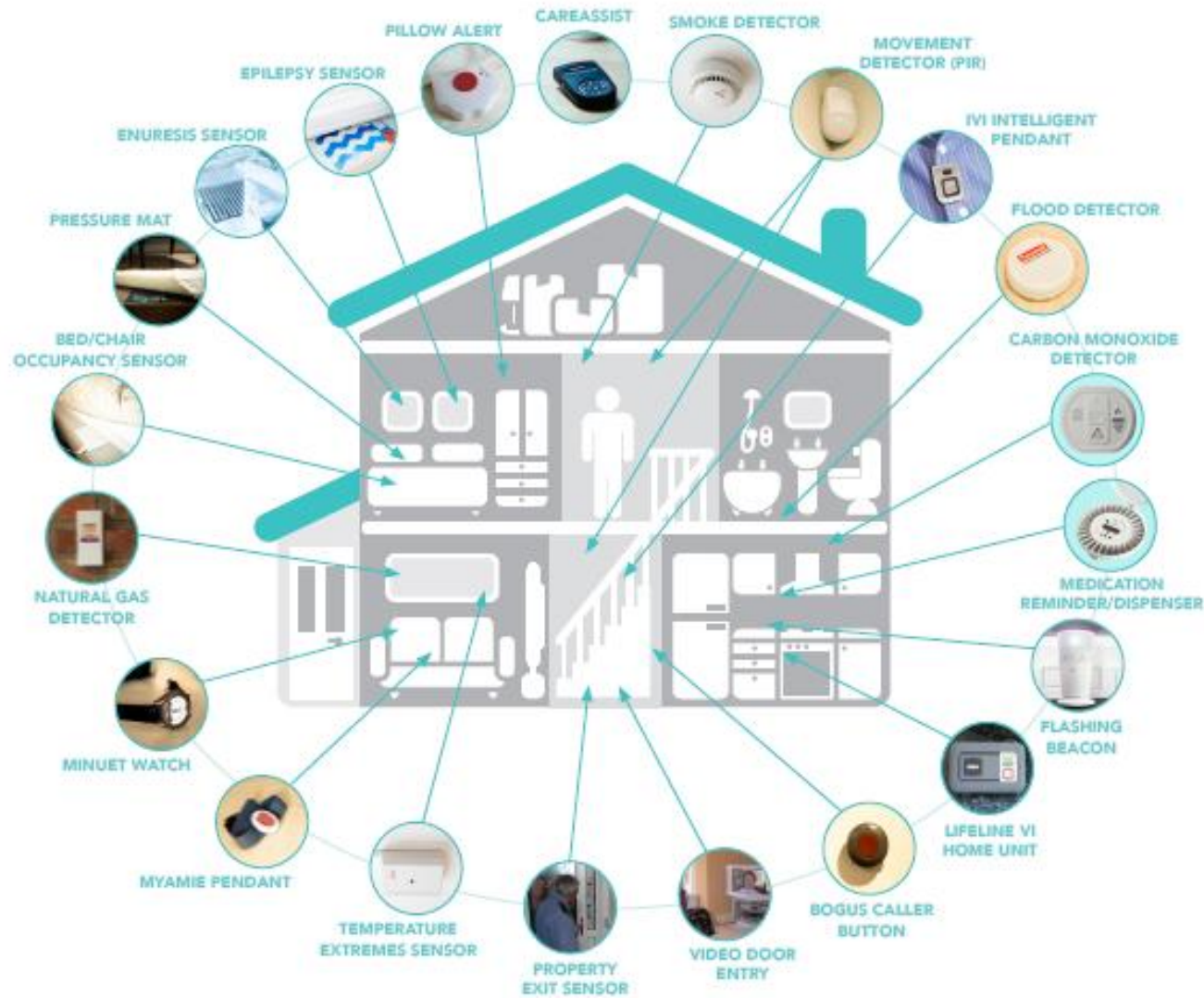
Find out more about how technology can help you and your family at:
alzheimers.org.uk/technologycharter

Helpline number: **0300 222 1122**

Alzheimer's Society | Leading the fight against dementia

Alzheimer's Society acknowledges the support of Tunstall in producing this infographic

Tunstall

Independent living through telecare solutions

Tunstall

Evidence | Telecare for People with Dementia:

Evaluation of Renfrewshire Project

- 320 people with dementia were provided with telecare in Renfrewshire in the five years to 31 March 2012, equivalent to 31% of all users of Renfrewshire telecare under this programme
  - Over 67% of savings from avoided hospital admissions or shorter lengths of stay
  - A further 24% of savings from care home admissions avoided
- Renfrewshire Partnership gave estimated net savings attributable to the 325 clients with dementia, over the five-year period, of over £2.8 million, equivalent to about £8,650 per client receiving a telecare system.
  - 88 admissions to care homes avoided, saving 606 days each, at a daily saving of £48.06 (£29,124 per event), giving total savings of £2.55 million;
  - 114 hospital admissions avoided, saving almost 20 days each, at a saving per day of £336, giving total savings of £0.75 million;
  - Delayed discharges avoided, saving £0.45 million;
  - Other savings from avoided sleep-overs (£110,910) and respite care (£30,060)

uk.tunstall.com

Tunstall

Telecare helping to manage independence

Challenge

•Rose lives in a new extra care flat with onsite staff. There were a few issues during the night when the building was not staffed. Rose would wander down corridors, knock on neighbours doors and may leave the building. She has no close family members.

Solution

•Rose agreed to have a bed occupancy sensor (indicating possible falls) and door sensor fitted to connect to her telecare home unit. The door sensor sent an alert between 10pm and 7am to the out of hours team

Outcome

•This solution has allowed Rose to remain safely at home

•The out of hours team has been called out 7 times in 4 months

•This has provided reassurance to Rose and prevented her from disturbing other residents or leaving the building at unsocial hours

Bed occupancy sensor

Tunstall

Managing risk

Challenge

- 96 year old Mrs B lived alone. One summer evening she left the grill pan on and forgot about it. Some oil in the pan overheated and caught fire.

- Alarmed, Mrs B tried to put out the fire with a damp mop. She also tried to turn the grill off, but in doing so, possibly through panic, she turned on three of the cooker top gas rings. At this point Mrs B retreated to her living room and was overcome by fumes.

Solution

- A smoke alarm linked to her telecare system activated, and immediately sent a signal to the alarm remote monitoring centre, who contacted the Fire Brigade, triggering a swift emergency response. In a short time, fire fighters using breathing apparatus forced entry into Mrs B's home and found her unconscious on a living room armchair

- The crew removed her from the smoke logged room, brought her round and helped her into the care of the ambulance service. Mrs B suffered from smoke inhalation and was kept in hospital overnight for observation, but was otherwise fine

Outcome

- Mrs B is alive and is still cooking.

Tunstall

Care home

Challenge

- Mrs C had dementia and had lived in an EMH unit in Residential Home for 3 years.

- She appeared settled and had a good rapport with the staff.

- Staff had noticed that during the night Mrs C was attempting to climb onto the basin in her room believing it to be a toilet; this was putting her at huge risk of falling and loss of dignity.

Solution

- Mrs C's Social Worker carried out a Mental Capacity test which identified that Mrs C did not have the mental capacity to make an informed decision about the provision of telecare equipment.

- A Best Interest decision was made to provide the least restrictive option of telecare provision in order to keep her safe.

- A bed occupancy sensor was provided which alerted staff if Mrs C attempted to get out of bed. This enabled staff to assist Mrs C to her toilet, provide her with reassurance and settle her back to bed safely.

Tunstall

Tunstall

Enabling independent living

Thank you.
Any questions?