

How can assistive technology help me?

The aim of social care support for vulnerable people in Cheshire East is to help people be as independent as possible and help them remain in their own home for as long as possible.

These objectives can be compromised by a number of issues:

- **Difficulties in obtaining a true assessment of night time needs;** for example, where you perhaps have some memory problems and there are concerns about your safety as a result of confusion at night time. One option could be to organise a period of assessment at a community support centre; however, taking you out of your known environment may provide an artificial idea of how you would manage at home and may be unsettling for you. The lack of options available for a comprehensive assessment of your abilities in your home, can lead to risk adverse support decisions; for example an admission to permanent care.
- **Risk management concerns;** for example, if you have a level of confusion and have been mixing up prescribed medication, and may be at risk of under or overdosing, then a traditional response may be to arrange support calls to prompt you with your medication. This intervention takes away something that you may wish to do for yourself and makes you dependent on support. Whilst support calls will be arranged to fit in with your routine and needs, you would need to stay at home to wait for someone to visit to watch beginning you take your medication, limiting your choices.
- **Limited opportunities to promote greater independence;** where you may develop difficulty with certain tasks you may be reluctant to have someone else physically help you or wish that you did not need someone else to assist you for reasons of dignity. Just providing the traditional response of physical support to increasing need may make you less independent, reducing your control over your life.

Electronic assistive technology (which includes telecare) can play an important role in combating these issues and achieving the stated aims.

How can technology help?

Reminding you about important things - alerts can jog your memory about taking your medication at the right time and a dispenser can ensure that you take the right medication at the right time. Alerts can also be programmed with a familiar voice to ask for identification when you open the front door, remind you to visit the doctor or even to send a card for your niece's birthday. Certain clocks can make sure that you know whether it is daytime or night time so that you have a point of reference for what comes next in your daily routine.

Case Examples:

A man with dementia who needed to take a number of medications at different points throughout the day had support staff visit his home to prompt him to take his medication at the correct time. He was frustrated at having to wait for staff to be there when he was capable of taking his own tablets, so he switched to using a medication dispenser. This unit beeps and has a flashing light to indicate that medication needs to be taken and only the tablets that he is due to take are visible and available to him from the dispenser (alleviating any risk of overdosing). If he doesn't remove the tablets from the dispenser within 15 minutes of the allotted time a carer is notified and can respond if assistance is required. *He is much happier with this arrangement, with support workers calling only when he really needs them and values the greater independence the dispenser gives him.*

A woman with a diagnosis of dementia, living in sheltered accommodation was reported to be leaving her flat during the early hours of the morning (thinking it was daytime). A memo minder unit was placed next to her front door with a message from her daughter recorded on to it saying to her mother that she shouldn't go out as it is night time. When she opens the front door at night time the movement of the door triggers the voice recording. *This has been effective in encouraging her not to leave her flat during the night time without any need for emergency alerts or staff to respond. The alternative would have been for this lady to give up her flat and go into residential care which she (supported by her family) did not want to do.*

Products:

[Pivotell Medication Dispenser](#)

[Tab time](#) products

[Mem-X](#)

[Memo Minder](#)

[Tunstall Lifeline Units](#)

[Day Night Clock](#)

Staying safe in your own home – Your home can be fitted with items which will trigger an alert if there is smoke or a rapid rise in temperature detected (suggesting a fire in the home). Carbon monoxide or water on the floor which may indicate a flood can also be sensed automatically. Alerts can be set up so that someone is contacted immediately and can take action to help you, preventing more serious results. If you are concerned about answering the front door and worry about bogus callers a system can be set up so that by pressing a button someone can talk you through answering the door on a speaker phone, making sure that the person at the door is someone you can let in to your home. If you may be at risk should you leave your home without someone being with you, equipment can be installed to produce an alert if you leave the house, with staff available to guide you back to your home.

Case Examples:

A woman living on her own with a diagnosis of dementia had some telecare fitted to manage a number of identified risks in her home. She had a heat rise detector fitted in her kitchen, flood detectors in her bathroom and kitchen where she also had a heat rise detector. Two weeks after the equipment was installed there was an alert from her heat rise detector in the kitchen followed by an alert from the smoke detector. Staff at her local call centre received the alert and tried to speak to her via the loud speaker on her lifeline unit but received no reply. They contacted the fire service who attended and put out a fire in the kitchen which had started in the cooker. The woman herself had been distressed and confused by the incident and had stayed in the kitchen trying to stop the smoke alarm from beeping. She was rescued from her home uninjured with only cosmetic damage to her property.

Without the telecare fitted managing the risks to her health and safety she would have been assessed as needing to go into permanent care which she (supported by her family) were desperate to avoid.

A young woman with a learning disability wanted to move out of her parents' property to live on her own but there were concerns about her safety in the house and she was not confident about opening the front door to people she didn't know. A telecare package was fitted which comprised a smoke alarm, carbon monoxide detector, flood sensor and a bogus caller button placed next to the front door. Every time the doorbell rang she pressed the bogus caller button and the call centre (who were aware of her situation and needs) talked her through asking for identification from people she didn't know and giving her the confidence to say no to people at the

door if she wanted to. She moved into a flat in 2008 and has been living there ever since with low key support and has grown in confidence when the doorbell rings so that she now only uses the button if she feels uncomfortable answering the door.

The telecare package enables her to live independently and provided confidence to both her and her parents to make it happen.

Products:

[Telecare smoke alarm](#)

[Telecare carbon monoxide detector](#)

[Telecare flood detector](#)

[Telecare temperature extremes sensor](#)

[Telecare bogus caller button](#)

Helping you to be independent – If you have difficulty bending down to switch plug sockets on or off by using a remote control this can be done automatically, saving energy and reducing the likelihood of a fall. Lights that come on automatically when you approach them or when you get out of bed can help you see at night time, reducing the risk of a trip or fall as you look for your slippers or the main light. Sensors can be placed in the bath to make sure that the bath temperature is just right and so that the bath isn't overfilled. Hot water dispensing units mean that people can make a hot drink without having to fill and carry a kettle or pour boiling water, reducing the likelihood of an accident. Sensors can even be installed to ensure that continence needs can be managed during the night time.

Case Studies:

A man with a tremor and weakness to one side of his body had been assessed as unable to manage to make a cup of coffee for himself as he could not fill or carry a kettle and risked scalding himself whilst pouring the boiling water. The impact for him was that he was reliant on staff support visits for a hot drink which he found frustrating. Staff supporting him found a hot water dispenser in the Argos catalogue which dispensed a cup full of hot water at the touch of a button. *He is now able to make himself a hot drink as and when he likes as there is no pouring or tipping required. He is pleased with the dignity it gives him as he is not dependent on staff for this basic need.*

A man with an acquired brain injury was keen to return to independent living following a period of intensive rehabilitation. As a result of his injury he had some short term memory difficulties, was occasionally unsteady on his feet and was unable to gauge temperature. He was set up with a telecare to manage the risk of falls and medication reminders to ensure that he took his tablets at the right times during the day. Due to his balance problems he needed to have a bath rather than a shower so he was also provided with a bath level and temperature sensor. That meant he was able to bathe independently and managed the risks of him scalding himself whilst bathing. *The equipment provided meant that he was able to return home where he had a small amount of support rather than requiring assistance 24 hours per day. The independence he gained from his package of support is highly valued by him and has enabled him to regain some sense of control over his life.*

[Movement sensitive lights](#)

[Tefal One Cup Hot Water Dispenser](#)

[Remote Control Plug Sockets](#)

[Telecare Continence Sensor](#)

Making sure that help is there when you need it - If you have had a slip, trip or a fall at home previously or if this is a concern there are a number of ways that others can be alerted automatically to a problem. For example, should you have a fall by pressing a pendant alarm someone of your choosing would be immediately notified, reassuring you through a speaker phone that help will be there quickly. Alternatively by wearing a fall detector an alert would be sent automatically if you were to fall and not get up within 5 seconds. Night time falls can be managed by a sensor placed under the mattress which will produce an alert if someone gets out of bed at night and doesn't return within a set time (which is up to the person themselves), indicating a problem. Falls that result in a fracture (which are less than 10% of all falls) are a significant predictor of admission into permanent care (Tinetti, 1997) and mortality (Keene, 1993). Confidence is a big factor in the likelihood of a fall (Simpson et al, 1997) and by knowing that if a fall does happen someone will be there to assist the assurance that leads to confidence while walking will follow. Also by identifying more minor falls, the issues underlying why the person is falling (e.g. medication compliance, postural hypotension, etc) can be addressed. If someone has certain forms of epilepsy a sensor can be placed under the mattress to detect a seizure and alert someone to provide the appropriate support.

Case Examples:

A woman living on her own and receiving daily domiciliary support had reported having two night time falls in a short period of time. There was no obvious cause for these falls and support workers had also reported that she was reluctant to eat when they assisted her to prepare a meal at tea time. A reassessment led to consideration of whether this woman needed to move on to permanent care. The woman herself expressed her wish in the strongest terms to remain in her own home. She had a bed sensor placed under her mattress which produced an alert if she was out of bed for more than 15 minutes at night time which managed the risk of a night time fall. She also had a lifestyle monitoring system installed as part of the reassessment which showed that she was moving around in the kitchen half an hour before the daily support called to assist with her tea time meal. It became clear that she was able to prepare food for herself and was doing so before the support worker arrived. The reluctance to eat was not an indicator of a general increase in needs as had been assumed. *Three years later this woman is still living independently in her own home with support tailored to her needs.*

A young man with a diagnosis of epilepsy received 24 hour support due to the risk of a seizure at any point in the day. He found this support very frustrating, limiting and unnecessary, feeling that he had no privacy in his own home. He was provided with an epilepsy sensor to manage the risk of a seizure in bed, a bed sensor to manage the risk of a seizure when he got up at night time and a fall detector to wear during the day which would manage the risk of a daytime seizure. Appropriately skilled responders are available to support him within 30 seconds of any alert. *He no longer requires a support worker to be physically with him at all times and appreciates time on his own providing him with privacy and dignity.*

Products:

[Tunstall pendant alarm](#)

[Tunstall Lifeline unit](#)

[Tunstall bed sensor](#)

[Tunstall fall detector](#)

[Emfit epilepsy sensor](#)

Help you keep in touch with family and friends – If you find remembering or dialling telephone numbers difficult, phones are available with speed dial

buttons where photos can be shown. So by simply pressing the photo of a particular person on your phone you can dial their number. Some telephones can be configured to automatically answer calls from pre-programmed numbers via a speaker phone so that you never miss calls from friends and family. Calls can be answered by using a portable button which switches the telephone to loudspeaker mode, so you don't have to leave your chair to answer a call. Adaptors and specialist phones are available if you have a hearing impairment.

Products:

[Picture phone](#)

[Easy Answer Desktop Mobile Phone](#)

[Doro HandleEasy 326gsm Mobile Phone](#)

Ensure a full assessment of need – If you have a degree of confusion and are concerned that you are not coping in your own home, a lifestyle monitoring system can be temporarily be installed. This will produce a real time (with a 6 minute delay) chart of movement in each room of a property, providing a 24 hour representation of your activity to inform a 360 degree assessment of your needs.

Case examples:

A woman living on her own with a diagnosis of dementia had had a fall at home which resulted in a hospital admission. In hospital she had been disorientated and there were concerns expressed by her family and professionals about whether she would be able to return home. She expressed her wishes to return home and was provided with a telecare package including a fall detector, bed sensor and heat rise detector. She was also provided with a lifestyle monitoring system following a discussion about what it was and the information that it would provide that enabled her family and the care manager to view a chart of movements within her property over a 24 hour period. *The monitoring system indicated that she was active around the house as expected during the daytime and slept well at night, with no evidence of the disorientation that she experienced in hospital. She remains at home where she is settled and content.*

A man living on his own who had a diagnosis of Alzheimer's disease and had recently had to sell his car as a result of his increasing confusion. As his memory was poor he struggled to remember that he had sold the car and was often spotted

outside his house searching for his car, sometimes in the early hours of the morning. His family were very concerned and felt that it might be time for him to go into permanent care. As part of his support package and following a lengthy discussion about the technology he was provided with a memo minder which was placed next to his front door which activated a message from his daughter reminding him that the car had been sold and suggesting that he stay inside when it is night time. He was also provided with a lifestyle monitoring system which enabled his family and care manager to look at activity in the house over a 24 hour period. *The monitoring system showed that he was no longer leaving the house in the early hours of the morning and that he was reasonably active during the day. He remained in his own property and his family who all lived at least 2 hours drive from his house purchased their own monitoring system as they had valued the reassurance provided by being able to look at the activity in the house regularly.*

Products:

[Just Checking lifestyle monitoring system](#)