

Sefton's Social Care and Health Care Systems are looking at how digital technology can support residents and their families in the Borough. Digital Technology for health and social care is an important part of the overarching digital services we offer, Sefton's Health and Wellbeing Strategy and the NHS 10-year plan.

This mini guide is designed to help the public and people who support individuals to live independently in their homes understand the terminology, descriptions of systems and who could benefit from using them.

Technology Enabled Care Solutions (TECS)

Technology Enabled Care Solutions (TECS) describes a range of health and care technologies such as **Telecare, Telehealth, Telemedicine /Triage and Home Activity Tracking Systems.**

TECS is a way to describe community equipment and would cover all technologies such as apps and smart home etc. It includes technology that assists people with disabilities, provides an adapted solution to empower and help's people to improve their skills or manage their conditions. It also describes how to select the appropriate TECS solutions and support people to use them

Digital Equipment and Assistive Technology can form an integral role in meeting the universal, targeted or specialist care needs of individuals accessing health and social care services, and it can enable the effective integration of these services.

Because there are different technologies it is important to know which technology is the correct for an individual at a particular time and helps to meet their needs.

Assistive Technology includes but is not limited to;

- Telecare
- Mobile devices and apps
- Assistive technology (monitored as well as stand-alone devices such as sensors)
- Skype and videoconferencing for real time communication
- Internet online booking and purchasing services
- Online market and support matching services
- Social media, forums and chatrooms for keeping in touch
- Telehealth
- Telemedicine

Assistive Technology promotes greater independence by supporting people to perform tasks that they were formerly unable to do or had great difficulty doing and it also promotes quality of life and improved health and wellbeing.

Here are some of the different assistive technologies that can provide support and help with independence.

Telecare

Telecare was developed from Social Alarms services which have been supporting elderly and vulnerable people live more independently for over forty years. The original pull cord systems in sheltered schemes and alarms and pendants which are installed in the users' home now offer a range of environmental and personal sensors which can also monitor their safety and wellbeing.

Telecare services provide a 24/7 monitoring service which will send alarm messages to a named responder or, if appropriate, the emergency services.

Environmental sensors include

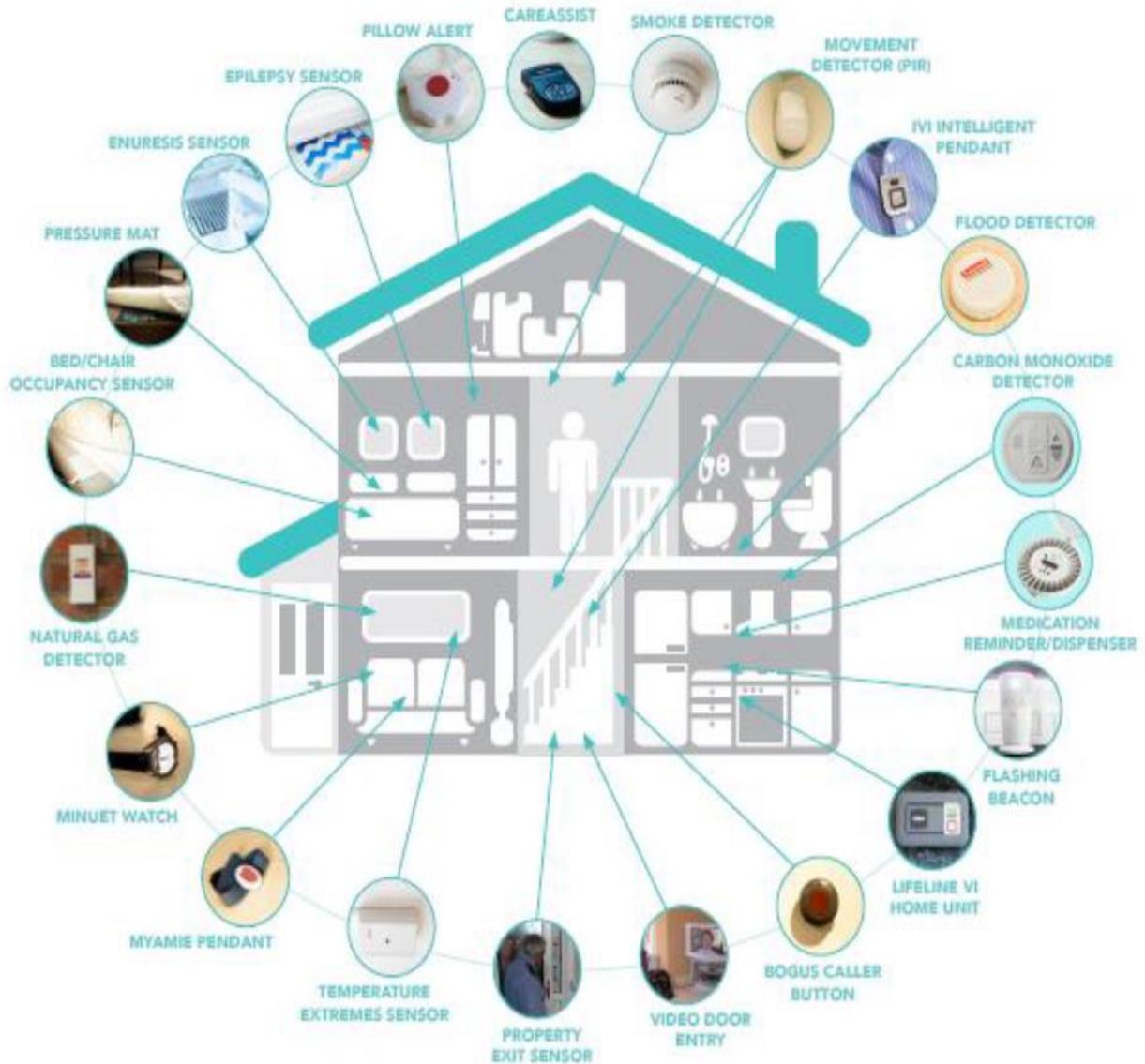
- smoke detectors
- temperature extreme sensors which can detect fire or low temperature
- flood detectors
- door sensors
- movement sensors
- carbon monoxide detectors.

Personal sensors include

- fall detectors
- bed and chair occupancy sensors
- incontinence sensors
- epilepsy sensors
- medication reminders

Who can benefit?

All the above not only help elderly and vulnerable people live more independently but can also be used in conjunction with Telehealth systems to assist younger people with long term conditions or disabilities.



Independent Living through Telecare Solutions

Home Activity Monitoring systems

Home Activity Monitoring systems such as [Just Checking](#) and [Canary](#) helps people with dementia to live in their own homes for longer by showing their day-to-day capabilities and where support is needed. Adults with learning disabilities and/or autism can extend their independence, and receive just the right level of support. They don't use cameras or microphones. *These systems* use discreet wireless sensors placed around a property to send an overview of daily activity to an online app. Family and professionals can see whether an individual is visiting the kitchen to make meals, using the bathroom as expected, and getting a good night's sleep.



These technologies complement services such as integrated digital care records and unified communications between health and social care teams. They also complement the use of Integrated Community Equipment Solutions (ICES) and the growing adoption of technologies in communities through the retail market.

Telehealth

Telehealth systems support people with Long Term Conditions (LTC's) to self-manage their conditions, remain more independent, reduce hospital stays, allow early hospital discharge and also reduce the dependency on primary health and GP services.



Telehealth services usually consist of a smart hub which allows the patient to enter vital signs data or have the data collected by various devices (blood pressures readers, pulse oximeters, and blood glucose monitors) which automatically transmits the readings to the hub. This data is then shared with a clinical or non-clinical monitoring service where the patient’s health is monitored, and any alerts addressed by the appropriate service.

Telehealth systems can also provide automatic coaching and mentoring to the patient through a series of questions and answers

Who can benefit?

Telehealth is used to support patients with Chronic Obstructive Pulmonary Disease (COPD), Chronic Heart Failure (CHF) Type 2 Diabetes, Cancer, Mental Health conditions and other long-term conditions.

Telemedicine/Teleconsultation or Telerriage

Telemedicine is the use of video technology to enable specialists and consultants to support patients and other professionals remotely by making a diagnosis and recommending treatments. Vital signs data, x-rays and other information can also be transmitted to enable a speedy diagnosis when a patient is located in a remote area or the expertise is not available locally.

Telemedicine/Telerriage systems are mainly employed in an acute health environment.

mHealth/Self Care Apps

A few of the services described under Telehealth can also be accessed via mobile phone technology and Apps.

Who can benefit?

These systems are often used by younger service users and patients to allow them greater flexibility to access these service

The use of GPS and GPRS, as a further mHealth application can also be used to provide safe walking services to people with dementia, early stage Alzheimer’s and learning disabilities.

Self-care Apps are Applications that raise awareness and help people self-manage.



Assistive Technologies/ Digital Technologies (Environmental Controls)

Assistive Technologies or Environmental Controls allow people with severe disabilities to function as independently as possible by using devices that allow them to carry out day to day activities such as switching on lights, opening curtains, turning on the TV and using a computer though a range of switches and sensors which can be operated with only limited movement. Environmental Controls can also be used in conjunction with Telecare and Telehealth systems.

Augmentative And Alternative Communication (AAC)

Effective communication occurs when the intent and meaning of one individual is understood by another person. How it is done is less important than the successful understanding of the message.



AAC is a set of tools and strategies that an individual's use to solve every day communicative challenges. AAC covers a huge range of techniques which support, or replace, spoken communication. These include Gestures, Signing, Symbols, Word boards, Communication boards, Books, Voice Output Communication Aids (VOCAs) Communication Matters (Royal College of Speech and Language Therapist).

For more information about AAC [click here](#)

Assistive Technology is any item, piece of equipment, software or product system that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities. AAC can include:

- low tech like communication boards made of cardboard or fuzzy felt.
- high tech such as special purpose computers
- hardware such as prosthetics, attachment devices (mounting systems), and positioning devices.
- computer hardware, like special switches, keyboards, and pointing devices.

- computer software such as screen-readers or communication software.
- inclusive or specialized learning materials and curriculum aids.
- specialized curricular software.
- much more, including electronic devices, wheel chairs, walkers, braces, educational software, power lifts, pencil holders, eye-gaze, and head trackers.

Connecting modern TECS into the heart of adult social care and support services, rather than an 'add-on' is a huge ambition, however the benefits of adopting such technologies should help in assisting a service user experience that is flexible, enabling, responsive and re-assuring.

