

AbilityNet Factsheet – April 2018

Dementia and computing

There are 850,000 people with dementia in the UK, and their numbers are set to rise to over 1 million by 2025. It is not a specific disease but an umbrella term used to describe a range of progressive conditions affecting the brain.

Dementia cannot be cured and anyone diagnosed with dementia will require increasing care and support as their condition worsens. Some people may suffer from different types of dementia – such as Alzheimer’s Disease and vascular dementia – but each person’s experience will be unique to them.

In addition to memory loss, dementia symptoms include difficulties with language, thinking, and concentration, as well as periods of mental confusion, and changes in personality and mood. Some dementia sufferers can also become withdrawn from social interaction and suffer from depression. However, during the early stages of dementia, much can be done to help the person to maintain as much of their independence and autonomy as possible.

Computer technology can help to make life easier for people with dementia and their carers. This factsheet summarises some of the key ways it can help support people with dementia to achieve greater independence and autonomy, including by:

- assisting with everyday living
- reducing risk and increasing safety
- helping with memory and recall
- maintaining social contact.

These benefits can all help to improve confidence and the quality of life for someone with dementia while also providing important support and reassurance to carers. With the involvement of family members and carers, computer activities for people with dementia can also help to strengthen relationships, inter-generational interactions and social connections.

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1 Introduction

Broadly speaking, ‘assistive technology’ can refer to any system or device that helps to improve a person’s independence safety and wellbeing.

The focus of this factsheet is on how home computer systems (including tablets and smartphones) can be used to help and support a person with dementia. It does not cover telecare or home monitoring and alarm systems.

Many people with dementia also experience further problems with their speech, hearing and/or eyesight. AbilityNet has produced separate factsheets looking at how computer technology can assist someone with any of these impairments.

Meeting individual needs

In selecting appropriate software, apps and devices, it is important to match these as closely as possible to the specific (changing) needs and capabilities of the individual. Potential ‘solutions’ based around more familiar technology – that an individual may have been using before developing dementia – could well be easier for them to adopt.

It is also important that decision-making is shared, so that the person with dementia is involved as much as possible in discussing and deciding on possible options. Such involvement and consent is likely to affect how well any chosen solution works.

There are also ethical issues that may need to be considered when looking at systems that monitor people or track their movements, especially if the person concerned has lost the ability to make decisions.

Research evidence

With appropriate support, research evidence suggests that people with dementia can derive substantial pleasure, enjoyment and relaxation from using a computer (or tablet). Personally-tailored activities involving familiar music, videos, photographs and / or games that connect with a person’s past occupation, hobbies and interests are likely to be the most engaging. It is also important to match activities to the individual’s cognitive and functional abilities.

2 Support for daily living

Computers, tablets and smartphones can be set up quite easily to support many key aspects of daily life for someone with memory loss. Possibilities include:

- clocks and calendars
- automated prompts and reminders

- medication reminders
- finding things.

Clocks and calendars

A large number of products are available to help people with dementia keep track of the time and date. These include clock and calendar apps for tablets that clearly display the day, date and times of day – many of which can be set up to suit your personal needs and preferences. Possible options include:

- *Dementia Clock* (for iOS only)
- *Dementia Calendar Clock*
- *RecallCue Day Clock*.

The *Dementia Clock* can be touched anywhere to speak the day and part of the day, with an option to record your own voices.

Prompts and reminders

A tablet or smartphone calendar can be set up to automatically display reminders of important events or activities. This can now also be done remotely. For example, by using the companion *RecallCue Connect* app, family members and carers can easily send messages, calendar reminders and photos for display by the *RecallCue Day Clock*.

Other possible apps for enhancing the effectiveness of regular and occasional reminders include *Reminder with Voice Reminders* and *Prompt* – both of which are available for iOS devices.

Prompt adds images and context to reminders – using photos of people and places to help you remember where you're are going and the people you may be seeing. *Reminder with Voice Reminders* enables you to record your own voice or to use familiar songs from your music library to create more meaningful reminders.

Another app that helps support less technological solutions is *Senior Assist Reminder & Learning* (for iOS only). This makes it easy to print out customised reminders and large readable labels that will adhere to any surface.

Medication reminders

An extensive range of apps are available to remind people to take their medicines, one example being the *Medisafe Pill Reminder*. These apps can provide visual and sound reminders to help users remember to take the correct dose of their medications at the right time. They can also keep stock of the need for repeat prescriptions.

Automatic pill dispensers are also available but need to be filled by a local pharmacist. These emit an alarm when any medication needs to be taken, with a compartment opening to allow the user to access their pill(s). Some models can send an alert to a carer if the medication hasn't been taken.

Finding things

A number of gadgets are now available to help users locate lost items, such as their keys, wallet or mobile phone. One example involves attaching a small tile to any item and using a simple app to display its last known location. The tag also emits a beep to help you to zero-in on the object once you're close by.

3 Increasing safety

There are a variety of ways that assistive technology can help to reduce risks and improve safety for people with dementia, at and away from home.

The wide array of gadgets now available to help people feel safer in and around their home include sensors and devices that can:

- detect movement and turn lights on when they are needed
- turn off a tap that's been left running or a cooker that's been left on
- detect smoke, gas, carbon monoxide and high or low temperatures
- indicate whether someone might have fallen
- detect if the front door has been left open
- indicate if someone has fallen
- detect if someone has got out of bed and not returned, or if they haven't moved out of their chair
- send an alert when someone moves outside a set boundary (eg their front garden).

Many of these devices can be linked to a telecare system, call centre or nominated person and trigger an alarm if a problem occurs. Information on what may be available in any area will be available from the local authority or nearest assisted living centre.

Personal alarms

Various simple systems will enable someone with dementia to press a 'panic' button and send an alarm call to a family member, friend, carer or monitoring agency. Some systems will cascade an alarm call to a sequence of numbers until someone answers – and then allow a two-way conversation. These devices are often worn as a pendant around the neck or on a wristband.

Another option is a quarterly subscription-based service such as the *Personal Alarm Service* offered by Age UK in conjunction with a private company. Pressing the alarm button connects the user to an emergency response centre who subsequently decide whether to inform their chosen contacts or the emergency services.

Location monitoring and tracking devices

Going on trips and walking about can be very beneficial for people with dementia. However, this can also present risks – such as the person getting lost or going out in the middle of the night when not properly dressed.

A number of apps and devices are now available that can help to keep a person safe, albeit with some implications for their privacy.

The *ManDown* app works by continuously monitors a smartphone's movement. If the phone is motionless for a set time (from 30 seconds upwards), it sends out a local, audible alarm and a text, email and phone call to selected emergency contacts. The message sent includes the GPS location of the person in distress. Various 'family locator' apps also use GPS technology on smartphones to pinpoint the precise location of group members.

A number of tracking devices like the *Pebble Mini* also use satellite and mobile phone technology to reduce the risk of someone getting lost or going missing. These give the wearer an SOS button for calling their carer, while enabling the carer to view their exact location (on their smartphone) by sending the tracker a text command. Such devices also act as a phone, allowing carers to speak and provide reassurance to someone who has become lost or confused.

Similar features are provided by the *MySOS* GPS tracker which, for a monthly subscription, provides access to 24-hour emergency support.

4 Helping with memory and recall

Favourite music and songs, film clips, old pictures, family photos and videos can all help to trigger important memories and reminiscences for someone with dementia, and may also help them to relax.

The internet now offers myriad possibilities for accessing relevant media and content – for example, through streaming music services (like Spotify, Deezer and Apple Music) or video channels (like YouTube and Vimeo).

It is quite easy now to put together your own personal music playlists, photo albums, slideshows and home movies using widely available software and apps for computers, tablets and smartphones. Digital photoframes can also be

programmed to play a slideshow that may help to stimulate memories and conversation with others.

An increasing number of apps are becoming available to enhance users' experience of accessing and recording personal memories. These include:

- *Memory box* – contains visuals and music for stimulating memories and conversation about famous events, people, places and topics from the 20th century that you can also save in a personal scrapbook.
- *GreyMatters* (for iPads only) – creates an interactive life storybook using visual reminiscence paired with music and games to preserve old memories and video record new ones.
- *MemoryGapp* (iOS only) – photo sharing app that allows people (carers, family members and friends etc) to tag personalised audio clips to their faces and other areas within pictures.
- *Playlist for Life* (iOS only) – makes the experience of searching for music and creating a playlist as simple as possible. It helps you track down the music that holds the strongest memories and gives access (through Spotify) to more than 100 ready-made playlists of the top songs from the past century.

5 Maintaining social contact

It is very important that people with dementia and their carers maintain good social contact with others and are able to access vital help and support.

Adapted telephones

Telephones with memory buttons are especially helpful for people with dementia. These phones allow you to store the most important or frequent numbers you call, and to call any of these by just pressing a single large button. Many allow you to insert photographs or pictures to help you remember who each button rings; and some models include an SOS button that will send a pre-recorded message asking for help to a short sequence of numbers.

As well as traditional landline phones, specialist mobile phones are now available that also include only a limited range of key features that make them much easier to use for anyone with memory loss.

Social media

The growth of social media means that people are increasingly meeting together and communicating in a virtual environment, as well as through more traditional contact.

While assistive technology should never be used to replace human contact, if used sensitively, new media channels (like Facebook, WhatsApp and Instagram) can help support increased social interaction and combat potential isolation for someone with dementia. Video calling services – such as Skype, Google Hangouts and Facetime (for iOs only) – also offer great potential for family members and friends to keep in regular touch when face-to-face meeting is not possible.

Social networking

Living with, or caring for, someone with dementia can be enormously stressful – and the help of others can make a huge difference. Social networking enables people to share their experiences and to seek support and advice from others in similar situations.

Talking Point is an online community moderated by the Alzheimer's Society for everyone who is affected by dementia, whether you have it yourself or know someone who does. It provides help videos and technical tips for anyone getting started. Visit forum.alzheimers.org.uk

Another option is *myALZteam* – a social network and online support group for family and friends who are caring for someone with dementia. Visit www.myalzteam.com

6 Other resources

myhomehelper

myhomehelper is an award-winning digital memory aid and communication device for people living with dementia and their carers. This computer tablet is especially suited to people who struggle with modern technology as all its features appear without the person with dementia having to touch or press anything. These include a calendar clock, a daily and weekly diary, timed and random reminders, auto-answer video calling, photos, instant messaging, news headlines and talking text. The feature you choose to show at any time is controlled via a secure, online control panel.

For more information, visit www.myhomehelper.co.uk

MemorySparx One

MemorySparx One is a subscription-based app that works on an iPad to help people with memory loss organise and recall important information about their day, their life and their health. It uses intuitive templates to make it very easy to add and update content. You can keep track of, and share, what matters most to you by storing personal details, captioned photos, audio recordings, tasks, activities and personal health information.

For more information, visit www.memorysparx.com

Memories Alive

The *Memories Alive* app for iOS devices allows you to create your own family care group. It becomes a tool your care group can use to stay informed about needs and coordinate care together. It also helps you to share photographs and reminisce with the individual you are caring for.

Further information about dementia

A wide range of apps are increasingly being produced for tablets and smartphones that provide information about dementia and living well with memory loss. Available options for iOS devices include:

- *Dementia guide for carers and care providers*
- *Dementia Guide Expert for Families*
- *Alzheimer's Daily Companion*
- *Living and Dying Well with Dementia*

Available options for both Android and iOS devices include:

- *The Dementia-Friendly Home*
- *Young Onset Dementia*

MIND App for Alzheimers' Parkinsons and Neurological Disorders

The MIND (Make an Impact on Neurological Disorders) app (for iOS only) features art, music and dance activities to appeal to the visual, physical and auditory capacities of patients with neurological disorders. It provides topics for discussion and activities that can be enjoyed together. The app includes a virtual art gallery where users can view well-known masterpieces (like the Mona Lisa), create their own version of them and play matching game activities. You can also create your own music, watch dance and exercise videos and enjoy music from different countries.

My Computer My Way

It is essential that your computing equipment is set up the best way possible to suit your particular needs.

My Computer My Way can help you achieve your optimum setup. It is a free, interactive tool developed by AbilityNet that makes any computer, tablet and smartphone easier to use. It covers all the accessibility features built into your computer, laptop, tablet or smartphone, and all the main operating systems – Windows, Mac OS X, iOS and Android.

My Computer My Way shows you how you can adjust your computer to assist with vision and hearing impairments, motor issues and cognitive problems. You can use it for free at www.mycomputermyway.com

AbilityNet factsheets

AbilityNet's factsheets provide practical advice about specific conditions, and the hardware and software adaptations that can help people of any age use computers to fulfil their potential. Relevant topics covered include:

- *Communication aids*
- *Telephones and mobile phones*
- *Hearing loss and computing*
- *Vision impairment and computing*

All these resources are free to download from www.abilitynet.org.uk/factsheets

7 Useful links

Alzheimer's Society

The Alzheimer's Society is a UK-wide charity providing information and support, improving care, funding research and creating lasting change for people affected by dementia. It publishes *The Dementia Guide* to help people and their carers to live well after diagnosis. The recently updated guide now includes sections on living alone, technology and communicating.

The Society runs the National Dementia Helpline on 0300 222 11 22, and an online shop offering a wide range of products to assist with day-to-day living.

For more information, visit www.alzheimers.org.uk

AT Dementia

AT Dementia provides information on assistive technology that can help people with dementia live more independently. It maintains a directory of equipment

and suppliers and provides an online *AT Guide* for people with dementia and their carers to find advice and product suggestions for everyday activities.

For more information, visit www.atdementia.org.uk

Disabled Living Centres

Disabled Living Centres (DLCs) provide free and impartial information and advice about products and equipment for disabled or older people – in person or by telephone, letter or email. Focus on disability provides contact details for DLCs in each region of the UK.

For more information, visit www.focusondisability.org.uk/disabled-living-centres-index.html

Living Made Easy

Living Made Easy is an online guide developed by the Disabled Living Foundation. It provides impartial advice about independent living for disabled adults and children, older people, their carers and families.

For more information, visit www.livingmadeeasy.org.uk

8 About AbilityNet

AbilityNet is the national charity that supports people with any disability, of any age. Our specialist services help disabled people to use assistive technology and the internet to improve their lives, whether at work, at home or in education. We offer:

- free advice and information
- accessibility services
- DSA/student assessments
- workplace assessments
- consultancy services
- IT help at home
- IT volunteers.

Support us

Visit www.abilitynet.org.uk/donate to learn how you can support our work.

Contact us

- Telephone 0800 269 545
- Email enquiries@abilitynet.org.uk
- Web: www.abilitynet.org.uk

We are always keen to help share knowledge about accessibility and assistive technology. If you have any questions about how you may use the contents of this factsheet, please contact us at AbilityNet and we will do all we can to help.

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