



LOTTERY FUNDED

SAFE AND SOUND
C A M P A I G N



WANDERING IN DEMENTIA: CAN TECHNOLOGY HELP?

DISORDERS such as Alzheimer's disease and senile dementia affect memory and mental reasoning (*cognitive impairment*). For care workers and partners and family of sufferers, one of the most worrying aspects of the condition is that the person may become confused and disoriented while outdoors and may be unable to find their way home. They may also walk out of their home unexpectedly – even at night. Collectively this problem is called '*wandering*'.

Carers worry that a person who wanders may be injured in a fall or traffic accident, suffer from hypothermia or get attacked. This is a common concern whether a dementia sufferer lives on their own or with a family member or is in a care home.

TEMPORARY PHASE

In many cases wandering is only a temporary phase of the condition and yet it is one of the most common reasons why those with cognitive impairment end up in full-time care.

Carers sometimes lock external doors or use door alarms or medication to prevent the cared-for person leaving their home, especially at night.

Most carers accept that these are not ideal steps to take as they restrict the person's freedom of movement and independence and may put a dementia sufferer at risk of being trapped in the event of a fire or other emergency. Yet carers often see such measures as the only practical solution. Another approach is to use '*assistive technology*' such as electronic monitoring to safeguard those prone to wandering. Inside we look at the high- and low-tech systems currently available. On page 4 we offer advice on the steps you can take to manage the problem of wandering.

***'It's common for people with dementia to wander... as if walking away from the problem'* – Pete (carer)**



Photo by Andrew Graham-Archer

Kent Search and Rescue (KSAR) are a group of dedicated volunteers who search for vulnerable people in potentially life-threatening situations, including those missing from home.

Our '*Safe and Sound*' campaign comprises various initiatives to help carers find ways to prevent the person they care for going missing, or find them quickly if they do.

It is aimed at those who care for friends and family at home, as well as care workers in residential settings. This newsletter has been prepared in conjunction with the campaign as a handy guide to the various devices and services available to help carers safeguard those at risk of going missing. It includes useful web sites where you can find more information.



Tunstall exit sensor

WHAT TO LOOK FOR IN ASSISTIVE TECHNOLOGY

There is a wide range of systems and devices available that give those at risk of wandering some degree of independence while alerting carers if a vulnerable person leaves home alone or at night, strays too far, or fails to return when expected. Some systems can also locate a person who has gone missing. Example products are listed here but there are others. For more brands and product details visit www.ksar.co.uk.

These systems can be divided into five broad categories, although there is some overlap between them. These are:

- Exit Door Sensors and Monitors,
- Distance Radio Signal Monitors,
- Tracking Using Satellite-linked Systems,
- Defined Safety Zone Monitors and
- Low-tech Solutions.

Exit Door Sensors and Monitors

The simplest systems involve pressure pads or door alarms (see *Low-tech Solutions: right*). More sophisticated systems use passive infrared (PIR) movement detectors to register when someone crosses a monitoring beam as they leave a building, or tags attached to the person's clothing that trigger an alert when they pass through a detector in an exit doorway. A warning is then sent to a handheld pager, or call centre system called 'telecare' (see: *page 4*). The call centre alerts a carer, neighbour or other keyholder by phone call or text. Other sensors around the home can alert the call centre if the person falls over, or there is no sign of movement. Detectors can also be set up to monitor a person's movements throughout the day and night and alert the call centre if there is a change in their behaviour pattern that might give cause for concern.

Pros: Tags can be attached to clothes, bags and mobility aids (e.g. walkers and wheelchairs) so the person doesn't need to remember to carry them.

Cons: Possible stigma due to association with tagging of offenders. Collection of personal data may be regarded as intrusive unless with person's consent.

Brands: Tunstall (Telecare Overlay, Lifeline +), Just Checking, QuietCare.



Loc8tor GPS



New buddi GPS



Lok8u (Nu.M8)



Connect 8 (SmartlinQ)

Distance (or Range) Radio Signal Monitors

Originally designed to prevent small children straying, distance monitors are now being used to safeguard vulnerable adults. They are simple transmitters that beam signals periodically to a receiver monitored by the carer (either a fixed base unit in the home or a portable device such as a mobile phone or similar). If the transmitter passes beyond a pre-set range it sends out a warning signal alerting the carer. Transmitters can be in the form of key fobs, watches, bracelets, pendants or tags attached to belts, clothes or shoulder straps. Range is limited to up to 200 m in open spaces but may be less in built-up areas or due to radio interference or the effect of tall buildings or weather. Battery life ranges from years to a few months, depending on usage.

Pros: Allows a vulnerable person some freedom of movement out of doors. Unlike some systems (see box: *opposite*) it works well indoors. Best for accompanied walks within defined areas, such as house and garden, public parks or shopping centres.

Cons: Limited range and battery life. Requires constant monitoring as an active adult can travel a long distance before their absence is noted. Possible choking risk with pendant types (see *Pendant Warning: page 4*).

Brands: Loc8tor Plus, Angel Alert Child Distance Monitor.

Defined Safety Zone (Geofence) Monitoring

This is a more sophisticated form of distance monitor that makes use of global positioning system (GPS) technology linked to the satellite network to monitor vulnerable adults within a defined safety zone (or 'geofence'). GPS is the technology behind in-car satellite navigation (SatNav) systems. When the device detects that it has been moved outside the safety zone it transmits an alert to the receiver unit held by the carer. As with distance monitors, the technology was first developed with children in mind. The transmitting device can be in the form of a wristwatch, bracelet, key fob, pendant, mobile phone or simple tag attached to belts, bags or clothing. Some bracelets transmit a warning if any attempt is made to remove them from the wrist. Many safety zone monitors include two-way communication and send out a 'man-down' alert if the user falls over.

Pros: Greater range and more flexibility than distance monitors and so allow the user more freedom of movement. The GPS technology also allows some safety zone devices to be used to track missing persons (see box: below).

Cons: More expensive than distance monitors. May only be reliable outdoors as some devices need to maintain a 'line-of-sight' with satellites. Bracelets and tags may be regarded as intrusive unless users can give their consent. Possible choking risk with pendant types (see *Pendant Warning: page 4*).

Brands: buddi GPS, Easylink Mini Tracker, Loc8tor GPS, Lok8U, Connect 8.



Doro HandlePlus 334gsm

Low-tech Solutions

Those who wander because of confusing day and night may find clocks that show this information clearly, coupled with a memo board and calendar, a great help. For those living with carers, a pressure mat or infrared beam near exit doors can sound an alarm if anyone tries to leave. (However, these may frighten dementia sufferers and are prone to false alarms in busy homes.) Memo Minder is a device located near exits that is set to work after dark and play a pre-recorded message when anyone walks past (e.g. reminding them that it is night). MedicAlert jewellery (www.medicalert.org.uk) have contact details and medical data for police or others who find a missing person. Mobile phones for dementia sufferers feature a few buttons pre-programmed with their carers' contact numbers, plus an SOS button, and may send a 'man-down' alert if the user falls over. Missing persons carrying a mobile phone may be tracked using an internet location service (see: *page 4*). For more useful ideas visit: AT Dementia (www.atdementia.org.uk).

Pros: Simple and relatively effective.

Cons: May be less effective for those with advanced dementia symptoms.

Brands: Clairmont clock, Memo Minder, MedicAlert, Doro HandlePlus, Connect 8.

Tracking Using Satellite-linked (GPS) Systems

GPS is standard in many mobile phones and has now been adapted for use in watches, bracelets, tags and so on to locate a person who has gone missing. It enables any GPS device to pinpoint its location by reference to three or more orbiting navigation satellites. The location may be given as map co-ordinates to be used with an internet map such as Google Maps and viewed on a computer screen, mobile phone, PDA or other equipment, enabling carers and rescue workers to locate the missing person. Some systems display the location and map automatically. Depending on the system, the location may be transmitted to a handheld receiver directly or to a web site that is accessed via the internet. As well as the initial outlay for the device there may be a monthly contract and fee to pay or the service may be pay-as-you-go. Some GPS devices are linked to a telecare service (see: *page 4*) and monitored by a call centre 24 hours a day.

Pros: Allows the person a high degree of freedom of movement while ensuring they can be located quickly if necessary. Accurate location, pinpointing a person to within metres, with no distance limit (as its name suggests, GPS is 'global').

Cons: One of the more expensive options, depending on equipment cost (between £200–300) and monthly charge (around £10–25 although some are pay-as-you-go). GPS may not work if the person is indoors, in a tunnel or surrounded by tall buildings as some devices need to maintain a direct 'line-of-sight' with satellites. Users may regard bracelets and tags as intrusive.

Brands: buddi GPS, Connect 8, Loc8tor GPS, Lok8U, Easylink Mini Tracker.



MedicAlert Jewellery

ADVICE ON WANDERING IN DEMENTIA

DEMENTIA sufferers should be encouraged to retain their independence and freedom of movement for as long as possible, especially in the early stages of the condition. This includes socialising, shopping and taking regular walks – solo or accompanied. As well as being healthy, exercise helps slow mental decline and delays the need for full-time and/or residential care. If someone starts to wander, the first step is to talk it over with them and try to find an underlying cause, such as boredom, need to expend energy, anxiety, side effect of medication, memory lapse, confusion over the time of day or day of the week, or an attempt to ease arthritic or other pain. Try to resolve the problem in consultation with the person, their GP or care worker, as necessary.

‘Dad can now go for walks or stay at home ... it’s given us peace of mind’ – Pete (carer)

Ensure the person gets plenty of mental and physical stimulation. Talk over anxieties and try to reassure them. Encourage them to write notes to remind themselves (and inform others) where they are going. Ensure their medication is appropriate and pain is being managed. Ask friends, neighbours and local traders to watch out for them and direct them home if they’re lost. Try to avoid locking doors or using medication or barriers to prevent wandering, especially if the person lives on their own, as this risks their safety and may worsen their confusion and distress. Don’t hide coats and shoes as the person may simply go out without them. A better approach is to hang a warm coat near the door and slip a note with your contact details into the pocket. If you also include a mobile phone you can use it to help find them (see *Tracing a Mobile: right*). The Alzheimer’s Society has fact sheets on these issues (www.alzheimers.org.uk).

Tips on Keeping a Wanderer Safe

Before deciding on a device, talk it over with the dementia sufferer and seek their consent, if possible. It is their statutory right to be involved in such decisions and they may be less resistant to a suggestion if they realise that it will help them keep their independence and put your mind at rest. There are ethical issues in using monitoring/tracking devices, such as loss of privacy, although studies show that carers generally give safety issues and their own peace of mind higher priority.

Ensure the system is suitable for your needs, is reliable, easy to operate and maintain, has good technical support and is safe (see *Pendant Warning: below*). Check total costs (for example, is there a monthly contract or pay-as-you-go?), ensure battery life is adequate and decide who will be responsible for recharging or replacing it. Many systems are linked to telecare call centres (see box: *top right*). This may add expense, although it can also provide peace of mind and may be a less expensive option than the alternative of full-time and/or residential care.

PENDANT WARNING

There have been cases in the USA where people have been choked by the neck cord of their pendant device after it became entangled. Always bear in mind the capabilities of the user before choosing any device.

TELECARE MONITORING

Telecare systems use sensors at exit doors and/or on the person to send data to a base unit in the house. This is linked to a telecare call centre staffed 24 hours a day. If the person leaves home, call centre staff alert a carer or other key holder. Some systems also monitor hazards such as overflowing taps, gas leaks, smoke etc. Telecare systems may be operated on behalf of social services. Contact your local authority for availability in your area.

SAFE AND SOUND

If the one you look after goes missing it will help rescue workers find them if you have a recent photo of the person and details of places they may visit. Go to www.ksar.co.uk/safe_and_sound to download a Life History Questionnaire and learn more about the Kent Search & Rescue ‘Safe & Sound’ Campaign.

TRACING A MOBILE

Missing persons carrying a mobile may be located through an internet phone location service – even if the phone is switched off. The phone is traced by measuring its signal strength to nearby phone masts. The location service charges on a pay-as-you-go basis. Unlike GPS, this works anywhere there’s a signal – even indoors. The phone can be pinpointed to within 0.5 km in town and 0.5–2 km in rural areas, depending on service provider.

Mobile phone tracking services:

www.childlocate.co.uk
www.findyourchild.net
www.findonamap.com
www.followus.co.uk