







Doorstep crime

Doorstep crime involving bogus callers can be a cause of worry to vulnerable people and their family. Bogus callers usually attempt to get into someone's home by pretending to be someone official; they might ask to visit or inspect an area of the home, including a meter cupboard, under the worktops in the kitchen, the airing cupboard or fuse box. This is often using the pretence that they are from the council or utility company, and need to read a meter or investigate a potential problem. They might even claim to be plain-clothes police officers while in reality they are trying to steal cash and valuables.

Various products and services exist that can help deter bogus callers, including a number of door-based security devices which allow the homeowner to talk with a caller without having to open their door. These include traditional 'peephole' door viewers as well are more sophisticated digital versions, door chains, intercoms and video-based systems that allow images of callers to be recorded and sometimes viewed remotely. There are also alarms that can be located by the door, which can be set up to contact a telecare monitoring service – silently, if required.













Falls

Falls are common among older people and can have devastating consequences which can lead to a loss of independence and a spiral of decline that can seriously impact their quality of life. Of particular concern is when an individual falls and is unable to get up and subsequently remains on the floor for an extended length of time. These so-called long-lies are strongly associated with serious injuries, dehydration, hypothermia, and other complications with a corresponding higher likelihood of admission to hospital, loss of independence and higher mortality rates.

Products and services are available to help prevent someone from falling in the first place (e.g. automatic night-lights) but also to allow them to raise an alarm if they fall, either manually (using a wireless pendant) or automatically so that they can receive appropriate assistance as soon as possible. Automatic fall alarms are worn or carried by the person. Falls may also be detected by using other products situated in the home, either directly (e.g. by using imaging techniques) or indirectly by using chair or bed occupancy sensors (which are especially useful for detecting night-time falls). Many of these products link through to a telecare monitoring service which will respond in the event of a fall alarm. Some fall detectors are limited to use in the home but others are available for use when out and about.













Getting lost

Going out and becoming lost can be a very stressful occurrence, especially if an individual is not confident in how to cope and obtain assistance. This is especially true if they don't know why they are in a particular location or where they were going. Individuals may be reluctant to ask for assistance and become increasingly frightened and move in the wrong direction. They could walk for miles and end up in a dangerous situation such as becoming the victim of a traffic accident.

There are many products and services to help someone navigate to a particular location (e.g. their home) or to allow a family member or other responders to help locate them and return them to safety. Products include a simple identity bracelet or badges which provides contact information for a 24-hour telecare monitoring service; GPS tracker devices that act like an electronic compass to provide directions on which way to go and GPS enabled devices that are designed to link the person to a family member or telecare monitoring service. Smartphones also have built-in GPS and there are various apps which can be used to assist with navigation and raising an alarm.













Home safety

People with poor short-term memory, reduced dexterity and vision impairments are all at risk of accidents in the home. These could include falls but also incidents that occur while performing domestic activities. They may be unable to take action to overcome the problem on their own or may even be unaware of an emergency.

It is best to try to prevent these issues from occurring in the first place by using equipment that helps the tasks to be performed more safely or by reminding the individual to take appropriate precautions. If accidents do occur, it is vital to detect them quickly and then to take appropriate action. Detection involves the use of electronic sensors that can identify a problem such as gas, flood or fire and provide an alarm. But many vulnerable people are unable to respond and require remote monitoring and intervention, which can be performed by a 24-hour telecare monitoring centre.













Hypoglycaemia

Hypoglycaemia, or a "hypo", is an abnormally low level of sugar (glucose) in the blood, resulting in the body not having enough energy to carry out its activities. It is most commonly associated with diabetes and occurs if an individual take too much insulin or other medications, miss a meal or exercise too hard. Most people will have some warning such as feeling hungry, trembling or shakiness, and sweating before they pass out. It's also possible for hypoglycaemia to occur during sleep, which can cause excess sweating, disturbed sleep, and can result in the person feeling tired and confused upon waking.

Diabetics may be advised to monitor blood glucose levels during the day and to take a sugary drink to prevent a hypo from occurring. There are products that are worn during the night to detect the symptoms of a hypo and to wake up the wearer with an audible alarm so that they can take corrective action.













Impaired vision

A loss of sight can result in a number of problems that can impact an individual's ability to live independently and to enjoy a good quality of life. Going out and using public transport can be difficult. People who are blind or partially sighted can adjust within their homes and many have coping strategies that enable them to find their way around without bumping into obstacles. Some may need assistance to enjoy recreational activities such as watching TV. Safety and security can also be difficult because they may not be able to detect the presence of strangers or the tell-tale signs of an emerging problem in the kitchen, for example.

There are various devices available to help overcome problems associated with visual impairment such as GPS locator devices that have recorded speech to announce location and directions; text to speech converters that can operate on books, newspapers or other printed items; talking electronic appliances such as kitchen scales and measuring jugs; apps that work with a smartphone's camera to provide context or to give colours; and computers with interfaces to enable them to be used by blind or partially sighted people.













Incontinence

Urinary incontinence is the unintentional passing of urine. It is also sometimes referred to as enuresis. It may be a small occasional leak, trickling after passing urine, or a total loss of bladder control and might occur with or without the knowledge of the individual. Difficulties with knowing when to use and how to use the toilet, can become problems for people with dementia, particularly as the condition progresses. Some people with learning disabilities may not achieve continence while some neurological diseases and head/brain injuries may lead to a loss of continence and control.

There are many different approaches to managing incontinence and using the toilet. These include adaptations to the home to make the route to the toilet quicker, safer and easier; automatic lighting to help guide the individual to the toilet during the night and reminders to go to the toilet at certain times. Enuresis sensors are also available that are either attached to clothing or worn pads or to the bed to inform the individual or a carer that the pad or bedclothes need to be changed.













Keeping cool

During the summer months, the ambient temperature can rise quickly. It can quickly lead to heat stress and, in extreme cases, heat exhaustion or heat stroke if the body is exposed to more heat than it can cope with. Older people and those with physical disabilities are particularly at risk, especially if they are unable to take appropriate action to reduce the risks.

There are various devices and systems to help with managing the issue including: electronic indoor and outdoor thermometers that can monitor the conditions; electronic fans that can help circulate the air; air conditioning systems; chilled pillows; and worn activity monitors that can provide an indication of excessive energy use.













Keeping warm

Living in a cold environment can have a significant impact on health. One of the best ways of keeping well during winter is to stay warm, and this means heating the home to a comfortable temperature (between 18°C – 21°C for the living room). This can help prevent colds, flu or more serious health conditions.

For monitoring the suitability of the temperature in a home, there are a number of temperature measurement products that provide alarms or alerts if the temperature drops below a defined (often programmable) limit. Some can have different limits for different times of the day (and night) and can link with telecare monitoring services, or directly to carers using text messages and/or e-mails.













Medication management

The use of medication is the most common form of treatment in primary care but its effectiveness can be compromised if it isn't taken as prescribed. This may be due to simply forgetting to take medication on time (and needing to be reminded to do so); this is particularly problematic for individuals living with memory problems. Some people get confused with what to take when and this may also be related to the quantity of medication prescribed. Others choose if and when to take their medication in a belief that the medication is needed only when there are symptoms showing.

Technology can help people to take medication as prescribed in a number of different ways, including reminding people when it is time to take their medication; informing people of the role of each medication; providing telephone reminders if the medication hasn't been dispensed; securing the medication in an appropriate container to avoid confusion; and combining a medication holder with a reminder to help ensure pills are taken at the right time.













Short-term memory problems

Short-term (or working) memory is where small bits of information are stored temporarily for perhaps only 15-30 seconds. The information stored quickly disappears unless a specific effort is made to try to remember it. Short-term memory therefore acts as a filter, deciding what's important enough to keep and what can be discarded to avoid the brain from being overwhelmed with information.

Products that are available to help with this issue are many and varied and include: clocks that can speak the time or which can easily be read; portable devices that can be setup to play specific voice-based reminders; door alarms that alert the user if they have left their fridge/freezer/front door open; flood alarms that will alert the user to a potential water overflow problem; mains timers that only supply electricity for a limited time when activated; cooker alerts and reminders; lost item locators that can help when important items that are misplaced; apps for tablet computers and smartphones to provide prompts, pictures and step-by-step instructions.













Social isolation

Social isolation refers to a lack of contact with family, friends, neighbours and even social care workers, as well as a reduced (or zero) level of involvement in other community activities and interactions, including access to shops, services and support.

There are products and services that can help people to connect with others – from a simple telephone to multi-function apps on tablet computers that provide a means to view photographs sent from family members, use video calls to catch up and chat, send messages and use social media. There is also a growing interest in electronic companions (e.g. in the form of robotic pets) that can show emotion and respond to sounds and other interactions which may be of use, especially for people with dementia.



