Types of Telecare

How Telecare Works
Telecare usually refers to those technological devices that alert a call centre on behalf of someone who may need help. There are also devices that do not use a call centre and stand-alone - these are under the wider term of assistive technology.

Telecare raises an alert which will be set up to contact either a nominated friend or family member directly or to go a call centre. The call centre is staffed by people trained in dealing with support needs and the various issues that may arise. If the alert goes to the call centre they will try to contact the user. If the user needs help the call centre will use a pre-arranged telephone number (usually a family member) and may call the emergency services also. Arrangements can be made for people who have no one to respond to an alert.

Some devices simply prompt someone or contact someone else within the home. And some record information about the user on a website (monitoring) that can be accessed online by a nominated person. There are other technological devices that have other ways of helping people such as adapted mobile phones, video-conferencing telephones and devices that control the home environment such as opening the curtains. The following is a list of telecare devices often used in the UK.

The Pendant Alarm
The pendant alarm has a button which people can push to raise an alarm if they need help. When the button is pressed it sends a signal to a person or call centre who will try to contact the user and if needed send help. There are many different forms of this alarm such as bracelet, watch, or phone and they can be adapted for people with physical or other disabilities. The alarm can have additional functionality such as a falls detector or GPS which allows the alarm to work in and outside the home and can be set to alert if a person goes beyond a certain boundary (geofencing).

Falls Detectors/ Sensors
Falls detectors or sensors can call for help for a person when they have had a fall. They can be worn around the wrist or be part of a pendant alarm or clipped onto clothing. The detector reacts when a person falls and will send an alert. The call centre operator or relative can speak to the person and ask if they need help and arrange this. Although the fall has not been prevented the person who has fallen avoids being left on the floor for too long which can result in distress, pain, stiffness, poor mobility and missed medication. Lying on the floor for long periods
can trigger deterioration in health or a medical condition leading to hospitalisation and can result in dehydration, hypothermia or even death. If a person has started falling more often this may be due to an underlying infection or other medical cause and the call centre can count the number of falls and in this way pick up any signs of deterioration or oncoming crisis. If a person has memory problems they may not remember falling - in this case the falls detector can assist in tracking falls and any changes to routine. This device can allow people to stay in their own home longer rather than moving to 24 hour care as it gives a way of minimising the risk around the fall.

**Bed and Chair Sensors**

Bed and chair sensors are flat mats which can be placed under a mattress, sheet or chair cushion and record when pressure is added onto the mat or taken away. They can be set to respond if a person stands up (or gets out of bed) or if a person does not return after a reasonable time, for example, if someone does not return to bed after a reasonable time to go to the toilet and back. These pressure mats can be used at a threshold under a doormat to trigger a recorded message when a person stands on them.

Bed and chair sensors can be used with other sensors such as movement sensors to see if the person is still moving around or not, or to trigger a sensor to turn on the light gradually so the person can see. Bed sensors can be very helpful for carers; for example if they have to assist at night and worry that they will not wake if the cared for person gets up. They can better rest knowing that they will be alerted if the cared for person needs them.

**Door Sensors**

Door sensors work by sensing when a door is opened. As well as being used on doors they can be used on anything with a door such as a microwave oven and cupboard. They are often used to alert carers when a person goes out a door or opens a window.

**GPS Trackers**

GPS trackers work in the same way as other non telecare GPS devices that can locate something by satellite such as the ‘Find my ‘Phone’ app that many people use to track their mobile phone if it gets lost. GPS if often used to locate people with memory problems who have gone out and may get lost or wander too far. Devices can raise an alert when the person goes beyond a certain point (this is called geofencing). The person will need to carry the tracker with them in the form of a pendant, watch or fob or even shoe innersoles and then a relative can log on to a website to see where the person is. The GPS will not track people to within a few feet or a specific room but can place them in an area of a few metres. Like most telecare it can be used as to understand habits and routines and establish any risks the user may face.
**Monitoring Systems**
Sometimes it is necessary to have a lot of telecare in place to reduce the risks for a person living at home or to assess what risks a person faces. Monitoring systems have a range of sensors attached and are set up to trigger alarms and prompts, capture information about what the person is doing or to do things automatically – such as shut off the cooker. When first installed they are often used to get an idea of routine for the person or to identify what risks they are taking. Movement sensors can record when a person is active and which rooms they visit, bed sensors when they are resting or not, door sensors when they go out or open the door to someone. Monitoring devices can often provide peace of mind to families who can check what is happening in the cared for persons home.

**Safety devices**
Safety devices include smoke detectors, carbon monoxide detectors, gas detectors, fire, temperature and flood alarms. These raise alarms in the home or go to someone outside the home and aim to keep the person and environment safer. For example the temperature sensor can be set to react if the temperature in the house gets too high or too low. The temperature sensor can also react if placed near a cooker if that area gets too hot because the cooker has been left on. The sensor detects this and can trigger a gas safety cut off device.

**Smart Plugs**
Smart plugs fit in ordinary electrical sockets and then everyday appliances can be plugged into them. There are a variety of smart plugs which do different things such as measuring heat or movement, detect if an appliance is being used (eg. microwave, kettle) or automatically turn the appliance off after a programmed time.

**Stand Alone Devices**
Not all devices contact someone outside the home - some just act within the home for the benefit of the user or their carer. Devices may act as prompts or reminders such as the pill dispenser or allow the person to be monitored or spoken to from a distance such as two way monitors. Devices can also help with tasks such the liquid level indicator which can tell people with sight impairment when a cup is full.