



WHITEPAPER

Digital telecare: when healthy ageing upgrades from analogue



For the first time in human history, the total world population has more people over 65 than children under five. Demographic changes are bringing new challenges but also opening doors to new opportunities. One example is the 'healthy ageing' industry. 'Healthy ageing' is defined by the WHO "as the process of developing and maintaining the functional ability that enables wellbeing in older age." Among other things, this includes a person's ability "to meet their basic needs and to be mobile". Healthy ageing has several physical benefits such as maintaining a healthy weight, protection against chronic diseases, and muscle and bone mass. It also allows the person to be independent, socially connected and generally happier and more relaxed; all of which contribute to better cognitive health (Active Ageing Australia). The products and services which support a person to remain active throughout their lifetime make up the healthy ageing industry. One example is social alarm systems which contribute to the safety and independence of many older people.

How do social alarms work?

Social alarm systems (also known as telecare) were first introduced in the 1970s and are designed to detect and send alerts in threatening situations. They can be used in many ways – from security cameras to fall sensors and safety tracking watches. "An indoor alarm system consists of a base unit / care phone, connected to the analogue telephone network or via the digital infrastructure in an apartment or house. An alarm button, which is worn on a necklace or around the wrist, is connected to the carephone.

When a user presses the alarm button, an alarm is sent to an alarm receiver, home care staff, or a relative. Social alarms also have a speech function at the base unit that makes it possible for the person who raised the alarm to talk to the alarm receiver" (Sjolinder et al, 2014). For an alarm system to work, everyone involved in ensuring the safety of a person must work in unison. If one of the components fail, the feeling of safety is lost. For example, if a person falls and the first line of action i.e., the primary caregivers are unaware, then critical action may not be taken in time.



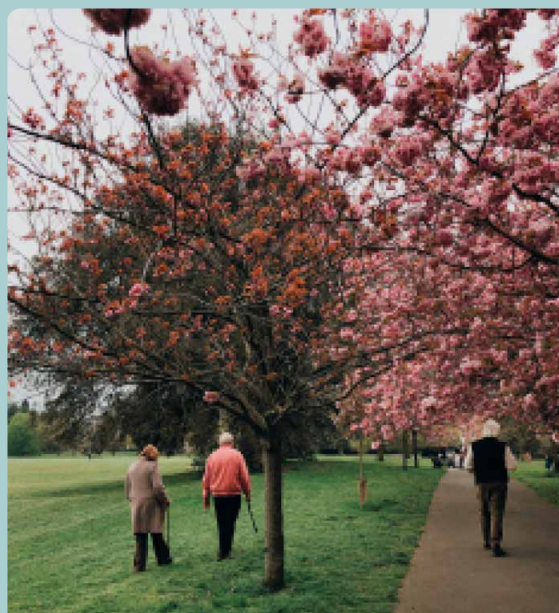


“The main advantage of digitalization is that we monitor our carephones in real-time. Previously it made a test alarm once a day which was faxed to the home care group. Now we have the opportunity to connect with the carephones from our offices and make adjustments from there.”

City of Kalmar

Since the 1970s few changes have taken place in the basic infrastructure of social alarm systems. One of the biggest ones currently underway in many countries is the transition from analogue telephone systems to digital ones. This results in the need to reinstall certain components of old alarm systems which are not compatible with digital networks. Around 2007-2008, Swedish telecommunication systems underwent a rapid transition from analogue to digital systems. Some 80000 old systems needed to be upgraded (Stenberg, 2008). Unfortunately, due to unpreparedness, many people were unequipped with appropriate systems.

In one case, it was reported that a 76-year old man had died as his social alarm failed to connect to the digital network via his analogue phone line and he could not receive the help he needed in time. Now, following the Swedish example, the UK is in the midst of a similar transition. Actively supporting the change and advocating for local authorities to help vulnerable groups be prepared for the change is Swedish company Doro, a market leader in digital care solutions.



“It is good that we no longer rely on a landline and have more flexible installation options. To be able to get an all-in-one solution is a big time saver.”

Borås Municipality

Why are digital systems better?

Doro has been actively working with Swedish municipalities to understand if they've benefitted from the change. Their responses have been positive. Continuous monitoring, instant updates, and lower costs are some of the benefits cited. The Swedish Association of Local Authorities and Regions (SKL) states in its report that “continuing with analogue social alarms will increase the cost of supervising growing numbers of people in sheltered housing via telephone and personal visits”. At Landskrona municipality, it was found that adoption of a cloud-based solution allowed care providers to direct out-of-hour calls to the alarm receiving centre operated by Doro. This freed up personnel previously employed to monitor alarm calls to be deployed as mobile

response staff. From mobile phones, automated transportation systems to digital health solutions and artificial intelligence – the digital revolution is impacting everybody in some way. In the case of alarms, by enhancing the user experience in the ways mentioned above, digitization is also improving the social benefits of traditional alarms. Better monitoring, cost efficiency, realtime updates make it even easier for people to continue living at home and independently for longer. The feeling of safety is especially important in empowering one to partake in regular activities while giving family members peace of mind. Living at home also reduces the public cost of care. Finally, for people affected by a diagnosis for dementia, outdoor activities like gardening can keep the brain stimulated and help with better management of the symptoms.



BENEFITS OF A DIGITAL SYSTEM

IMPROVED QUALITY



Digital solutions improve the call quality between alarm receiving centers and social alarms by removing traditional interference via a reliable communication path.

COST EFFICIENCY



Digital solutions can be monitored and updated remotely. By removing the need for physical visits by the service providers costs are cut.

KEEPING SYSTEMS IN CHECK



Digital systems, enable always-on-line communication so if problems occur in the alarm, they will be detected immediately. This is not possible with analogue systems.

SEAMLESS CONNECTION

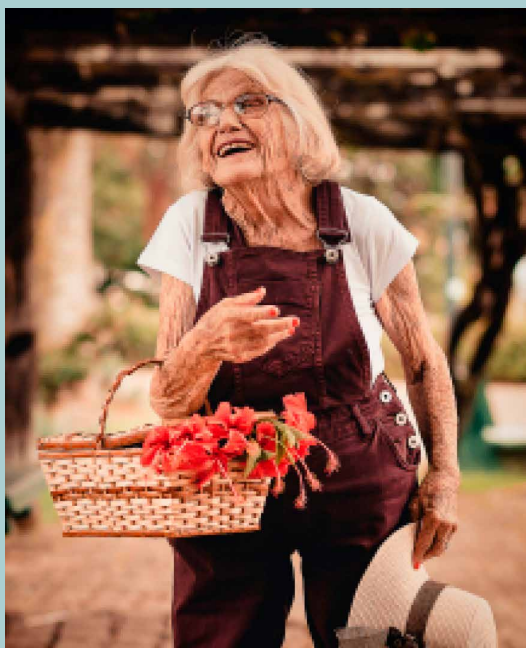


Implementing digital systems reduces the risk of error and increases the security and efficiency of the system.

NO MORE FIXED LINES



Digital social only need a mobile network or broadband connection – meaning they can be installed even if the home does not have a fixed line system.



“This is much safer because we have control over our data. We rent the carephones as well which is also most cost-effective.”

Nyköping Municipality

The prospects

Technology-enabled care (TEC) is becoming the go-to for seniors around the world. It has the potential to transform how care is understood and provided. Not only can it support people to live better and more independently, but it can also help care providers manage their time and resources better to provide higher quality and more efficient services.

The Swedish example of the transition from analogue to digital systems shows both the possibilities of using TEC and the dangers of not doing it in a user-centric manner. For countries such as the UK which is going through a similar change, it is imperative to ensure that high-needs groups like seniors and people living with dementia can benefit from the change. Ultimately the aim is to enable healthy-ageing with safety and dignity in mind.