Using assistive technology to support *personalisation* in social care

The Voluntary Organisations Disability Group (VODG)

Voluntary Organisations Disability Group
V O D G

The VODG is the leading umbrella group of voluntary sector providers of social care services for adults with disabilities. Our aim is to ensure that people with disabilities are supported in ways that they themselves define. We are committed to personalisation and the principle of "no decisions about me, without me".

Our ambition is to shape the development of social care policy, to influence its implementation and to provide sector-leading information and research.VODG members believe that meaningful engagement and fair negotiation between commissioners and providers, focused on the needs of people who rely on social care services, helps build strategic relationships, enhances service design and is more likely to ensure that beneficial outcomes and efficiencies are achieved.

We have more than 70 members who work with about a million disabled people throughout the UK providing services that promote independence, choice and control. Our members employ more than 75,000 staff and have a combined annual turnover of more than £2.2bn. We aim to ensure that members, working in partnership with commissioners can provide progressive, high quality and sustainable services that reflect the Think Local Act Personal partnership principles (www.thinklocalactpersonal.org.uk) and meet the needs of disabled people.

Find out more on our website and blog www.vodg.org.uk

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The National Care Forum (NCF)

NCF
THE NATIONAL CARE FORUM

The NCF membership reflects the wide diversity of care and support services provided by the not-for-profit sector.

We improve the effectiveness of our members through the provision of information, policy analysis, knowledge exchange and representation to develop and deliver care services. Our objectives are to speak as one not for profit voice on behalf of members at a national level, to inform the Department of Health and other national bodies of the facts and potential solutions and to have a seat at the relevant policy forums. We work to develop improved standards for all service users as well as improved status, career development and recognition for staff and work in partnership with local authorities and health services.

Find out more at www.nationalcareforum.org.uk

or contact us National Care Forum, 3 The Quadrant, Coventry, CV1 2DY or phone 024 7624 3619.

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About this report:

This piece of work could not have been produced without the contribution of the NCF and VODG members listed at the end of the report. We also thank the service users who allowed us to tell their inspiring stories. In particular, thanks to Hft and Jim Ellam of Staffordshire county council for their input and West Midlands Improvement and Efficiency Partnership for its help. Additional images are courtesy of Hft and we would like to thank Gill Boston, NCF and VODG strategic partnership programme manager for her original case study research.
This report has been commissioned by the VODG and the NCF working together as Department of Health strategic partners and written by social affairs journalist Saba Salman (www.sabasalman.com), a regular contributor to the Guardian who also manages the VODG blog (www.vodg.org.uk).

Introduction

Robert Longley-Cook, chief executive Hft

Little over a year ago at the launch of the Strategy for UK Life Sciences[1], Prime Minister David Cameron described government plans to increase the use of telehealth and telecare technology over the next five years. He wanted the NHS, he said, to be "the fastest adopter of new ideas in the world". Referring to a scheme to provide more evidence about telecare and telehealth (the Whole System Demonstrator, or WSD[2]) he explained: "Just look at our approach to telehealth - getting new technology into patients' homes so they can be monitored remotely. We've trialled it, it's been a huge success, and now we're on a drive to roll this out nationwide."

Telecare, telehealth and telemedicine – terms that refer to devices usually connected to a telephone, from emergency response alarms to monitors and sensors that help independent living – have a prominent profile among health practitioners, policymakers and even the public. The Telecare Services Association[3] estimates that 1.7m people use telecare in the UK, including older people, people with disabilities, with mental health problems or people with cognitive impairments such as dementia.

Yet there is not the same perception about the use of such technology in the social care sector. This is despite the fact many organisations – some of which feature in this report - are at the forefront of assistive or personalised technology, a catch-all term for an array of high and low-tech non-intrusive systems and equipment that help people to live their lives with greater choice and control.

Assistive technology, a definition

The Foundation for Assistive Technology (FAST)[4] suggested this good, general definition in 2001: "Assistive Technology is any product or service designed to enable independence for disabled and older people." Another commonly used explanation is "any device or system that allows individuals to perform tasks that they would otherwise be unable to do, or increases the ease and safety with which tasks can be performed".

Assistive technology includes a wide-range of supportive but unobtrusive services and equipment, ranging from from personal alarms for elderly people, to seizure monitors, to more sophisticated fingerprint recognition systems that allow you to open the door without keys. It can also include computer software, hand held devices or video call systems that increase social interaction and family contact.

The policy context

Current policy trends encourage the use of devices which support independence, choice and control in the home or in residential care. Approaches such as self-directed support, person-centred planning, personalisation and re-ablement as well as the focus on the ageing population encourage the use of assistive technology.

Successive governments have issued policy and guidance to underline how technology can support independence for vulnerable people. As well as work in the 1990s including An Information Strategy for the Modern NHS 1998-2005[5] and the first National Carers Strategy[6] in 1999 (which stressed the role of telecare), more recent policy has included:

- 2005 Department of Health (DH) policy document Building Telecare in England[7] set out guidelines to inform local authorities of the resources, systems and procedures necessary to implement telecare effectively

- 2006-2008 the preventative technology grant[8] provided £80 million of funding to support local authorities to work in partnership with other agencies in the voluntary, health and housing sectors to develop telecare initiatives

- 2007 Putting People First[9], a government commitment to transform adult social care, enabling people to live their own lives as they wish

- 2009 Shaping the Future of Care Together[10], the green paper on adult social care reform

- the DALLAS programme (Delivering Assisted Living Lifestyles at Scale)[11] reflects the current government's commitment to Assistive Living Technology (ALT)

- the Technology Strategy Board's Assisted Living Innovation Platform (ALIP)[12] launched in 2007 supports research and development in health and care technologies

More recently, the WSD programme which took place in integrated social and health care sites in Newham, Kent, and Cornwall, showed the effectiveness and cost-effectiveness of technology in the largest randomised control trial of its kind in the world.

The WSD's (Whole System Demonstrator) 2011 figures, based on 6,191 patients and 238 GP practices, demonstrated how telehealth can reduce mortality, hospital admissions and number of bed days in hospital and in A&E. The findings included a 15% reduction in A&E visits.

In January 2012 the DH launched its 3 million lives campaign[13] to identify 3m people with long-term conditions and social care needs who might benefit from telehealth and telecare. The government also published a concordat to support this commitment.

Meanwhile, the DH's plans announced last year to provide up to £100 million in additional funding to Clinical Commissioning Groups (CCGs) to improve local services and prevent unnecessary admissions to hospital, includes the commissioning of "any service which supports patients in the community and in their homes to help avoid unnecessary visits to hospital". This supports the use of assistive technology.

The economic context

Today's health and social care reforms aim to enable the two sectors to achieve a more effective use of resources, including cost efficiencies, something which should encourage a higher take up of assistive technology by providers and commissioners (read Gayle's story in the NCHA case study on p18 to find out how technology can help save money).

But it is short sighted to advocate the use of technology simply to save money. Budget cuts might encourage providers to explore options, for example, for remote nighttime monitoring systems as opposed to sleep-in staff, but cost-efficiency should be regarded as the knock-on effect of supporting people's independence, not the impetus for adopting technological advances.

Individuals' rights and desires for personalised support that increases independence is what drives the providers that embrace high quality assistive technology, not the tough reality of a squeeze on resources.

The advantages of assistive technology

As this report shows, assistive technology doesn't need to be expensive or complicated. It does, however, require a shift in attitude towards the individuals we support, transferring the focus from someone's disabilities to their abilities. While the technology might have originated in elderly care with the basic aim of offering monitoring and reassurance, allowing staff to "listen in", it has developed into offering more choice and control.

What piece of equipment, for example, does someone need to help them make choices or live more independently? Can they hit a button? A non-verbal disabled person can use touch screen technology to express their feelings - do they want to watch television or listen to music?

The approach outlined in this report demonstrates how technology can support service delivery for independence, reducing dependence on staff. This creates a dilemma for some organisations; if personalisation demands that staff who were once relied upon 24-7 in rigid models of delivery change their roles to be more enabling and flexible, then the introduction of independence-boosting assistive technology compounds that challenge. This, and other challenges, are explored in the conclusion, but the most forward-thinking providers (those with the personal choices and interests of individuals at their heart) will surmount such barriers.

This report

The social care sector has embraced a huge amount of innovation in assistive technology, using new methods to complement the physical work of support staff. it is transforming lives for the better. However, our use of such services, systems and equipment does not enjoy the higher profile of our counterparts in the health sector. This report aims to change that.

The stories in this report do not provide a complete picture of social care's success in this field, but they reveal how the lives of people of all abilities and ages and their families have improved as a result of assistive technology. By hearing from individuals, families and providers in a range of care environments, our report shows:

- the potential of the technologies (Hft p8)
- older people in residential care benefitting from low-tech solutions (Belong p10)
- children with learning disabilities using technology to boost independence (Staffordshire county council p12)
- disabled adults being supported into more independent accommodation (Brandon Trust p14)
- older people in residential care using digital technology for social interaction (Somerset Care p16)
- adults with complex needs maintaining their independence and how technology and physical support complement each other (NCHA p18)
- benefits from a multi-agency approach to assistive technology (IEWM p20)

Helping people live their lives

Whether it's sophisticated software or simple sensors, the sum of all these high and low-tech parts is that they all encourage person-centred support - regardless of the individual's age, abilities or whether they are in their own home, in supported living or in residential care.

Read the inspiring testimonies on the following pages and you should be struck not by the technology per se, but by what it enables people to do. Put simply, assistive technology helps people live their lives the way they want.

1 https://www.gov.uk/government/publications/strategy-for-uk-life-sciences-one-year-on

2 www.gov.uk/government/news/whole-system-demonstrator-programme-headline-findings-december-2011

3 www.telecare.org.uk

4 www.fastuk.org

5 webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4007832

6 www.gov.uk/government/news/a-national-strategy-for-carers

7 http://3millionlives.innovation.nhs.uk/pg/cv_content/content/view/6737

8 http://www.fastuk.org/atcommunity/orgview.php?id=3267

9 http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/SocialCare/Socialcarereform/Personalisation/index.htm

10 http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Consultations/Liveconsultations/DH_102339

11 http://www.innovateuk.org/content/competition/dallas-delivering-assisted-living-lifestyles-at-sc.ashx

12 http://www.innovateuk.org/ourstrategy/innovationplatforms/assistedliving/assisted-living-innovation-platform.ashx

13 http://3millionlives.co.uk

Some basic assistive technology definitions

■ **Telehealth** – often referred to as remote patient monitoring - refers to the use of various point-of-care technologies to monitor a patient's physiological status and health conditions. When combined with personalised health education within a chronic disease management programme, it can significantly improve an individual's health and quality of life. Typically, it involves electronic sensors or equipment that monitors vital health signs remotely from home or while on the move. Readings are automatically transmitted to an appropriately trained person who can monitor the health vital signs and make decisions about potential interventions in real time, without the patient needing to attend a clinic.

■ **Telecare** - a service that enables people, especially older and more vulnerable individuals, to live independently and securely in their own home. It includes services that incorporate personal and environmental sensors in the home, and remotely, that enable people to remain safe and independent in their own home for longer. 24 hour monitoring ensures that should an event occur, the information is acted upon immediately and the most appropriate response put in train.

■ **Assistive - or personalised - technology -** the gadgets and equipment selected to meet someone's daily needs, whether at home, out and about in the community or at work. It is often called personalised technology because it is not about the technology, but the people and how providers can enhance their lives. Solutions can include anything from telecare equipment and environmental controls, to mobile technology and communication aids.

- Information based on explanations in the Department of Health's Whole Systems Demonstrator project (www.dh.gov.uk) and on Hft's introduction to personalised technology (www.hft.org.uk)

Setting the technological scene – Hft's virtual Smart House

A fingerprint recognition system lets you into the house while a voice prompt and door sensor alert your housemates that you're back; had they been worried about who was at the door, they could have used the bogus caller alarm by the door which is linked to a call centre.

Once inside, you use the big picture phone – pressing the photo of the person you want to call instead of having to remember their number – to let your friends know you've arrived home. In the kitchen, you make a cup of tea (the kettle shuts off automatically after use) and when you open the fridge door, a voice prompt gives you a reminder of your food allergies.

When you take a bath, you're reassured about the water temperature (the plug changes colour if it's too hot) and a flood sensor shuts off taps if the water level reaches the overflow. In the bedroom, you touch the lamp to turn it on and, at the touch of a button, you close the curtains. As you fall asleep, you do so safe in the knowledge that if you wake and stay out of bed for too long, the bed occupancy sensor will alert off-site carers after a set amount of time.

Welcome to Hft's web-based Virtual Smart House, an interactive demonstration of the kind of technology that can be used to support people at home, helping to improve their independence and safety.

The walk through experience – you essentially click through the various rooms of a cut away house – brings a raft of disparate and hard-to-explain technologies to life.

The front door, sitting room, kitchen, bathroom and bedroom all showcase different items which users click on if they want to discover more. The technologies include gadgets to boost security, set reminders or alerts and help communication. There are also environmental controls to make it easier to switch appliances on or off, sensors to increase safety and electronic dispensers to help you take control of medication.

One of the biggest challenges with assistive or personalised technology is its relatively low public profile. Due to the huge range of possibilities and the fact the technology is evolving fast, the high (and low) tech options used to help support people in social care can be hard to explain and demonstrate. Families and individuals are largely unaware of the potential that could be, literally, at their fingertips.

Steve Barnard, Hft's director of information systems, adds: "When we started developing person-centred technology, it was hard to get the message over to people – families, commissioners and other decision-makers and stakeholders such as policy makers. People wanted to see what we were talking about – as if we had a single catalogue - but it was tricky to show the kinds of things we knew existed in situ, in one place. The Smart House is an attempt to increase the understanding about what support someone needs and how technology might help them."

Initially, Hft created a Mobile Smart House, a physical structure that is taken to shows and demonstrations, but the charity realised the potential of an online version in terms of accessibility and keeping it updated. Although the Virtual Smart House, designed in 2010, is based on Hft's work with people with learning disabilities, much of the technology can also be used to support other vulnerable groups such as the elderly, people with dementia and people with physical disabilities.

Sue is among the individuals supported by Hft who have benefitted from some of the technologies displayed in the Virtual Smart House. Sue, who has limited communication skills, epilepsy and is prone to falling, moved from registered care in the south west into supported living with two friends. She wanted the privacy of her own room but is unable to use or keep a key. By using a combination of sensors, pagers and a finger print lock so she can get into her room without a key, Sue now has the independence and security she wants. During the night Sue gets the support she needs when she needs it by using telecare sensors linked to a staff pager.

"Various technologies can be steps towards independence. The more people feel in control in a safe environment they more they can do," says Steve. He adds: "Staff understand their role as supporting people to achieve whatever they're able to; staff with a more paternalistic approach might find it harder to embrace personalised technology."

Hft's approach to personalised technology, as underlined by the Virtual Smart House, focuses first on what people want to achieve, and then looks at the solutions technology can provide. "It's not about the technology itself," adds Steve, "it's about the people and how we can help them to live life the way they choose. It's not about the disabilities - it's about the abilities people have and making most of their potential. Using technology appropriately really does pay dividends. We don't see personalised technology as a one-off fix, but as part of the on-going process of continually evaluating people's needs and ambitions."

More information: www.hft.org.uk and www.hftsmarthouse.org.uk

2

Sensors boost the independence of older people in care – Belong, Cheshire

As a child, Jan Norris was brought up to "do things, and not just stare out of the window". Now aged 97, Jan's use it or lose it philosophy is one that she still sticks to. Mobility issues might mean she can no longer live in her own home and she moved into residential care two years ago, but she is being supported in her desire to maintain her independence.

Jan lives in an ensuite bedroom within the Poplar household for 12 residents in the Belong Macclesfield care village, run by care provider CLS Group. But although the bistro, gym, restaurant, hair salon and visits from local choirs are among the on-site facilities and social events which encourage an active life, it is in fact something as small as a single sensor that helps Jan remain as independent as possible.

Rather than a raft of high-end technological solutions, a simple sensor mat under Jan's mattress means that if she gets out of bed at night, a light automatically comes on in her bathroom. The pressure mat has a timing set according to how long Jan needs to get in and out of bed on her own. If she hasn't returned within a given time, an alarm alerts staff who can check she hasn't had a fall. The bathroom light goes off when she is safely back in bed.

Tracy Paine, Belong operations director, explains: "The staff need not know that someone has got in or out of bed unless there is a break in their times routine. Staff don't need to keep opening the door to check on someone every hour, something that can disrupts an individual's sleep. The resident enjoys a better night's sleep with dignity and independence and the staff aren't following task routines."

If someone is at risk of falls, then the call system can be set outside the room to notify staff as soon as the person starts to get out of bed so they can get to them quickly. This reduces falls, and removes the need for

bed rails for some. The sensor system, meanwhile, can also be monitored to check on movements, falls and routines, all of which helps to inform individual care plans and is useful with issues like staff resourcing.

Tracy adds that even a small piece of technology like a bed sensor can have a massive impact on both the individual and care staff. "The technology available can help residents to live more independent lives – even if it is just a small part of their lives that is altered. The more independent a person can be the more choice and flexibility they have around their day to day living, and the less dependent they become on other people, such as staff." Not only are there benefits in terms of an individual's general well-being and health, says Tracy, but staff have more time to spend with the people they care for doing other, more fulfilling activities.

Jan's senior support worker, Angel Ciuzauskaite, agrees. Without the sensor, she says she or her fellow care staff would have to go into Jan's room three or four times a night to check on her. She says: "It means that staff can instead spend that time with someone who does need physical assistance. The technology is promoting Jan's safety and her independence, it's making her more active and less passive." says Ciuzauskaite. As for the impact on the relationship between carer and individual, "it changes the dynamic knowing that people can be more independent – they're happier as a result - and active instead of passive receivers of care".

As for Jan, she says she feels independent as long as she keeps mobile: "I've always walked - that's what kept me moving." Although she sometimes uses a walking frame due to her arthritis, Jan is a frequent visitor to the gym and does exercises in the morning to get moving. "You've got to use it or lose it - otherwise you'd sink under - that's my philosophy. And the things like sensors help keep you moving."

More information: www.belong.org.uk

Jan Norris is maintaining as much independence as she can at the Belong care village in Macclesfield (pic: Belong/CLS Group)

Your life, your pace, your way.

3

Wireless systems support a child with autism: Staffordshire county council

Julie Heightley was so worried about her son Thomas suffering an epileptic fit at night that for two years she slept on a camp bed outside his room. The broken sleep and constant supervision of Thomas, who has autism and global developmental delay, was adversely affecting both Julie's role as a carer and any prospect of independence for her son.

Now however, thanks to a discrete network of wireless sensors dotted around the four-bedroom family home just outside Wolverhampton, Julie and Thomas, now five, are enjoying what Julie calls "a new lease of life". Since the home was kitted out with the assistive technology two years ago, Thomas has been able to safely play and walk about the house independently without needing his mother's 24-hours-a-day supervision. As well as having a slightly more hands-off approach to her five-year-old, Julie, a lone parent, has more time to spend her two older children who are in their teens.

The family began using the system after Thomas' community nurse put them in touch with Staffordshire county council's assistive technology lead, Jim Ellam. Thomas' obsessive tendencies with water – he had flooded the bathroom after leaving the taps running – and his sensory issues (including eating inappropriate things like toothpaste, or smearing his own faeces), meant Jim recognised the potential the technology could make to the family's life.

The main devices are the monitors in all the rooms and by the front and back doors, which alert Julie via pager to Thomas' whereabouts (he wears an unobtrusive pendant around his neck which is linked to the monitors). If Thomas has spent longer than five minutes in a certain area that carries a potential risk – the bathroom or kitchen, for example – Julie's pager will message her to warn her. Another major bonus at night has been the epilepsy sensor mat in Thomas' bed and the monitor on his door, so Julie gets an alert if he has a seizure or leaves his room.

The impact on Thomas and his family has been immensely positive, says Julie. "The assistive technology gives him his independence and means that if I've got something to do or need to spend a bit of time with the older children, I can. Before we began using the devices, I always had to see for myself where Thomas was, everyone was always checking on him. Now he can just wander around the house or go and play in his room. He can be creative with his play instead of relying on me."

Julie adds that Thomas' siblings have in the past struggled with the fact that the focus is always on their younger brother. "He can't feed himself, he can't dress himself and until we started using the technology, they were resentful of the amount of time I spent with him."

In addition, Julie says the family has benefitted from using locator technology outside the home. Wearing a pendant linked to a handheld monitor, Julie is alerted if Thomas strays outside a certain radius that she sets beforehand.

"Using the kinds of things we do doesn't take your care or your role away, it just takes the pressure off," adds Julie. "The physical support and the technology work alongside each other to make the disabled person more independent and to help the caregiver."

For Staffordshire county council, the experience of carers like Julie has helped shape the authority's understanding of the technology. Jim Ellam explains: "People can get very hung up about the definition and terms like telecare or telehealth but in Staffordshire we take assistive technology to mean any piece of equipment that helps you do things you'd struggle to do so, to help you do things more safely and also to provide support and reassurance to carers."

Jim says this person-led approach to technology means the equipment "fulfills a purpose rather than being the focus itself". The idea, as Julie and Thomas' story shows, is that you manage by exception, intervening only when the unexpected happens – like Thomas spending more time in the kitchen than usual. He adds: "Although people know about telecare and associate it with older people and residential care, not many parents know how useful technology can be in the home - not only to take the stress off the family carer, but to promote independence."

Two other families are currently awaiting installation of the same kind of equipment that Thomas has. The council assesses the needs of each family and the equipment is loaned and funded through the
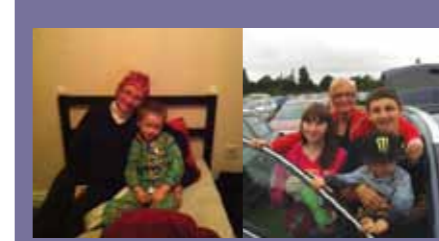
children's services if they meet the eligibility criteria. The technology is less expensive - although not a substitute for - care workers – for example the total monthly cost of the handset and pendant system is only £120, or around £30 a week (equivalent to a two hour visit from care staff).

Jim adds: "There are saving in emotional and physical terms through allowing family to lead less stressed and more fulfilling lives in and outside home. Improving sleep patterns and supporting Julie today and night will reduce likelihood of her not being able to cope. Prevention is always cheaper than a crisis intervention, the technology is an effective investment which supports quality of life for all the family, reduces risk of breakdown and allows Thomas to thrive within a supportive and supported family.

"In terms of lifelong savings this will support Thomas's transition into adulthood and the technology will act as an assessment tool in terms to managing and mitigating risks in a proportional way as he explores his life skills at home and within the community."

The council is planning to promote the benefits of assistive technology within its libraries and as part of its interactive online tool Me, Myself and I, which helps people understand the various ways they can achieve independence.

Julie would certainly agree that, although Thomas will need some form of support as he grows, her son's independence has greatly improved. She says: "Two years ago I couldn't have imagined Thomas going out on his own when he's older – out with friends or to the local shop. There was the constant pressure of having to watching all the time, the sleepless nights, and the future was starting to looking bleak in terms the support I thought he'd need. But I don't want to wrap him in cotton wool because I'm not always going to be around - it's almost that it's given us a new lease of life because we know there is a better future for him."

More information: www.staffordshire.gov.uk and www.mmi-game.co.uk

Julie Heightley has seen her son Thomas's independence grow since the family began using assistive technology (pic: Julie Heightley)

Staffordshire County Council

4

High-tech supported housing encourages adults with disabilities towards independent living: Brandon Trust

The Windermere Road Move On Project in Gloucester (pic: Brandon Trust)"

Senior support Anne Blake at the Windermere Road Move On Project (pic: Brandon Trust)"

Rachel Gush at the Windermere Road Move On Project (pic: Brandon Trust)

When Rachel Gush's friends visited her in her Cheltenham flat, she couldn't wait to open her front door.

And that's not simply because she looked forward to seeing them, but because it was the first time that, thanks to assistive technology, she'd been able to open her front door herself.

Before the 36-year-old from Gloucester settled into the supported living complex at the Windermere Road Move On Project over two years ago, she was in residential care. Visitors would always be let in by residential care staff, meaning Rachel didn't feel a sense of ownership over her own home. But at Windermere Road Rachel was able to open the communal front door remotely from the comfort of her own one-bedroom flat.

Rachel demonstrated that she was able to live independently with a range of assistive technology to support her. The independence she gained meant that she has recently moved into a supported living housing association flat in Gloucester, with minimal support, which perfectly illustrates the success of the project.

Rachel, a wheelchair-user who has cerebral palsy, has this to say of the high-tech development run by the Brandon Trust in partnership with Advance Housing and Gloucestershire county councils' commissioning and telecare team: "I loved living there. I could let my own friends in through my own front door, you didn't have to go through staff. The technology helped me become more independent."

The scheme accommodates 10 people aged from 18 to 45 (most are under 25) with mild to moderate learning disabilities and physical disabilities to live in their own homes with Brandon Trust providing personalised support. Individuals receive an assessment before moving in; this identifies the outcomes they want to achieve and the number of one-to-one hours needed to accomplish them. The intention is that individuals, referred from shared supported living, residential care or their family home by Gloucestershire city council, will build their independent living skills.

Each flat has its own assistive technology "hub", including a button which allows tenants to speak to guests and release the main front door from their flat. Tenants can also contact staff using an integrated or remote call button with a two-way speech channel from their flats or the communal areas of the complex.

Another useful item is a key fob system which lets tenants who can't manage a key open their own doors. Simply being able to hold a fob up to a reader gives tenants privacy and ownership as well as the freedom to come and go as they please.

The kind of flat Rachel lived in has automatic doors and window openers, which offered ease of access around her home. As Rachel is hard of hearing, she had a flashing doorbell so she knew when staff came to her flat and a special device on her phone to eliminate background noise and amplify speech so she could communicate with

family and friends more easily. Other devices include a vibrating pillow alarm and a flashing alarm that are triggered by fire and smoke, in case Rachel failed to hear the fire alarm. The technology complements traditional support by staff; there is always one member of staff on duty around the clock, including a sleep-in person at night.

Support staff have their own centrally located technology "hub", which receives information from sensors in the flats and informs staff, via a phone, that help is needed. The sensors pick up anything from a carbon monoxide leak to someone getting out of bed or having an epileptic seizure at night, depending on the occupant's needs.

In the two years since the project was launched, four people, including Rachel, have moved onto more independent living situations. One individual has moved into a living environment where there is a door entry system; like Rachel, he has been able to transfer the skills that he learnt at Windermere Road to his new environment.

Ann Collins, assistive technology project manager, explains: "Assistive technology provides ways for people to be supported without the need for constant staff presence; this empowers individuals to be as autonomous as possible in all aspects of their life. The use of assistive technology provides an opportunity for people to develop the skills and gain the confidence to live independently whilst providing an invisible safety net." The presence of this safety net was pivotal in giving the reassurance and confidence that individuals and families needed to take this significant step towards independence.

All the people who moved into the project had previously lived somewhere with considerably higher levels of support. Prior to a move, it is not always possible to fully understand what risks may be present or support needed in a different living situation. Assistive technology enables risk to be managed in a way that ensures people are safe without fostering over-dependent relationships with staff. Living with a greater degree of independence helps people to more readily acknowledge their own skills and competence and encourages their aspiration for greater independence.

Ann adds: "As well as the partnership approach and early embedding of assistive technology in the project, the service is unique in offering a phased introduction to independent living. It provides occupants with the opportunity to develop appropriate skills in an environment that offers 'arm's length' rather than intrusive support through onsite staffing and technology."

Senior support worker Anne Blake says: "What's amazed us is that having access to this technology highlights what else people can do because they're comfortable with it; Rachel surprised us all with her computer skills, for example. She was keen to get out more and socialise as she felt more able to come and go as she pleased. So the technology kept her safe with background support from staff, but also increased her confidence."

As for the future, Rachel says: "I'd like to live in my own bungalow." The fact that more independent living is her aspiration, speaks volumes about the confidence she has gained with the support of assistive technology.

More information: www.brandontrust.org

Brandon Trust
Learning disabilities.
Living a life.

Dorothy Smith has always hated the telephone. As her daughter, Roma Kitto, explains, Dorothy associates phones with bad news so has always preferred people to visit her at home, or to go out and meet friends and family.

It is difficult to reconcile Dorothy's rejection of telecommunication with the image of the 92-year-old today; sitting at a computer, wearing headphones and chatting animatedly on the video call system Skype.

After a stroke affected her mobility four years ago, Dorothy was unable to live in her own home and moved into Sunningdale Lodge in Yeovil, run by Somerset Care Group. Somerset Care has embedded digital technology into its homes, with the ethos that technology complements individuals' support and is an integral part of their experience in residential care – not an add-on.

Jason, a former care assistant himself, began by installing computers in the group's 28 care homes five years ago. This involved a basic package of wireless Internet and PCs on a moveable trolley so computers could be easily moved around each home.

Skype was among the first benefits that residents gained. Jason adds: "Using Skype has made people feel more included in their family circle, to maintain more meaningful contact with loved ones and keep tabs on what's going on with their relatives, and the families are happy as they've gone from maybe feeling separate from what goes on in the home to easily being able to see and hear their relatives." Individual care homes also Skype each other – holding quiz afternoons over the Internet, for example – so residents talk to each other despite being in different homes.

Somerset Care has also begun to use iPads, for example during relaxation sessions by adding sounds and a visual element such as a fish aquarium or log fire, which individuals find very relaxing and soothing. "Other uses for the iPad include them being used for games like marble mazes which is really good for hand eye coordination," adds Jason.

In addition, the trial introduction of Apple TVs has allowed staff to access a home's YouTube video playlist that has been setup by the activity coordinator. The playlist includes a selection of videos that enhance reminiscence sessions. Connecting the iPad to the Apple TV also allows larger groups of people to see the screen.

The costs are modest, says Jason. The cost to each home for the computer is £1400, Internet connection costs £20 a month per home and it can be up to £400

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Digital communication helps older people stay connected with family: Somerset Care

Digital communications and computers are part of the assistive technology family and help maintain family networks (pic: Somerset Care)

Mum didn't like the computer at first," explains Roma, "but once she realized how she could use it to keep in touch and see people, she totally took to it." Dorothy uses Skype at least once a week, mostly to chat to her son in Cyprus. Roma adds: "She went there on holiday before the stroke, so when my brother shows her the inside and out side of the villa and view of of the sea on Skype, she can see the familiar and have an conversation. You can see her face light up when she talks to him – it makes a difference as before she only had what I'd told her, but now she can see him and speak to him herself." The headphones, explains Roma, mean she is able to hear the conversation better.

Jason Shaw, Somerset Care Group's innovatively titled IT administrator and care technologist, supports the use of technology in the homes, helping people use different digital methods to maintain relationships and add to their care experience.

Skype is only one strand of Somerset Care's home-based used of technology. Jason explains: "We wanted to get away from the idea that the computer was stuck in the corner of the home and was only pulled out if someone wanted to send an email – we want to make technology integral to the homes, so if grandchildren come and visit, they might like to play a game on it or we can use technology to enhance existing regular activities. It's not replacing anything but complementing what goes on daily in each home."

Firstly, it is important that the computers are easy to use – from the fact they are mobile and on trolleys, to the way the desktop screen shows large icons on which to click and makes the system more intuitive.

Also, staff are starting to create "online books" for each home and some individuals. By collating stories from people's lives and turning it into a web-based book where family members can also add stories, pictures or comments.

to install cables and wires for the right connections. "We see this as part of providing an up to date care for people," says Jason, "technology is moving fast and we're starting to see residents come in with their own laptops, mobiles, tablets and so on – we need to ensure we provide people with the tools they want and need to keep in touch with family and friends."

Dorothy's daughter Roma believes all care homes should harness digital communication and technology for the benefit of their residents. "Just one phone call on Skype means mum can see as well as hear from people she wants to be in touch with – and the person she's chatting to can see she's okay," says Roma. "My brother doesn't just have my word for how mum is, he can see from himself despite sitting thousands of miles away in Cyprus. And it's helping her wellbeing, no doubt about it."

More information: www.somersetcare.co.uk

6

Technology-led 'social care triage': Nottingham Community Housing Association

NCHA system of 'social triage' uses a raft of technological solutions to support individuals in its care (pic: NCHA)"

NOTTINGHAM COMMUNITY HOUSING ASSOCIATION

More homes, great services, better lives

Gayle, 48, has Asperger's syndrome and complex communication needs. For many years, before moving into supported living with Nottingham Community Housing Association (NCHA), Gayle would regularly abuse alcohol at night.

For the last four years, she has been supported by NCHA's innovative team of specialist professionals – she no longer drinks to excess - but while she needs round-the-clock care, this is carried out remotely, via a call centre. Gayle lives in a self-contained first floor flat in a supported housing scheme, social isolation is an issue as her disability means it is a challenge for her to make friends and have social contact.

Gayle's life has been transformed by the out-of-hours SMaRT scheme (Supported Management and Response Team). Because she finds it very hard to communicate with people she is not familiar with, the SMaRT team spent time building professional relationships with her to enable them to support her effectively.

During the day, daytime staff work with Gayle on a wide variety of daily living skills with a view to supporting her to gain independent accommodation of her own in the future. The day staff meet regularly with the SMaRT team to discuss how best to meet Gayle's specific needs and she has drawn up all her support plans with the involvement of individuals from both of these teams.

Because the SMaRT team can be contacted through the night as well as face-to-face during regular visits, Gayle has been able to avoid drinking as much as she used. As Gayle's confidence in SMaRT has built, she has gained some insight in to the impact her behaviors have on others, increasingly understanding that sustaining her home is very important and she does need help to do that. This work has been crucial in giving her a solid base from which she can look to move on into independent living within the community.

John Bartle, NCHA's head of housing with care and support stresses that the organisation's approach is "very pick and mix", by which he means that the housing association has an open mind to the range of solutions available: "We ask what does someone need

to empower themselves to control their environment through the use of technology," adds John, "We won't be slaves to technology, but we will exploit what's available."

NCHA provides supported housing to older people, individuals with learning disabilities and people with mental health issues, Women and Children escaping Domestic Violence, Single Young People. The SMaRT call centre was launched 10 years ago to help with support whilst delivering person-centered services. The project is among the reasons that the housing group is considered a sector leader and is a member of the European consortium Impact (Improve the Person Centered Technology).

SMaRT is essentially a new take on the traditional call centre used to monitor alarms in supported living schemes for vulnerable people. The remote response service was both a reaction to service users who wanted more independence (they needed night time reassurance but did not want to have staff sleeping in) and was launched in line with NCHA's personalisation drive.

A key success factor is that calls are taken by skilled support workers, rather than by call handlers. They are trained to take the time necessary with each caller and the culture is that "SMaRT helps, whatever the problem", even if that problem might appear trivial.

The initial contact is through a call centre, but the response is personal and the aim is to resolve calls if possible rather than just signpost someone onto other services. When a caller contacts the team, both parties know who they are speaking to (all callers have information sheets with details of who is on duty). The split screen technology operates in a similar way to Skype, allowing both caller and staff member to see each other as they speak.

John explains: "Because all calls and visits are logged on the system, if the caller has had a bad day – they failed to go to their college course or had a family row, for example – the risk assessments are clear. Whatever's happened is recorded by the last member of staff in contact with the individual so you can see

risk assessment and ask 'how are things going?'" The aim is for the seamless transition between physical daytime staff and after hours remote support.

Although the pressure on budgets in health and social care was one factor in the social landlord investigating how to increase efficiency through technology, staff are clear that the system complements physical care, rather than replacing it. As John adds: "Even if you were to pay minimum wage, 24-hour cover is not always deliverable within shrinking budgets. We can do 24-hour cover, but as a response-based service."

NCHA's July 2012 review of the SMaRT client database and call log shows the use of technology is boosting individuals' independence. For example, 371 people supported by SMaRT had been in some form of long term institutional care before being supported by SMaRT including 43 people who had been in care for more than 15 years each. So people who would traditionally have more expensive residential or hospital support are being enabled to live independently and safely in the community for as many years as required.

As for costs, in the year 2012-13 SMaRT cost £780,000, with costs ranging from 99 pence to £20 per user per week. Because people can immediately access support 24-hours-a-day via SMaRT, night staff have been replaced at many schemes at a lower cost per user. NCHA has calculated that this saved £670,000 a year at 2012 prices.

Ultimately, says John, the SMaRT system is a form of social triage: "We have skilled social care professionals making an assessment with the aim of positive outcomes – they don't just field calls or signpost to another agency. And the technology supports personalisation. Some people might assume that technology is intrusive, that people are being "tracked" or "monitored", but we realised early on that once we began a more person-centred approach, we could use existing technology to deliver personal support tailored to individual needs and wants whilst increasing their choice and control which deliver real economic benefits to all stakeholders. "

More information: www.ncha.org.uk

7

Multi-agency pilot to trial assistive technology in social care and health: Improvement and Efficiency West Midlands (IEWM)

"The bell rings, the red light shines, you lift it up and turn it forwards and it is already pre-set. Tablets in the mouth - gone!" These are the words of an 84-year-old man from Dudley, West Midlands, describing how "dead easy" it is to use an automated pill dispenser for his medication.

The patient's dementia made it hard for him to remember to take his tablets for diabetes and a heart condition. He was involved in a multi-agency assistive technology pilot in the West Midlands last year when 250 people with a range of conditions - dementia, visual impairments, mental health issues, Parkinsons and people with learning disabilities - tried the technology.

Not only do people who fail to correctly take prescribed drugs risk their health and independence, research shows the costs of admissions from such patients is between £36m and £197 (2006-7 figures).

The West Midlands project involved a GP prescribing the device or a social worker assessing patient suitability, then a pharmacist dispensing it and social care staff advising and embedding the scheme into care plans. The trial was funded by the NHS Innovation Fund and regional improvement and efficiency partnership Improvement and Efficiency West Midlands (IEWM).

The pilot included 53 people who had been in hospital after failing to properly take their medication in the previous six months. Not one was readmitted after using the dispenser. With just those 53, 371 bed days were freed up and the NHS saved £94,605 against an investment of £10,865. The cost per patient was £205 but the average saving per patient in terms of social care and NHS costs was £1,700 over six months thanks to reduced visits to the patients' homes and less readmission to hospital.

The pre-programmed dispenser, around 19cm in diameter, dispenses pills at pre-programmable times during the day and consists of a movable carousel divided into 29 sections containing tablets. The dispenser sounds when it is time to take medicine and can connect to personal alarms and telephone monitoring systems, alerting carers if someone fails to take medicines on time.

Dr Dawn Moody, a local GP with a special interest in geriatric medicine involved in the project, has said of the scheme: "The automatic pill dispensers can have a very dramatic impact upon medication compliance and safety for frail older people, leading to increased safety, reduced hospital admissions and thus improving quality of life. Our involvement has also provided excellent new opportunities to improve communication and sharing of ideas with colleagues in adult social care and is acting as a catalyst for the wider development of joint working initiatives."

More information: www.westmidlandsiep.gov.uk

Improvement and
Efficiency
West Midlands

Conclusion

The debate about assistive technology in social care is far more than just a discussion about the disparate products and systems available to monitor an individual's wellbeing. Assistive – or personalised - technology has a firm place at the centre of what today's social care and support should do. Modern social care has an enabling role; it encourages choice, control and focuses on the needs of the individual. The technologies you have just read about support this approach.

People who want greater independence can be given additional, unobtrusive technological support to help them do the things they want. The methods and equipment described in our stories explore what individuals can do (can they flick a switch or push a button?) not on what they cannot. Assistive technology chimes with the current policy context of personalisation, helping providers develop specific service solutions based on individual need and enabling outcomes to be achieved.

The benefits of assistive technology

While computerised services and devices cannot be used in isolation or always be relied upon as a substitute for traditional human support, our report reveals a number of benefits to a technology-embracing social care approach. Technology can:

- increase choice, control and independence
- support people of different ages and abilities, often through relatively simple methods
- help stretch personal, health and social care budgets to provide more support at a time of financial constraint
- be employed in a variety of care settings, including community living, residential care and private homes
- support the role of carers and staff, encouraging their enabling role and often freeing them to concentrate on other tasks
- help commissioners and providers in running cost effective services

The barriers to greater use of assistive technology

It is telling that the barriers to assistive technology outlined in a Department of Health (DH) paper several years ago appear still to be current:

"The opportunities for assistive technology service providers to develop new services that meet the needs of the individual are substantial, but there are challenges, including previously low levels of investment in many assistive technology services, the lack of care pathway commissioning for these services and the lack of awareness of assistive technology on the part of the public. At the same time, technological advances, coupled with some forward thinking research funding programmes, make the delivery of innovative assistive technology services at scale a real possibility." (From DH Research and Development Work Relating to Assistive Technology 2010 – 2011[14])

So, despite the clear potential of assistive technology, as evidenced by our good practice examples, it has not been comprehensively embraced by the social care sector. The dual benefits of reduced costs and more personalised support are crucial given ongoing budgetary constraints and our ageing population, yet its use in our sector has been relatively slow to develop and become embedded in everyday practice. This is despite the fact it has been used in health and housing-related settings, for example, to support older people for several years. Assistive technology's potential has yet to be reached.

One reason for the slow take up may rest with some mindsets. Firstly, providers or staff who view themselves as traditional "caregivers" might fear technology will replace physical care and that "social aspect" of social care will be lost as the use of technology increases. There is real potential for personalised healthcare and personal health budgets to allow investment in technology and support in a community living or home setting, but it requires cultural change within the wider workforce and in particular a challenge to the medical model of care.

In addition, there may be concerns that a technology-based approach undermines risk management (staff may fear, for example, that leaving people "alone" with technology support compromises their safety). Lastly, technology that supports independence can also be used to monitor movements (a global positioning system, for example, will alert you if a child moves out of a defined area), raising ethical concerns among providers and commissioners alike.

The stories in this report go some way to correcting these preconceptions.

Key actions to be taken

Stakeholders such as providers, commissioners and government can act to offer more people the benefits of assistive technology and tackle the barriers to its greater use.

Generally, commissioners and providers should have early and frank discussions about who will be the beneficiaries of investment in assistive technology. In many cases, early investment will save different sectors (health, social care) more costs further down the line. In the case of some schemes – the pill dispenser (see p20) for example – the multi-agency partners recognised that each would benefit and the costs were shared.

Action for government and commissioners:

- acknowledge the benefit of assistive technology in the context of outcome-based commissioning and measurement of impact
- take a longer-term approach beyond current fiscal constraints – investing in personalised technologies increases independence and can reduce dependence on some traditional provision (sleep-in services, for example)
- new clinical commissioning groups need to take stock of the potential of technology among recipients of social care, not just health care

Action for providers:

- embed assistive technology in social care with workforce development and guidance to build competency in this area
- clarify the purpose of the new methods in sustaining and improving quality of life – the role of technology is to help enable, not to replace caregiving
- ensure systems meets service needs – carry out analysis if care services are to be redesigned and technology integrated with existing services
- consider the ethical aspect - be clear about the best interests of the individual; why you are using a particular technology and ensure you get consent from the user
- review traditional conservative views of risk and risk management and use technology to identify, manage and mitigate risks to allow people to live their lives

Assistive technology's role in modern social care

Assistive technology does not replace human contact or caregiving. However, it is flexible enough to suit a wide range of people with varying abilities and needs and can be used in different care settings, from residential placements to community living. It is unobtrusive and increases independence.

The methods described in this report reinforce technology's vital place in modern social care, complementing and enhancing traditional human care and support and contributing to increased independence of vulnerable people.

Put simply, technology is part of our modern landscape. We use it for work, leisure, at home and on the move. It makes our lives easier. People with life-long disabilities or age related conditions should share that experience, benefitting from the advantages that tailor-made technological support can bring.

14 http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Aboutus Researchanddevelopment/AtoZ/DH_062674

Appendix A: list of organisations featured in this report

The premise of Belong villages was to create a care setting that is not defined by care. There are there are four Belong villages so far in the UK and the fifth is under construction. Belong is a community village where care is just one element of the community, but not the defining factor. www.belong.org.uk

Brandon Trust is one of the most innovative charities currently supporting people with learning disabilities in the UK. Formed in 1994, in Bristol, by the merger of the Buttress Trust with the South Avon Housing Association, Brandon Trust started with just 25 people. The charity has over 1,000 employees but we always stay local to wherever we work, developing genuine community inclusion. www.brandontrust.org

Hft is a national charity supporting people with learning disabilities and their families. Everything we do focuses on helping the people we support live the life they choose. www.hft.org.uk

Improvement and Efficiency West Midlands (IEWM) is the brand name of the West Midlands Regional Improvement and Efficiency Partnership. IEWM is a sector-led organisation that supports local authorities and their wider public sector partners in their drive to increase efficiency and improve local public services. www.westmidlandsiep.gov.uk

Nottingham Community Housing Association (NCHA) is one of the largest locally-based housing groups in the East Midlands, managing over 8,100 homes and housing more than 15,000 tenants in Nottinghamshire, Derbyshire, Lincolnshire, Leicestershire, Northamptonshire and Rutland. www.ncha.org.uk

Somerset Care Group is one of the major care providers in Southern England and one of the largest not-for-profit care companies in the UK.The group provides day or respite care, nursing and residential care with a range of homes in the South West and on the Isle of Wight. www. somersetcare.co.uk

Staffordshire county council provides services to over 800,000 residents, for families, communities and a prosperous Staffordshire. www. staffordshire.gov.uk/

For a full list of VODG and NCF members, please see http://www.vodg.org.uk/members/list-of-vodg-members.html and http://www.nationalcareforum.org.uk/memberlist.asp

Appendix B: references and sources used in this report

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Voluntary Organisations Disability Group

VODG

For further information please contact: info@vodg.org.uk

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