



extending independence

Successfully introducing
assistive technology

By engaging with users, staff and partners – and carefully communicating its benefits – assistive technology can extend the independence of older people with dementia.



Since the Older People's Programme was launched in 2003, the use of assistive technology in the provision of care for older people with dementia has become increasingly mainstreamed. Local authorities and their partners have been encouraged to develop a strategic approach to the use of assistive technology and a number of councils are now leading the field.

Two projects focused on developing assistive technology for older people with dementia or mental health problems. While the situation has changed since they both began, the insights from both are still relevant to the introduction and implementation of assistive technology strategies.

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The Older People's Programme

The Third Sector has always played a critical role in developing ideas and practical solutions, but this ingenuity is often compromised by a lack of the requisite resources needed to develop ideas into sustainable solutions.

In 2003, using funding from the Henry Smith Charity and the Housing Corporation, hact launched its Older People's Programme, in order to pioneer housing solutions for older people.

In partnership with the LintelTrust in Scotland, NIHACT in Northern Ireland and Community Housing Cymru in Wales, hact invited voluntary and community groups to apply for grants for projects that would develop and test practical solutions to issues affecting older people. In total, 19 projects from England, Scotland, Wales and Northern Ireland were given funds totalling £1 million.

The criteria for choosing the projects included ideas that could address gaps in services affecting marginalised older people, including those with mental health problems, older people in rural areas and BME and refugee elders.

All of the projects worked with, as well as for, the benefit of older people. Hact encouraged all the projects to consult with older people, to develop partnerships with other organisations and to share their experiences with other projects on the programme. To ensure that insights from the programme were captured, hact employed Moyra Riseborough and Peter Fletcher Associates to evaluate the project. Finally, an Advisory Group was convened, composed of experts in older people's housing and this met regularly over four years.

Two projects focused on developing assistive technology for older people with dementia or mental health problems. While they had similarities, the Older People's Programme funded different parts of their development. The funding for the Fold HA project was used to pay for an evaluation of the assistive technology that had already been installed in a specialist housing care scheme, in order to assess its contribution to the care and support of older people with dementia. The funding for the Dane Housing Group project was used to develop the technology and infrastructure to support people with dementia in their own homes, enabling the project to spend more time in communicating with its key stakeholders, persuading them about the value and role of assistive technology.

Project information

Dane Housing Group – *introducing assistive technology to extend independence*

Cheshire (North West)

www.dane-housing.co.uk

PROJECT AIM

- to develop a project using assistive technology for people with dementia to enable them to remain in their own homes for longer.

ACHIEVEMENTS

- developed an understanding of how assistive technology can support a range of people to continue to self care, or have a greater level of independence, working with care arrangements, rather than replacing them;
- installed assistive technology in the homes of 75 people;
- developed partnerships with hospital discharge teams;
- developed a comprehensive Telecare Manual, including sets of procedures, referral arrangements and assessment tools;
- produced a user-friendly leaflet explaining telecare.

Fold Housing Association – *evaluating a three-year assistive technology pilot scheme*

Derry (Northern Ireland)

www.foldgroup.co.uk

PROJECT AIM

- to evaluate a three-year pilot scheme on the use of assistive technology in a specialist housing scheme for older people with dementia.

ACHIEVEMENTS

- produced an evaluation report focusing on the organisation's experience in introducing assistive technology;
- developed a good practice guide to new technology in housing with care schemes for people with dementia.

The early adopter

The lessons from Fold's introduction of assistive technology are still relevant. The organisation experimented with existing technology in the 1990s, particularly the capacity of community alarm systems to support individuals and devices that could be linked to these systems. In the late 1990s, Fold decided to introduce a range of new products and operating systems into a new housing with care scheme called Seven Oaks in Derry, Northern Ireland, which is a partly registered care home and partly registered housing scheme.

The organisation received funding and support from hact to evaluate the technology, three years after it had been first introduced. Many of the technologies and products were new and, subsequently, there were a number of teething problems. For example, tenants moving into the home brought their own furniture and this proved to be a problem. Some of the bed legs, for example, did not fit the cup sensors designed for use in the scheme, so the cup sensors had to be redesigned.

A practical example

In traditional care arrangements, a member of staff would enter the room of any resident who was thought to be at risk of falling out of their bed or wandering in the middle of the night at hourly intervals. The use of detectors enables staff to monitor whether, for example, a door has been opened or a person has fallen out of their bed. There is no need to physically enter the room, thereby reducing the risk that they will unnecessarily wake up the resident. Additionally, any untoward incident will be detected instantly, rather than during the next hourly check – which could be in 59 minutes time.

The technology was, initially, intended to assess the benefits of assistive technology to support older people in both the specialist housing scheme and the wider community. In effect, however, the technology that was introduced was developed primarily for use within the specialist housing scheme. In addition, the technology was not made available to everyone in the scheme, because of concerns by care and health commissioning managers about the sensors and other elements that were integral parts of the scheme. There was reluctance to use this technology for those residents with severe dementia, who required one-to-one input from members of the care team. Consequently, the technology was only made available to people with mild dementia, who needed relatively little support from staff.

The evaluation proved to be invaluable. Over a 12 months period, it uncovered a number of issues and reflected these back to Fold, enabling the organisation to refine and improve the use of assistive technology. It drew lessons for specifying, procuring and commissioning the use of assistive technology, as well as identifying how care and health cultures could embrace technology and change. Ultimately, it succeeded in promoting the use of assistive technology, not as a replacement for traditional care methods, but as a modern, responsive partnership between older people, their families, care staff, and technology.

Lessons for staff

The technology that Fold decided to use in Seven Oaks can be divided into three areas:

- The voice and communication call system, allowing for communication from each flat and bungalow with the Manager's office and staff via handheld sets, similar in appearance to mobile phones. Residents were able to communicate with staff either in the office or

through their handsets – and staff could also communicate with each other;

- A range of devices that would provide alerts in pre-determined circumstances (*see box*), providing information about the status of a resident or indicate whether further investigation is required;
- The central computer (called Super Midas) that receives data from the devices located in the residents' rooms and provides a graphic representation of the status of each resident.

The experiences of staff differed according to each technology area, partly as a result of the status of the technology, partly as a result of human reaction. For example, the functionality of the Super Midas computer was not initially appreciated by staff who, as a consequence, had unrealistic expectations of its usability. There was a clear lesson about ensuring staff were aware of the capabilities – and limitations – of the technology before it was introduced.

The evaluation also uncovered a problem with training. Resource constraints meant that the only training provided had been delivered by the suppliers of the equipment, and this was perceived to be too technical for most staff. Without any clear demonstration of its benefits – to both the residents and themselves – many staff lacked confidence in the technology. Simultaneously, there was some initial reluctance to use the handsets, and generally poor practice about responsibility for looking after handsets.

Once these issues had been highlighted, they were gradually overcome. One factor was the suggestion that two technology champions be appointed from within the staff to provide peer support to staff and reinforce the training on a day-to-day basis. The two champions also undertook basic maintenance of the system, re-setting devices, reporting faults, etc.

Another factor was in the role of the manager, whose confidence in the technology resulted in

How it works

A typical set of devices might include:

Door opening detector – this may be set to raise an alarm if a door is opened either by someone entering or leaving a room, for example, at night.

Bed occupancy detector – this may be set to raise an alarm if a person leaves their bed and does not return within a stipulated period.

Furniture occupancy detector – this provides similar functionality, but provides reassurance if absence from the bed is detected, but the chair is occupied.

Automatic light controls – these may be set for lights to come on automatically when movement is detected, for example, when a resident gets up in the night to go to the toilet. The intensity of the light can be adjusted to aid orientation.

Incontinence alert – this will detect a level of saturation before the capacity of the incontinence pad has been reached, allowing a timely intervention before bedclothes are wet.

Fall detector – this will normally be fitted to the clothing of a resident and will detect a fall, although there have been reports of difficulties in wearing them.

Environmental controls – these may detect temperature and humidity and automatically adjust the heating and ventilation.

Flood detector – this will raise an alarm and turn off the water supply if flooding is detected in the kitchen or bathroom.

Excess heat detector – where residents have access to a kitchen, this will raise an alert and turn off the power if an oven or hob is left on.

it being incorporated into her care philosophy, which she then successfully communicated to her staff. Finally, initiatives were taken involving staff in, for example, developing handset protocols in a user-friendly format.

Members of staff have grown in confidence in using the technology. The flexibility and ease of communication offered by the handsets has been particularly welcomed. The appointment of technology champions within the staff has proved to be highly successful in providing moderate on-site experience, supporting colleagues on a day-to-day basis and building overall confidence among the staff that they are in control of the technology, rather than vice versa.

The positive benefits

The evaluation found the following positive benefits:

- Technology supports the development of less intrusive practice – residents do not need to be checked routinely to see that they are in their bed, for example;
- The risk to residents can be reduced – an alarm is raised immediately, rather than relying on the next hourly check, which might be in 59 minutes time;
- Some situations of risk can be pre-empted – by observing changes in behaviour pattern, staff may be able to predict adverse incidents, such as a fall;
- Staff can work more confidently – being able to communicate with each other without having to leave residents results in greater mutual support. Similarly, staff know they will automatically be informed of any incidents that require their immediate attention;
- Staff can focus on quality interventions – being released from routine checks enables staff to spend time on quality interventions with residents.

The four-point plan

The evaluation outlined a four-point plan for good practice in introducing assistive technologies.

Establish first principles, and first steps.

The benefit of introducing assistive technology can only be achieved by having clear principles of care practice that the technology must support, rather than devising principles based on the capabilities of the technology. From these principles there should follow a brief statement of how the care regime will deliver them, a clear statement on the objective for the use of technology, the implications for its deployment, the outcomes expected and the indicators by which its impact can be measured.

1 Identify suitable technology.

The capacity of individual devices should be identified in a simple format – what it does, the applications it has, as well as its limitations.

2 Train and induct.

Before any equipment is fitted, a training and induction strategy should be developed, including, for example, the identification of key managers and staff champions. Training needs of all staff should be audited and monitored. In addition, the introduction of new technology should be discussed with potential service users.

3 Procure and commission.

A clear specification of necessary purchases should be drawn up – not a list of devices, but a schedule of systems, described in relation to the areas of the scheme in which they are to be deployed, and the purpose for which they are intended. The timetable for the delivery, installation, testing and introduction of the hardware and software should be clearly established, with identifiable milestones. Importantly, the contract should include a definition of what will constitute a technical completion.

A good practice guide: specifying, procuring and commissioning new technology in housing with care schemes and *The Fold Good Practice Guide to new technology in housing with care schemes for people with dementia* are available from www.foldgroup.co.uk

Engage and deliver

Assistive technology has to work with care arrangements, rather than replace them. That was one of the key insights from the project run by Dane Housing Group, called Home Safe. The project was designed to help people with dementia living in Congleton and surrounding areas to stay longer in their homes. The grant and support from hact enabled Dane Housing Group to increase the amount of electronic sensors, mechanical devices and communications systems, which were discreetly installed in homes to help and support vulnerable people, monitored by a 24-hour emergency Careline service.

Dane's pilot was one of several being pursued in Cheshire and provided some clear lessons in how assistive technology could be used and made to fit with local commissioning and practice arrangements. Primarily, this involved communication, with users, staff and local partners. For example, the project developed a user-friendly leaflet, which explained the benefits of the technology, for both users and carers. Face-to-face talks with users were also standard practice, as well as discussions with carers and relatives, listening to their concerns and reassuring them about the capabilities of the technology – and the impact it would have on the ability of their loved ones to remain in their homes.

Internally, the project commissioned one of the equipment manufacturers to conduct training for Dane's maintenance staff, enabling them to provide a more responsive installation operation,

according to the needs of each individual client. Dane also established a demonstration flat, which was visited by the Director of Social Services for Cheshire. The project co-ordinator was invited on to the Cheshire Council Telecare strategy group, and took part in a training video for new councillors, explaining the benefits of the technology.

The project also focused on networking with local health and social care professionals, many of whom visited the demonstration flat. Workshops were held to facilitate inter-agency relations with hospitals, Alzheimer Groups and social service departments, as well as mental health PCT teams. Articles about the flat were placed in the local press and a number of evening talks were given to carers groups.

The benefits of this approach took time to emerge, but by the end of the project funding period it became clear that assistive technology was being perceived as a tangible option for older people by social workers. The project reported that in two cases, a hospital team needed to discharge a patient and were assessing them for residential care. By working closely with them, the project was able to persuade the hospital team to successfully return them to their homes, which were installed with suitable assistive technology.

The project also developed a telecare manual, in association with Cheshire County Council. This included detail about available telecare equipment, advice on commissioning procedures, as well as charging, care planning and response protocols. In addition, the manual included telecare assessment tools, examples of referral tools, equipment fitting checklists and review forms. It took time to persuade the project's stakeholders about the value of assistive technology, but thanks to Dane's ability to communicate, its role in the care and wellbeing of older people with dementia in Cheshire is now assured.

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Fold HA, which is based in Northern Ireland, was funded and supported to evaluate its Getting Home, Staying Home project, which had been running for three years. The Older People's Programme had no influence on what had occurred in the establishment or initial running of the organisation's assistive technology project, although some feedback from the evaluation was used to develop good practice.

By contrast, Dane Housing Group was funded and supported to develop the technology and infrastructure to support people with dementia. As with the Fold programme, it intended to, and has contributed to, good practice. The two key elements from both projects were the importance of engagement – and the essential nature of communication with all stakeholders, including users and their carers, staff and their suppliers, and partners and local commissioning officials.



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Key learning

- The importance of involving all key stakeholders, including older people, their families and carers, staff, managers, commissioners and other groups when introducing and implementing assistive technology;
- Relationships should be built with key voluntary groups, and health and care professionals, in order to build awareness and confidence about the possibilities of assistive technology to support and extend independent living;
- A demonstration property can be a useful way of showing how the technology works;
- A clear strategy focusing on outcomes that can be achieved with the support of assistive technology helps with commissioning decisions, which should be centred around systems rather than devices;
- The appointment of technology champions can assist the on-going training of care staff and managers, and help increase confidence in the application and daily use of the technology;
- Care staff and managers should be aware of the limitations of the technology before it is introduced, so that they have realistic expectations about its impact;
- Assistive technology is not a replacement for traditional care – it should be seen as a way of empowering carers, improving response times and, as a result, extending the independence of older people with dementia.