

## Integrating Assisted Living Technology (ALT) support in the community

A test of change project was undertaken to evaluate a novel service intervention with assistive living technology (ALT) equipment assessments integrated into routine home visits by occupational therapists (OTs). ALT equipment can both increase independence for people living with physical disabilities and improve quality of life for elderly adults living with chronic conditions. ALT refers to digital consumer equipment that is widely available for example Amazon Alexa and smart wi-fi bulbs. This trial was undertaken by three NHS Lothian services including the environmental control service (ECS), the Disabled Living Centre (DLC) and the Neurological Occupational Therapy Service based in the Astley Ainslie Hospital. The NHS Lothian Charity awarded £4,982 from the Small Grants Programme so they could purchase a range of ALT equipment to learn the most effective way of integrating ALT support in the community.

### Why this test of change project?

Within the Lothians some patients can receive more specialist equipment from the Environmental Control Service (ECS) to increase independence but others do not meet the service eligibility criteria. Consequently, a gap was identified for patients that could benefit from ALT equipment but would not be able to receive ALT assessment or advice from their local health and social care services. The test of change project was designed to explore a new pathway and assess its effectiveness. There was also the opportunity for staff involved in the project to increase their knowledge of ALT and develop skills and confidence in their use.



#### ALT equipment purchased included:

- Smart hubs and accessories that allow users to control personal tasks and their environment e.g.: Amazon Show, Tapo Smart Wi-Fi Lamp, Tapo Smart Wi-Fi Socket
- Technology access devices such as switches and Head trackers
- A wireless 4G dongle was also purchased to assist with the setting up of the Wi-Fi devices.



Range of the ALT purchased

### The benefits of ALT

The benefits are wide-ranging and include:

- Increased independence – don't need to rely on family members or health professionals to carry out personal tasks e.g. audio prompts to remind to take medications
- Improved safety in the home – decreases the amount of risk to the patient e.g. video door bells alerting family someone at the door
- Improved quality of life – adaptations allow individuals to continue to take part in hobbies and interests e.g. playing online games on a tablet
- Increased connection – able to keep in touch with friends and family e.g. using video call on a laptop
- Less stress/distress and confusion – simplifies daily tasks e.g. big button phones for people with physical or cognitive disabilities

## Impact on patients

# 100%

of OT's involved in the pilot  
agreed ALT empowers  
patients to better  
manage their daily lives

 Supports self-management, independence, can reduce family anxiety, and can reduce care needs.”  
Occupational Therapist involved in the pilot

 Patient can now change channel on TV herself using her voice and can manage her calendar using Alexa independently.”  
Occupational Therapist involved in the pilot

 Controlling their environment independently increases safety in the home, supports productivity and reduces reliance on others.”  
Occupational Therapist involved in the pilot

### Case Study – Increasing independence and providing simulation

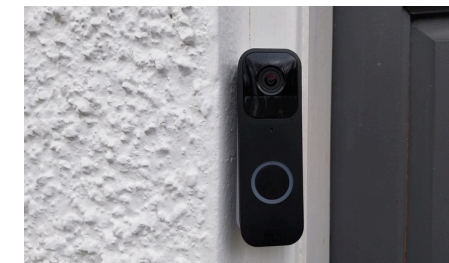
The Service worked with a gentleman living at home whose stroke had left him with reduced fine motor skills and significant language barriers, making standard iPad navigation and voice-activated technology impossible. A large red button which can be used with a device such as a tablet or laptop was a solution to bypass his physical limitations. The large surface area of the button allowed him to operate his tablet simply by pressing the button softly with the palm of his hand. This simple button drastically reduced his reliance on family members by restoring his ability to independently use his iPad again to watch TV, listen to music, shop online and answer emails. Regaining control over these daily activities significantly boosted his wellbeing and mental health, supporting in his overall recovery process.



 It's the little adaptations that often make the biggest difference to peoples lives.”  
Occupational Therapist,  
DCL and ESC

### Case Study – Improving safety in the home

A family was referred to the Service as they were worried about the safety of their mother who has dementia, lives at home alone and had recently been scammed by a bogus caller at the door. The family were keen to know what technology could help prevent this in the future. The OT was able to demonstrate a video doorbell and how it's functions could help the family keep their mother safe. The family were signposted to a relevant support organisation who gave advice and were able to purchase a suitable video doorbell. The family are alerted when someone is at the door, can see who is there as well as communicate with people at the door remotely. This has provided the family with a peace of mind for the safety of their mother and will save any further financial loss.



 I have seen the difference ALT can make in helping people live at home safely.”  
Occupational Therapist,  
DCL and ESC

## Testing change and enhanced service

Two half-day training sessions were provided to the participating OTs including 'hands on' with the equipment and processes were established to facilitate the smooth running of the project. The ECS staff were available for technical support and advice. The OTs completed an assessment of the patient's needs in relation to their home and their physical and cognitive abilities. They demonstrated the ALT within their home and provided recommendations and advice regarding the purchase of equipment after the trial. Feedback was gathered at the end of the project to determine the effectiveness of the service via a purpose designed questionnaire.

The results indicated that OTs' confidence in explaining the use of the equipment was low. In addition, despite the initial training and available support, the majority did not feel sufficiently trained and supported to integrate technologies into their practice. Most responders indicated that technology did add value to the assessment process, such as supporting self-management and providing access to equipment to facilitate more independent living. All the OTs identified that the technologies empowered their patients to better manage their daily lives and achieve their goals.

The model of service provision as evaluated demonstrated some weaknesses. This was due to lack of access to on-going training and support to boost confidence in implementing ALT as part of a treatment programme with a patient. ALTs cannot be introduced into an OT's assessment without initial and on-going training and ready access to expert support.



**Having this knowledge gives us more tools in the tool box to support patients."**

Occupational Therapist, DCL and ESC



**Pushed me to be imaginative and creative in how I support patients to independently and safely have a good quality of life at home."**

Occupational Therapist, DCL and ESC

## Next steps

To improve access to on-going training and support the following was recommended by the Services involved in the test of change pilot:

- Discussion with management to establish a model of service provision that includes an ALT pathway working alongside ECS. Currently the suggestion is to second an Occupational Therapist already working in the DLC one day a week. This will establish whether such a role is effective and a good use of resources.
- Development of training competencies using a graded approach including basic familiarisation with equipment and moving towards independent use of the technology in a clients' home environment.
- Providing on the job training closely working with ECS to ensure confidence and engagement of the Occupational Therapist. Engagement in the Digital Health and Care Leadership Programme to provide a formal framework for the ongoing project.

## Conclusion

ALT equipment can provide life-enhancing improvements to patients though the challenge remains to find the most effective and efficient way to improve access to the independent expert advice and support they need. The DLC and ECS services are continuing to explore other ways to improve access to ALT in the community through the above recommendations.

The equipment funded by NHS Lothian Charity has enabled the services to trial models of service delivery, to learn about the delivery model's limitations and implement a new model to facilitate staff use of the equipment for the benefit of patients accessing the ECS and DLC.

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