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Workforce Development for Assisted Living Technology: understanding roles, delivery and workforce needs

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May 2012

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Acknowledgements

The authors of this report would like to thank the staff at Sandwell Metropolitan Borough Council, Kent County Council, and (the London Borough of) Lambeth Council and who willingly participated in the research and generously gave their time to be interviewed. The authors are grateful to Skills for Care who funded the research. In addition to Skills for Care staff, in particular to Liz Burtney and Diane Buddery, who provided information, support and guidance throughout the research.

Glossary

ALIP	Assistive Living Innovation Platform
ALMO	Arms Length Management Organisation
ALS	Assisted Living Services
ALT	Assisted Living Technology
ASSIST	Central contact centre for adult social care
ACT	Assistive Care Technologies
AT	Assistive Technology
CHD	Coronary Heart Disease
CIRCLE	Centre for International Research on Care, Labour and Equalities
COPD	Chronic Obstructive Pulmonary Disease
DALLAS	Delivering Assisted Living Lifestyles at Scale
DH	Department of Health
EIF	Employer Investment Fund
FACS	Free Access to Care Service
GSM	Global Systems for Mobile Communication
GPS	Global Positioning System
HMG	Her Majesty's Government
LET	Life Enhancing Technologies
LTC	Life Threatening Condition
PCT	Primary Care Trust
PTG	Preventative Technology Grant
SAP1	Single Assessment Process
SfC	Skills for Care
SfCD	Skills for Care and Development
SfH	Skills for Health
STAY	Sandwell Telecare Assisting You
SWIFT	Local Authority ICT system
WSD	Whole System Demonstrator

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Executive Summary

Introduction

Assisted Living Technology (ALT), including telecare and telehealth, digital participation services, and wellness services, is increasingly being offered to individuals in need of social care support as a way of assisting them to maintain independence and to promote quality of life at home. It is recognised that the delivery of Assisted Living Services (ALS) (the term used to refer to this collection of services) has implications for the workforce in the social care and health sectors.

This report, commissioned by Skills for Care, sets out the findings of case studies of three local authorities (Sandwell Metropolitan Borough Council; Kent County Council; and the London Borough of Lambeth), all of which are offering ALS through different delivery approaches. It examines the implications of ALT and ALS for workforce development, providing information and knowledge which can contribute to the development of a more strategic approach to support learning and development in the social care sector.

Methods

In-depth semi-structured face to face interviews were carried out with 32 members of staff (nine in Sandwell, ten in Kent, and 13 in Lambeth). The job roles of interviewees included commissioners, service managers, care managers, social workers, ALT coordinators, trainers, assessors, occupation therapy consultants, care workers, equipment providers, technicians / installers, and monitoring staff. Key documents and reports relating to the ALS in each local authority were also collected.

The technologies

Broadly similar technologies are being used across the case study authorities, with some variation in the use of the more advanced technological developments. There are also some differences in the ratios of stand-alone products to those linked to monitoring services, as well as variations in the nature of the response services. A variety of large and smaller equipment providers are being used to facilitate a wider selection of solutions which can be tailored to meet need.

A number of challenges had arisen in the delivery of ALS, including issues around: the aesthetics of the equipment; potential under-use of equipment; the ever changing and complex nature of the technology; the effectiveness of the equipment and the potential for it to generate false alerts; and the need for local authorities to introduce financial charges for ALT use.

Delivery arrangements

Delivery arrangements in the three authorities vary, with ALT and ALS provided by a separate specialist unit in one authority but by teams of social care and health professionals dispersed across the councils in the other two. By looking at delivery arrangements of the key processes of ALS - including referral, assessment, installation, monitoring and response - it is evident that the delivery of ALS varies, in terms of in-house provision; how far processes are separated or integrated; and the

degree to which the technologies give rise to specialist roles or are assimilated into existing practice. The authorities were generally moving towards assimilation of ALS into mainstream social care and health provision but there was a recognition of the benefits of retaining some specialist leadership, which can generate expertise, drive change and promote referral.

Current, new, and emerging job roles and skills

The different delivery arrangements in the three case study authorities have produced specialist ALS job roles and specific tasks, but have also led to the need for different skills within existing roles. A number of new specialist job roles have emerged through the delivery of ALS such as telecare engineers, technicians, installers and specialist assessors. These job roles require technical expertise, but also wider social and communication skills.

As the services become mainstreamed and more closely integrated into existing social and health care provision, there can be a tendency for new specialist job roles to be replaced by a widening of existing roles, as well as a tendency for a greater focus on specific new tasks within existing job roles. Many job roles involved in the delivery of ALT require a wider range of social skills (including communication skills and publicity and awareness raising abilities) *as well* as technical knowledge.

Training and workforce development

New and widened job roles associated with ALS inevitably create a growing requirement for appropriate and effective workforce development and learning. Appropriate on and off-the-job training is required which enables staff to have 'hands-on' experience of the equipment, and to develop the required competencies. Training which is mandatory, and extended to all those involved in the service delivery - social and health care professionals, voluntary and community organisations, emergency services, service users and carers - is likely to have most beneficial impact.

Awareness raising and marketing

To widen the reach of ALT and stimulate the required culture change amongst some sections of the population, awareness raising and marketing activities are required on a continuous basis for social care and health professionals; service users and their friends, relatives and carers; and for the general public. The need to target 'hard to reach' groups should be incorporated into marketing campaigns. Innovative techniques are required through a variety of mediums, ranging from the more traditional form of advertisements to activities in local community centres, shops, general practices and hospitals.

Future innovations and cost effectiveness

A number of innovations and changes were anticipated across the three authorities, including initiatives around: partnership working; embracing technological advancement; mainstreaming ALS; promoting learning and development; and championing ALT. These planned innovations indicate that the use of ALT will

continue to grow in the future, particularly given the potential of both telecare and teleheath to generate cost savings.

Conclusions and recommendations

ALT and ALS are growing areas of social and health care provision and can present many benefits to services users, their families, friends and carers. However, the approaches to delivery vary by local authority and so do, in turn, the implications for job roles, and tasks, and the associated skills and knowledge required. All of this has connotations for workforce development and learning. Seven recommendations have been developed with these issues in mind, covering: the need for further research across a wider range of local authorities in England, as well as research on self-funders; strengthened partnership working between social care and health; ALT leads to champion and drive forward services; a generic framework outlining skills and knowledge needs amongst the social care and health professionals and an associated national framework of learning and development; awareness raising and marketing initiatives; and specific learning and development requirements which can be built into the proposed next stages of development for Skills for Care.

1 Introduction

1.1 Background and policy context

Assisted Living Technology (ALT) is increasingly being offered to individuals in need of social care support as a way of assisting them to maintain independence and to promote quality of life at home. Assisted Living Technology, sometimes known as Assistive Technology (AT), is a broad term which encompasses a range of equipment, and the term is often interpreted differently by different people. For the purposes of this report, the definition of ALT is based upon the Skills for Care[1] (SfC) definition which includes:

- Telecare and telehealth: delivery of cost effective social and health care using technology in the homes of those needing support to enable them to live longer at home and in their communities. This may include returning home after a period of illness.
- Digital participation services: to educate, entertain and stimulate social interaction to enrich the lives of people in need of social support living at home.
- Wellness services: to encourage people to adopt and maintain a healthy lifestyle, to help prevent or delay the need for support.

SfC refer to this collection of services as Assisted Living Services (ALS).

However, it should be pointed out that much of ALS delivery in local authorities, at the moment, focuses on telecare, although this is expected to change in the future as the use of technology becomes more acceptable and widespread.

As technology has become an increasingly important part of everyday life, the use of ALT has become more acceptable. For example, the Telecare Services Association estimates that 1.7 million people use telecare in the UK[2], including older people, people with physical disabilities and cognitive impairments (including dementia) and people supported by community mental health teams. Its growing use has also been a response to policy trends directed at supporting our ageing population, including self directed support and personalisation, self care, early intervention and preventative action and re-ablement.

The opportunities for technology to facilitate independence have been recognised for a number of years. The 1998 NHS report *An Information Strategy for the Modern NHS 1998-2005* noted:

[1] Skills for Care is an employer-led organisation with a remit for developing the workforce in England to meet adult social care needs.
[2] http://www.telecare.org.uk/consumer-services/what-is-telecare

> *Telecare technology will be used to provide a reliable but unobtrusive supervision of vulnerable people who want to sustain an independent life in their own home.* (DH, 1998: 15)

Successive governments have supported the wider use of telecare in private households. Thus the Department of Health (DH) set *'ambitious targets for telecare to be available in all homes that need it by December 2010'* (Audit Commission, 2004: 4), and the DH policy document *Building Telecare in England* set out guidelines to inform local authorities of the resources, systems and procedures necessary to implement telecare effectively (DH, 2005). The importance of telecare for carers, as well as service users, was highlighted in the national carers' strategies (HMG, 1999; 2008; 2010) and the significance of telecare was also acknowledged in the key policy documents *Putting People First* (HMG, 2007) and *Shaping the Future of Care Together* (HMG, 2009).

Several government-funded programmes have been introduced to encourage the use of telecare. The Preventative Technology Grant provided £80 million of funding between 2006-2008 and was designed to support local authorities to work in partnership with other agencies in the voluntary, health and housing sectors to develop telecare initiatives (DH, 2006). The Whole System Demonstrator (WSD) programme, designed primarily to strengthen the evidence base about telecare and telehealth, operated in three integrated social and health care sites (Newham, Kent, and Cornwall) between 2008 and 2010, aiming to benefit 6,000 service users, 660 carers, and to be *'largest randomised control trial of telehealth and telecare in the* world' (DH, 2008; 2011).

More recently the DALLAS programme (Delivering Assisted Living Lifestyles at Scale) reflects the current government's commitment to ALT. The programme represents £37 million investment (£25 million of which is government funding) to establish four consortia-led initiatives in the UK, including one in Scotland reflecting Scottish contributions to the investment. The initiatives include: *i-Focus*, a nationwide programme offering people a range of products and services to help them feel more comfortable in their own homes such as on-line and mobile technologies designed to enhance and organise informal care networks; *Year Zero*, an online application that is designed to empower individuals to actively manage their health information throughout their lives; *The Feelgood Factory*, which encourages people living in Liverpool to plan for their future in order to better manage their health and social care needs, supported by Life Enhancing Technologies (LET); *Living it Up* which focuses on developing innovative solutions that will enable people in communities across Scotland to live happy, health and safe lives, enabling choice and better control over their health and well-being.[3] The programme aims to recruit 10,000 people to each initiative and demonstrate how ALT and ALS can be used to *'promote well-being,*

[3] https://connect.innovateuk.org/web/assisted-living-innovation-platform-alip/articles/-/blogs/8113842

and provide top quality health and care, enabling people to live independently – including a preventative approach' (Technology Strategy Board, 2011:1).

The government has also initiated *'3millionlives'*[4], a strategy to enhance the lives of three million people over the next five years by accelerating the roll-out of telehealth and telecare through the NHS and social care, by working with industry.

1.2 ALS and workforce development

Emerging evidence from the WSD programme indicates that equipping the workforce with the confidence and skills to engage with available technology is an important factor in the successful delivery of ALS (SfC, 2011). The Department of Health has also recognised the implications of ALT for the workforce in the health and social care sectors (DH, 2009). SfC suggests that while the advancement of ALT is supported in policy, and there is recognition of the importance of a supported and skilled workforce, there is less detail on how to develop and maintain practitioners' skills and knowledge in this area. They point to four key documents which set out: the indicative behaviours for a trained workforce; the role of the workforce in promoting understanding of technology; the role of management and the need for strong leadership to drive change; and the broader context of skills required to implement technology (SfC and SfH, 2008; DH, 2009; SfC, 2011; SfC and Development, 2011).

Several other funded initiatives are already in place to support workforce development in relation to ALT, for example: the Assistive Living Innovation Platform (ALIP); WSD (mentioned earlier); and the National Catalogue of Equipment for Independent Daily Living.

In addition, the Employer Investment Fund (EIF) has recently funded SfC and Development (SfCD) to develop a UK-wide workforce strategy and supporting knowledge and skills sets. This work complements ongoing developmental work undertaken by SfC to continue to support workforce development in England.

Understanding the learning and development needs of the workforce involved in the delivery of ALS is of paramount importance though it is not straightforward, partly because service delivery models vary throughout England, with the range of professionals and practitioners involved in assessing, installing and reviewing ALT differing between localities. SfC (2011) points out that:

> *there is a real and current need to address this situation as the number of people requiring social care and health support continues to increase and there are fewer people in the 'caring professions' to meet the demand.* (SfC, 2011:5)

[4] See http://www.dh.gov.uk/health/2012/01/roll-out-of-telehealth-and-telecare-to-benefit-three-million-lives

1.3 Research objectives

Responding to the need to enhance understanding of the workforce development needs involved in ALT/S delivery, SfC commissioned CIRCLE (Centre for International Research on Care, Labour and Equalities) at the University of Leeds to carry out research in three English local authorities currently delivering ALT. The aim of the research was to assist SfC to formulate a more strategic approach to support learning and development in the social care sector. This was to be achieved by gaining a greater understanding of: how services are commissioned and delivered; the roles of staff engaged in them; and importantly what employers and staff believe to be the skills and knowledge needed to maximise the impact of ALT.

The specific objectives of the research were to:

- Investigate the commissioning processes for ALS within different delivery models.
- Illustrate the management structure of services.
- Examine marketing and promotion of the service.
- Examine individual service delivery models, mapping the range, number and input of professionals and practitioners involved across different levels.
- Determine current training and support provision for those involved in service delivery.
- Highlight existing gaps in support and learning development.
- Outline future planned developments for the service.

1.4 Research Methods

The study involved qualitative case studies of three English local authorities currently delivering ALS (predominantly but not exclusively telecare services). Although the case studies each used different terms to refer to the technologies and services they offer, for the purposes of consistency and to avoid confusion the terms ALT and ALS are used generically throughout the text of this report.

Identifying the sample

SfC area teams approached local authorities in their area to identify interested parties to be put forward for inclusion in case study site selection. This resulted in 11 expressions of interest, all of whom were invited to share further details of their service via a short on-line questionnaire. Five completed questionnaires were received, which were reviewed by CIRCLE and SfC, from which Sandwell Metropolitan Borough Council, Kent County Council and the London Borough of Lambeth were selected as case studies. These were selected for a number of reasons: they offered different approaches to delivering ALS; had a relatively large number of users; were geographically widespread; represented rural and urban

perspectives; and had differing approaches to learning and development in this field[5].

The case study approach

The case studies involved in-depth semi-structured interviews with key personnel (including service commissioners, staff involved in service delivery at different levels and staff responsible for workforce development) in each local authority. Semi-structured interview schedules (tailored for use with commissioners; service managers; telecare workers; and care workers) were developed and used to guide the interviews. Documentary analysis was also undertaken which involved collecting and analysing documents and reports relevant to ALS delivery in each local authority.

The ALT leads in each case study authority were asked to complete a proforma identifying the key staff involved in delivering ALS, their roles, and the proportion of time they spend on work involving ALT. From this information, potential interviewees were selected (representing a range of roles) and invited to participate in the interviews[6].

CIRCLE researchers visited each local authority spending two to three days in each, interviewing staff and collecting key documents and reports. In total 32 face to face interviews were carried out (nine in Sandwell, ten in Kent, and 13 in Lambeth). Each interview lasted between 45 minutes and two hours, averaging one hour. The job roles of interviewees included: commissioners; service managers; care managers; social workers; ALT coordinators; trainers; assessors; occupation therapy consultants; care workers; equipment providers; technicians / installers; monitoring staff.

Data recording and analysis

Interviews were audio recorded and subsequently transcribed. Data was analysed using a thematic approach to identify key issues and topics.

[5] Following selection of the case studies, CIRCLE secured ethical approval from the University of Leeds Ethics Committee and successfully applied for research governance approval from each of the three local authorities.

[6] Consenting interviewees were sent a *participant information form* outlining the research and possible research outputs, with details of the researchers and the funding agency. All interviewees signed consent forms giving permission for participation and for the interviews to be audio-recorded.

2 The Case Studies

This section provides a summary of the key issues relating to the nature of ALS delivery in each of the three case study authorities and includes information relating to the background and context, technology, delivery models, training, awareness and marketing, future developments, and unique features.

2.1 Case study 1: Sandwell Metropolitan Borough Council

Background

Sandwell's telecare service, STAY (Sandwell Telecare Assisting You), is jointly funded by Sandwell Metropolitan Borough Council and Sandwell Primary Care Trust (PCT) and is based within the local authority's Adult Social Care directorate. The council was an early implementer of telecare and established the service in 2001. The service began as a small 'cottage industry' (as some staff put it) and has grown substantially in recent years.

The STAY service works in partnership with the separately run Community Alarms 24 hour monitoring and response service operated by Sandwell Homes[7], which has been available in Sandwell for about 20 years (and existed before the telecare service was developed).

Technology

STAY currently provides a range of telecare products[8] which are purchased from a range of different suppliers to maximise the solutions available to meet individual needs. A range of suppliers is used including Tunstall, Chubb Tyntech, Easy Link, Possum, and Pivotell.

The 'Just Checking'[9] system, which was first used in Sandwell in 2004, uses wireless sensors to record a service user's movements around the home, is also offered as part of the STAY service. Sensor-detected data are sent, via the mobile phone network, to the 'Just Checking' web-server, and authorised professionals and family members can log on to the 'Just Checking' website to view a chart of the service user's activity. 'Just Checking' can also be used by social workers as an assessment aid, or to provide reassurance for carers living at a distance.

The STAY service has also been trialling devices using GPS (Global Positioning System) with existing telecare customers, and has provided GPS devices to some users as a complementary package following their scheduled telecare review /

[7] Sandwell Homes is the main arms-length management organisation (ALMO) responsible for managing social housing in Sandwell.

[8] Including: falls detectors; movement sensors; gas cooker lock-off valves; smoke / heat / flood detectors; hearing impaired alarms; door and window contact alarms; automatic medication reminder boxes; high and low room temperature sensors; automatic night light sensors; alarm buttons / pendants; epilepsy sensors; enuresis sensors; remote control switches; talking labels and tin lids and digital memory aids

[9] www.justchecking.co.uk

reassessment. As these trials have produced variable results, to date the products tested have not been rolled out more widely.

Several telehealth systems have been piloted through the STAY service, working in collaboration with the PCT. One example is Tunstall's RTX telehealth system, which was recently piloted to help service users with Chronic Obstructive Pulmonary Disease (COPD) manage their condition. Service users were able to use the system to measure their own 'vital signs' (including oxygen levels, blood pressure, temperature, weight and symptoms), which were then transmitted via the service user's telephone line and could be reviewed by a clinician (Sultan et al, 2011). A 'Virtual Visiting System' is also currently being piloted on a small scale, again in collaboration with the PCT. STAY is both raising awareness of and installing this system, which connects to the service user's television and broadband service and enables social care and health professionals to conduct a 'virtual visit', during which the service user and professionals can view each other on the television screen. 'Virtual Visiting' can also be used to reduce social isolation, through facilitating contact with friends, family members or support services, as well as 'befriending' visits. There is a much wider scope of virtual visiting functions which the STAY team are currently developing, such as medication compliance visits, telehealth monitoring, remote consultation, and communicating with service users using sign language.

Eligibility and use

The telecare services offered are free to Sandwell residents, although for packages which require a link to the Community Alarms monitoring service, a weekly charge is made by Sandwell Homes. The STAY service currently has approximately 2,600 'live users'.

Delivery model

The STAY service forms a separate unit within Adult and Community Services and has a dedicated staff team focused on providing telecare. This team currently comprises about twelve staff, each with a specialist function. The day-to-day management and strategic development of service delivery is undertaken by a service manager based in the STAY team. The service is overseen by an operations manager (who also manages Sandwell's joint equipment store and occupational therapy service). The STAY telecare team is continuously evolving, and recruitment of four new staff to two new positions ('resources manager' and 'assistant rehabilitation officer') was in progress at the time of the case study visit. Most elements of the service are provided in-house, including: specialist telecare assessments; installation; training; review; and administration. However (as previously mentioned) the 24-hour monitoring and response service is provided by the ALMO-run Community Alarms.

The STAY service aims to encourage social care and health professionals working elsewhere in the local authority or for the PCT to assess clients' telecare needs as part of the wider care package they are offered. 'Trusted Assessor' training

(discussed later) has been developed to help these staff make accurate and effective referrals. 'Trusted Assessors' can refer clients for telecare directly using a Single Assessment Process (SAP1) form which has been tailored for referrals to the STAY service. Members of the public can also refer to the service by contacting Sandwell ASSIST (the central contact centre for adult social care).

All referrals are uploaded to the SWIFT system (the local authority ICT system) either by the STAY telecare team or by social care professionals at the point of referral. The referral is then processed by business support staff, and passed on for duty assessment by a telecare assessor. Following duty assessment, the telecare assessor decides if enough information is available for the referral to go directly to 'installation' (as happens in about 65-70% of cases) or if a home visit for a specialist telecare assessment is required to review need, environmental considerations and risk.

Social care and health professionals trained through the Trusted Assessor system can complete more effective and detailed referrals to the telecare service, enabling a higher proportion of referrals to go straight to installation without the need for additional details, visits or bureaucracy. After telecare equipment is installed, service users receive an initial 'needs review' call (four weeks later) and thereafter receive 'maintenance' calls to resolve faults / issues whenever necessary. All service users receive a full technical review which is provided every 12 months.

Training

All new STAY staff members receive a full induction and training programme, completed over a period of about six weeks. This includes 'on-the-job' training whereby time is spent with each function of the service. Following this, staff subsequently receive function-specific training in their specialist area (over a three to four week period), which involves shadowing more experienced workers. STAY staff have regular supervision, appraisals and personal development meetings with the service manager, which are used to formulate personal development plans, reviewed every six months. They can also access additional training via the local authority intranet, and further relevant training with the support of the service manager.

In addition, the STAY telecare team have developed the 'Trusted Assessor' training programme (established in 2010). This is delivered to internal staff in the STAY team as part of their induction, as well as to social care and health professionals external to the team, and independent and voluntary organisations who refer in to the service.

The 'Trusted Assessor' programme comprises two separate but interconnected elements of training. In the first stage (a 1-1½ hour awareness training session) an overview of what the service can offer and the types of equipment available is provided and participants gain 'hands-on' experience of the technologies. This element of the training can also be offered to service users, carers and members of the community. Following the awareness training, 'Trusted Assessor' training can be completed by social care and health professionals. This session (approximately 1½ hours) is generally delivered about a week after the awareness training. It focuses on

how the technology can be used to address needs and risks and how appropriate referrals to the service can be made, using the 'three Rs' concept - Risk, Requirement and Response. Staff who complete 'Trusted Assessor' training receive a certificate and unique 'Trusted Assessor' number. The Awareness and 'Trusted Assessor' training is now mandatory for new social care staff and although not yet mandatory for health care professionals, this is being considered. To date 550 professionals have completed 'Trusted Assessor' training.

Awareness and marketing

The STAY service has a dedicated Awareness and Publicity Officer who delivers the awareness sessions to social care and health professionals, carers, service users, members of the public and voluntary organisations (including sessions for local faith groups and hospital-based organisations). A rise in the number of referrals suggests that awareness of the service among social care and health professionals has been growing.

A range of marketing techniques is used, including leaflets, a webpage, newspaper coverage and posters displayed in general practices. The acronym 'STAY' was designed to be unique and memorable, to have positive implications in terms of staying 'independent' and 'in your own home', and to avoid the term 'technology', which has negative connotations for some people.

Future plans

Whilst the STAY team is continuously changing, and new staff are being recruited, the long-term aim is for telecare provision to be integrated into the roles of the social care and health teams in Sandwell and for assessment of telecare needs to be offered as part of the client's wider care package. The team aims to achieve this by continuing to raise awareness of telecare among social care and health professionals and by further developing and disseminating the 'Trusted Assessor' training programme. Negotiations about making the 'Trusted Assessor' training mandatory for health care staff are ongoing, with plans in place to seek accreditation for the 'Trusted Assessor' training and introduce an online competency module (to test whether information conveyed through the training has been understood and applied).

Ultimately, Sandwell aspires to create an integrated 24-hour response network, incorporating different response services within social care, although this will be dependent upon wider funding and service planning issues. Proposals are also in development to extend and develop telehealth options and the 'Virtual Visiting system' (already mentioned), in partnership with the health care sector. The feasibility of using individual budgets to pay for any monitoring or subscription charges associated with telecare is being explored.

Staff anticipate future changes in the commissioning of the service, arising from the shift to GP commissioning and the phasing out of PCTs under the Health and Social Care Act 2012. As these changes are implemented, one option being considered is

the possibility of delivering the telecare service by developing STAY into a 'community interest company'.

2.2 Case study: Kent County Council

Background

In 2004, Kent County Council undertook a Telecare pilot within several localities in the County using funding from the Preventative Technologies Grant. At its height, the pilot had 1,300 users and plans to expand across the remaining localities were underway. Delivery of the pilot meant that a number of new organisational procedures were implemented and embedded.

In 2005 the Council funded and led the largest telehealth pilot in Europe at that time, the Kent Telehealth Evaluative Development Pilot, which recruited 250 users and went through a full health ethics approval process. The council worked in partnership with five PCTs across Kent and the project led to the development of new ways of working.

In 2007 the council and its health partners (West Kent PCT and Eastern and Coastal Kent PCT) was selected as one of three nationwide Department of Health-funded WSD sites, tasked with exploring the impacts and outcomes of telecare and telehealth systems. The council managed the WSD programme on behalf of the partnership and when the programme ended in 2011 both telecare and telehealth were mainstreamed by the respective social care and health organisations.

Technology

The technologies offered by Kent include both telecare and telehealth equipment. Telecare equipment is assessed for and provided by Kent County Council and includes sensors which monitor personal and environmental circumstances[10]. A 24/7 monitoring service responds to any alerts raised by the system. Responses may be from carers, relatives, friends, emergency services or the in-house response service. Kent Community Health Trust carries out assessments of the suitability of telehealth equipment for potential service users. Telehealth consists a hub and a range of peripherals used to monitor various long-term conditions. Data generated by the system is reviewed remotely by clinicians and action taken when appropriate.

Eligibility and use

Telecare equipment is currently provided at no cost to those assessed as in need of the service and who are eligible for services under FACS criteria. Kent County Council applies FACS's 'moderate' criteria and currently has 1,200 users.

Delivery model

The inventory, installation and maintenance of both telecare and telehealth is provided by an in-house team, Assistive Care Technologies (ACT), which is

[10] Equipment includes, but is not limited to, the lifeline base unit, lifeline pendant, smoke detector door alarms, falls monitors, flood alarms, pull cords, carbon monoxide detectors, heat detectors, and pressure mats.

managed within the commercial arm of the council. Staff working in ACT are specialists in dealing with the application and combinations of ALT (including advanced technologies). Social care and health organisations retain responsibility for assessment and referral into the respective services.

ALT is offered in combination with other social / healthcare service solutions, as appropriate. In social care, a 'case manager' visits the service user and carries out the assessment, collecting information on how the service user would like their needs to be met, and then makes appropriate suggestions which may include telecare as part of the support plan. Once telecare is installed, the case manager and team are kept informed of all subsequent developments (e.g. frequency of use of equipment) through the monitoring service. Cases are reviewed annually, or sooner if needs appear to have changed and / or a reassessment is required to modify the existing support package.

Training

Training in the use of telecare has been developed and is delivered in its current form in-house. Kent County Council recently introduced a monthly half-day telecare training session, which all social care staff wishing to develop a better understanding of telecare and its applications are encouraged to voluntarily attend. The training session covers a range of relevant issues including: history of the service; information about the equipment available; options and potential for use; good practice case studies; examples of appropriate installations; and information about benefits to clients and their carers (e.g. the ability to live independently at home and 'peace of mind' for carers). A programme to deliver short training sessions on telecare and telehealth, and how these can be used together will be offered to staff in the emergency services (fire and rescue teams, ambulance paramedics, and police officers) with a view to encouraging them to use, and recommend the use of, telecare to people they come into contact with.

Awareness and marketing

The council plans to use staff within localities as 'telecare leads' to promote telecare among their teams. Other information is available through training, on the council's website, and other internal information and communications. Information and knowledge is also disseminated among potential service users by case managers.

Future plans

In February 2011 the Kent and Medway Technology Strategy Group was formed and includes partners from all sectors of the health community: representatives from key areas of Kent County Council; universities; and an industry representative group. The objective of this group is to drive innovation and the strategic implementation of ALT (including advanced technologies) across Kent, harnessing all the expertise, know-how and experience.

Kent County Council has various plans to grow and integrate its telecare service and to break down barriers between social care and health. It aims to use single point of access and to pool data systems to support referrals to telecare and telehealth. To

achieve this aim, the council hopes to develop joint training for staff and to help ensure ALT (including advanced technologies) is embraced as part of everyday service provision. Options for developing the existing training programme into a mandatory, competence-based and accredited programme for staff are currently under consideration.

Managers are enthusiastic about future developments, but also realistic about what can be developed within current staffing and budgetary resources. To encourage uptake of ALT among potential service users, consideration is being given to the feasibility of widening commissioning arrangements, with a view to encouraging and supporting skill development with voluntary groups and emergency services and other appropriate agencies in order to reach new clients. There are also plans to oblige all domiciliary care contractors to have an awareness of telecare and the future delivery of telecare assessments.

2.3 Case study 3: London Borough of lambeth

Background

The London Borough of Lambeth's ALS was developed and extended through a £300,000 Preventative Technology Grant (PTG) between 2006 and 2008. The local authority already had a community alarm system which had been operating for a number of years (and was initially developed as part of Lambeth's sheltered housing service). The ALS were extended and formalised in 2004 to provide a 24 hour, seven day a week monitoring and emergency response service, Careline24[11], designed to help individuals remain independent in their homes. ALS are included in Lambeth strategies, such as the Carers Strategy 2008-13, the Positive Ageing Strategy 2009-14 and the Joint Commissioning Strategy Social Care and Health Services for Adults with Learning Difficulties 2009-14. Key areas targeted for ALS in these strategies are supporting people in their own homes, staying safe, supporting carers and choice and control.

Eligibility and use

Currently ALS provided to meet FACS eligible social care need are funded by Lambeth Council. However, the council is intending to include ALT in charging policies, so that service users will have to make a financial contribution or pay in full for the service, if they are able to do so under the Fairer Charging policy.

A charge is already made for those who are not assessed as FACS-eligible (at present charges are £3 per week, with £5 installation costs). This provision outside FACS comprises a 24 hour monitoring and response package, facilitated by a personal trigger (pendant). There are around 600 'self-funders' paying for the service

[11]For further details see www.lambeth.gov.uk/Services/HealthSocialCare/ServicesAdults/Careline.htm

outside of FACS and a further 670 people receive ALT/S as part of a care package supplied in accordance with FACS criteria.

Technology

Lambeth Council provides a range of telecare technologies in addition to the basic pendant alarm. Its Assistive Technology and Telecare requisition form lists nine products linked to the Careline24 service and 12 stand-alone products. The former includes radio-linked smoke, carbon monoxide and temperature extreme sensors and flood detectors. Stand-alone products include: personal triggers to carer-pagers; movement, bed and chair sensors linked to carer-pagers; memo minders and voice announcers; lockable gas shut-off valves and key safes. Electronic Medication Dispensers are currently being trialled in social care as part of an innovative intervention in support of medication adherence. The local authority uses a number of different ALT suppliers as part of a needs-led and creative approach to ALS. The development of telehealth is undertaken by the PCT.

Delivery model

In Lambeth overall management of the service is through the ALT team, comprising two lead staff based in the Adult Care Services directorate's commissioning team. All social care staff are expected to consider the possibility of using ALT when assessing support options for a service user or creating a support plan for them. Where required, ALT consultancy services will be supplied through the ALT team for professional expertise, working alongside social care and health staff. This is available for the entire ALS pathway, including assessment processes, ALT support needs, implementation and review. Staff complete a services requisition form (which includes a tick-list of less complex ALTs). This is then submitted to an external ALT coordinator employed by a small installation company operating under subcontract to one of the main equipment suppliers. In cases where more complex or specialist technology is thought appropriate, or where the service user or situation are complex, social care and health staff initially submit the requisition form to the ALT team so that consultation can be provided for specialist assessment and advice, either through joint visits to the client or other means of communication.

'Enablement' is a key element of the ALT referral process in Lambeth. The Enablement Team puts packages (including ALT) in place to support and facilitate people who are moving from hospital into their own homes. This team comprises four social workers, four case coordinators and two occupational therapists who work with physiotherapists and occupational therapists employed by the PCT. Six posts for physiotherapists have also been created to join the Enablement Team. The installation subcontractor undertakes ALT installation and conducts scheduled technical maintenances and ad-hoc technical call-outs which may include a basic review element, as instructed by the coordinator or the ALT team. The installation subcontractor currently has three engineers who work in Lambeth. ALT receives maintenance every 12 months, with Electronic Medication Dispensers reviewed every six months.

The 24 hour Careline24 service is currently provided in-house under a service-level agreement and is based in the 'brokerage' division, also within the Adult Care Services Directorate but organised separately from the ALT team. The brokerage division provides an interface with externally commissioned services, including domiciliary care. Careline24 employs 24 officers, working 12 hour shifts, who when responding to alerts identify whether the client needs to be visited or needs emergency attendance. Careline24 officers install the basic pendant system and, where appropriate, also make visits in response to alerts.

Training

In Lambeth the ALT team provides induction and awareness training for social care and health professionals, using a display flat which has been fitted with ALT. The training lasts around two to three hours, catering for between ten and 12 staff at one time, and is voluntary. It is estimated that 80 per cent of social care staff have attended this training. In addition, ALS staff attend team meetings with social services and health professionals to provide direct advice and support relating to the technology and associated services.

The monitoring and response service, Careline24, has its own training programme: staff are trained on-the-job, in-house, over six weeks. Training is provided for staff working for the (separate) installation company through on-the-job work-shadowing, with additional specialist sessions provided. Enablement support workers, employed through a subcontracted agency, receive training (including an ALT element) through the local authority. However, there is no such training for domiciliary care workers. The ALT suppliers also provide some training, including product-based support for engineers.

Awareness and marketing

To raise awareness of ALT amongst staff, posters have been displayed in the lifts in the Adult Care Services directorate in Lambeth Council. There has also recently been a telecare event showcasing equipment in the town hall, to which social care and health professionals were invited, and ALT has been promoted as part of a wider poster campaign across London. The ALT team would like to provide more publicity in general practices, as GPs and nurses are seen as a crucial gateway to increased referrals. However, in the current economic climate, capacity and resources for extensive promotion of ALT are limited.

Future plans

Lambeth Council aims to significantly increase the overall numbers using ALT and there is an expectation that ALS will develop as an integrated and mainstreamed service. Budgetary constraints mean expenditure on ALT needs to be justified in terms of prevention, reablement and cost-saving, and both in-house services and contracts are subject to close scrutiny. Further developments in telehealth are also anticipated, and it is predicted that these will increasingly be delivered through remote and mobile technology.

3. Technology and delivery models

3.1 Introduction

Having discussed in some detail, in Section 2, the technology and delivery approaches adopted in each case study authority, this section aims to summarise the key differences and similarities in: the technologies used; delivery approaches in place; and challenges and difficulties encountered.

3.2 The technologies used in the case study sites

As evidenced in Section 2 broadly similar technologies are being used across the case study authorities, with some variation in the use of more advanced technological developments. There are also some differences in the ratios of stand-alone products to those linked to monitoring services, as well as variations in the nature of the response services. Major suppliers, such as Tunstall, were mentioned, although preferences were indicated in all three local authorities for the use a variety of large and smaller providers. The use of a range of different suppliers can facilitate a wider selection of solutions which can be tailored to meet need.

First generation products – primarily the community alarm scheme - have continued to prevail in all three authorities. The simplicity of the pendant alarm and the security it provides means it remains key to ALT strategies across all case study sites. However all three authorities had moved beyond this and are utilising a range of more sophisticated second generation technologies, namely sensors monitoring the home environment, vital signs and physiological measures. These include: flood, temperature and heat detectors; and smoke alarms and sensors monitoring falls, incontinence, bed and chair occupancy / movement, including entry and exit. Electronic Medication Devices are being used in two authorities for medication management.

First and second generation technologies allow alarm calls to be put through to a control or monitoring centre where a call handler organises a response by a social care or health professional, warden, a carer, or key holder (sometimes via a pager). There is variation across the case study sites in the extent to which products are stand-alone or linked up to such monitoring services. In one authority the ratio is about 50:50, but in another a much higher proportion (between 80% and 90%) of products are linked to the local authority's monitoring and response centre. The extent of stand-alone services may, in part, reflect the proportion of service users who live alone or with carers, as well as their needs and ability to communicate their needs. It may also be a result of the type of equipment referred, the capacity of response services and, ultimately, cost.

The popularity of the pendant alarm is contingent on monitoring and response services. Two of the local authorities had previously established in-house community alarm systems which were later developed to provide a 24 hour response service, where staff either respond to the calls themselves or refer the caller elsewhere in the authority. The other authority had outsourced its monitoring and response service. In

all three authorities the service was free where clients met FACS criteria, but in one there was an extra nominal charge for residents who were not eligible *if* products were linked to the monitoring service.

All three authorities were moving towards third generation technology (equipment using broadband, wireless and audio-visual technology). This can allow virtual or tele-consultations between the health service and patient, alleviating the need for home visits or hospital appointments and this technology appears to be more prevalent where there is a strategy to integrate telecare and telehealth. Telehealth had been piloted in two of the authorities. In one it was suggested by an interviewee that telecare is a 'reactive' service, responding to clients' on-going support needs, whereas telehealth is regarded as 'proactive' in the sense that it monitors on-going health conditions. In this same local authority there is a move to promote a combination of telecare and telehealth as part of a future 'integrated' strategy. Another authority is distinctive in that it is one of a small number of authorities nationally where ALT is provided and funded in partnership with the local PCT and this was the basis of their pilots of the virtual visiting system and telehealth service for COPD (Chronic Obstructive Pulmonary Disease) patients. This relationship with the PCT also appears to provide greater opportunity for a more integrated telecare and telehealth service.

Two authorities were exploring digital technology, primarily GPS tracking for people with dementia. However, this was at an early stage of development and was described by one member of staff as having variable results and being something that needed further tests and would have to be rolled out slowly. One authority was also starting to experiment with GSM (Global Systems for Mobile Communication), and some staff saw mobile technology as the future of ALT. In another authority, there was discussion of the potential of third generation technology to allow those unable to leave their homes alone to maintain contact with family and friends. Whilst at present adoption of such technology is aspirational, its potential to reduce social isolation was debated by interviewees.

Staff across the three local authorities reported that a number of challenges had arisen with the delivery of ALS. One issue concerned the aesthetics of the products, with reports that some service users did not like the visual appearance of some of the equipment and thought that its presence could label or stigmatise them. Staff mentioned for example, 'white boxes stuck on walls' in people's homes and suggested that the visual appearance of the equipment can adversely affect service user take-up. This emphasises the importance of high quality design with the 'home' in mind. A second challenge related to underuse of equipment. A number of respondents across the three authorities reported that some equipment was installed and not used. One technician suggested that to avoid this in the future local authorities should work closely with suppliers to seek greater knowledge about matching supply with need and with the home environment. A third issue that was mentioned in one of the authorities was the complexity of the technology. A telecare

engineer in this local authority suggested that the technology could become too complicated for service users and that the equipment needs to be as simple to use as possible. This engineer cited the pendant alarm as a prime example of the simplicity that is required. A fourth challenge to ALS delivery in the local authorities relates to the effectiveness of some of the equipment and the number of false alerts that can be generated. Occupancy falls and bed sensors were mentioned, for example, as having the potential to generate false alerts to monitoring centres. Another challenge that was mentioned related to the need for local authorities to charge for some ALT and the potential impact of this on service use. In one authority, for example, charges for GPS were viewed as a potential obstacle to wider use. Furthermore, this tension between cost and use is likely to intensify in the future in the context of budgetary restraints.

The variation in technology and its delivery has implications for staff and their training and support needs. The evolution of ALT, the increasing availability of a variety of more complex products, and the potential for interoperability – that is the way in which different items of equipment can work together - demands more comprehensive, up-to-date and flexible training for technical, social care and health professionals. In recognition of this, one of the local authorities had adjusted the nature of its training programme as the complexity of the equipment that was being used increased. This need for up-to-date training and support extends to both those employed directly by local authorities and by external organisations (see Section 4).

The development of telehealth, on the other hand, requires more involvement from health care staff, and also creates a need for increased awareness and training not only among health professionals but amongst social care staff too. Continuous updating of training provision is also required. These training and support needs are addressed in Section 4.2, but firstly there is consideration of the different delivery and support models that can define these needs.

3.3 Delivery arrangements in the case study sites

As the case studies presented in Section 2 indicate, delivery arrangements in the three authorities varied, with ALS provided by a separate specialist unit in one authority but by teams of social care and health professionals dispersed across the councils in the other two. In each local authority, the longer-term strategy was to integrate and mainstream ALS, recognising that staff making referrals and working with ALT users need some specialist skills.

The key features of the delivery arrangements in place in the three case study authorities are outlined below, although it is recognised that different arrangements may exist elsewhere in the country. The focus here is on delivery arrangements for the key processes of ALS: referral; assessment; installation; monitoring and response.

Referral

Three types of referral were identified in the three local authorities: by social care and health professionals; via enablement / reablement; and through self-referrals.

i) Referral via social care and health professionals

Across the three authorities, systems for making referrals generally followed an assessment by a case or social worker. However, there were different routes for staff to follow in the authorities once initial assessment had been made. Staff in one authority had the flexibility to order basic equipment direct from the external provider via email or fax, with the ALT team only involved in more complex cases. This was seen as advantageous by care staff and social workers, particularly by those with heavy workloads, as it provided a quick and streamlined process. However, there was also a feeling amongst some staff that this streamlined route to referrals left care and social workers without sufficient specialist knowledge or resources to make good quality referrals. Furthermore, the capacity to refer provision to specialist ALT staff, meant that care and social workers did not always take ownership of ALT/S, and remained dependent upon the ALT specialists.

In another local authority there was a more complex administration route to follow in order to make a referral direct to the ALT team. This system meant that a lot of detailed and useful information was provided about the service user and their needs and this had the potential to ensure that accurate referrals were made. However, some felt this process was too long, detailed and time consuming, and there were suggestions that it sometimes acted as a disincentive for staff to refer service users for ALT.

(ii) Referral via enablement

Enablement or reablement - health and social care staff supporting people through promoting self help and health improvement and by encouraging them to be as independent as possible - can play a key role in embedding ALT within a local authority's ALS provision and can help ensure that it is offered as a positive solution to service users' needs and not simply focussed upon risk management. As one respondent explained:

> *I think telecare is a vital part of reablement - if you don't include it as part of reablement, how can you enable someone to live as independently as possible?*

In one local authority, for example, the enablement strategy has highlighted the ability of ALT to facilitate safer transition back to living at home following hospital discharge. Individuals about to be discharged from hospital are assessed by a social worker for a six week care package designed to support and assist them in rehabilitation in their homes. They are allocated a case coordinator who identifies individual goals and at this point ALT is considered, thereby allowing them to trial ALT equipment free of charge. A new role, an Enablement Support Worker, has been introduced to provide the six week support. These workers are employed by an external agency and play a key role in supporting service users to familiarise themselves with ALT and are trained by the Enablement Team *'to think differently'*.

At the end of the six week period, progress is reviewed and ongoing support needs discussed with a social worker or care coordinator. However, if individuals continue to use the ALT beyond the six week period they may then have to contribute towards the costs.

In another of the authorities, enablement was similarly seen as a vital process by which individuals could be introduced to a wider package of telecare, care and support. In the other locality, ALT was used by hospital teams to facilitate reablement and independent living and to reduce the need for high cost, labour intensive care packages. Prior to clients being discharged from most hospitals in this locality, an occupational therapist would assess individual's homes. In all three cases, the introduction of ALT had the potential to reduce the need for direct visits for medication compliance, for example, or following hospital discharge, thus reducing staff time needed for such visits.

(iii) Self-referral

As the general public have become more aware of the available technology and supporting services, authorities have seen an increase in the number of self referrals. However, process to deal with self referrals can vary by locality. For example, one local authority encourages the public to contact council staff directly who then order basic equipment and arrange installation. Similarly in another authority, members of the public can contact a central contact centre for social care and be referred to the dedicated ALT Team. Following receipt and processing of a referral of this nature, assessment is carried out by a dedicated team of telecare assessors, who then decide to get the equipment installed or carry out a home visit to gather more information.

Self-referrals can be increased through the use of dedicated publicity officers who undertake outreach and awareness raising in the community (see Section 5). In one local authority, referrals (through these kinds of activities and others) have increased substantially in recent years, equivalent to around a 200 per cent increase in a two year period. This growth in demand has meant that the time taken to process a referral has increased, and that the system has inevitably become more bureaucratic. Although raising public awareness of ALT is clearly advantageous there was also a view expressed in at least one of the authorities that making the public aware of what is available could lead to self-referrals for equipment that is not needed, which in turn can place increasing workload pressures on staff. This emphasises the importance of matching ALT to needs and to the home environment.

Self-funders are a potential group of service users who are likely to make self-referrals. In at least one local authority there was a concern that a focus on a needs-based service meant that self-funders had a limited awareness of ALT and there was felt to be a lack of recognition amongst staff that ALT was appropriate also for those with moderate needs. To address this, the local authority had been involved in a project, which encouraged local retailers to provide moderate, small items of equipment. Staff also mentioned a local social enterprise which provided equipment

solutions and which had a shop-front so that individuals could drop in to view equipment, and also get advice and support. Initiatives such as these can help encourage self-referrals, particularly from self-funders, although the cost of the equipment was seen as a barrier to this group of potential service users. Whilst initiatives that generate a greater number of referrals from self-funders are a positive step forward, this does have the potential to lead to inappropriate self-referrals.

Assessment

There have been attempts in all three local authorities to assimilate ALT into social care services across the three local authority case studies. ALT is being promoted in all three authorities as *'another tool'* in the assessors' toolbox and integrated into existing care pathways, part of virtually every service that is assessed, rather than an alternative care pathway:

> *The equipment isn't there as an 'add on', it is there to supplement what people do, to enable them to do it that bit easier and more efficient.*

Assessment is a critical aspect of integrating ALT/S into wider social care but there are different approaches to achieving integration. For example, one local authority has a dedicated, specialist team of ALT telecare assessors which is currently being expanded and to which new posts are being introduced. However, integration is ensured in this authority by enabling social care and health professionals to carry out assessments too. This assessment process is underpinned by a specific assessor training programme, not only for the specialist assessors but for social care and health professionals. The specialist ALT skills and knowledge that this approach generates arguably enables a more accurate matching of products to needs, whilst at the same time embedding ALT/S into the social and health care system and ensuring that a wider range of staff are involved in the assessment process, thus having scope to reach a greater number of service users.

Another local authority approached ALT as part of a 'holistic' assessment to be undertaken by all case workers, social workers, and occupational therapists (including annual reviews of service users), rather than as a specialist service that requires needs assessments by staff with expertise in ALT/S. Care assessors were in the process of ensuring that each service user had a support plan and personal budget and that ALT was discussed as part of the design of their care package. The way in which social care and health professionals viewed the ALT assessment process in this authority was explained by one interviewee who said that although ALT was a small part of her job she *'doesn't like leaving a house without mentioning fire alarms, and detectors, especially to those who live alone'*. She said that she is happy just to mention ALT without 'selling it' to the service user, that the service user should come first, and that ALT should be seen as only part of an appropriate care package. Another member of staff at the same local authority stressed that assessment should be practitioner-led and that as long as there is an understanding of the equipment, specialist ALT assessment is not needed. This reflected the local

authority's aspiration to mainstream ALT and link it to the standard assessment procedure, thereby encouraging local ownership by staff. Whilst this approach means that all social care and health professionals are required to consider ALT, a lack of sufficient specialist ALT knowledge can mean that inappropriate assessments are made, particularly if complex cases emerge.

Two different approaches to the assessment process were therefore evident within the case study authorities, both of which were concerned with integrating assessment into the social care system, but have quite different implications for job roles and training (see Section 4).

Installation

Following the assessment process a list of the equipment required is passed onto the installation technicians who typically visit people's homes to set up and install equipment and explain to service users how the equipment works, something which is particularly important if it is linked to a monitoring and response service. Following installation, the technicians then carry out an initial review to check that the equipment is functioning correctly and to deal with any initial problems. This is followed by regular maintenance calls and technical reviews to ensure that the equipment continues to operate effectively. In all three case studies the technical reviews and maintenance checks were carried out on an annual basis.

A specialist working for a PCT in one of the areas stressed the importance of the initial review process to eradicate any initial teething issues, but also emphasised the importance of utilising appropriately skilled staff who have sufficient technical understanding and knowledge. It was suggested that some local authorities can underestimate the importance of this initial review process.

Installation is a specialist activity which can be carried out by the equipment suppliers and / or by dedicated staff within local authority teams. In two of the local authorities installation was carried out by in-house staff, whereas in the other authority equipment installation, maintenance, service review, and technical call-outs (beyond the basic pendant alarm) were outsourced to a small external contractor. The contractor was responsible for managing the procurement process and arranging and coordinating installation (with three engineers attached to the locality).

The extent to which the installation process worked well appeared to be dependant upon close cooperation between the assessment and the installation team and on the availability of good quality assessments. This was the case where installation was contracted out as well as where it was provided in-house.

Monitoring and response

An ALT monitoring service commonly provides a 24 hour a day service with staff responding to alerts raised by service users. There is a difference between the immediate handling or monitoring of the call and the response service that is subsequently provided. Once a call is received and the user's problem identified, an appropriate response is arranged and this can include contacting a carer, family

member, friend, relative or warden to assist the user; arranging for someone from the service's response unit (if in place) to visit their home; or, in extreme cases, contacting emergency services. The way the monitoring and response service works varies between different ALS and different local authorities. Response and monitoring can be provided as separate services, although they were provided as integrated services in all three case study authorities.

The monitoring and response services operated slightly differently in each local authority. In one authority, the monitoring and response service is provided entirely in-house under a service-level agreement. This service also monitors other council provision such as domiciliary care and meals on wheels services. Another authority outsources both monitoring and response and this was said to 'work well' with daily reporting and data provided on a regular basis. In the other local authority, the monitoring and response service is undertaken in partnership with the community alarms service run by an arms-length management organisation (responsible for managing housing in the local authority).

Where the service is provided in-house it can potentially lead to a more responsive service, with more committed and trained staff, and a service which is easier to influence if the authority wants to make changes: *'You can't force the change with technology, it's got to be part of a change programme for successful adoption by health and social care staff'.* In contrast, as with all services which are contracted out, there is a potential for less control by the local authority relating to staff recruitment, training and competencies when the monitoring and response service is run by an external agency. It was noted by interviewees that other local authorities have separated monitoring (or call handling) from response and there was perceived to be a move towards outsourcing the monitoring service, particularly in the current economic climate of budget cuts, something which will clearly have implications for job roles, tasks and skills and workforce development plans.

3.4 Summary

The delivery of ALS varies between the authorities in terms of in-house provision, how far processes are separated or integrated and the degree to which ALT/S gives rise to specialist roles or is assimilated into existing practice. Nevertheless, assimilation of ALT into mainstream social care and health provision is seen as the longer term objective, with a recognition that reliance on specialism can reduce ownership amongst social care and health professionals and appear to be 'top-down'. However, at the same time authorities seem to recognise the benefits of retaining some specialist leadership, which can generate expertise on the most appropriate technologies, drive change and promote referral within existing enablement and assessment processes, as well as for the wider self-funding community. These different approaches have implications for jobs, job roles, skills and training.

4 Job roles, training and workforce development

4.1 Introduction

The different delivery arrangements in the three case study authorities, that were outlined in Section 3, have produced specialist ALS job roles and specific tasks but have also led to the need for different skills within existing roles. The first part of this section identifies: the knowledge and / or skills that interviewees felt were required to deliver ALS; the implications for new tasks and implications for existing job roles; some of the possible tensions arising from widened roles; and the implications for training. The second part of this section then looks at the approaches to training undertaken by the authorities and possible changes needed in the future.

4.2 Current, new, and emerging job roles and skills

The delivery of ALS can generate some specific tasks and subsequently in some areas, new job roles. New tasks and job roles include: assessment; equipment installation / maintenance; monitoring and response; and publicity and awareness raising. Examples of both new tasks and changed job roles are explored here by looking at how these specific job roles have emerged / changed as ALT has been introduced in the case study authorities.

ALT assessors and assessment tasks

The role of assessing for ALT, as explained in the previous section, is determined to some extent by the approach to ALS delivery. Dedicated ALT assessment roles can emerge as new posts, particularly where there is a specialist approach to ALS delivery. Where this has occurred it has led to a reduction in the need for the occupational therapist role. However, as the assessment process becomes more integrated into the existing social and health care system, assessment for ALT becomes part of existing social care and health professionals' job roles, rather than necessarily forming a new specialist post. As explained in Section 3, the creation of specialist ALT assessor roles can lead to some social and health care professionals taking less ownership of ALT and getting less involved in assessing for it.

There was some debate amongst interviewees about how ALT has expanded or even changed the role of those responsible for assessment (when carried out by social care and health professionals, rather than specialist ALT assessors). Some interviewees felt assessors needed more technical knowledge when assessing for ALT, including a good understanding of the principles of the technology, its application to needs and how it works in practice once installed. Several respondents stated that if those involved in the assessment process did not understand the equipment fully, it could lead to lower referral rates. One interviewee stressed the importance of this basic technical knowledge for the referral and assessment roles and stated that care staff needed sufficient knowledge of telecare equipment to have the confidence to assess telecare needs as part of their role:

They can have those conversations with people, and discuss the problem they are having and what might be beneficial - involving service users in decisions. It is quite a stressful job, so confidence is important.

Although technical knowledge was seen as important, others felt that assessors should not be constrained by the technology, and that there was a need 'to think outside the box'. As one interviewee put it:

So it's being able to look at a person's needs without necessarily thinking of a piece of equipment straight away, and thinking 'in order to meet that need we need a piece of equipment that will do a certain thing, so how could we do that?' So that's the assessment side of things…I suppose some technical ability certainly wouldn't go amiss - it would help - but the main thing is to be able to link a person's needs with what the technology could do, which doesn't necessarily mean knowing how the equipment works, it's just about knowing what it does, and what it can do.

Indeed many interviewees outlined the importance of assessors using their technical knowledge in conjunction with a wider assessment of service users' needs and their living circumstances. Without this more holistic approach to assessment the wrong equipment can be ordered and can lead to under or misuse and / or to 'installation failures'. One interviewee stated that practitioners need 'global awareness', including good observational, listening, communication and interview skills to identify the issues as well as the ability to analyse information. A number of staff identified the necessity for knowledge and awareness of the client and sensitivity to their needs and environment based upon a picture of their daily activity and routines and the formal and informal care they received. As an interviewee said:

So I think from an assessors' point of view the skills you need are to be able to identify the need and not make it too complicated. I think with some people it's recognising the limits to what they would accept and if there's lots of things that you think, start off with one or two first and then build it up as you go along.

It was also noted by some interviewees that the assessment process did not always work as well when it was conducted by telephone, rather than in person. When the former technique was used it, it could lead to a mismatch of supply and demand, as the home environment could not be physically seen by the assessor and therefore service users were not necessarily supplied with the most appropriate products or equipment.

ALT Installers / Technicians

Initially as local authorities embark upon ALT/S delivery and as some of the positions required are very new, there is not always a recognised job title associated with the roles required. Installers, for example, are in effect dedicated 'telecare engineers',

but as this job title is not yet widely recognised, it cannot be used in the recruitment process. Attempts have been made to overcome the lack of widespread knowledge about some of the new job roles associated with ALT by advertising for more generic workers and then providing specialist training once they are in post. One interviewee, for example, advertised for electrical engineers rather than telecare engineers, and after recruitment provided appointees with additional technical support in telecare.

Installing ALT equipment necessarily requires specialist technical expertise, and those currently in post in the local authorities had previous experience of working in electronics and telecommunications, as well as engineering in the motor industry. Many interviewees indicated that maintaining appropriate and up-to-date technical expertise was an important requirement of this role, something which was challenging given the speed at which the technology changes. One technician, however, predicted that in the near future the installation process would become easier, the implication being that perhaps the technical knowledge required by the installer would lessen.

While some interviewees thought that the role of the installers should be limited to technical knowledge and expertise, others felt that the role also required wider social care awareness, such as general knowledge about the service users and their vulnerability, as well as social skills which are important when communicating with the service users during the installation period. One technician said he had no prior knowledge of service user needs but had learnt on the job. He was usually given information about the service user's condition or disability prior to installation but he also thought that listening skills were an important part of the job, given that many service users have minimal social interaction and 'like to have a chat'. Another technician explained:

> *You've got to have some sort of technical knowledge, but you've also got to have empathy- you're going into people's properties that are in some cases distraught - I mean I've had ladies crying over me, just on the basis that they are dealing with someone whose got dementia in their family and they don't know how to cope with it.*

A manager elsewhere said that, whatever their technical abilities, he would not employ engineers who lacked adequate social skills, and an engineer working for the same organisation commented:

> *You've got to be able to talk to people, which is not that easy with some people...the main thing I do is, I go in, I introduce myself, I find out how they are, talk about the weather whatever, explain what I'm doing, roughly how long I am going to be there for, put them at ease and it makes it a lot easier...there has got to be a two way thing with the client.*

Some interviewees also mentioned their roles included making arrangements to pick up equipment following a service user's death and therefore installers were required to respond to bereavement.

Monitoring and response

Monitoring and response positions often already exist in local authorities, particularly where an in-house community alarm service is available. However, as the delivery of ALT increases, the number of jobs required in monitoring and response increases too. The job roles can also widen to encompass responses to different circumstances and situations and to different types of equipment. The expertise and skill needed within monitoring and response is exemplified by one interviewee:

> *One of the biggest difficulties of doing this job is not going out to do an installation, it's not the basic runs of the job, the biggest difficulty in the learning curve of this job is assessing that phone call, that's difficult. There's only one way you can learn that, you need a minimum of one year doing it … You have to pay full attention to the client, if there's any triggers that actually highlight and say to you, hold on we are really not communicating - no hesitation you go out and visit, to get a face-to-face assessment; normally you can do it via the phone and as time goes on that experience beds in, and gives you the goal you're looking for, to actually be on guard with someone's life.*

Given that these skills can take a while to develop, difficulties can arise when there is a high turnover of staff, for example when using agency staff, who may not be in post long enough to develop these skills.

Monitoring and response staff need to be able to communicate directly with service users and so need to acquire good social and communication skills. Some concerns were expressed in at least one of the case study authorities about call centre staff in outsourced operations dealing with calls without adequate training, and this clearly needs to be taken into account when developing training and support arrangements.

Publicity and awareness

Marketing, publicising and raising general awareness of ALT/S is an important job role which is required as part of the local authorities' wider approach to provision. This can be achieved by creating a new specialist job role which may also include some elements of training provision, or by including awareness raising tasks within existing job roles, for example of social workers, care workers, assessors. Attempts had been made in one local authority to encourage emergency services staff to raise awareness of ALT/S amongst the public and there is, therefore, potential for this to become a feature of their job roles in the future.

Interviewees raised an issue about the degree to which care workers, social workers and assessors should promote ALT/S. Promotion of ALT/S by these staff was felt to require certain skills and knowledge, for example, explanation and demonstration of

the technology, and presentation of equipment in a non-threatening, non-intrusive and simplified way. Yet some interviewees stressed the need for social care and health professionals, particularly during the assessment process, to ensure that service users are given choice and do not have a model imposed on them. There was some uncertainty amongst care workers as to the balance required between offering service users choice and working with them to overcome resistance. As one interviewee said:

> *Maybe we need to be a bit more brazen with some of our service users and just stick stuff in really because, I always feel 'no I don't want to stick it in because it might not work', maybe by just approaching the service user a bit more often, and saying you might really benefit… maybe having a trial period stick something in, see how it works and we'll get rid of it if you don't like it … I do respect their wishes when they so no immediately, but I think it's just a knee jerk reaction to the technology, 'no thank you very much' … its similar to the personal budgets.*

Training and support to achieve a balance between awareness raising and service user choice is clearly therefore important. This relates to broader ethical debates around ALT, concerning tensions between ensuring the security of service users, while maintaining their freedom and choice (Niemeijer et al., 2011).

The piecemeal evolution of ALS has meant that the development of skills and job roles to support it have necessarily varied across the local authorities. A number of telecare engineering and specialist assessor jobs have emerged, requiring specialist expertise but also wider social and communication skills. At the same time new tasks have also emerged that are becoming part of existing jobs rather than forming new job roles. However, some dedicated ALT roles such as assessors may not survive the move to mainstream ALT and / or the trend towards outsourcing service delivery. This means that social care and health, including professional and managerial, roles may become increasingly wider, requiring social and communication skills, technical awareness, as well as publicity and awareness raising abilities. The challenge is how to translate these wider job role requirements into effective learning and development.

4.3 Training approaches and gaps in provision

All three local authorities offered ALT training to their staff although the nature of training, the way it was delivered, who it was delivered by, and the extent to which it was a requirement of the job, varied across the case studies. The main training *approaches* are explained below looking at: on and off-the-job provision; mandatory versus voluntary; supplier-led training; and accreditation. This is followed by an assessment of the key features that are required in the *content* of training provision.

Main training approaches

(i) On and off-the-job training

A combination of both on and off-the-job trained seemed to be an effective way of training the workforce. Initial off the job induction / awareness training was offered in-house in all three local authorities and allowed staff to gain an understanding of the basics of ALT, its purpose, how it can be used, and in what circumstances. This worked well but appeared to be more effective when it was supplemented by regular equipment demonstrations delivered at staff team meetings, rather than through designated 'training' events. More detailed off-the-job specialist training of staff was also beneficial. For example there were suggestions that staff involved in the assessment and referral process who received additional specialist training were able to make referrals more effectively. There was also a view that the provision of externally run short courses or workshops could be a positive contribution to the existing training provision (see below for more details).

It was felt important that the off-the-job training (particularly for staff not directly involved in telecare delivery) was interactive, 'hands on' and involved 'feeling' the equipment, this worked best where a demonstrator room or house was equipped with telecare for training and awareness raising purposes. An absence of demonstration facilities can mean that not all staff develop the required technical knowledge (referred to in Section 4.2) to enable them to: recommend the most appropriate equipment; and understand issues around installation or the appropriateness of equipment for different accommodation types, living circumstances and individuals. A lack of this kind of knowledge can mean equipment being ordered which is inappropriate for the particular service user and / or home.

Specialist off-the-job training for particular aspects of equipment was also seen as valuable, for example training on how to use *'Just Checking'* - a system to see how someone is moving around the property - or how to use medication dispensers. More generic off-the job courses were also useful for staff, particularly where job roles where being widened, for example for technicians to gain knowledge about working with older or vulnerable people.

On-the-job training and continued support was seen as an essential supplement to off-the-job training and this worked particularly well when it was delivered to multi-disciplinary teams, for example, where technicians interacted with assessors to discuss the potential uses of new equipment, as well as the advantages and disadvantages of it. For those whose jobs were more technically defined (such as engineers) on-the-job training and shadowing existing staff was particularly useful.

(ii) Voluntary versus mandatory

All training provided across the three local authorities was voluntary, with the exception of the training for assessors in one of the local authorities which had recently become a mandatory requirement for new social care staff. When assessing the numbers attending training and the impact of the training in all three local authorities, there appeared to be support for training to become mandatory in the

future (at least from service managers and training officers), to ensure that all members of staff: actually attend the training (even if there are time constraints and workload pressures); have the same basic level of training; and gain a greater understanding of ALT and associated services. In at least one of the local authorities, one of the disadvantages mentioned of the training being voluntary was that work pressures meant that staff felt unable to prioritise time to attend the training sessions, and the last minute drop out rate was subsequently high. Another consequence of voluntary training arrangements involved staff selecting, as part of staff development plans, other training courses which were felt to be more applicable to their daily job roles than ALT/S training. Staff at one local authority stated that they had a limited allocation of training time to invest each year, and despite their involvement in ALT and service delivery, could not always justify selecting ALT/S training.

(iii) Supplier-led training

The extent to which supplier-led training was used varied across the local authorities and had changed over time as the ALS had evolved. It appeared that supplier led training worked well when there were only a small number of suppliers and a limited range of equipment available. However, when larger numbers of suppliers were used and the range of equipment became much larger (in one of the local authorities it was reported to be 30 and 250 respectively) it was reported to be difficult to sustain this kind of training.

There was also a view amongst some interviewees that supplier-led training was too limited as it usually involved training on specific pieces of equipment and was viewed by some as '*too market orientated'*. That said, some members of staff in the local authorities (particularly the technicians) valued the use of supplier-led training as they felt that it helped them to gain a greater awareness of the nuances of different technologies. Supplier-led training can perhaps play an important role, therefore, in supplementing local authority run and other externally provided training, but should not be the sole mechanism for learning and development.

(iv) Qualifications and accreditation

The training carried out across the three local authorities was structured but fairly informal in that it was provided in-house and did not lead to any formal qualifications or accreditation. There was a view that this needed to be addressed and that a standardised competency based training course or specific short workshops for staff involved in ALT/S would be beneficial. It was acknowledged, however, that developing a standardised ALT/S training course would present a challenge as the technology, delivery models, and staff roles vary so much from one local authority to another.

A monitoring and response unit operating in one of the local authority areas had been accredited by the Telecare Services Association, but training formed only one aspect of the organisational accreditation and was not designed for individual staff. An area coordinator had qualified as a Telecare Services Association Assessor on

the basis of a one day training course, but there was no accreditation or follow-up and he said that he would like a longer period of more in-depth accredited training. In another of the local authorities a desire was expressed to improve, extend and formalise the training by introducing competency based modules in order to ensure that the quality of the assessments and referrals process was adequate.

There were various discussions taking place to review how the training in one of the authorities could become accredited, possibly by working with a local college or university but at the same time there was recognition that continued in-house support was important on a day-to-day basis. Concerns were also raised in another authority about the time and resources required to implement such measures.

A number of staff pointed to courses that were available for ALT such as one at Coventry University (MSc Assistive Technology) but suggested that these were lengthy courses, sometimes at degree level, which required a large amount of commitment in terms of time. Although training for ALT was generally seen as something which was best delivered in house, it was also recognised that there was both the demand and need for more competency, or formal college-based training and this is perhaps something that needs exploring in the future.

The nature and content of training

(ii) Training for technical and social skills

As mentioned in Section 4.1, the need for an understanding of both the technical and social side of ALT delivery is essential for all staff. Technicians are required to develop some 'social skills', and social care and health professionals to acquire some general technical awareness. Training that can facilitate the development of these broader skills sets within existing roles is therefore of paramount importance.

Training for technical staff in 'social skills' is currently available in the local authorities, to some extent. In one local authority, for example, a six week on-the-job training programme for monitoring staff consisted of 50 per cent technical and 50 per cent customer care components. Engineers working in the same local authority area were 'made aware' that they were 'dealing with elderly and vulnerable people' and had attended a training session on dementia. In another local authority, those working within the ALT team had also participated in a dementia awareness course. Other staff had accessed various generic courses that were not specifically for ALT but nevertheless were useful for enabling technicians to learn about the 'social side' of the job such as courses that related to working with vulnerable people, or about customer services.

The technicians and engineers in the local authorities often receive technical training informing them how to use specific items of equipment but technical training for other staff such as care workers and assessors is also important, although some staff felt it should be focused on basic technical awareness rather than detailed technical knowledge. The assessors in one authority received specific training to support their role, which includes a basic understanding of the technical aspects of the equipment and supports them to match equipment to needs.

Offering a holistic approach to training which includes both technical and social training for all members of staff involved in the delivery of ALT enables them to develop a user based perspective which views the person and their needs in a wider context, where a range of possible solutions are considered and then offered rather than viewing ALT or even one particular kind of ALT as the only solution. In one local authority, for example, it was pointed out that falls detectors are often automatically assumed to be the solution for people susceptible to falls but that other solutions may be more appropriate depending on when and why the falls are occurring.

(ii) Widening training delivery

Training to support the use of ALT was not just delivered to the local authority staff but to other interested parties and stakeholders too. In one local authority, for example, health and social care workers, as well as staff from independent and voluntary organisations, and service users and carers could all receive the awareness training. A one hour awareness session in this area, for example, was provided at a local hospital for people recently diagnosed with dementia and their families, who were shown the equipment and provided with more detail about how it worked. Another local authority had also trained staff from the emergency services and hospitals in order to encourage referrals from outside the council. Training for a wider audience helps generate a greater awareness amongst relevant professionals and stakeholders, as well as the public, and will inevitably assist in the process of culture change and facilitate the wider acceptance and use of ALT (see Section 5 for further details).

The importance of providing training for outsourced workers was also highlighted in the research. An interviewee with experience of ALT/S across a number of local authorities expressed concern about the level of training for call handlers in call centres providing monitoring services to a number of different organisations and noted that there were no agreed standards or competencies in place. Similarly, subcontractors of domiciliary care workers do not always provide appropriate training for their staff and this can mean that they are unable to use some of the equipment that is installed in the homes which they are visiting. A solution provided by one local authority was to provide training to outsourced workers themselves, but another solution could be to include the requirement for subcontractors to provide adequate staff training as part of their contractual agreements.

This demonstrates that the training needs for successful delivery of ALS touches numerous professions and organisations and emphasises the importance of maintaining control over the availability and quality of training both within and outside commissioning agencies. The importance of relevant organisations and stakeholders coming together to discuss training needs is therefore clear. An example of this kind of approach was provided by an interviewee who was involved in a forum run by a PCT, which brought together ALT specialists from a range of organisations, including local authorities, to discuss their experiences, to benchmark requirements and monitor new technologies and products.

4.4 Summary

It is therefore clear that some new specialist job roles can emerge through the delivery of ALS such as engineers, technicians, installers and specialist assessors. However, as the services become mainstreamed and more closely integrated into existing social and health care provision there may be a tendency for new specialist job roles to be replaced by a widening of existing roles, as well as a greater focus on specific new tasks within existing job roles. Either way there is a growing requirement for technical staff to gain wider social and communication skills and for social and care workers to gain greater technical knowledge and awareness. Appropriate on and off-the-job training is required which enables staff to develop the required competencies and where this is mandatory, and extended to all those involved in the service delivery - social and health care professionals, voluntary and community organisations, emergency services, service users, and carers - it is likely to have most the beneficial impact.

5 Raising awareness, changing culture and future developments

5.1 Introduction

Having assessed the changing job roles, new tasks and associated learning and development required for successful ALS delivery, this section explores the accompanying awareness raising and culture changes that are often required. The section then goes on to look at possible future developments in ALT and the significance of cost effectiveness.

5.2 Raising awareness and marketing

In all three local authorities whilst the numbers using ALT were growing, the proportions of potential service users who have some form of telecare installed in their homes were still fairly small. In one local authority, for example, there were an estimated 33,000 people aged 65+ in the borough but, at the time of the case study visit only 11% of them were connected to the monitoring and response service, and many of these were reported to be using the basic pendant alarm system rather than the more complex telecare technology. Awareness raising and marketing clearly has an important part to play in generating greater ALT use.

Awareness amongst social and health care professionals

Awareness raising, alongside marketing and publicity drives, were said to be taking place in all three local authorities, to varying degrees of intensity and with varying degrees of success. Most interviewees felt that awareness raising of ALT amongst local authority staff was adequate, although many respondents highlighted issues around shortages of staff and resources as potential constraints. There was a general feeling in two of the local authorities that health sector staff were less aware of ALT than their social care sector counterparts and that widening awareness amongst health professionals was important. In one area, for example, the take-up of Electronic Medication Dispensers was viewed by some as dependent upon having interested and co-operative pharmacists who would fill up dispensers on a weekly basis or even visit clients to do so.

Although it was generally felt that awareness raising activities were taking place for social care staff, there were concerns in one of the local authorities that relevant information and guidance had not necessarily reached outsourced workers, particularly those involved in domiciliary care. Providing a way of ensuring that outsourced staff receive both training and knowledge about services and products is then an important learning point for the future. Indeed, one interviewee explained that the lack of awareness and training of domiciliary care workers meant that many did not know how to operate the exit sensors which are installed in people's homes.

Public awareness

It was recognised that the more aware staff are of ALT, the more aware the public are too, and that awareness raising amongst staff is an important activity. Indeed, staff operating in areas where awareness raising training was less widespread were

conscious of the potential limiting impact on service take-up and use. However, where training involved awareness raising for both internal and external staff and was offered to carers, services users, and the general public through local community organisations, evidence of success was apparent. For example, there was a general consensus in one local authority that since the introduction of awareness raising training, referral rates had increased drastically, with one saying that:

> *Go back a couple of years and we used to say that 'the telecare service is the best kept secret in [the area]' and that's not a situation we wanted to continue .... we took [the awareness / publicity officer] on to change that so we were no longer the best kept secret ... he's done a great job of making people aware that we exist.*

Ideas also emerged about how best to engage with members of the public in the future. For example, in one local authority there were plans to continue to work closely with community organisations, targeting 'hard to reach' groups such as ethnic minority communities, young carers, families of service users, as well as to initiate more high profile campaigns, such as advertisements on a plasma screen in the local shopping centre and incorporating video clips demonstrating the use of telecare on their website.

A number of staff felt that both service users and the general public would benefit from enhanced marketing materials, which should be available in a range of formats and take into account the needs of different individuals, for example those who are visually impaired, whose first language is not English, and self funders. A consensus across the three local authorities was that the health sector was an important 'gateway' through which services could be more effectively promoted, and that this could be pursued by working more closely with general practices and hospitals.

5.3 Culture change

The research indicated that some key awareness issues, requiring wider cultural change amongst both the public and social and health care professionals, need to be addressed more comprehensively if the full benefits of ALT are to be realised. In particular it is important that service users and workers understand: the need for care workers to continue to operate alongside technological innovations; and the technology, its purpose, how it works, and in what context.

There was a view across the three local authorities that whilst ALT clearly has a number of benefits to service users, it was also important to recognise that it was not a direct replacement for care support workers. There was concern by some interviewees that technological innovations had the potential to be used as a mechanism for reducing labour, in an attempt to demonstrate cost savings, and that this could have a detrimental impact on some service users, who may become increasingly isolated without direct human contact. As a social worker commented:

> *I think perhaps councils see it as saving money. It is going to substitute for social contact but whose responsibility is the social contact? A lot of elderly service users like the carers going in because that is social contact but is that something that the local authority should be providing or should it be coming from other means … should we be encouraging people to email or skype to do all those things to keep in contact with family?*

Whilst some clients prefer ALT to what they see as *'the intrusion of care workers'*, an engineer also suggested that for others it was not necessarily the answer:

> *A lot of them want to stay in their own homes, it is their lifeline, but there are people who you see and its obvious they can't care for themselves and you could give them all the equipment in the world, they are existing, some of the people are not looking after themselves…they are totally lifeless.*

Again this reflects wider debates around ethics and telecare, and previous research which has highlighted concerns among care professionals regarding the potential of telecare to dehumanise care (Savenstedt et al., 2006).

The need for continued support by care workers alongside the installation of technological equipment needs to made clear to staff, service users and their families and needs to be incorporated into awareness raising activities and training. This should help alleviate staff fears about their jobs and encourage them to embrace rather than resist the technology, as well as to reassure service users and their families that ALT is not designed as a replacement for social contact.

Providing staff and service users with knowledge of how particular items of equipment work, their purpose, who can benefit from them, and in which kinds of living accommodation they work most effectively, is also essential. Without this knowledge, service users can sometimes forgo equipment which could make a big difference to their lives. In one of the local authorities, for example, a service manager explained that ALT could make a difference to those with moderate needs but there appeared to be an attitude amongst staff that if individuals do not need personal care, or do not currently receive personal care, they do not need ALT.

There was also a feeling amongst some staff, sometimes unjustifiably, that ALT was not suitable for clients with mental health needs and as a result some of those who could benefit from the installation of ALT could potentially be missing the opportunity. Indeed a mental health social worker explained that they had found the Electronic Medication Dispensers useful in preventing impulsive suicide attempts:

> *It's been most useful for me in reducing the risk of impulsive overdoses for the people that we work with, it has also I think been useful in promoting compliance with treatment, it's very difficult to work out why – I'm not using it with people with dementia who are*

forgetting - it seems to have some influence on people's willingness to take their medicine because it has got a little alarm and I've arranged for it to be there and it's being seen by the pharmacist every week .. there is a sense that we are in the room, saying maybe you should take your medicine, it slightly increases people's feeling of being held and also being watched, which seems to help with some people.

Another issue facing local authorities in some cases, which may have arisen due to the absence of awareness and training of outsourced workers, is the reluctance of domiciliary care workers to fully understand the technology. For example, there were reports that they were both unwilling and unable to carry out basic processes such as failing to switch off or reset codes for exit monitoring systems, or to replace batteries. In one local authority, awareness training and the provision of 'hands-on' experience to outsourced workers had helped to overcome this.

A lack of understanding of how the equipment works and the need for basic maintenance on behalf of the service users was also mentioned as an issue. For example, service users were reported to sometimes use the equipment incorrectly, leading to system failures, or sometimes failed to carry out basic maintenance such as replacing batteries or bulbs. This kind of inappropriate use or failure to maintain equipment can sometimes be due to a lack of knowledge but can also be due to a resistance to change.

Sometimes the resistance to change can be explained by a misunderstanding by the service user about how the technology works and how the information resulting from it is used. In one area, for example, it was suggested by one interviewee that some service users were concerned that they were being watched or monitored and that if they were *'not in bed at a certain time they would be in trouble'*. In other cases, though, the resistance maybe due to the way the technology looks and the potential stigma that could be associated with it. In one area, service users were reported to sometimes turn down technology when they saw it, especially telehealth which can involve the installation of quite large items of equipment. This therefore highlights the importance of 'user focused' design.

Resistance to change by both staff and service users can adversely affect the number of telecare installations and is something that needs to be taken into account in awareness training. There was also a suggestion, however, that much of the service user resistance was a generational issue and that this would be the last generation to be resistant to the use of technological innovations in care support. As one engineer put it:

They are worried about technology, I've done an install and then hours later this woman is so panicked she has contacted her daughter to say can you go and take it out, she is so scared of it, the big thing is to keep it as simple as possible, the person who has

got it hasn't got to think – I fall I push the button…old people don't like technology.

One suggestion from technicians and assessors which would assist in changing public attitudes to ALT was to introduce a 'trial' of the telecare equipment. An assessor at one local authority stated that:

I mean quite often with telecare the intervention that we recommend- obviously we have an inclination that it will help them and it will work- but we always advise them that it is a trial...obviously this is why we have a carer or a family member there, because it does require input from the family to report back to us any changes that need to be made to the package that we've provided.

Without a full understanding of the equipment, its benefits and the purpose of its use among care workers, service users and unpaid carers, there may be underutilisation or incorrect use of the technology, leading to false alerts and potential dangers to the lives of service users. In one authority, for example, there were suggestions that a high proportion of fall detectors and pendants were not worn.

Clearly then the way in which ALT and ALS are delivered, the support, and extent and nature of the accompanying awareness raising, marketing, and training will inevitably have an impact on the end outcomes for service users. The benefits of ALT, and telecare in particular, for service users have been documented widely elsewhere (e.g. Brownsell et al, 2008; Clark, 2008; Jarrold and Yeandle, 2009; Roworth-Gaunt et al, 2009). Many of the positive outcomes reported elsewhere were confirmed by interviewees in the three local authorities including, for example, increasing safety, increasing independence and freedom, enabling service users to remain in their own home, promoting dignity, providing reassurance to family and friends, and reducing the stress associated with caring for someone. In one local authority, ALT was described quite aptly as 'a silent friend'.

They want the silent friend, but then they want the friend that's silent but they can press a button and talk to someone which is what the [the monitoring service] is … I think that's what it is … it is very close to having someone with you but it is not the same … it's the next best thing.

5.4 Future innovations

A number of innovations and changes were anticipated across the three authorities, including initiatives around: partnership working; embracing technological advancement; mainstreaming ALS; promoting learning and development; and championing ALS.

Partnership working

Staff in all three mentioned that they are planning to work much closer with the health care sector in the future as a way of: widening awareness and access;

integrating telecare and telehealth; and increasing the effectiveness of service delivery. One local authority, for example, would like to build on existing partnerships with the health care sector as a way to continue to improve awareness and promote the use of telehealth. Potential changes in the way the telecare service is delivered in the future were also mentioned in this local authority with the possibility of delivering the telecare service through a not for profit community interest company suggested. This was seen by staff, in part, as a response to the NHS reforms and abolition of the PCTs. There was also acknowledgement by staff in another local authority that different ways of delivering ALS in the future might need to be explored, such as private sector providers.

One interviewee similarly suggested that they anticipated telehealth to feature more in the future and that there would need to be a much closer integration of telecare and telehealth. Interviewees talked about *'breaking down barriers between health and social care'* and a future scenario where telecare and / or telehealth could be accessed through a single point of access. Additionally, data pooling between different partners (including between health and social care), was mentioned as an initiative that could help achieve a more comprehensive understanding of service users and of equipment utilisation, both of which could help identify further changes required. Future partnership plans could also extend beyond the health care sector to include closer working with the voluntary, community and faith sector, as well as the emergency services, in attempts to increase awareness and promote alternative referral pathways.

Embracing technological advancement

Staff in all three local authorities recognised that ALT was fluid; ever changing with the advent of new technological developments. As one interviewee said:

> *I think it will really change, because the range of equipment is just getting better and better and better...I've got a feeling that in the future we will be able to extend the sort of people we can help because the technology will really improve.*

The increasing use of mobile technology was also seen as a feature of future developments. One interviewee pointed out that: *'in the future the technology will become a single unit, with all equipment working off one unit'.* Another interviewee said that they would like to see a future where *'all new house builds would be wired for telecare for use in different life stages, babies, older people'.*

However, there was a message of caution, too, that if the technology becomes too complicated it could become unusable by the service users.

Mainstreaming ALS

In all three case study sites the need for a greater degree of mainstreaming of ALS in the future was advocated. This aspiration was articulated by one interviewee:

> *I don't want [telecare] to be commissioned- that might sound really, really weird- but what I want it to be is part of what people do, so it's*

not being commissioned it's what you do. ... I liken that [a particular system of telehealth] to telephones- nobody commissions a telephone, but everybody has a telephone, and if you are using a communication conduit so you can speak to your patients quickly, safely and confidentially.... It doesn't make any sense to me to have that commissioned separately- supported separately....that's where I want to get to, where people are using the equipment as part of what they do, rather than commissioning it separately.

There was, however, some recognition that a fully mainstreamed service would still require specialist ALT staff.

Promoting learning and development

There was an aspiration across the three local authorities to widen the recipients of training and to move towards mandatory, competency based training which could be accredited. This included plans to involve more health professionals through mandatory provision, to formalise existing programmes, and to build competencies into them.

Championing ALS

As with any relatively new service or process, ALS are more likely to be taken on board within an organisation if there is a dedicated champion or senior member of staff who is passionate about the concept. The importance of this was mentioned by interviewees, but with differing implications for the future. For example, in one local authority individuals were championing the service but felt a need to highlight concerns about relying solely on one key individual within the organisation. In another authority the introduction of 'Telecare Champions' was being considered as a way of promoting the service.

5.5 Cost effectiveness

In this era of austerity and public sector cuts, there is mounting pressure on local government to deliver services more efficiently and cost effectively, and therefore the cost of ALT and any associated savings are important considerations. Various reports suggest that the introduction of ALT can be cost effective and can lead to a range of cost savings such as: a reduction in hospital day visits, homecare hours, carer sleepover nights; avoided or delayed admission to hospital, residential or nursing care; safer and quicker discharge from hospital or care; a decrease in direct payment costs (see for example Jarrold and Yeandle, 2009; Newhaven Research, 2010; Woolham, 2006). Some local authorities have subsequently calculated the monetary value associated with these savings: North Yorkshire (£1.1m); Essex (£190k); Northamptonshire (£1.5m over 2 years); Nottingham City (£475k); Cheshire East (£198k Learning Disabilities); Bury (£97k Learning Disabilities) (London Joint Improvement Partnership, 2010).

More recently, the headline findings for the telehealth element of the WSD trial were published in January 2012. These findings show that telehealth can reduce mortality,

the need for admissions to hospital, the number of bed days spent in hospital and the time spent in Accident and Emergency (see table 1)**.**

There was, in fact, a general assumption by staff across the three local authority case studies that ALT was inevitably cost effective, and some staff mentioned that they were waiting for the evidence from the WSD[12] programme on cost effectiveness and cost savings to support their initiatives. Many staff members seemed to base their assumptions largely on anecdotal evidence, as one interviewee indicated:

> *Our service, because I suppose in the media it's sort of 'the saviour of the ageing population', so we know that everybody is living longer and we won't have the people young enough to look after them, so I suppose telecare is being pushed by the government. So I don't think our telecare service ... will be particularly at risk from staffing cuts or funding cuts.*

Table 1: Cost savings resulting from telehealth: WSD programme

- 15% reduction in A&E visits
- 20% reduction in emergency admissions
- 14% reduction in elective admissions
- 14% reduction in bed days
- 8% reduction in tariff costs
- 45% reduction in mortality rates

Source: DH (2011:2)

One of the local authorities initially attempted to calculate how much would be saved by delayed or avoided residential or hospital admissions as a result of the financial investment in telecare. The results in 2009/2010 were said to be positive, with £1.7 million savings in cost diversions over a year, against £500,000 investment in the service. Interviewees in this authority appeared to indicate that the arguments for having a telecare service had subsequently been broadly accepted, that telecare was now considered as a first point of call, and as a result, the need to calculate cost effectiveness and cost diversions was both less important and less feasible.

A number of high cost cases within a learning disability project in the same local authority were being assessed at the time of the case study visit and budget savings were being calculated based on, amongst other things, a reduction in the number of hours care workers were required to visit individual service users. This suggests then that ALT can sometimes be used as a replacement for human contact, although in this case the lower number of visits was offset to some extent by focusing on more 'quality visits'. So far, in this local authority a total of £156,334.89 full year savings (52 weeks) have already been made against Supporting People budgets and

[12] At the time of the case study visits the WSD headline findings had not yet been published.

Community Learning Disability Team budgets, where packages of support have been reassessed and service users are now provided with complimentary packages of support and technology. Once fully completed, it is expected that these cases (33 in total) will have provided actual budget savings in the current financial year of £333,399, and it is estimated based on these figures that the total savings made by the Learning Disability Telecare project in 2012/13 will be £439,585.

In another local authority attempts were being made to establish the precise cost of the service and this was felt particularly important in the context of budget cuts. An external evaluation of Electronic Medication Dispensers in this authority, for example, had been commissioned and results suggested that it could lead to a reduction in planned care hours of one to two hours per week, with an average saving per client of around £4,000 per annum.

Cost savings of a telehealth pilot were calculated in the third authority for 2006/7 and it was estimated that per patient over a six month period the teleheath intervention saved an average of £1,878 through reduced unplanned hospital admissions, Accident and Emergency Admissions, Nurse / GP home visits, and better use of clinicians' time. Extrapolation of savings across three Life Threatening Conditions (LTCs) of COPD (Chronic Obstructive Pulmonary Disease), CHD (Conorary Heart Disease) and diabetes was also undertaken and the calculated annual cost saving was £7,560,000.

5.6 Summary

A number of further innovations and changes are expected to take place in the delivery of ALT in the near future. Moreover, given the potential cost savings of both telecare and teleheath and the current need to introduce cost efficiencies across the public sector it is likely that the use of ALT will continue to grow, as will the importance of providing training and support to the health and social care workforce to deliver the service.

6 Conclusions and recommendations

This research has shown that ALT/S is increasingly becoming part of the range of solutions that practitioners offer individuals to maintain independence and quality of life at home and that a number of positive outcomes can be experienced by service users, their families / informal carers, and care workers. Successive governments have supported the use of telecare in people's homes, which is reflected in a number of government documents and papers, as well as funded programmes such as the WSD and DALLAS initiatives.

Approaches to delivery of ALS

Experiences of ALS in three local authorities (Kent, Lambeth and Sandwell), each of which has adopted a different approach to service delivery, demonstrates that a number of factors determine the effectiveness of ALT, and that a skilled and capable workforce is one of the key factors that contributes to success. However, as SfC (2011) have previously outlined, understanding the learning and development needs of the workforce involved in the delivery of ALT/S is not so straightforward. The approaches to delivery vary and as a consequence so do the range of professionals and practitioners required and the nature of their job roles and skills. The resulting 'fragmentary' nature of training provision and qualifications further adds to this complex picture (SfC, 2011).

A range of ALTs was available in all three local authorities, supplied by a mix of large and small suppliers, both as stand alone products and devices which could be linked up to monitoring systems. First generation products – primarily the community alarm scheme - have continued to prevail in all three authorities. The simplicity of the pendant alarm and the security it provides means it remains key to ALS strategies across all case study sites. However all three authorities have moved beyond this and are utilising a range of more sophisticated second generation technologies, namely sensors monitoring the home environment, vital signs and physiological measures. All three authorities were also experimenting with third generation technology, that is equipment using broadband, wireless and audio-visual technology such as GSM, GPS and various telehealth products.

Recommendation 1: *There is a need for a greater understanding of the extent to which the varied approaches to delivery of ALS and the many different types of ALT impact upon different job roles and tasks in local authorities and private and voluntary care providers across the country through a quantitative survey of employees.*

ALT/S were available free of charge to service users eligible in terms of FACS criteria but self funders were also using the services. The number of self funders making use of ALT is likely to increase further in the future and this, in itself, may have implications for the way in which the service may need to be delivered and the skills that the workforce has. Self funders are likely to be more 'product aware' and less willing to accept products which are not suitable, do not fit with their particular living accommodation or lifestyles, or which do not look aesthetically pleasing.

Recommendation 2: *There is a need for further research on the decision making criteria used by, and related support needs of, self-funders.*

Mainstreaming ALS and integration of telecare and teleheath

Differences in service delivery approaches and workforce profiles are evident in the three local authorities. One local authority had a dedicated telecare unit with specialist staff but a longer term aim of mainstreaming the service; one had mainstreamed the ALT service following its involvement in the WSD programme, and consequently had a number of staff experienced in ALT but without a dedicated ALT lead; another authority seemed to fall somewhere between the two, it had dedicated ALT leads but the service was dispersed across the adult social care service.

There was an expectation that ALS would develop as an integrated and mainstreamed service in all three authorities and that there would be more developments in telehealth which offered greater emphasis on prevention rather than risk management. A successful working relationship between the local authorities and the local PCT can provide greater opportunities for a more integrated telecare and telehealth service and is something that should be promoted in the future.

Recommendation 3: *Partnership working between social care and health sector should be encouraged to deliver integrated ALS incorporating telecare and telehealth.*

The research suggested that varying degrees of specialism and integration of ALS into the existing social care and health system were evident in the three authorities, with advantages and disadvantages at both ends of the spectrum apparent. Specialist roles can 'inhibit' the 'ownership' of ALT and associated services by some care and social workers, lead to dependence upon dedicated staff, and appear to be 'top down'. However, providing specialist roles in ALS can offer the necessary lead and drive to research and promote new products and expand service user take-up. Indeed it was apparent that specialist ALT leads are an important component of any ALT service provision, including for authorities which have fully mainstreamed ALS.

Recommendation 4: *Specialised and passionate ALT leads are required to advance the service regardless of whether the delivery approach is specialised or integrated. The development of ALT champions should be considered to further this work.*

Awareness, training and workforce development

Integration of ALT/S needs to be accompanied by learning and development across social care and health professionals, if it is to work effectively. This also extends to staff working in primary care, those involved in enablement, and those working for outsourced agencies. Training needs to generate sufficient knowledge and understanding of ALT, how the technology can be used to respond to the needs of service users, and in which types of home environment it works effectively. Without this learning and development of staff, there can be: a refusal to recommend ALT; inappropriate referrals which can lead to installation failures; under-utilisation; and

misuse of the equipment. This can be exacerbated in an environment where social care and health professionals are working with increasingly heavy workloads and feel as though they do not have the time and space to plan and promote ALT.

Recommendation 5: *There is a need to develop a learning and development framework which incorporates the skills and knowledge needed for the tasks required to deliver ALS. The focus should be on tasks rather than roles as people in differing job roles can undertake them. Any framework should build on existing qualifications and competencies relating to ALT/S and make links with generic qualifications. The framework and support should extend to all those who are likely to come into contact with ALT in people's homes, including staff working for primary care and outsourced agencies. Commissioners need to be made aware of this framework and the reasons for its existence.*

Under or misuse of ALT is not just determined by the level of training of social care and health professionals but by other factors too, for example the way in which it the equipment is designed, its visual appearance and the extent to which it 'fits' into individual's homes, as well as the ability and willingness of service users to use the equipment appropriately. Training amongst social care and health professionals should therefore be accompanied by awareness raising amongst potential service users, their carers and the general public.

Recommendation 6: *Awareness raising and marketing campaigns promoting an understanding of ALT and its use should be developed and expanded through a number of different media and forums, including by social and health care professionals when coming into contact with appropriate service users and their carers, awareness raising sessions delivered in local communities, as well as through more traditional advertising mechanisms in the press, posters in public areas, on public plasma screens. Installing ALT for trial periods in people's homes could be used to augment this awareness raising.*

The research has shown that variation between delivery approaches, in terms of in-house / external provision, and the separation of processes and assimilation, has implications for jobs, job roles, skills, and training. Some new specialist job roles can emerge through the delivery of ALS such as engineers, technicians, installers and specialist assessors. However, as the services become mainstreamed and more closely integrated into existing social and health care provision there may be a tendency for new specialist job roles to be replaced by a widening of existing roles. In both cases this research has shown that that there is a growing requirement for technical staff to gain wider social and communication skills and for social and care workers to gain greater technical knowledge and awareness. A key challenge is how to translate these new and wider job role requirements into effective training and accreditation.

Appropriate training is then a clear requirement. Training that can facilitate the development of both technical and social skills is of paramount importance, including, for example: support for technicians to develop better social and

communication skills; and for social care and health professionals to acquire some general technical awareness. The research has demonstrated that this should be delivered in a variety of ways, through both on and off-the-job mechanisms, in-house, and via external training providers including by equipment suppliers, colleges and possibly universities, thus enabling staff to develop the required competencies and qualifications. Where training is mandatory, and extended to all those involved in the service delivery such as social and health care professionals (including those working for outsourced agencies), voluntary and community organisations, emergency services, service users, and carers it is likely to have most beneficial impact.

Recommendation 7: *Although learning and development needs vary by delivery approaches and local authority, future learning and development should incorporate some key aspects for it to have maximum effectiveness:*

- *Holistic training including both technical awareness and social and communication skills.*
- *Formal off-the-job training provided either within the local authority or externally, including 'hands-on' interactive experience with the technology.*
- *On-the-job training supported by on-going support.*
- *Supplier-led training to be incorporated but not to be offered as the only source of training.*
- *Inclusion of competency based accredited elements.*

These key elements should be built into the learning and development framework previously mentioned.

The future role of ALT/S

The positive contribution of ALT to independent living and the dignity of those needing social care was clearly recognised in this research. However, it is clear that the way in which ALS are delivered, the support, and extent and nature of the accompanying awareness raising, marketing, and training inevitably have an impact on the end outcomes for service users. The need for continued and professional support by trained workers, with a sensitivity to appropriate technological solutions, supporting service user choice and independence, therefore remains of paramount importance.

A number of innovations and changes are expected to take place in the delivery of ALS in the near future, which include the importance of mandatory, competency based, accredited training but also closer partnership working between the social and health care sector; service awareness and delivery through private and voluntary sector providers; and the continued promotion of the service by dedicated leads or 'champions'. Given the potential cost savings of both telecare and teleheath and the current need to introduce cost efficiencies across the public sector it is likely that the use of ALT will continue to grow, as will the importance of providing training and support to the health and social care workforce to deliver the service.

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