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## The evolving UK market for telecare

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Advancing Knowledge of Telecare for Independence and Vitality in later lifE

Technology Strategy Board Driving Innovation

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## Introduction

This paper aims to provide an accessible introduction to telecare technology and services for older people, situated within the context of fundamental change within the statutory adult social care and healthcare sectors. The insights provided in this paper may be useful not only when developing a market entry strategy for potential new entrants to the UK telecare market, including the third sector as well as commercial organisations, but also for existing market players exploring strategies which help them adapt to this evolving market.

This paper provides an overview of the changing UK market for telecare including

- Telecare market drivers
- Defining the market who is the customer
- Evolving technology development and service models
- Evolving retail and b2c business models

Telecare is central for many older and vulnerable people living with cognitive and/or physical impairment, and who are often managing chronic healthcare conditions. Telecare incorporates a mix of personal (wearable) and environmental sensors used throughout (and in some cases beyond) an individual's home, and whose data transmission is monitored remotely in real-time to ensure the safety and security of the individual, for example to prevent or mitigate harm posed to older people prone to falls.

On the other hand telehealth or telemedicine, is defined as the use of information & communication technologies to deliver clinical health services, including remote diagnostics and monitoring of vital signs and other physiological indicators for managing chronic health conditions. For many older people, the simultaneous use of both technologies is critical for professional and informal carer capacity to manage the older person's physical and cognitive conditions, whilst the absence of these technologies and supporting services might mean that independent living is unsustainable.

Whilst telecare solutions resolve specific issues – for example, alerting informal and formal carers to a fall

- and offer important 'peace of mind' solutions for the individual and their families, telecare in and of itself is not a complete solution to living at home independently. Nonetheless, telecare as a set of technology products and services designed to enhance the lives and wellbeing of older people plays a central role at national and local levels in terms of on-going policy change and financial commitments.

This Paper starts from the perspective of AKTIVE, the Technology Strategy Board's Assisted Living Innovation Platform-funded project. The project conducted a sociological study of selected older people living in their own homes who were prone to falls and cognitive decline, and observed how telecare products and services were used to support independent living. Whilst the findings from this project will be reported in full by May 2014, and will be available via the project website,<sup>1</sup> this Paper utilises insight gained from the study to highlight trends in technology design and service delivery relevant to those currently working within the adult social and health care environment, and those who seek to enter this market.

<sup>1</sup> www.aktive.org.uk



## Telecare market drivers

With greater awareness of the challenges posed by an ageing society comes change and opportunity. Developed countries are no longer in any doubt as to the economic, fiscal and social impact of medium- and long-term demographic change.

The demand for innovative solutions to maintain 'quality of life' for as long as possible, and to manage the cost of public services for the older population, is driven primarily by government. It is government who is responsible for its nation's overall health and wellbeing and it is the public purse that faces financial pressure to continue to deliver quality services whilst the number of people with multiple chronic conditions is increasing, whilst tax revenues are static and whilst the cost-benefit of new therapies is strongly contested.

The UK market for telecare & telemedicine services is driven by both statutory and commercial change.

The growing shift from mainly statutory to more self-funded provision indicates a move toward a more consumer-led business model for future health and care services – with the ageing population increasingly likely to seek, and pay for, solutions and services.

Meanwhile, statutory providers are facing significant financial and policy pressures to provide jointlycommissioned high-quality integrated services which deliver cost-savings and value-for-money. For example, the Care Bill introduced by the coalition Government in May 2013 places responsibility upon UK local authorities to arrange care services which prevent or delay individuals from deteriorating to the point where comprehensive on-going care becomes unavoidable.

### Defining the market – who is the customer?



Governments and public authorities recognize the need for innovative solutions for managing the cost and delivery of health and social care services for the ageing population. Public authorities therefore occupy an uneasy position, simultaneously driving supply-side change to existing service provision as well as acting as a significant 'customer' in terms of technology and service innovation.

Older people themselves do not necessarily realise the value they represent to private and public sector organizations willing to develop solutions to meet their needs and wants. This report notes that low levels of consumer awareness surrounding the physical and cognitive challenges of ageing, and what technologies exist to support older people, is holding back some market development. A shift in what drives demand would not only make it easier for suppliers to create improved solutions, but would also help them in selling those solutions to a more receptive audience.



Current buyers in the market for telecare solutions vary considerably since value, benefit and cost are realised in different ways. The following model outlines basic value propositions for different telecare stakeholders, and identifies where the provision of telecare products and services delivers value.

#### Older person & informal carers

- Enabling independent living in own home for longer, through for example friends or neighbours becoming named responders for those living on their own
- Peace of mind for both informal and professional carers, for example with obtaining emergency responses to falls
- Supporting daily life and routine decisionmaking, for example with better management of and prompts to follow medication routines or meal times
- Enabling a greater sense of safety, security and comfort, through for example older people feeling more in control of their life and resilient

#### Health & Care Commission

- Routine monitoring and timely response decreases acute hospital admissions, and supports integrated care plans
- Reduces the cost of care through fewer sleepover nights and home check visits; by facilitating speedier hospital discharge and reducing unplanned hospital admissions; and through delayed entry to care homes<sup>2</sup>

#### Homecare providers

- Maintaining client independence, comfort and safety by combining home visits with real-time monitoring technology
- While telecare can lead to a lower number of domiciliary care visits, this allows for creation of more cost effective packages which some clients (and commissioners) might otherwise not be able to afford.

#### Housing providers

• Enabling greater quality of life & safety for older people, whether in social, sheltered or private housing

<sup>&</sup>lt;sup>2</sup> http://www.thinklocalactpersonal.org.uk/\_library/Resources /Building\_a\_business\_Case\_for\_Telecare.pdf



## Evolving technology development and service model

Given the significant challenges to the UK adult social care market arising from demographic and statutory change, the current provision of telecare monitoring support opens up possibilities for ongoing service re-development and for new market entrants.

Changing market and demand conditions for telecare adoption may offer attractive opportunities for new service providers. Telecare services are increasingly being explored by organizations in a range of business sectors including security, home automation, telecommunications, and housing providers. Homecare organisations are also a potential entrant since although they may lack the technological infrastructure of call centres, their specialist workforce is appropriate when providing a trusted formal response service.

The market drivers keep increasingly highlighting the opportunities for innovation in both technology development and service delivery. This is attracting the attention of new market players from varied backgrounds who can build upon their already existing capabilities and who are willing to try and learn to serve this evolving market.

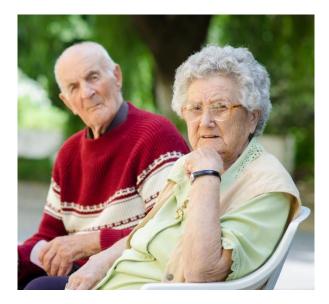
#### Smart home technology manufacturers

Smart homes encompass embedded sensors in appliances, furniture, and building infrastructure for integrated, automated remote control of home cinema, lighting, telephony, closed circuit TV, alarms & security systems. Purchase considerations for smart home technology share some characteristics with telecare – with convenience, independence and security being strong drivers in buying decisions.

Positioning telecare services as part of a 'smart home' focuses on adjusting the value proposition to better reflect consumer needs for personalised comfort, convenience and lifestyle at any age, with additional safety and security benefits in later life. The term 'smart' conveys significant meaning to modern consumers – intelligent, intuitive, automated, integrated, modern. Providers of home automation systems commonly use in their marketing communications terminology phrases such as 'enhanced lifestyle of entertainment, convenience, comfort and security'. Telecare technology and services are likely to have a strong fit with smart home automation propositions – in the near future – given the affluent ageing 'baby boomer' demographic, already highly familiar with other 'smart' communications technology.

Across Europe several not-for-profit organisations have set up 'smart house' showcases, demonstrating the functionality and benefits of integrated assistive technologies in domestic residential environments including the Mi project's 'Smart House' (see key trends, below). While a number of these smart home initiatives have been at least initially funded as part of national or European funding schemes, there are examples of organisations which have managed to develop services targeted specifically at the older population independently such as e-Domotica in Netherlands or Iris Smart Home in the USA.

While home automation companies used to target primarily the affluent market segment, it is increasingly becoming accessible to the mass market thanks to the engagement of organisations such as ADT, BT, Deutsche Telekom or Eon which are aiming to provide connected home devices as part of 'managed systems'.



#### Home security providers

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Some providers focusing on home security and monitoring support are realizing the potential of expanding their service to include personal safety within the home. One such example is ADT, already mentioned, and their Medical Alert solutions in the USA.

Security organisations providing lone worker and other GPS based services are expanding their service proposition to offer 'traveler' safety monitoring (e.g. Safeguard in the UK; Segurus, Inc in the USA), but also targeting pet owners, parents, older adults and anybody else who might benefit from having their location tracked so that assistance can be called when needed.

#### **Telecommunications providers**

Many UK telecommunications companies and mobile operators as well as those in Germany and the USA have developed healthcare service offerings. Tariffs and pricing strategies appear to be secondary concerns, eclipsed in this market by a customer focus upon service quality and security. In the last fifteen years many telecommunications services providers have also developed m-health and e-health offers which includes services targeted at clinical staff and patients.

Whilst interest in the B2B e-health market from telecommunications providers remains high, their interest in the B2C sector is less of a priority. In 2013 O2 Health launched its 'Help at Hand' service, targeted at patients and their care organisations and at individuals and their families. Instead of being just a partner in the delivery of a 'mobile solution', O2 Health championed customer support, helping customers to set-up and configure the service, and established a dedicated 24-7 telecare monitoring centre through which their clients could receive continual monitoring support. O2 appeared to transition from delivering services focused on healthcare staff productivity to providing health and safety-related services direct to consumers, but the service was discontinued only months after its launch.

In mid-2013 British Telecom's Global Health division created a new joint venture and strategic partnership for supporting telehealth and telecare services throughout Cornwall, taking over service management from the local NHS body Peninsula Community Health. In addition BT Global Health also announced its participation in a four-year procurement contract, enabling it to provide both online purchasing of telecare & telehealth equipment and managed services for telecare & telehealth.

#### Homecare providers

The arranged response to a telecare alert can either be provided by friends & relatives, emergency services or trained staff such as home care workers. It is up to the telecare user to decide which form of support they would like to have and telecare monitoring service providers often use a combination of partnering with home care providers in different regions to deliver response and putting their own people in.

In 2013, one of the UK's major homecare providers, Saga, announced its partnership with a US remote monitoring developer Grandcare Systems. Although appearing to present a step forward in the integration of remote care services with home care delivery, one year later only an SOS personal alarm has been introduced.

#### Housing providers

Some organisations offering extra-care accommodation and assisted living are clearly focusing on their value proposition for clients, enabling clients to remain living independently for as long as possible. Trends include partnering between organizations - such as Riverside, a social housing provider partnering with Tunstall, a leading telecare monitoring provider - or housing providers acting as monitoring providers themselves. Whether through partnerships or stand-alone service provision, capacity-building in telecare monitoring by housing providers opens up possibilities for service expansion outside organisational remits and boundaries.



## Evolving retail and business-to-consumer (b2c) business models

Retailers are experts at understanding what people want to buy and what they do not. With growth in the market for products aimed at older people, several retailers have trialed the selling of specialist products. As of 2013 there have been several attempts by major UK retailers to stock 'assisted living' products, but many of these have been discontinued from sale. Lack of awareness among customers of what such technologies can do for them has been a major contributing factor.

#### Key trends

• Channel partnerships

Some telecare providers partner with retail pharmacies as channels for promoting their services, offering education and training to pharmacy staff who can then provide informed advice to their clients.

## Retail pharmacies are already slowly becoming community wellbeing centers.

Their role as a supplier of medicines has been gradually expanding to offer a range of additional informational services such as healthy lifestyle advice, as well as medical services such as travel vaccinations. 'Telehealth booths' through which customers can upload their medical data such as blood pressure or blood sugar levels for remote assessment and communication with health professionals, have been trialed for example by NHS Highland in 2013. In the USA, patients using the services of the NowClinic have the option to access these also from several RiteAid pharmacy locations.

#### • Consumer awareness & education

With major in-store and online footfall for UK supermarkets, distribution, display and incentives in this major retail environment provides significant latent opportunity. However, supermarket retailers generally source and stock fast-moving volume sales products with high existing brand awareness, or new products backed by extensive brand awareness & positioning campaigns. Distribution deals take place within a highly competitive industry, and product positioning strategies are often aggressive and expensive.

The 'More Independent' project funded by the Technology Strategy Board's DALLAS scheme (Delivering Assisted Living Lifestyles At Scale) took an innovative approach to this issue. Mi's 'Smart House' situated within the new Museum of Liverpool building demonstrates to consumers how assisted living technologies, products and services support independence and quality of life, and aims to support consumer purchasing and decision-making. Mi provide a virtual Smart House online too. The Mi project has also built consumer awareness through its partnership with Shop Mobility, a specialist supplier located within a major shopping centre in Liverpool city centre, demonstrating assistive technologies in the retail environment and in front of key market segments.

As the team in More Independent are very well aware of the limited and precious supermarket shelf-space, they are playing with the idea of inserting a 'smart-shelf' into major retail outlets.

This shelf would not contain the actual products, but would be an interactive space engaging customers to learn more about the products available. They are currently in the process of developing this idea further.



Low levels of consumer awareness of telecare products, together with a confusing mix of assistive technology terminology, are major factors in the current low level of retail penetration.

As of August 2013, a review of major UK, US and German retailers conducted by Inventya found that only 5 telecare suppliers offered their products online. These suppliers include Sencit, Alimed, Logicmark, Securus Inc., and Medipendant. While this may seem a low number of suppliers, 50% of all products had emerged into online retail environments within just the space of last three years (2011 - 2014). Amazon was not included in this review as they do not have brick and mortar stores but the range of telecare technology provided through Amazon suppliers is the widest among mainstream retailers and new products are regularly added.

#### • Product vs. Service

Whilst consumer awareness and understanding of tangible assisted living products remains low, awareness and understanding of a product-based or a service-based approach to telecare is equally problematic. Although some stand-alone telecare technology does not need an ongoing service, the majority of telecare technologies currently available are offered as part of a service package.

This adds further complexity for the consumer who has to evaluate and compare both tangible products and intangible services simultaneously.

#### If assistive technologies become more standardized, consumers will benefit from broader awareness-raising programmes.

However, it remains unlikely that different service packages will be standardized, and therefore more likely that retailers may partner with product manufacturers and remote care providers, with in-store trained advisors providing customer advice and support.

#### **Recommendations for industry**

- Partnering with major 'brick and mortar' retailers. Retailers may require more education and awareness about the market opportunities presented by assistive and smart technologies in order to make strategic business decisions about whether their brands could align with specialist ageing products and services. This is potentially where the telecare & assistive technologies industries, along with innovation agencies such as the Technology Strategy Board, could drive dialogue and discussion with a broader range of industries, including retail.
- Increasing product and brand visibility. While this is already the aim of every supplier, much more could currently be done to help inform consumers through targeted marketing and communications campaigns.

Packaging and presentation are central in retailing – telecare and assistive technology products start from a low level of awareness and some stigma associated with challenges associated with ageing including independence, cognition and mobility. Visually appealing, memorable and informative packaging will achieve much in the current market to overcome poor awareness and lack of understanding.

## Conclusions – the telecare monitoring center of the future

This paper has outlined the implications of statutory and commercial change for the UK's future adult social care environment and likely trends impacting upon the role of telecare for public and private care provision. Significant change in statutory national and local care provision may present emerging opportunities to develop new technologies, services, service providers and business models. What conclusions can be drawn at this time for the future trends in telecare development and delivery?

#### 1. 'Consumerisation'

Technology design, packaging and presentation, availability, and attractiveness for users is a central issue. Those aged over 80 by 2030 are currently middleaged 'baby boomers' with more exposure to and acceptance of the reality of wearable, smart and integrated technology. The marketing of discreet, aesthetically appealing, intuitive and personalisable technologies for assisted living will be a key response to overcoming consumer stigma and/or lack of awareness and in driving acceptance and uptake of new technologies. Marketing & consumer awareness programmes for both the technology products and related services will have to be widespread, on-going, and explanatory in order to create brand awareness and trust.

For example, findings from the AKTIVE project suggest that some older telecare users feel they are inadequately prepared for the introduction of telecare products; unsure how to install or operate some products; unsure of who to turn to for technical advice and help; and do not fully understand the cost implications of telecare services in terms of 'who pays'.

#### 2. 'Connectedness'

Design and adoption factors not only present issues for technology developers and integrators, but also for enabling the future for integrated service design and consumer choice about the types of services they need and want. Technology and service design may increasingly combine social functionality and 'connectedness' as well as traditional health & care requirements.

For example, findings from the AKTIVE project highlighted how for some older users, the 'my intercom' functionality could be extended to enable their access to a wide range of other services such as approved home repairs or community transport schemes, rather than 'my intercom' being seen as just an emergency communications device.



#### 3. Integration of public services

The integration of telecare and telehealth – from a technology as well as a service provision perspective – is already underway, and is set to continue. These technologies provide direct benefit to those individuals that use and rely upon them, although challenges remain for public authorities in terms of integrating data, assessments, responses and interventions into workflow, auditing and financial flows.

Centres for digital care incorporating telehealth, telecare, telecoaching and other tele-delivered services of the future will necessarily require a shift in perspective from primarily an alert or emergency response, towards a multifunctional integrated enterprise. Defining new staff roles and designing appropriate staff training will be key to this development.

Findings from the AKTIVE project suggest that timeliness of provision is crucial, especially where telecare is introduced to an older person following a time of crisis or stress. Older people and those supporting them need a great deal of help to enable them to use telecare effectively, and individuals and their carers need to know how to obtain additional or different equipment and support as their needs change. A telecare equipment package tailored to individual circumstances and preferences, as well as assessed needs, should always be based on consultation with older people and everyone in their 'caring network'.

Telecare, telehealth, telecoaching, telemonitoring, and telementoring – what do all these services have in common? They are digital, enable remote and real-time communications, and they all play a role in improving independence and wellbeing for an individual.

Investments by key players in communications infrastructure, service design and staff required to deliver these tele-enabled services represent a significant commitment as well as major opportunities to leverage these capabilities and to expand the types and delivery modes for adult social care services.

Who is this going to be?



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