Feasibility Study:
Telecare in Scotland Analogue to Digital Transition

Product 1 Report (Executive Summary)

NHS 24, Scottish Centre for Telehealth and Telecare

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1.   Executive Summary

The Scottish Government, via The Scottish Centre for Telehealth and Telecare, has commissioned FarrPoint to undertake a feasibility study to investigate the transition of Telecare within Scotland from analogue to digital technology. This is a constituent part of a wider Technology Enabled Care Programme aligned with the National Telehealth & Telecare Delivery Plan aiming to enable greater choice and control in healthcare and wellbeing services for an additional 300,000 people by March 2016, enabling more citizens to remain at home and in their communities.

This study relates to Workstream 5 within the Technology Enabled Care Programme:

- **Workstream 5: Exploring the scope and benefits of switching current provision of Telecare from analogue to digital Telecare**.

In completing the overall feasibility study, a number of staged products were agreed as deliverables:

- Product 1 - Evidence Base and Profile;
- Product 2 - Implementation Guide and Cost Benefit Analysis;
- Product 3 - Trial Site Design.

This report details the findings of the first Product, examining the transition of Telecare in Scotland from analogue to digital.   The Product has audited the current digital status of Telecare solutions in Scotland and has examined the potential benefits that a move to digital Telecare may deliver.

Prior to examining the benefits and practicalities of moving Telecare from analogue to digital, it is important to first define what is meant by Digital Telecare. For the purposes of this study FarrPoint has developed the following definition of Digital Telecare:

> *A Telecare solution is considered to be Digital if it carries information end-to-end, from sensor / monitor, to the Alarm Receiving Centre agent's workstation / telephone in a digital form without any conversion occurring. In technical terms, this means that data will be carried end-to-end using Internet Protocol (IP) format.*

To establish the current digital status of Telecare solutions in Scotland questionnaires were sent to all ARCs that are operated by, or on behalf of, Scottish public bodies. 81%

of questionnaire responses were received. The responses are consistent with those received by SCTT and JIT in previous, similar exercises. Headline findings are that:

- it is estimated that there are 22 ARCs delivering telecare solutions for, or on behalf of, Scottish public bodies;

- it is estimated that 38% of ARCs are providing services for more than one public body;

- the 22 organisations that provided questionnaire responses are serving a total of approximately 153,000 subscribers and receive around 4 million incoming Telecare alarm calls per annum. These calls are answered by a total of 256 full-time equivalent agents, an average of 12.8 agents per ARC;

- Tunstall is the dominant provider of Telecare ARC solutions, being used by 12 respondents. Jontek and Chubb solutions are used by two and three respondents respectively. The remaining respondents use other solutions. The ARC solutions deployed vary in their age and software release;

- a range of suppliers' controller and sensor/monitor equipment is used, although there are examples of some providers using a single provider's equipment for their ARC system and all controllers, sensors/monitors.

No Scottish Telecare solution currently meets the definition of digital Telecare. There are examples of deployments based on digital technology, for example geofencing and video camera use, but these are limited in scale and number and tend to be deployed as standalone solutions, separate to the main Telecare systems. A number of Telecare providers are currently starting the process of procuring new ARC solutions and are considering solutions that offer a greater degree of digital capability than used at present, however, these procurements are in the early stages and no decisions have yet been made on the nature of the new solutions that will be delivered.

The range of supplier equipment and age of the current Scottish Telecare systems is a factor that will need to be considered in the next Product of this study when the high level implementation guide for digital Telecare is developed. The fact that ARCs are starting from different positions, with some more 'digital ready' than others will mean that there are a number of challenges in developing a single standard approach for the deployment of digital Telecare.

Telecare providers would currently struggle to procure a Telecare solution that met the above definition of digital Telecare and delivered all of the potential benefits identified.

This is because none of the larger suppliers currently offer an end-to-end digital solution, although some are closer to being able to offer this than others. Lack of customer demand, and the absence of recognised standards for digital Telecare, are factors contributing to this situation. This is another factor that that will need to be considered as part of the high level digital Telecare implementation guide produced in the next Product of this study. It is clear that a direct move to a fully digital Telecare solution is probably not viable, and an approach based on an incremental digital deployment is more likely to be appropriate.

This incremental digital deployment approach is being used in Sweden. The initial focus of digital Telecare has been the shift to digital connection between in-home controllers and the ARC. This is to address the reliability issues experienced following the main Swedish telecom provider's shift to using digital technology in their core networks, and the end of their obligation to provide analogue exchange lines. This shift from analogue exchange lines meant that there was a compelling event driving the need to adopt digital Telecare. There are currently no similar plans for the decommissioning of analogue phone lines in the UK, however, there are reports that BT is seeking this issue to be included within the scope of the Digital Communications Review currently being completed by Ofcom, and so this is an area that should be monitored.

Currently 40,000 of Sweden's 220,000 Telecare subscribers have been shifted to this digital technology. The initial focus of the digital Telecare rollout has been on subscribers in rural areas as the Swedish telecoms provider is decommissioning analogue exchange lines in these areas first. Given the incremental deployment of digital technology, the current Telecare solutions in Sweden do not meet the definition of digital Telecare.

The experience from Sweden, along with the discussions held and questionnaire responses received from Scottish Telecare providers, have allowed a range of potential benefits of digital Telecare to be identified. These potential benefits fall into four main themes:

- **Reliability** – Potential benefits relating to improving the reliability and quality of Telecare services, or ensuring the continuity of Telecare;

- **Efficiency** – Potential benefits relating to improving the efficiency of Telecare. These relate both to efficiencies gained through improvements in delivery

methods and utilising increased sharing of information/partnership working to broaden services;

- **Additional Functionality** – Potential benefits obtained by using digital technology to deliver new Telecare functionality and services;

- **Telehealth** – Potential benefits obtained by using digital Telecare technology to support the delivery of Telehealth services.

At this stage of the study, potential benefits have been identified by FarrPoint, but no further analysis of them has been completed. The Cost Benefit Analysis completed in Product 2 of this study will establish the value and viability, or otherwise, of each of these potential benefits.

A number of the potential benefits identified relate to the additional capacity, flexibility, and future-proofing that digital Telecare could deliver. These reflect the fact that digital Telecare provides an enabling platform which could be used to deliver change and a range of new services and applications, and not just those directly related to Telecare. The nature of this change is not currently fully understood, and is, to a large degree, dependent upon the output from the other four Workstreams of the Technology Enabled Care programme. Programme-level co-ordination will need to ensure that the Workstreams take account of each others' findings and that cross-dependencies and potential overlap in business cases is identified. It is likely that costs identified in the Digital Telecare business case will act as an enabler for benefits delivered other Workstreams. For example, using the digital Telecare connection to subscribers' homes could also support the delivery of video-conferencing (Workstream 2) or home health monitoring (Workstream 1) services.