BT Scotland welcomes this opportunity to respond to the Scottish Parliament Health & Sport Committee’s inquiry into eHealth. We appreciate that the Committee is interested in views specifically relating to the Scottish Government Digital Health & Social Care strategy; however, since this is yet to be published, we have confined our response to the wider questions outlined in the inquiry’s call for evidence.

What do you consider to have been the main successes of the existing Scottish Government’s eHealth and telecare/telehealth strategies and why?

- As the e-health strategy 2014-2017 indicates: “Scotland has a national reputation for telehealth and telecare and substantial experience has been gained at national (NHS24, the Scottish Centre for Telehealth and Telecare, and the Scottish Government Joint Improvement Team) and local (various NHS Boards and Local Authorities) levels, and a number of innovative projects are underway including United4Health, SmartCare and Living It Up20”.
- Scotland is ahead of the curve with national patient information/integration systems such as the Intersystems TrakCare technology.

What do you consider have been the main failures of the existing Scottish Government’s eHealth and telecare/telehealth strategies and why?

- It is BT’s understanding that the Scottish Government still sees eHealth and telecare/telehealth as a key deliverable of a modernised NHS in Scotland. However, whilst there is clearly a greater interest and appetite in eHealth and telecare/telehealth services within Scotland, this is failing to translate into game-changing, large scale implementation of telehealth and telecare services across Scotland for managing long-term health conditions. Possible explanations for this circumstance are as follows:
  1. Lack of seed funding to establish these services at scale;
  2. Lack of demonstrable local success at scale;
  3. Risk in using an existing budget to establish these “unproven” services;
  4. HEAT targets are ‘Acute’ focused and the Boards’ focus, including budgets, remain in this area;
  5. There is a lack of evidence from the small scale pilots and therefore confidence across the NHS Board Executive community that the large scale adoption of telehealth and telecare services will see the reduction in the use of Acute services required to balance the budgets.

- The current deployment of analogue telecare solutions is a major limiting factor in the evolution of telecare/health in a home setting. Separation of budgets and lack of integration/co-ordination between health and local authorities has resulted in siloed services. The boundaries between telecare and telehealth are increasingly becoming blurred, and they should be viewed as a single solution set with both local authorities and NHS boards benefiting from the deployment of digital services. Any spend in telehealth services should be focused on the migration to digital as this will enable benefit sharing as citizens/patients will have access to sensors that will assist in the management of

1 The target outcomes for the deployment of these technologies is to allow people with long term conditions to remain in their homes for longer, both improving their quality of life and reducing the costs of long-term residential care across the population.
their conditions and also prevent unplanned admissions. There are a few forward-looking councils examining how Community Health & Social Partnerships should be driving to replace the existing analogue telecare services with digital solutions. This will enable care in a home setting to be delivered with advanced digital health services that can monitor both health conditions and care services.

What key opportunities exist for the use of technology in health and social care over the next 10 years?

- The continued drive to digital will present opportunities across a wide spectrum, improving secure access to information and enabling true interoperability, mobility of staff and analytics. The migration to digital services from a telehealth/telecare perspective will enable both local authorities and Health Boards to benefit from improved information on citizen/patient conditions and to manage these situations accordingly. Thought should be given to budget allocations as in this scenario money spent by local authorities on digital services arguably provides the greatest financial benefit to the Health Boards.
- The development of Internet of Things (IoT) technologies will also provide opportunities for Health & Social Care. IoT will provide access to huge amounts of sensor data that will help inform patient care. In a smart city environment, patients with COPD (chronic obstructive pulmonary disease) could be informed of local air pollution levels automatically and take these into consideration before making any travel decisions.
- Radio-frequency identification (RFID) tags could be added to medication containers to improve drug management. The addition of these tags will enable producers, consumers and regulators to track and trace their journey and therefore have greater confidence in the drug supply chain. RFID tags can also be used to monitor and manage expensive healthcare equipment in a primary care setting ensuring that whenever it is required it can be located.
- The connected nature of IoT devices also means that they present a potential security vulnerability, therefore any IoT deployment in a Health & Social Care setting must be secured.
- The wider deployment of mobile technologies across the field-based Health & Social Care communities will improve the care delivered and increase staff productivity, whilst improving work/life balance. In our experience, staff that utilise our mobility offerings can:
  - Spend +30% more time with patients each day
  - Make 1-2 more visits per day
  - Make 45% improvement in referral handling
  - Create a 60% reduction in admin time
  - Create a 30% reduction in travel time
- Population risk stratification is also an area of interest, so that at risk population groups for high incidence long term conditions (e.g. COPD or Type 2 diabetes) can be actively targeted.

Are there any actions that require to be taken to improve accessibility to and sharing of electronic Health records?

In BT’s experience of delivering Whole System Transformation with Health & Social Care providers in England, we believe that there are a number of areas to be addressed. Firstly, Interoperability is a broad church but not just about information sharing. The following should also be key requirements of any Interoperability solution:

- Care Pathways, Care Plans, Integrated Digital Care Record, Personal Health Record, Federated Real time view of information, inclusive of Electronic Master Patient Index (EMPI), managed & hosted fully PID compliant.
• Video conferencing should be integrated for GP overflow, for Multi-disciplinary teams (MDTs) and for the inclusion of minorities (BT acknowledges the successes to date of the NHS National Video Conferencing Service).
• Population level predictive analytics leading to Population Based Outcomes.
• Pre and post implementation analytics leading to detailed cohort selection and adaptive risk stratification. To be used as a learning health system.
• It is important to remember that there is no such thing as a greenfield environment and as such having a competitor or partner solution in place isn’t a barrier. This should be about ‘connect all’ not ‘replace all’, which aligns well with the e-Health strategy.

BT has delivered Whole System Transformation in the London Borough of Islington which includes the approach detailed above plus:

• Using analytics tools to identify problem cohorts then embedding Care Plans specific to individual across MDTs.
• Utilising Care Pathway management tools to focus on longitudinal management of specific disease types.
• Full Integrated Digital Care Record (IDCR) across health and social care, covering GPs, Acute, Community, Mental Health, Adult & Child Social Care for over 10,000 care providers.
• Person Health Record across 206,000 Islington citizens, via Portal or App with secure access. Allowing the citizen to have access and share IDCR, manage Health and Wellbeing, book appointments, request repeat prescription and be a full part in their own health care. Prediction, prevention, personalisation & prevention.
• Video conferencing initially to support MDTs and minorities such as those with deafness and mobility issues, but planned to use as GP overflow to address challenges of access and 7-day working.
• Population analytics, fully embedded in solution, used at the front end to cover risk stratification and cohort selection.

What actions are needed to improve the accessibility and sharing of the electronic patient record?

• Adopting a Whole System Transformation view and methodology will improve accessibility and sharing of the electronic patient record. The lack of progress in this area is partly due to funding. Various funding mechanisms were made available by NHS England to kick-start the progress of Interoperability and record sharing. Without the seed funding being made available NHS boards will struggle to commence the journey as current budgets are largely focused on ‘keeping the lights on,’ i.e. software and hardware refreshes.
• In addition, Information Governance and sharing policies must be in place between all parties that require to share and access information. Consideration should also be given to widening access to other public sector bodies such as Police Scotland, Scottish Fire & Rescue Service and Scottish Ambulance Service.

What are the barriers to innovation in health and social care?

• There are a number of barriers to innovation in Health & Social Care. These include:
  • Fragmented governance with multiple bodies involved;
  • Fragmented funding;
• Lack of availability of seed funding to establish innovative solutions;
• Need for a clear procurement route that rewards supplier investment in innovation;
• Need for a clear responsibility accountability matrix across all stakeholders;
• Lack of mature dialogue between the public and private sectors - as a starting point the NHS in Scotland needs to have a greater familiarity with potential private sector partner technology capabilities, and these potential private sector partners need a much greater familiarity with NHS Scotland’s ehealth/digital plans moving forward. This would facilitate deeper, more meaningful technology and commercial discussions between interested parties, leading to more informed procurements and valued future relationships.

BT Scotland, July 2017