

Realising sustainable QIPP wins

Opportunities for Telehealth

February 2011



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Intellect's healthcare programme represents and provides a collective voice for over 240 companies from multinationals to SMEs, many of whom are at the forefront of developing and deploying solutions across the sector.

Our telehealth group provides a channel for government and industry to discuss policy, strategy and implementation issues.



About Telehealth

Telehealth is a term that frequently means different things to different people and has been used to describe a wide range of technologies. Intellect supports the definition used by 2020health in its recent report 'Healthcare without walls: A framework for delivering telehealth at scale':

“Telehealth is not a single, uniform type of technology; rather it is a targeted approach appropriate to the individual’s needs, combining process, organisational and responsibility changes supported by monitoring and collaboration technologies.”¹

Telehealth, for example, can be used to monitor patients remotely, particularly those with chronic diseases such as diabetes and chronic obstructive pulmonary disease (COPD). And in this way, it is enabling a shift in the provision of care, helping to move it out of the hospital and into the community, which means the geographical location of care professionals is becoming increasingly less important.

It is a rapidly growing industry and one that is increasing its credibility and traction as a means of providing viable and modern health solutions. Scotland, Wales and several English Trusts are pioneering early adoption and investment in telehealth, bringing it into mainstream services that deliver efficiency savings and improved health outcomes. In spring the Department of Health is due to publish the results from its Whole System Demonstrator (WSD) programme, the largest evaluation of assisted living technologies (encompassing both telehealth and telecare) ever undertaken covering three key sights – Newham, Cornwall and Kent - and involving a mix of roughly 6,000 patients.² The objective is to 'provide an evidence base for more cost effective and clinically effective ways of managing long term conditions.'³

International experience is also pointing towards the scale of the opportunity that telehealth presents. The Veterans Health Administration uses a telehealth service to meet the needs of a vast population across a wide geographical area.⁴ Telehealth for veterans is used to manage a range of conditions including diabetes, chronic heart failure, stroke, depression and post-traumatic stress disorder and makes use of a range of technologies to accommodate a diverse population. It is considered a vital service in the US; one that is proving popular and responsive to patients' needs.

1 <http://www.2020health.org/2020health/research/telehealth.html>

2 <http://www.dh.gov.uk/en/Healthcare/Longtermconditions/wholesystemdemonstrators/index.htm>

3 http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_100947.pdf

4 <http://www.telehealth.va.gov/telehealth/>

Introduction

The aim of this paper is to set out the industry's views on the value and benefits of telehealth as a modernising tool to support the NHS as it seeks to identify significant efficiency savings and become more sustainable in the face of major demographic changes and rising costs. Through case studies from the UK this paper demonstrates how telehealth has a vital role to play in the NHS Quality, Innovation, Productivity and Prevention (QIPP) agenda.

The Health and Social Care Bill puts a new emphasis on meaningful information enabling patients to have greater control of their care, including and beyond the choice of provider. The evidence, including research from The Health Foundation, suggests patient outcomes can be greatly improved through increased patient/user engagement.⁵ Telehealth should be recognised as a core tool for achieving this patient centred vision and shaping a health service that is fit for the demands of the 21st century.

By focusing more on intervening earlier in the patient pathway and helping prevent people getting ill and visiting a hospital in the first place, huge efficiencies and significantly improved health outcomes can be achieved. It is essential to the sustainability of the health service. A recent study by think-tank 2020health claimed that the NHS could save up to £1 billion a year from the wide scale deployment of telehealth.⁶ But achieving this will require a cultural shift that supports new ways of working and driving take up will inevitably require concerted efforts from all players in the healthcare community.

We have identified a set of recommendations aimed primarily at DH and The National Commissioning Board (NCB), the local NHS, industry and of course the wider stakeholder community. The recommendations focus on three themes:

1. Building on momentum and education
2. Promoting a conducive environment
3. Encouraging flexible solutions

We welcome your views on these and other aspects of the paper.

⁵ <http://www.health.org.uk/publications/implementing-shared-decision-making-in-the-uk/#>

⁶ <http://www.2020health.org/2020health/research/telehealth.html>

Realising Sustainable QIPP Wins

The NHS is committed to realising £20 billion of efficiency savings by 2015 and reinvesting this in frontline services. But there will also be a reduction in available resources as the like-for-like budget of the NHS is expected to drop from between £15 billion to £20 billion due to the growing demand for care, above average inflation in the sector and a stagnant budget from 2011 onwards.⁷ Services clearly need to become more sustainable, while at the same time maintaining quality and meeting rising demand and patient expectations. A transformation in the way healthcare services are delivered and how people work is overdue and the QIPP agenda will be of central importance in achieving this in a tighter economic climate. We argue telehealth is a core tool that can help the NHS meet this agenda.

1. Quality

Implemented correctly telehealth solutions can have a major impact on quality of service delivery and ultimately on patients' quality of life. Educating and supporting patients with long term conditions can enable them to self-manage and self-care, empowering them and giving them more confidence which can help them to exercise choice on when to access care. Helping patients in this way has been shown to reduce demands on the health service in the long term and help people to live independently for longer.

Conventional monitoring approaches are relatively expensive, often complex to use and gather limited types of data. By contrast, telehealth solutions allow the delivery of care to follow the patient ensuring providers have continuity of access to information. Day by day recording of signs and symptoms can be assessed alongside quality of life assessments and lifestyle measures to identify early indicators of change and the progression or regression of conditions. New and innovative management approaches enabled by telehealth allow providers to deliver optimised care earlier in the cycle; this prevents conditions being exacerbated, reduces the length of in-hospital stays and avoids inappropriate admissions.

⁷ <http://www.ic.nhs.uk/about-us/more-about-us/supporting-qipp>

The analysis of data using algorithm driven processes means that potential crises can be averted through proactive interventions. The data can be used to trigger medication reviews, the provision of a consultation or education programme, or any other intervention that has demonstrated its effectiveness in a similar situation. Telehealth can help patients communicate more effectively with care professionals, particularly when guidance is needed or issues arise. It can also lead to an improved understanding of their symptoms and the sequence of decisions made to address them. NHS Blackpool saw evidence of this in a patient survey with 80% reporting increased awareness of their condition as well as an increased feeling of involvement with the management of their health. In addition 70% strongly believed that their quality of life has improved as a result of using telehealth.⁸

Telehealth can help deliver the government's vision of a patient-focused care system. Allowing patients to take their health needs into their own hands empowers patients and improves their understanding allowing them to work collaboratively with care professionals to develop a unique and tailored care pathway that will improve their outcomes. Promoting telehealth as a viable alternative to residential care or live-in staff could also support the Direct Payment scheme which is currently being piloted. Government has a key role in promoting the benefits of telehealth services to GP Commissioning Consortia, Health and Wellbeing Boards and the wider public.

2. Innovation

There are 15.4 million people living with a long term condition in England alone, and this is expected to rise due to an ageing population and the increasing prevalence of unhealthy lifestyle choices.⁹ With financial pressures mounting the government and the NHS need to embrace innovative new ways of doing things. Telehealth is not just about innovative technology; it is about using technology to support radically new ways of delivering care that is sustainable in the long term.

Monitoring conditions such as COPD, heart disease and diabetes from home not only allows patients to manage their own conditions but also reduces the strain on NHS resources.

⁸ <http://www.thiis.co.uk/tele-black-jan10.aspx>

⁹ <http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Healthcare/Longtermconditions/index.htm>

While the issues facing the NHS are national, innovation is needed at the local level to address specific problems that local communities and their care providers are facing. Localising problems and building a set of requirements on specific needs helps to ensure solutions that are developed and adopted are fit-for-purpose.

The Health and Social Care Bill currently passing through Parliament is enshrining the creation of GP Commissioning Consortia. This means there is now real potential for commissioning budgets and behaviours to be aligned with optimising long term health outcomes for patients. Until now commissioning budgets were constrained by short term targets and the benefits could not be accurately split across providers in the NHS.

Telehealth also enables care professionals to develop innovative ways of managing complex patients. A joint NHS Knowsley and Knowsley Council project used telehealth to monitor 37 patients with heart failure and cardiovascular disease in their own homes, with patients achieving “significant” psychological benefits from being able to recuperate outside of the hospital setting.¹⁰ Daily information and readings of blood pressure and blood oxygen are transmitted to a clinician who can monitor and assess the patient’s condition in a timely manner and determine the care needs from there, cutting down on unnecessary visits to outpatient clinics and emergency hospital admissions.

The information generated by telehealth can also challenge existing and accepted ways of working. For example, current best practice for hypertension was set at measuring four times a year since more frequent measurements would overload GPs. Now that this can be done by patients at home there is a strong case for reconsidering best practice in this area.

In the Liberating the NHS White Paper, the gap between health and social care services is identified as an impediment to better and more personalised care. Deploying systems that link up additional services from third parties and the independent sector creates opportunities for interoperable and unified services that are uniquely focused on patient needs. In this way innovation can support collaboration between health and social care professionals, improving services and outcomes for patients and at the same time allowing providers to work more efficiently and productively. Telehealth can be used as a tool to enable more integrated care; one that cuts away the bureaucracy and policy issues that have acted as barriers to joined-up approaches in the past.

¹⁰ <http://www.nursingtimes.net/whats-new-in-nursing/primary-care/home-ecg-monitoring-reduces-costs-and-improves-care/5017591.article>

3. Productivity

Telehealth can achieve financial savings across the board: from 999 calls to GP appointments and from A&E visits to costly hospital admissions. Research has shown that savings made in these areas often cancel out the costs of deploying telehealth: often within one financial year for the primary care commissioner, trickling down to acute care later on. However, further work needs to be done on the benefits of telehealth and how different groups should be incentivised to make use of it. Under the current payment tariff it is difficult to ensure the benefits are shared equally among the relevant providers. Incentives need to be aligned across primary, secondary and social care to ensure that the benefits are optimised. Although financial benefits can be achieved quickly, they are also sustainable over time and will grow as the number of patients who can make use of telehealth services increases.

Nonetheless, savings from telehealth can also help to free up resources that could be used more productively as the health service struggles to tackle rising demand eg, through more productive urgent care, and cheaper and automated services which complement the overall service. Telehealth should not be seen as an 'add-on' service; real savings and productivity gains will only come if the resources that it frees up are diverted to more productive areas and if the services it replaces are scaled down or decommissioned over time.

Case studies show that minimal expenditure on telehealth is likely to produce significant savings for care providers. An audit of small scale deployments revealed high cost efficiency ratios. In Inverclyde the telehealth service which cost £52,000 generated cost savings of £450,000 in one year.¹¹ Achieving maximum efficiency savings means systems need to be fully deployed. This is particularly relevant as there is a direct relationship between the size of the systems and the makeup of the community care teams needed to support them. Small systems typically achieve much higher levels of deployment and patient compliance and offer a foundation that can be built upon as new needs are identified.

¹¹ http://library.nhsqc.org.uk/mediaAssets/CHP%20Inverclyde/Paper_10-25_COPD_FINAL_Report_v6.pdf

The 2020 health report 'Healthcare without walls: A framework for delivering telehealth at scale' estimated potential savings from telehealth solutions could be as much as £1 billion annually. Trusts up and down the country are already beginning to realise savings. Sheffield PCT for example, has a patient demography with a high prevalence of COPD, representing over 2,000 hospital admissions annually. Their localised telehealth solution for high risk patients has halved COPD admissions during the pilot phase. The scheme has had further investment and the PCT has calculated savings of £1.2 million on the basis of £2,000 per admission. Moreover, this figure did not include savings on travel as a result of an 80% reduction in home visits or additional savings connected with savings in carers' time.¹² For the same project, NHS Leeds has reported a 10% reduction in hospital admissions equating to £22,500 per annum as well as a 16% reduction in bed days and 8% in A&E attendances adding to the savings made.¹³

NHS South East Essex observed savings of £13,092 per annum from the 75% reduction in A&E visits for 53 patients using its telehealth solutions and £44,892 per month as a result of 83% reduction in hospital admissions. They estimated that if 1000 patients received telehealth services, savings from A&E visits and hospital admissions could reach £10.4m.¹⁴ These findings not only demonstrate that telehealth can deliver significant efficiency savings but also reveal much wider potential for economies of scale from mainstreaming its availability across the NHS. But telehealth will only succeed if the environment for NHS customers and suppliers is conducive and enables them to develop robust business cases and invest in innovative approaches to flexible end-to-end service models.

Telehealth can also be a valuable tool to support staff in the management of their case loads to improve efficiency and even increase their capacity. In South East Essex telehealth helped community matrons reduce patient visits by 12% on average, with patients reporting a high level of satisfaction. This not only affected the mileage of community matrons in the area but freed up case management capacity, allowing community services to reach further. Portsmouth Hospitals NHS Trust has reported £220,000 in savings from providing midwives with Blackberry smartphones, but staff have also found it has halved their administration time by facilitating secure, remote note-taking at the point of care.¹⁵

12 <http://www.tunstall.co.uk/assets/literature/Sheffield%20case%20study.pdf>

13 <http://www.tunstall.co.uk/assets/literature/Telehealth%20Management%20of%20COPD%20-%20NHS%20Leeds.pdf>

14 <http://www.telecareaware.com/images/pdfs/nhsd-essex-final-eval-telehealth-26Feb10.pdf>

15 [http://uk.blackberry.com/newsroom/success/Portsmouth%20NHS%20\(UK\).pdf](http://uk.blackberry.com/newsroom/success/Portsmouth%20NHS%20(UK).pdf)

4. Prevention

Preventative care has huge potential for helping to keep the population healthy and for relieving the increasing strain on the public purse. Unplanned admissions, emergency appointments and out of hours care are putting incredible pressure on the NHS. Treating patients with long term conditions accounts for approximately 70% of total health and social care spend in England, and introducing solutions to help these patients rely less on reactionary care should be a priority. Telehealth should be incorporated into the government's plans as a tool to help deliver the vision set out in the NHS Information Revolution, and support the new social care reforms and choice agenda. This would help create the much needed shift towards preventative care by ensuring that the majority of patients with long term conditions (11 million in tier 3¹⁶) can access the information they need to make choices about and take control of their own care.

Prevention is about more than preventing admissions. It is about preventing the rate of decline of a person's health and quality of life. Preventing deterioration of respiratory function, avoiding heart and lung attacks, identifying signs and acting, all work towards improving health and hence quality of life. Making daily readings and in some circumstances collecting real-time information about their conditions means patients are able to self-monitor, identify changes and address them at an earlier stage which prevents more serious incidents occurring. Telehealth also has a track record in reducing anxiety, a factor which often contributes to deteriorating conditions and can be responsible for unplanned admissions and unnecessary appointments.

Chronic heart failure costs the NHS £600 million annually and over 50% of this is attributed to inpatient care. Telehealth presents some major cost saving opportunities as well as improving patients' quality of life. The Orchard Medical Centre in Bristol found that telehealth could reduce the volume of A&E attendance by 67% and hospital admissions by 46% when it was used to monitor patients with chronic heart failure in the community.¹⁷ It allowed vulnerable and elderly people to remain in their own homes for longer and prompted a shift from emergency hospital admissions to elective attendance on a scheduled basis.

¹⁶ Tier 3 patients are a segment of population with LTCs with low level of care needs as identified in the "Kaiser pyramid". See link for further information: http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH_120915

¹⁷ http://www.tunstall.co.uk/assets/Literature/Case%20Studies/managing_chf_orchard_medical_centre.pdf

Recommendations for DH, NHS and industry

Telehealth clearly has enormous potential to help tackle the challenges the NHS is facing in this period of austerity, but releasing this potential will require a concerted effort by all stakeholders. We have set out a number of recommendations that we believe are essential to making the opportunity that telehealth presents a reality. The recommendations focus on three themes:

1. Building on momentum and education
2. Promoting a conducive environment
3. Encouraging flexible solutions

1. Building on momentum and education

The centre has an important role to play in educating NHS trusts, healthcare professionals and the wider public about the benefits of telehealth and self care.

- Ensure the National Commissioning Board includes a senior clinician responsible for championing the benefits of telehealth and providing leadership on the commissioning of local and national services.
- Rapidly build on the momentum of the evidence from the Whole System Demonstrator programme using existing NHS networks to promote the findings.
- Create business cases as part of the Long Term Conditions QIPP workstream to spread best practice and encourage wider uptake.
- Communicate the benefits of telehealth to new Health and Wellbeing Boards who have a key role to play in integrating health, public health and social care services.
- Work with the Royal Colleges to drive clinical engagement, promote the value of telehealth across the professions, provide information and guidance, and ensure telehealth is embedded in clinical education and training programmes.
- Publicise and explain telehealth options as part of the Direct Payments pilots and roll-out, showcasing early adopters and identifying best practice.
- Reimburse GP Commissioning Consortia, responsible for commissioning care for patients' conditions across the whole care pathway, for telehealth solutions that support the care of people with long term conditions closer to home.

2. Promoting a conducive environment

Harnessing telehealth's true potential will require an environment that is conducive for allowing solutions to flourish. The right environment combined with clear signalling will mean that industry is able to develop and provide commercial models that are cost effective and deliver end-to-end services that are scalable and flexible.

- Improve procurement practice by promoting closer engagement with industry to strengthen business cases, identify the requirements that will achieve desired outcomes, and ensure the capability and capacity of the supply base is understood.
- Promote Intellect's Concept Viability service which facilitates early engagement with industry to test the feasibility of projects and how requirements can be translated into outcomes.
- Collaborate with industry to embrace standards that support a common infrastructure and interoperability, where appropriate using existing standards development and testing bodies.
- Encourage local bottom up innovation that recognises regional diversity, but avoid fragmentation by promoting common standards and national frameworks to allow for economies of scale.
- Create a national commissioning toolkit for telehealth that helps commissioners develop services that make best use of telehealth.



3. Encouraging flexible solutions

Telehealth solutions will need to be increasingly flexible in order to meet national standards and local requirements. The Whole System Demonstrator programme shows that the average lifetime of a given installation is relatively short: patients move off telehealth as they either improve, move to live with close family or into residential care, or sadly pass away. In many instances it makes sense to invest in flexible solutions that include mobile and/or re-use of fixed solutions. This flexibility can also help to address issues associated with uptake by tackling the impression that solutions might restrict mobility or where the patient or the patient's family feel that telehealth is a sign that they cannot cope on their own.

As telehealth becomes increasingly mainstream it will appeal to a broader group. A significant proportion of the 15.4 million people in England with long term conditions hold down jobs and need to manage their conditions away from home. Given the widespread use of smartphones by the population at large, this technology platform can help people manage their health more effectively and avoid getting into a situation where they need intensive and expensive care, for example, by helping people with diabetes manage their blood glucose and there are already applications available for this.

- Look at options for flexible telehealth services where mobile and re-use of fixed solutions is included in service agreements.
- Encourage private sector solutions that are targeted directly to consumers by ensuring regulation is appropriate and not overly burdensome.
- Join-up telehealth initiatives at the local level through joint commissioning to deliver scale and maximise benefits and savings through shared services.
- Support the redesign of care pathways to allow telehealth services to deliver optimal results.

Conclusion

Telehealth needs to be seen as a positive tool in reducing the spiralling costs of NHS services and a real way of addressing the major challenges it is facing in the coming years. Engaging more actively with industry will help address the challenges. If industry is to invest in mainstreaming telehealth leading to improved and cheaper services it needs clear sight of where the market is going. As the trade body for the technology industry in the UK Intellect and its members can provide a wealth of knowledge and experience so that informed choices are made about how to optimise the value of telehealth.

Acknowledgements

Intellect would like to thank the members of its Telehealth Management Committee for their invaluable contribution to this paper.

- BT Group Plc
- Clinical Solutions International Ltd
- Docobo Ltd
- IBM United Kingdom Ltd
- Intel Corporation (UK) Ltd
- Lloyds Pharmacy Ltd
- Philips Research Laboratories
- Plain Healthcare
- Research In Motion UK Ltd
- Stalis Ltd
- Tunstall Healthcare (UK) Ltd

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