Good Governance Institute

Keeping the NHS Great

Delivering technology enabled care services

A Good Governance Institute discussion paper

September 2014

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This discussion paper is part of a growing series of reports developed by the Good Governance Institute (GGI) that consider issues contributing to the better governance of healthcare organisations. GGI is an independent organisation working to improve governance through both direct work with individual boards and governing bodies, and by promoting better practice through broader, national programmes and studies.

We run board development programmes, undertake governance reviews and support organisations develop towards authorisations. Other recent GGI reports and board development tools have considered board assurance, patient safety, clinical audit, quality and safety of telehealth services, services for people with long-term conditions, diabetes services, better practice in treatment decision-making, productive diversity, the board assurance framework, integrated governance, governance between organisations and of course good governance. GGI is committed to develop and promote the Good Governance Body of Knowledge

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1. Executive Summary

A 'wicked issue'

The population is ageing. People are living for longer, with healthcare complexity associated with multiple long term conditions, including frailty. For those aged over 75 years, the number of emergency admissions has increased by 31% over the past decade, particularly for those with dementia and it is likely that in some cases these people could have been managed in their own environment if a greater level of support was readily available. Reducing avoidable hospital admissions gives the potential to improve value in healthcare.

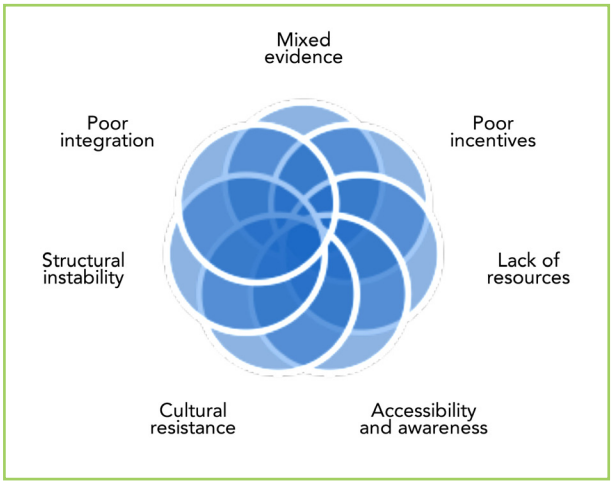
As the media and politicians talk about the challenges we face so often, there is a feeling that someone must be doing something about it. But what are we doing and is it working?

A potential solution

Increasing the use of technology within the NHS will facilitate integration and lead to cohesive service delivery across the boundaries of health, housing and social care, as well as the primary and secondary care divide.

The scope of Technology Enabled Care Services (TECS - NHS England's new terminology for 3millionlives) encompasses a wide range of products and services, from low level gadgets available on the high street through to traditional telecare/telehealth and emerging digital technology (including mobile phones, apps and televideo).

Barriers to telehealth take up



These solutions offer a way of delivering tailored care for people and their carers in any care setting. There is potential to improve quality of life, reduce avoidable admissions to acute settings, support early discharge when a hospital stay has been essential, and impact on independence at home thus delaying the need for long-term care.

Action

Integrated care must be the central goal of any future reforms. This should not simply be about re-designing services and system structures (essential as they are) but about engaging patients and populations to ensure that their experience of care is continuous across all settings. TECS can play a key role in integrating care for people.

The following recommendations for policy makers to increase deployment are required to make this happen:

Re-establishing the case for telehealth	• Best practice and evidence review
Raising awareness	• National awareness programme and patient empowerment campaign • A personal technology czar
Funding mechanisms	• Aligned incentives, integration • Pooled budgets, top sliced funding • Outcome based commissioning
System transformation	• National implementation team • National training programme • Redesigned pathways • GP incentives

Contents

2. Foreword

The *'Keeping the NHS Great, Delivering Technology Enabled Services discussion paper'* is the product of a collaboration between The Good Governance Institute and Tunstall Healthcare (the leading telehealthcare provider). It was conceived out of a growing recognition that telehealth services have not spread as widely as was expected some years ago.

In light of this, we asked a sample of experts and practitioners in health, social care and housing why they thought this was the case, what the barriers to adoption were and what solutions there might be to make it possible for people who might benefit from telehealth to access these services. GGI conducted a small survey of healthcare professionals across its networks in the spring of 2014 asking the questions contained on pages 15 to 17. GGI also conducted a workshop on 25th April 2014 with the Tunstall Clinical Advisory Group (its members are listed on page 18).

This discussion paper summarises the findings and recommendations of these exercises. The discussion paper also contains a detailed analysis of the process of delivering long-term, successful and cost effective technology enabled services during a period of austerity and when the numbers of people with long-term conditions is increasing. It is a guidance document designed to explain how to tackle the barriers currently facing innovation and integration of technology and how technology enabled services can be taken forward. It attempts to present the means of effectively and efficiently integrating technology within health, housing and social care in order to achieve positive outcomes. We believe this discussion paper makes the case for delivering efficient Technology Enabled Care Services, in order to keep the NHS great.

3. Introduction

Since telehealth was first introduced in the UK in 2000, and following the Whole System Demonstrator (WDS) Project conducted in 2007, take up of Technology Enabled Care Services (TECS) within health, social care and housing services has been slow. There are currently approximately 10,000 telehealth patients in the UK. In a recent poll by GP magazine, 108 (61%) of the 176 Clinical Commissioning Groups that responded (out of 211 nationally) were commissioning telehealth services in 2013/14, expecting to spend around £15.2m[1].

In light of this, Tunstall Healthcare asked the Good Governance Institute to conduct a short survey of its health professional networks and conduct an expert focus group to look at the barriers to introduction of telehealth and to provide some recommendations on how to improve its introduction for those patients that would benefit from it. The expert group convened on 25 April 2014, and brought together experts from health, housing and social care, including clinicians, nursing representatives and NHS commissioners. They discussed and made recommendations on how to address the barriers to TECS. An online survey was also conducted, detailed feedback from which is contained in this discussion paper on pages 15 to 17.

This discussion paper outlines the benefits to be gained from integrating services through the use of technology, in particular telecare and telehealth, barriers to its deployment and proposes some emerging recommendations on how Government and commissioners can improve take up.

1) See http://offlinehbpl.hbpl.co.uk/NewsAttachments/GCC/Inside_Commissioning_Tackling_Telehealth.pdf

4. Context

The need for Telehealth

The growing demands on health and social care services as a consequence of an ageing population and increasingly complex long-term conditions are well documented and recognised across health and social care. There is consensus too that integration of services and more personalised care will deliver better health and social care outcomes. There is debate about whether this will create cost savings but the current bottlenecks of older people living with frailty and people with long-term conditions stuck in acute care settings is acknowledged to be inefficient, expensive and delivering poor care outcomes. It is self-evident that an avoidable admission to hospital is distressing for patients and their families and wastes acute NHS resources.

The Demographic Pressure

- By 2018, 3m people will have 3+ long-term conditions, whether physical, mental, or both.
- For people 75+, the number of emergency admissions has increased by 31% over the last 10 years.
- At least a fifth of these emergency admissions are estimated to be directly avoidable in some way.
- 23% of older people discharged after an overnight stay said they felt very vulnerable when they came home[2].

Professionals see integrated care across all health, care and housing sectors as a 'NO CHOICE' challenge. If it is not delivered the costs and demands will cause the system to 'fall over' and yet for all but a few champions it still sits in the 'TOO TOUGH' box as solutions seem almost impossible to deliver.

Key barriers to this change include:

One of the answers to the pressures within the NHS is the increased use of Technology Enabled Care Services (TECS). TECS has an important role to play in facilitating better integration and more cohesive service delivery across traditional social care, health and housing boundaries. One of the most common issues service users raise is the need to deliver a more integrated service. Technology is potentially a key enabler. It is vital to start with the service user and deliver a holistic service[3].

2) Transforming Primary Care. NHS England/DH

3) http://www.good-governance.org.uk/rethinking-the-integration-agenda/

What is Technology Enabled Care Services (TECS)?

The scope of Technology Enabled Care Services encompasses a wide range of products and services, from low level gadgets available on the high street through to traditional telecare/telehealth and emerging digital technology (including mobile phones, apps and televideo).

These solutions offer a way of delivering tailored care for patients and their carers in any care setting, thereby improving quality of life and preventing the need for more costly and intensive support (e.g. admission to acute setting and long-term care supporting early discharge).

TECS includes the provision of health and care services by way of hardware and/or software devices, remote monitoring devices, devices that assist independent living, remote communications by healthcare professionals and mobile and IT solutions that are designed to improve an individual's healthcare or monitor it. Increasingly they involve educating and empowering people to manage their health (wellness) and long-term conditions.

What is telehealth?

- Telehealth provides timely, reliable, trend-based clinical information enabling the early identification of changes to a patient's condition, aiding decision-making and providing proactive care and support for the patient
- Effective implementation of telehealth combines technology and services that enable patients to learn about their condition and monitor their vital signs (e.g. pulse, blood pressure, weight) and condition symptoms, at home on a daily basis. The patient information is then transmitted from the patient's home location and reviewed periodically by a health professional
- It is most commonly used for supporting the care of patients with COPD (chronic obstructive pulmonary disease), heart failure and diabetes, however, Tunstall have examples in supporting care with UTI (urinary tract infection), stroke, hypertension, AF (atrial fibrillation), obesity and pain management

Telehealth solutions specifically offer the following benefits

- Enable the transformation of clinical services and patient pathways, allowing patients to be cared for and monitored from home
- Free up valuable health resources by reducing unplanned hospital admissions, bed days, readmission rates and the number of unnecessary journeys made by care staff
- Enhance patient self-care and improve patient anxiety
- Improve a patient's understanding of their condition, helping them to make appropriate and positive choices about their care
- Aid in medication compliance and provide greater reassurance for family members
- Help clinicians provide tailored, personalised care designed specifically to fit the needs of the patient

What is the difference between telecare & telehealth?

The main difference is that telecare is a 24 hours a day emergency service managing real time risks to a person's independence, such as falls, wandering, fire and safety. Telehealth is a remote monitoring system that manages the trends relating to an individual's health condition.

The history of the introduction of telecare and telehealth in the UK

Telecare has been around since the 1960s with its roots in sheltered housing provision. Today in the UK there are approximately 1.7 million telecare users and 250 telecare monitoring centres. The past growth in telecare use arises from an £80m public policy initiative, the Preventative Technology Grant offered to public bodies in England by the Department of Health (DH) between 2006 and 2009. This grant aimed to support an additional 160,000 people using telecare and there were similar initiatives in Scotland and Wales[4].

4) http://www.jitscotland.org.uk/action-areas/telehealth-and-telecare/

This DH funding was directed at social care and was designed to 'pump-prime' telecare projects which could, in the longer term, become 'sustainable'. It came about due to evidence from West Lothian in Scotland that showed: 'Telecare… helped West Lothian achieve the lowest proportion of delayed hospital discharges of older people in Scotland and reduced the average stay in private care homes from 36 to 18 months'.

In 2008 the Whole Systems Demonstrator (WSD) Programme was established with trials in Kent, Cornwall and the London Borough of Newham to provide integrated health and social care supported by telecare and telehealth to over 6,000 people, making it the world's largest randomised control trial of telecare and telehealth services.

While telecare has been used in the UK for over 50 years, telehealth has only been present for a decade. However the evidence base for telehealth, whilst still evolving, is compelling. The findings from the Whole Systems Demonstrator (WSD) programme, showed that telehealth achieved a:

- 15% reduction in A&E attendances
- 20% reduction in emergency hospital admissions
- 14% reduction in hospital bed days
- 8% reduction in tariff costs
- 45% reduction in mortality rates[5]

In addition, the DH estimates that savings from the widespread use of telecare and telehealth could save the NHS up to £1.2 billion over five years[6].

University of Salford systematic review of evidence

The University of Salford has carried out a systematic review of the literature to research the effectiveness of telehealth on clinical outcomes, cost effectiveness and patient experience. Telehealth allows patients to monitor long-term health conditions from home, reducing visits to a clinic or hospital. Patients are able to measure factors such as blood pressure and blood glucose levels, and the readings are automatically transmitted to health professionals who can make decisions about interventions.
A wide-ranging review of existing studies found that telehealth is effective in:

- Reducing patient mortality and hospital admissions for chronic heart failure
- Reducing hospital admissions for COPD
- Reducing blood pressure in hypertension
- Improving glycaemic control in diabetes
- Reducing symptoms in asthma[7]

5) http://www.bmj.com/content/344/bmj.e3874
6) http://www.good-governance.org.uk/better-care-for-people-with-long-term-conditions-the-quality-and-good-governance-of-telehealth-services/
7) Telehealth: The effects on clinical outcomes, cost effectiveness and the patient experience: a systematic overview of the literature, University of Salford, Dr Alison Brettle, Tamara Brown, Professor Nicolas Hardiker, Jon Radcliffe, Christine Smith http://usir.salford.ac.uk/29392/

Case study: London Borough of Hillingdon's telecare service programme results:

In April 2014, Hillingdon decided to extend the free TeleCareLine telecare service to all residents over 80. The leadership within the Council supported this key move as a result of its success and today, more than 3,000 people benefit from the independence and support telecare brings. Here is a summary of achievements:

- More than 3,379 TeleCareLine installations have been completed since 1 April 2011. Of these installations, more than 1,663 have been self-referrals from Hillingdon residents as a result of the Council's efforts to raise awareness of the telecare service at user level
- The telecare and reablement service achieved the financial savings target of £4,957,000 by March 2014
- From January 2013 to February 2014 the percentage of residents not requiring further services after the initial six week reablement programme was 46.44% and the number of residents who only required a reduced service after their reablement period was 16.83%
- Long-term residential/nursing care placements reduced from 8.08 per week in 2010 to 2.13 per week by the end of 2013/14
- Accessibility - free telecare for everyone over 85 was extended to everyone over 80 in April 2014
- Safer walking pilot launched in May 2013 with 46 current active users[8]

International telehealth adoption

Case Study: US Department of Veteran Affairs

In the US, the Department of Veteran Affairs, has been using telehealth for a number of years. It's June 2014 study shows telehealth cuts costs and boosts care for veterans. Adam Darkins, author of the study and chief consultant for telehealth services at VA, found that annual healthcare expenses between 2009 and 2012 for veterans treated via telehealth decreased by 4% one year after beginning the use of such services. In fiscal year 2013 alone, Darkins said that VA-specific telehealth applications delivered care from 151 VA medical centers and more than 705 community-based outpatient clinics. Of the 608,900 veterans who were treated via telehealth, 45% lived in rural areas. In total, nearly 1.8 million episodes of care used telehealth services. The number of veterans receiving telehealthcare is increasing by about 22% each year. In addition, the study found that in FY 2013:

- Home telehealth services reduced bed days of care by 59%
- Home telehealth services reduced hospital admissions by 35%
- Clinical video telehealth services reduced bed days of care for mental health by 38% (Darkins, VA Health Care presentation, 6/17)[9]

8) http://uk.tunstall.com/Uploads/Documents/London%20Borough%20of%20Hillingdon%20-%20Telecare%20provided%20free%20to%20over%2085s.pdf

9) http://www.ihealthbeat.org/articles/2014/6/20/va-study-shows-telehealth-cuts-costs-boosts-care-for-veterans

5. Findings on the barriers to introduction of TECS

The key barriers identified by the GGI survey and focus group were:

1. **Lack of resources** to invest in equipment, installation, maintenance and redesign of systems and processes and training of staff to introduce the new system.

2. **Mixed evidence.** Parts of the health and social care professional networks believe that there is lack of evidence to justify the introduction of telehealth. This perception derives from some of the mixed results on costs savings in WSD trials and other research. For the right patients telehealth is transformational.

3. **Poor incentives.** There are perverse incentives in the existing system. The introduction of the 'year of care' tariff for patients with long-term conditions, including telehealthcare, could be helpful and should ensure that the current payment system is re-aligned to encourage more preventative methods of health and social care. The piloting of the new tariff arrangements should be expedited to help transform the health and social care delivery system.

4. **Poor referral accessibility.** TECS needs to be available for all appropriate professionals to refer into the service. In some areas only social care professionals are allowed to refer for telecare, and hospital teams cannot.

5. **Cultural resistance to change.** TECS is a disruptive intervention and by its very nature it goes against the traditional training and modes of operation in a clinical setting.

6. **Poor integration.** There is mismatch between health and social care and the interdisciplinary relationships between health and social care are not present.

7. **Structural instability**. Often as soon as teams become accustomed to the new service, the commissioners withdraw the services.

8. **Poor public awareness.** Potential service users and their families are unaware this solution exists to transform their lives.

9. **Workforce training.** Staff in health and social care do not have the training and awareness to deliver these services.

Case study: Birmingham City Council and health and housing partners

Birmingham is the most ethnically diverse city in the UK, and its population of over 65s is set to grow by over 23% to reach 168,000 by 2030. Birmingham has higher rates of hospital admissions due to falls (5.2%) than the national average (3.3%). Birmingham City Council has invested £14 million in a large-scale, city-wide telecare service in partnership with Tunstall. The deployment, which is believed to be the first of its kind in the UK is already benefitting 9,500 people and will ensure safety and support for up to 27,000 older and vulnerable residents whilst maximising their independence.

The service has created local jobs and is free through an innovative public and private sector partnership between the Council and Tunstall. It involves partners from health, CCGs and housing. It is also delivering savings, with an estimated £900,000 saved in care costs in its first year of operation. By making the strategic decision to extend the telecare service provision to more people, the Council expects to create a systemic shift towards early intervention and preventative services, to meet growing demand for increasingly personalised care packages. Birmingham City Council have made the decision to partner with Tunstall to deliver the whole system, from assessment and response to installation and monitoring[10].

Case study: Mr & Mrs C – adjusting to life after a stroke with telecare – integrating services around the individual

The Challenge
Mr C was a fit and healthy 67 year old when he suddenly had a stroke.

Mr C can no longer speak, has memory problems, suffers from incontinence, exits the home during the night and has other cognitive difficulties.

Since the stroke, Mrs C has reduced her hours at work and was considering giving up work.

Mr C remained in hospital some six weeks.

The Solution
Following a person-centred assessment, including completion of a carer's assessment, a personal budget was identified of around £17,000 per annum. Continuing Health Care funding was granted to support Mr C, at crucial times during the day, supplemented by a telecare package which included:

DDA pager – for the carer to wear during the day and to send an alarm to a vibrating under pillow alert during the night – all sensors would alert the pager rather than be sent to an external monitoring centre initially.

Enuresis sensor – to alert to incidents occurring during the night.

Pressure mat – to indicate movement at the top of the stairs.

Door contacts – connected to a door announcer with a recording of his wife's voice saying "wait for me before you go outside".

Bed sensor – to automatically gradually turn a light on and alert Mrs C if Mr C left the bed during the night.

Mrs C did not want her husband home from hospital without telecare in place as she felt the risks were too great. As a result of the telecare package, Mr C was discharged early from hospital.

10) http://www.birminghamtelecareservice.co.uk/

6. Recommendations

Given the findings it is clear that the case for telehealth needs to be re-established and awareness of its benefits improved to drive demand. Funding mechanisms need to be better aligned and the system for delivering the service needs to be transformed.

Restate the evidence

- A Cochrane Review of the data on TECS that has been published so far would help to overcome the scepticism in many parts of the health service. We need to look at sites where it is working and replicate what is happening on the ground
- Benefits for patients should be the main driver for the introduction of telehealth with less emphasis on financial gains which will be very difficult to achieve without disinvestment (e.g. in hospitals)

National awareness programme and patient empowerment campaign

- There needs to be a focused campaign on patient empowerment. Patients and their families will drive change if they are aware of the benefits of telehealth and ask for these services. They are the ones who are driving email consultations and video with GPs
- Patients can be responsible for their own care (e.g. home glucose meters to take home rather than having to attend A&E and phoning your GP)
- Promoting the benefits through campaigns such as the Dementia Challenge, using ambassadors, peer support and hearing from someone with experience
- Name national and local champions. A "personal technology" czar?
- Emphasise that it is available for all. There are services available to assist ALL people – they are not only reserved for patients with dementia or one type of long-term condition or of a certain age

Make sure the resource is available and financial incentives aligned

- **Funding** - Funding and financing remain key barriers to delivering an integrated care experience for patients and removing such obstacles will present clear opportunities for delivering care that is patient and user-centric. Reforms to tariffs will be a major part of this and the development of new tariff structures such as the 'year of care' tariff for patients will help. Such developments should assist in ensuring that the narrative and associated statements are delivered
- **Pool budgets between health and social care** - There is emerging evidence that pooling health, housing and social care budgets can lead to greater integration as both risks and rewards are shared between commissioners. Pooled budgets allow commissioners to work more closely together and deliver redesigned preventative services that can lead to improvements in user experience and outcomes. It will be important that any pooled budgets are properly ring-fenced, as there is evidence that local authorities have used the removal of the ring-fence for some adult social care grants to transfer budgets to other areas of expenditure, increasing pressures on local health economies.
- **Introduce a top sliced fund** that could be bid for to introduce the new system
- **Drive forward integration** - The Better Care Fund should drive integration forward. It requires agencies to work together and make joint commitments. Telehealth needs to be part of the mix of options available. Significant attention and focus needs to go into enabling multi-disciplinary teams to work together so that their behaviour and practice changes. This needs to be incentivised in ways which reward home based care
- **Incentives** - To incentivise the uptake and delivery of the narrative NHS England should explore the applicability of financial incentives, including Commissioning for Quality and Innovation (CQUIN) indicators to drive uptake of integrated care and link this to patient experience
- **Commissioning for Outcome-Based Incentivised Contracts (COBICs)** is a specific example of how commissioners can catalyse the creation of health outcomes of oriented integrated care by introducing incentives into the market in new and innovative ways, and using contractual forms that are new to the NHS. COBICs involve commissioning on the basis of outcomes achieved. This requires a lead contractor to subcontract, and is paid based on outcomes. If there was pressure to go down the COBIC route, then TECS would rise to the surface. CCGs have other priorities currently. The commissioner just wants delivery of the outcomes. COBIC removes the issues of incentives and how the contract is monitored and the deliverer is free to innovate[11]

11) http://www.rightcare.nhs.uk/index.php/resourcecentre/commissioning-for-value-best-practice-casebooks/integrated-care-and-health-outcomes-based-contract-cobic/

Transform the system

System wide cultural change is needed to make telehealth work. This means:

- **National implementation team** - Changing beliefs and job roles requires strong leadership and change management. Staff have to engage in a change management exercise, which will be better for them and better for patients
- **National training programme** for relevant professionals. Health Education England should remove arbitrary boundaries around allied professional education for doctors and nurses, and improve cross-functional training
- **National pathways** - To introduce telehealth at scale you have to change the care pathway. NICE has a role to play
- **Redesigning services** - To deliver this for patients and service users, will require new ways of working and re-designing the way care is delivered so that a whole-person approach is adopted. TECS is well placed to deliver this and work with the new bodies charged with driving this agenda, particularly health and wellbeing boards. The inclusion of housing, local authority and NHS representatives on these boards presents a real opportunity to change the way health and social care is delivered, including through pooling budgets across traditional organisational boundaries
- **GPs need to be incentivised** to change their referral behaviour in order to improve take up. They need to be encouraged to think of telehealth as data collection as it is an accurate and cost efficient way of collecting data compared with face-to-face consultations
- **Robust outcome measures and data collection** - Measures should include an indicator for integrated patient care in the fourth domain of the NHS Outcomes Framework. Such an indicator will need to properly capture the experience of patients in the community as well as those in secondary and residential care settings

Case study: London Borough of Havering telecare evaluation

Havering has around 2,500 telecare users and carried out robust, longitudinal analysis of three key measures – impact of assistive technology (telecare) and homecare (cohort A) compared with homecare only (cohort B) on:

- **general hospital admissions** – cohort A less likely to be admitted after 18 months by a margin of 25%
- **hospital admissions due to falls** – reduction of 44% in 2013 compared to 2011 which would convert to estimated annual savings of £2.24m (or if attributing 50% of this to assistive technology then £1.12m)
- **residential/nursing care admissions** – cohort A less likely to be admitted by a margin of 6% than cohort B which would equate to an annual net saving of £937,500
- Quality of life was also greatly improved – survey indicated:
  - 97% of users agree or strongly agree that they are more secure knowing that someone would respond in an emergency[12]

Case study: One Housing Group and Foundation Trust

- One Housing Group has taken a strategic approach to develop housing and community based solutions for people with mental health needs that deliver a reduction in need for hospital beds. They have formed a strategic partnership with a Foundation Trust, and embedded themselves in the supply chain
- Building on the Trust's land, One Housing Group has developed an extra care scheme for people with mental ill health. Technology is integral to the design and operation of the scheme, with CCTV and telecare underpinning the support services offered. The scheme provides a very attractive and safe place to live, as well as delivering a better and more effective pathway to support people with mental health needs; as a result only those requiring clinical interventions need to go into hospital. Service users generally stay for approximately 14 months, and are supported to move on to settled accommodation
- Savings come from the 60% reduction to date in acute admissions for those individuals supported in the extra care scheme for people with mental health needs. It provides a better experience for individuals with much better outcomes – and more move on successfully with fewer relapses[13]

12) http://democracy.havering.gov.uk/documents/s9914/HWB%20-%20paper%20on%20AT%20v5.pdf

13) Chartered Institute of Housing and Tunstall – Delivering housing, health and care outcomes http://www.cih.org/resources/PDF/Policy%20free%20download%20pdfs/Summit%20notes.pdf

Dementia

Dementia-friendly Technology Charter
The Dementia-friendly Technology Charter, produced as part of the dementia-friendly communities strand of the Prime Minister's challenge on dementia, was launched on the 17th June 2014.
Since November 2013, 33 organisations have collaborated on the production of the Charter, led by Tunstall Healthcare.

Alongside The Good Governance Institute, opinions were sought from individuals in health, housing, social care, providers and voluntary sectors and also those living with dementia.

The purpose of the Charter is to outline and encourage implementation of high-level principles and best practice for service providers to those suffering from dementia. It also aims to allow for every person with dementia to have the opportunity to benefit from technology appropriate to his or her needs.

Clinical Commissioning Groups, local authorities and housing commissioners, including integration pioneers, are encouraged to sign up to the Charter, as are service and technology providers.[14]

14) http://www.alzheimers.org.uk/technologycharter

7. Conclusion

This discussion paper has tried to demonstrate how technology enabled care services (TECS) can have an important role within the NHS. Extensive research and analysis of evidence has allowed for a detailed discussion of the benefits, delivery plan and how to successfully tackle the current barriers that are faced. The feedback of specialists with extensive expertise in the area of TECS has allowed us to produce a discussion paper that covers all aspects of the subject of introducing more TECS throughout the health sector.

These key components are:

- The need for telehealth
- Positives shown with telehealth abroad
- Quantitative and qualitative research to support benefits
- Tackling of costs and other barriers
- Recommendations
- Delivery model for TECS

The supporting evidence provided by the quantitative and qualitative research undertaken, demonstrates the positives of TECS. Highlights include:

- Half of respondents said that telehealth was "very important" and 35% said "important" in developing pathways for patients with long-term conditions and the better management of their care in the community
- The overwhelming majority (79%) of participants responded by saying they would be prepared to contribute to some or all of the costs or introducing telehealth from their own budgets
- A majority of (75%) respondents stated that there needs to be a system-wide cultural change in order to overcome the barriers of adopting TECS

Ensuring that patients access integrated care must be a central goal of future reform. This should not simply be about re-designing services and system structures (essential as they are) but about engaging patients to ensure that their experience of care is continuous across care settings. Technology Enabled Care Services can play a key role in integrating care for people and can make a real difference to their lives.

Appendix 1

GGI Survey Results

A range of CCG and Health and Wellbeing Board members were contacted via email to take part in a short online survey, which ran for two months, closing on the 16th June 2014. The survey focused on payment systems for telehealth and, in particular, looked to answer the question of how the barriers to funding telehealth could be overcome. Six questions were asked and in total there were 30 responses. The results of the survey can be seen below.

Question 1:

> Do you think that it should be a priority for the next Government to roll out Technology Enabled Care Services such as telehealth, to every person with a long-term health condition that would benefit from it, with no new funding?

57% of the respondents responded "no".

1a. If no, why not?

Funding should be made available first and then telehealth service implemented and sustained.
Telehealth Consultant

Successful telehealth implementation can only happen where care systems, processes and changing professional / patient behaviours enable this. Investment needs to be structured and must ensure that the foundations of information management (e.g bringing hospitals into 21st century with IT, high performance hardware / software / RBAC in place / training) are in place.
CCG

Not sufficient evidence on the impact and success of telehealth to warrant such a wide approach.
Chief Operating Officer

All new technologies are over-rated by enthusiasts and need time and practical evaluation so if you define the question better I would agree more!
Anonymous

Not suitable or cost effective for everyone with a LTC. Local pilots have had very mixed results and have not shown any significant reductions in emergency admissions or improved life expectancy.
Anonymous

1b. If yes, what are the barriers in your view to this happening, apart from cash constraints?

Lack of understanding of the benefits.
Anonymous

Behaviour change from health and care practitioners, based on protectionism of professional expertise and income streams.
Assistant Director for Strategic Planning

Considerable 'hearts and minds' work would be needed.
Overcoming previous negative publications and general lack of awareness.
Anonymous

Strong, transparent working between health, social care and housing, with a uniform willingness to disinvest in some areas in order to invest in telehealthcare.
Telecare transformation lead

Question 2:

How important is telehealth to your organisation in developing pathways for patients with long-term conditions and the better management of their care in the community?

Half of the respondents responded that telehealth was "very important"to their organisation.
In addition, 35% responded that it was "important to their organisation".

Come back in 10 years and it will be integral to what we do but currently a solution looking for a problem. Until it is adopted (and funded) by mainstream primary and secondary care and the benefits to patients and medicine clear then it will struggle to be adopted. There is no new cash to invest; the case for cost effectiveness is not yet overwhelming enough.
Chair, CCG

We are using and gaining evidence.
Chair and Clinical Lead, CCG

Assistive technology, including telecare and telehealth are vital to the cost effective delivery of care and support; not telehealth in isolation.
Telecare Transformation Lead

Question 3:

What can be done to overcome barriers to adoption of Technology Enabled Care Services ? Please mark the following statements in order of priority to your organisation.

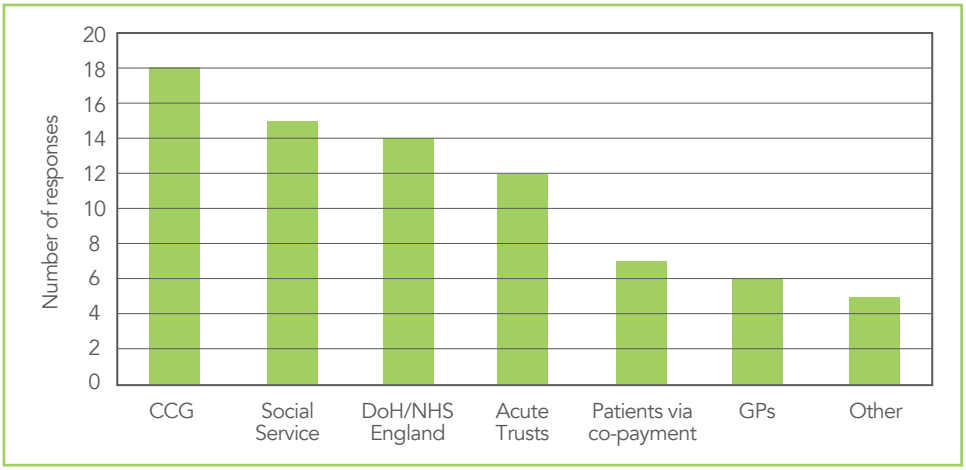
High Priorities	% Responses
Data interoperability	75.00%
System-wide cultural change	75.00%
Pooled budgets between health and social care	64.29%
Incentives that reward home based care	64.29%
More robust evidence	57.14%
National awareness programme	57.14%
Low Priorities	**% Responses**
Commissioning toolkits	50.00%
Government mandatory targets	35.71%
National training programme	32.14%

Other
It is very important to pick the patients who would benefit from remote monitoring very carefully. By doing so, studies may see a reduction in costs of care. The problem is that, a reduction in admissions by a particular cohort of patients using telehealth will not translate into a reduction in costs for a CCG unless it is matched by bed closure as beds will be filled with other patients therefore no cost reduction.
Clinical Lead for Innovation, Quality and Medicines Management, CCG

National procurement has a very unsuccessful track record, please avoid.
Chair, NHS Trust

Workforce to manage the technology.
Anonymous

If the costs of introducing telehealth have come from existing budgets, who do you think should pay?



Question 5:

Would you be prepared to contribute to some or all of the costs of introducing telehealth from your budgets?

The overwhelming majority (79%) of the participants responded "yes" to this question.

Other Comments:
We have already invested in technology and continue to do so. Implementation is easier where there is an incentive - this helps people 'test out' the technology and appreciate the benefits prior to being asked to invest.
Senior Development and Transformation Programme Manager

Because telehealth produces potential savings in different budgets at different times (e.g. social care and health) no-one wants to pay for it but is wanting the other organisation to pay.
Old Age Psychiatrist

Our organisation is a community co-op, we have no money for funding, but if we were a profit-making group we would budget for telehealth. Once we move into profit we will certainly have it in our budget.
Volunteer.

Case study: Norman, Cornwall – integrating services around the patient

Background
Norman was identified as a suitable candidate for telehealth services as he suffers from COPD and his breathing was becoming progressively more difficult. He had frequent infections requiring strong antibiotics and was invited onto the WSD programme – his equipment was installed in January 2010.

Outcomes
Readings produced trends enabling Norman to better manage his condition, resulting in less frequent infections. Blood pressure readings detected regular low pulse rates which were picked up by the telehealth nurses who alerted his GP. As a result, the GP asked him to visit the surgery for an ECG. Following ECG he was referred to a cardiologist who diagnosed bradycardia that required a small operation to rectify.

"It's thanks to telehealth that this was detected. I've always had a low pulse but it showed it was very low, the on call doctor was very concerned."

Appendix 2

Members of the Tunstall Clinical Advisory Group who participated in the GGI facilitated workshop:

Andrew Corbett-Nolan	Chief Executive, Good Governance Institute
Dr. Zoe Wyrko	Consultant Geriatrician, University Hospitals Birmingham NHS Foundation Trust
Dr. Amanda Thompsell	Consultant Old Age Psychiatrist, South London and the Maudsley NHS Foundation Trust
Dr. Adrian Heald	Consultant Physician in Diabetes and Endocrinology, Mid-Cheshire Hospitals NHS Foundation Trust
Dr. Simon Fradd	General Practitioner, Southwark and Chairman and Medical Director, Concordia Health, London
Dr. Linda Patterson OBE	Clinical Vice-President, Royal College of Physicians of London
Elizabeth Butler	Chair, Lewisham and Greenwich NHS Trust
Thomas Mytton	GGI, Research Analyst
Stephanie Elsy	GGI, Senior Associate

About the authors

Stephanie Elsy, Senior Associate, Good Governance Institute
Stephanie has worked in the delivery of public services for over 30 years. For 15 years she managed community and residential services for people recovering from substance misuse, people with disabilities and people living with long term conditions. She was a Council Leader in London and sat on her local PCT. She ran a consultancy before joining Serco Group as a Director in 2004. Stephanie left Serco in 2012 to establish a new consultancy business, Stephanie Elsy Associates, advising a number of businesses and public sector bodies.

Alison Rogan, External Affairs Director, Tunstall Healthcare
Alison works closely with partners in the charity, health, housing and care sectors and represents the industry by being a member of various groups including the Chair of the Alzheimer's Society Dementia Friendly Technology sub-sector task group, active member of NHS England's TECS (Technology Enabled Care Services, formerly 3millionlives) Implementation Group and Skills for Care workforce strategy.

About GGI

GGI is an independent organisation working to improve governance through both direct work with individual boards and governing bodies, and by promoting better practice through broader, national programmes and studies. We run board development programmes, undertake governance reviews and support organisations develop towards authorisations.

About Tunstall

Tunstall Healthcare is the world's leading provider of telehealthcare solutions operating in over 50 countries and supporting over 3.6m people. Our technology and services play a key role in helping older people and those with long-term health and care needs to stay out of hospital or residential care and enjoy a better quality of life. Tunstall is working with over 90 primary care organisations across the UK, the vast majority of local authorities and housing associations. We work closely with the NHS, local authority and housing partners to deliver integrated services that cross traditional boundaries and protect people's wellbeing and empower them to live their lives to the full. Tunstall is the only organisation embedded across each sector to help deliver this.

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Case study

SEQOL is responsible for delivering health and social care in the Swindon area, and has been using telehealth to support the delivery of integrated services to people with long-term chronic conditions in the community.

Len is 62, and has cardiomyopathy. He has had a pacemaker fitted as well as an internal defibrillator as his heart regularly goes out of rhythm. His condition meant he was admitted to hospital no less than 143 times in nine years, at an approximate overall cost of £357,500.

Len has been using telehealth to monitor his symptoms at home and as a result he is much more knowledgeable about his condition, and better able to manage it in accordance with his self-management plan. If his weight increases he can take additional diuretics, and he knows the signs when his renal function is good or bad. Use of the system has also helped Len to reduce his weight to the point where he has recently been deemed clinically fit to go onto the heart transplant waiting list.

Since telehealth has helped to stabilise Len's condition, he has had no unplanned admissions to hospital and the cost of his care has also significantly reduced.

Since the SEQOL team provided Len with telehealth, the recurrent cost savings to the NHS are £250,000 per year.

"We used to have a bag permanently packed ready to go off to hospital. We were so worried all the time, and I needed a lot of time off work. The system means we understand much more of what's going on and can manage things at home rather than calling for an ambulance."
Jackie, Len's wife and carer[15]

15) http://uk.tunstall.com/Uploads/Documents/SEQOL%20-%20using%20telehealth%20to%20support%20self-care%20for%20people%20with%20long-term%20conditions%20and%20learning%20disabilities.pdf

www.good-governance.org.uk