END OF YEAR REPORT

2015/2016

Supporting Improvement, Integration and Innovation
Foreword

Technology enabled care is already transforming the way we deliver health, care and support services in Scotland, providing us with exciting opportunities to care in new ways and help manage rising costs and demand.

Benefits to date include:
- safe, effective and personalised care;
- easier access to services;
- more efficient use of workforce capacity and skills;
- reduced need to travel for professionals, patients, service users and carers.

Technology is making a difference to all aspects of our lives and it is imperative that we continue to build public and professional confidence in how even simple technologies can make a substantial difference to the services we provide. As global innovation produces ever smarter technology, our care systems must be flexible enough to adapt and embed new ways of working.

Scotland is currently recognised as a world leader in technology enabled care, with the Scottish Centre for Telehealth and Telecare (SCTT) at the forefront of supporting service redesign, delivering digital solutions and better outcomes for our citizens.

I am delighted to introduce you to the SCTT annual report, outlining the progress that has been made over this past year, and presenting our next steps in supporting Scotland’s journey.

Professor George Crooks
Director, Scottish Centre for Telehealth and Telecare, NHS 24
Introduction

Scotland has a strong foundation on which to progress technology enabled care. This is supported by the Scottish Centre for Telehealth and Telecare (SCTT) as a national resource, which performs the following key functions on behalf of Scotland and NHS 24:

- leading the design and development of new services;
- providing consultancy and facilitation services for partner organisations;
- supporting knowledge transfer and shared learning;
- engaging internationally to secure additional funding and to build expertise for the benefit of Scotland.

This year, and working in partnership with others, SCTT has:

- Supported 8,314 people to access online health and wellbeing services, providing advice and assistance for falls prevention and the self management of long term health and care issues;
- Improved access to psychological therapies for 2,889 patients who have commenced treatment. 80% of all referrals were made by GPs, with the remaining 20% coming from MasterMind cCBT service, with 2,889 patients commencing treatment. 80% of all referrals were made by GPs, with the remaining 20% coming from clinical psychology and other mental health services.
- Provided leadership and programme management to the national Teletechnology Enabled Care (TEC) Programme, which has enabled 4,937 patients to receive home and mobile health monitoring services across nine geographic areas of Scotland and expanded telecare services to 7,124 new service users;
- Enabled easier access to public sector services for citizens, by supporting secure video connections from their own devices to our NHS video conferencing system; and providing low cost video access to a range of services in support of our care homes and charitable organisations;
- Continued to improve access to care for people living in our remote or rural communities;
- Supported the more efficient use and improved patient adherence to medication, with the introduction of virtual polypharmacy review clinics;
- Supported shared learning and knowledge transfer for more than 4,095 ‘learning beneficiaries’ as a critical element of the expansion of technology enabled health and care;
- Supported knowledge transfer and shared learning for partners by delivering 14 business end-products, including - two European Memorandums of Understanding with the Basque Region and Catalonia in Spain, established Baseline and Implementation Guidelines for Home and Mobile Health Monitoring, and a Digital Dementia Charter with Alzheimer’s Scotland;
- Secured inward investment of €320k and reinforced Scotland’s positive international reputation on technology enabled health and care, engaging directly with a broad range of influential stakeholders.

Computerised Mental Health Services

MasterMind

There is significant evidence that computerised cognitive behaviour therapy (cCBT) works. As part of the three year European Mastermind Programme, a consortium of nine European Union members are working together to learn how to effectively implement cCBT at scale. Mastermind is targeted at people with low to moderate levels of depression and/or anxiety.

In Scotland, MasterMind has spent its first year developing, implementing and evaluating its cCBT services across four territorial Health Boards - Lanarkshire, Grampian, Fife and Shetland. The service currently utilises the digital software package Beating the Blues, and builds on services originally established in Forth Valley and Tayside in 2005 and 2007 respectively, who continue to offer cCBT as one of their care, mainstream psychological therapies.

In 2015/16, there were over 4,000 referrals to the MasterMind cCBT service, with 2,889 patients commencing treatment. 80% of all referrals were made by GPs, with the remaining 20% coming from clinical psychology and other mental health services.

Quotes from Patients

“I thought it was helpful because it was not intrusive and I could do it at a pace I could cope with. I am currently reducing my medication and am recognising at this stage the importance of having undertaken the course last year. I started to feel the benefits very quickly after taking the course, but it is certainly helping in maintaining my well being in the long term.”

“I found the online CBT extremely helpful. It has given strategies and confidence to help overcome difficulties and taught me different ways to view setbacks and think about problems in a different way. I feel more able to cope with what life throws at me without being overcome by it and would highly recommend anyone who struggles with life situations to try it out.”
Digital Cardiac Care

**Atrial Fibrillation**

SCCT is currently involved in the world’s largest screening trial to date using technology to help identify the prevalence of Atrial Fibrillation (AF) across Scotland. SCCT is part of a collaborative team with NHS Lothian, the Digital Health Institute (DHI), and health technology firm AliveCor, to trial the use of the AliveCor ECG App at scale in primary care.

Heart Zone

A digital information zone for people living with heart conditions was facilitated by SCCT and officially launched by NHS 24 as part of its national NHS Inform website.

Heart Zone provides a range of information and resources to support the self management of short and long term heart disease, as well as a range of inherited and congenital heart conditions.

Patient involvement has driven the content of the zone, created by Chest Heart Stroke Scotland in association with each of Scotland’s regional Health Boards, Scottish Ambulance Service and the British Heart Foundation.

**Monitoring Health in the Community**

United4Health

The three-year European United4Health programme formally finished in December 2015. It was set up in Scotland to implement large scale health monitoring solutions to support people living with diabetes, heart failure and lung disease. United4Health is the largest deployment study of Home and Mobile Health Monitoring in Scotland. Formal publication of its evaluation is pending, but is anticipated to demonstrate that “real life” scaling up of digital health monitoring solutions is not only feasible but can deliver important clinical results and a reduction in costs per patient through the use of at scale telehealth services.

**United4Health**

**Diabetes**

Through the use of innovative software, U4H enhanced the national NHS Scotland My Diabetes My Way (MDMW) interactive website, which is designed to support people who have Type 1 and insulin dependent Type 2 diabetes to better self-manage and control symptoms. Clinicians were able to provide better, more targeted, care while patients could effectively self manage their blood glucose levels.

**Chronic Obstructive Pulmonary Disease (COPD)**

Simple technology solutions, including the use of SMS Messaging provided patients with the ability to take and transmit a set of measurements, such as pulse oximetry, that would alert staff and patients to early signs of worsening condition.

**Congestive Heart Failure**

Home monitoring equipment allowed patients to easily collect and transmit specific health readings, such as weight gain or breathlessness, to their cardiac care team. This, together with education on how to self manage their condition, provided patients with the confidence to manage their condition at home, contributing to reductions in hospital admissions and outpatient appointments.

A repository of resources has been produced by U4H to support the procurement and implementation of technology enabled care at scale. http://sctt.org.uk/programmes/health/united4health

Click here to watch the United4Health video
The Technology Enabled Care Programme, announced in 2014 as a three-year £30 million Scotland-wide Programme, was established to help support the adoption and scaling of Telehealth and Telecare solutions. The overall aim of the TEC Programme is aligned with the National Telehealth & Telecare Delivery Plan. It is about significantly up-scaling tried and tested approaches across the following interlinked workstreams in 2015/16, four of which are led by SCTT:

- Extending the use of home health monitoring;
- Expanding use of video conferencing across all health and social care sectors, as well as growing its use for clinical/practitioner consultations;
- Building on the emerging national digital platforms to enable direct access to advice and assistance;
- Exploring the scope and benefits of switching from analogue to digital telecare services.

To date, HMHM successes include:

- The establishment of a clear base-line of users in Scotland at March 2015, on which further improvement and growth can be measured;
- Published research that identifies the critical success factors for implementing telehealth services at scale;
- A 285% increase in the home monitoring user base over one year, from 495 to 1900 people benefiting from remote health monitoring as part of their care;
- Development of a National Service Model for Home and Mobile Health Monitoring that is due to be published in 2016/17 and includes;
- Guidelines on HMHM:
  - A framework that describes a conceptual model core pathway template and common service components to act as a reference point for service re-design in health and social care organisations across the country;
  - Advice on organisational models, shared services and return on investment.

Video Enabled Services

The 2015/16 aim of the TEC Video Conferencing (VC) workstream was to expand the use of video services across health and social care, and increase its use for consultations. eHealth colleagues provide leadership for this workstream, with SCTT providing programme management support.

Significant progress has been made during 2015/16:

- Formal launch of the Scotland-wide Jabber Guest service by the National VC Team to support easier citizen access to video based consultations. This system has been introduced successfully over a number of specialties including speech and language therapy, occupational therapy and the treatment of diabetic leg ulcers.
- Development of the Call Manager platform. This allows low-cost video devices to be deployed using a standard internet connection and will support the development of a range of services to care homes, sheltered housing complexes and charitable organisations.
- Establishment of a Care Home Action Group to support the development of VC mediated services to care homes in Tayside, Borders, Lanarkshire and Midlothian. This has enabled successful VC testing within a number of Care Homes, which will support the rollout of a number of planned projects.

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Analogue to Digital Telecare

The TEC programme is currently exploring the scope and benefits of switching current Telecare provision from a predominantly analogue based system (i.e. through traditional telephony connections) to a digital service.

Independent IT and Telecoms consultancy, FarrPoint Ltd, was awarded the contract to conduct a feasibility study. The first of two reports, Telecare in Scotland Analogue to Digital Transition, has been published. This provides a working definition of ‘digital telecare’, identifies the current digital status of telecare services in Scotland and examines the potential benefits that a move to digital Telecare may deliver.

Its key findings fall into four main themes:

- Reliability – improving the reliability and quality of Telecare services, or ensuring the continuity of Telecare;
- Efficiency – 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.

A Cost Benefit Analysis of a transfer will be completed in Report 2 of this study, to explore the value and viability of such a transition.

Telecare

In 2015/16, the TEC Programme supported the expansion of telecare services to 7124 new service users. SCiT provides leadership and programme management for the TEC Telecare workstream which included:

Falls Prevention

Across Scotland 14 partnerships are working with the Scottish Ambulance Service and Scottish Fire and Rescue to develop technology enabled pathways to support falls prevention and management.

Scottish Fire & Rescue have also developed a demonstrator home environment at their Scottish National Training Centre with embedded technology, and have undertaken home safety training to identify potential falls risk as part of ongoing staff development.

Technology Support for Dementia

TEC has funded 14 partnerships to support people living with dementia and their carers, including nine projects to expand the use of GPS technology to support safer navigation in the community. Additionally, Alzheimer’s Scotland received funding to support early embedding of technology as part of a person’s care, and have produced Scotland’s first Dementia Technology Charter.

Reduced Delays in Hospital Discharge

Technology demonstration areas have been established within the acute health sector to familiarise families, carers and professionals with the range of available supportive technologies. This has directly resulted in increased referrals, and embedded telecare as part of standard hospital discharge processes, contributing to a decrease in delayed discharges.

Awareness Raising

Ongoing public and professional awareness raising and development of telecare has been supported through a series of webinars, national meetings, workshops, good practice guides as well as through local events at lunch clubs, sheltered housing etc.
**Online Access to Health & Wellbeing Services**

**Living it Up**

Living it Up (LiU), is an online supported, self-management service for people with long term health and care conditions ([www.livingitup.scot](http://www.livingitup.scot)). With over 23,000 ‘signed up’ users and members, LiU has now successfully moved from its innovative development phase into an early stage service. Funded by Scottish Government, LiU has been co-designed with local partners and communities across Scotland to help address the increasing demands on health and care services. Exciting initiatives have been progressed this year with its partners, such as supporting Hibernian FC and NHS Lothian with their GameChanger programme, promoting health checks and healthy activity.

**SmartCare**

This three-year programme was set up to improve Falls Prevention and Management, by supporting integration through improved care co-ordination and communication.

SmartCare is on target to deliver technology enabled, integrated care in partnership with seven health and care partnerships in Ayrshire & Arran, Lanarkshire and Renfrewshire / East Renfrewshire. Some significant developments have been implemented this year.

Jointly funded by the Scottish Government and the European Commission, SmartCare has worked with local communities and industry to co-design and develop three digital tools – a Person Held File, Care Coordination Calendar and a Falls Self Assessment Tool.

- Renfrewshire Partnership to electronically share Assessment and Care Plan information with around 30 service users, evidencing real organisational and user benefits;
- NHS National Services Scotland and Atos in the process of integrating the Emergency Care Summary information into the Person Held File as an initial pilot for 10 users;
- Around 400 users to share aspects of their Person Held File with other people and organisations;
- Users to share their Care Coordination Calendar with their carers and professionals;
- North Ayrshire Partnership to integrate Care at Home Appointments within the Care Co-ordination Calendar via the CM 2000 database. This provides users with the name of their visiting carer and verifies the time of their appointment;
- 1,839 people to access the Falls Self Assessment Tool, benefiting from personalised falls related information and advice. Fun games are being developed by Social Marketing Gateway to reinforce key prevention messages and engage users.

**Current evidence from LiU identifies:**

- It is generating preventative behaviours in its users, including a three times lower self-reported use of care services and six times higher self-reported levels of volunteering;
- LiU active users have greater levels of adherence to preventative care and health routines; more appropriate food selection and diet choices; and more resilient coping strategies for the care of their health;
- It supports the introduction of digital health and wellbeing products into the statutory health and wellbeing sector in Scotland.
Improved Access to Care

Neurology Clinics
SCCT continues to provide support for the establishment of Telesneurology clinics across Scotland. In collaboration with the Department of Neurology at Ninewells Hospital and the locality integration staff in Forfar, an additional clinic has now been facilitated with Whitehills Community Health and Care Centre in Angus.

The clinic has so far provided 17 patients with access to specialist neurology staff closer to home, saving patients from long journeys to access specialist care.

Polypharmacy Reviews - Prescription for Excellence
As part of the Scottish Government’s Prescription for Excellence programme, SCTT is currently supporting the development of a small portfolio of technology enabled projects that:

- supports people to better manage their medication;
- improves adherence;
- widens access to pharmaceutical care review services for people in Care Homes and in their own homes.

Programme partners include Ayrshire & Arran, Borders, Highland, Lanarkshire, Lothian and Shetland.

In 2015/16, the programme enabled NHS Highland to deliver a Polypharmacy Review service via Video Consultation (VC) to three care homes in Lochaber. More than 40 people living in remote and rural locations were able to have their medication reviewed via VC by a pharmacist based in Dingwall. Expansion of this service is expected in 2016 across Lanarkshire, Ayrshire & Arran and Shetland.

Custodial Health Care
SCCT provided support for the development and delivery of Scotland’s first ever VC-enabled out-of-hours service within a Scottish prison. Since go-live in January 2016, 20 people in custody have benefited from faster access to specialist care, including medical, psychiatric and addiction issues. Seven doctors have now been trained to deliver the new service.

Doctor:
“It’s gone very well from the doctor’s point of view. Informal feedback from the nurses also positive and we have had no complaints I am aware of.

“Assessing new admissions to prison is usually a routine administrative task taking around 10 minutes per patient. When HMP Greenock became unable to find local doctors with the necessary training, we developed the telemedicine service. The IT equipment was already in place and we designed a pro forma for nurses and doctors to complete for each patient. The nurses are there in person to take clinical observations such as blood pressure and assess things like drug and alcohol withdrawal scores. The doctor then dials in by video link to carry out the assessment of the patient’s medical, psychiatric and addictions problems. Prescribing is easily facilitated by standard remote prescribing procedures.

“A service that had been difficult, and latterly impossible, to cover became simple, efficient and cost effective. We have had no adverse incidents and nurses and doctors all speak highly of it. SCCT provided valuable support in helping us to set up and facilitate this new service model of care.”

International Engagement

SCCT has continued to engage in a wide range of international knowledge exchange programmes, network activities and partnerships this year, in order to globally promote the Scottish digital health and care agenda. Although our predominant focus has been Europe, engagements with Japan, United States, Canada, Australia and New Zealand have also featured, demonstrating a wide range of interest in what we are doing.

Collaboration Opportunities
Over 2015/16, SCCT has received 97 business enquiries, including invitations to participate as a partner in European funding submissions. This is a significant increase in activity from the previous year and is evidence of Scotland’s growing reputation in the technology enabled care international community. The SCCT European Team, has researched, engaged and developed 7 funding submissions over the year, with 1 successful, 1 pending decision, and 1 requested to resubmit. This is a very strong performance, giving regard to the significant competition for European funding.

Memorandums of Understanding
On behalf of the Scottish Government, SCTT agreed two Memorandums of Understanding during 2015 – one with the Basque Ministries for Health and Social Welfare and the other with the Catalan Health Ministry. Their purpose is to share knowledge and good practice through technology enabled health and care services in an in depth way.

European Innovation Partnership on Active and Healthy Ageing
SCCT continues to play an active role in the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA). This voluntary collaboration of EU regions brings together industry, research institutions and healthcare professionals to share good practices and innovative solutions to meet the needs of our ageing populations.

As part of this, SCCT leads the B3 Action Group on Integrated Care and led the development of a new Maturity Model for Integrated Care – a self-assessment tool designed to help regions and organisations assess how well developed their approach to health and care integration is. This piece of work enabled a successful EU funded project application, called SCIROCCO (see below), which will see the further development and validation of the Maturity Model for use across Europe.

SCIROCCO – Scaling Integrated Care in Context
SCCT was awarded European Public Health Programme funding for the integrated care programme SCIROCCO which will launch in April 2016.

As lead partner, SCCT will work with European regions and universities on the development of self-assessment tools to facilitate scaling-up and transfer of good practices in integrated care across Europe.
Priorities 2016/17

SCoTT’s focus for the next 5 years will be on the expansion and embedding of:
- home and mobile monitoring;
- telecare (including digital telecare);
- video conferencing enabled services;
- mental health and wellbeing applications and services.

We will continue to promote and develop citizen centred solutions that reduce pressure on formal public services and create economic benefit for Scotland.

During this coming year, SCoTT will continue its significant support for the Scottish Government’s national Technology Enabled Care programme, and in particular provide leadership and programme management to the Home and Mobile Health and Telecare workstreams, programme management for the Video Enabled Services workstream and support the digital platform and improvement programme for staff. We will also further develop our thinking around appropriate evaluation methodologies and our approach to the analysis and sharing of lessons learned.

Additionally, 2016/17 will see the completion of some existing programmes of activity and the introduction of new programmes including:

- The SCoRROCCO project which identifies the hallmarks for successful health and social care innovation and integration, and support twinning, coaching and scaling up of identified good practice in this area;
- Significant expansion of computerised CBT services in Scotland building on the experiences from the European Mastermind project;
- Further stabilisation and development of the Living It Up digital service.

Shared Learning & Knowledge Transfer

Over 2015/16, SCoTT facilitated and provided input to a very large range of Scottish, UK and International Events, supported learning and knowledge transfer for over 4,000 people.

Scottish Telehealth and Telecare Learning Network

An annual Learning Network event is facilitated by SCoTT to support knowledge exchange activities for staff working in health, social care, voluntary sector, housing, education, policy, research and supplier organisations.

The June 2015 event, held at Queen Margaret University, Edinburgh, focused on how lessons learned can be applied in multidisciplinary settings. Attendees heard about new solutions and met with exhibitors to learn more about their services and products. The event attracted more than 250 delegates, over 200 attended in person and additional numbers viewed the elements of the day which were streamed, either live or via ‘on demand’.

The Network communicates with members via an email distribution list, which currently has 500+ names, and a Community website which sits on the Knowledge Network:

Webcasts from the Learning Network day are available to view ‘on demand’. Two additional webcasts on the topic of Home and Mobile Health Monitoring have also been recorded.

Higher Education - Embedding Technology Enabled Health and Care

In 2015-16, SCoTT has delivered lectures, tutorials and podcasts directly to over 750 people, raising awareness about technology enabled health and care with academic staff and embedding this into undergraduate programmes and CPD modules. This activity has been supported by sharing resources directly with the academic staff and by increasing the number of HEIs who participate in the knowledge exchange events.

In addition, the Conference welcomed for the first time members of the public who brought their insights and experiences of using technology into the event’s workshops.

Interviews with speakers and delegates can be accessed at: http://sctt.org.uk/scottish-digital-health-care-week-2015/