Scotland: Home & Mobile Health Monitoring

Part 1: General Information

Publication on EIP on AHA Portal	Yes
Copyright	Yes
Verification of the Good Practice	Yes
Evaluation of the Good Practice	No
Type of the Good Practice	Notable practice

Part 2: Description of the Good Practice

Name of the Good Practice	Home & Mobile Health Monitoring
Short name (Acronym)	HMHM
URL of the Good Practice	Not available
Geographical scope	Regional level
Country	Scotland
Region(s) involved	Scotland
Status of the Good Practice	On-going
Stakeholders involved	• Hospitals • Primary care centres • Specialised physicians • General practitioners • Nurses • Small-sized • Industry • Research centres • Academia
Size of population covered	1,000-9,9999
Targeted audience	Irrelevant

Summary of the Good Practice

Under the auspices of the Technology Enabled Care (TEC) Programme (see separate Good Practice), the Scottish Government and the Scottish Centre for Telehealth & Telecare (SCTT) are aiming to expand the use of Home & Mobile Health Monitoring (HMHM) as part of integrated care plans to move beyond the same/medium scale initiatives that have been introduced in a small number of areas to substantial programme across Scotland, building on the EC-funded United4Health programme.

Specific funding was made available during 2015/16 to commence creation of a national service model for HMHM that is efficient from both a clinical and financial perspective. This includes improved patient targeting, triaging and monitoring arrangements and the introduction of more cost effective technologies.

A National Service Model is a tool that plays a supportive role in the management of service design and development. It can fulfil this role in a number of ways:

- Articulate the desired approach to HMHM in Scotland.
- • Provide a national reference point for service development and improvement.
- • Support the development and implementation of efficient services at scale.
- The framework seeks to:
- • Consolidate the best of the good work and learning that has already been attained by early adopters and service pioneers in Scotland
- • Bring in applicable learning from other parts of the world, especially Europe and North America
- • Establish a foundational service template designed to be scalable and efficient when applied in the context of services in Scotland
- • Provide a starting point from which new experiences based on common principles can be used to drive improvement in this field of practice.

Key words: Telehealth, clinical pathways, remote monitoring

Good practice being part of the larger programme

Yes.

Part of the Technology Enabled Care (TEC) Programme. The TEC Programme is subject to a separate Good Practice submission, but can be summed up as national government providing support to local delivery organisations to ensure that outcomes for individuals, in home or community settings, are improved through

the application of technology as an integral part of quality cost- effective care and support.
Challenges / problems addressed by the good practice The use of, and evidence for, HMHM solutions and approaches continues to grow, both within Scotland and further afield. Much of this has been driven by either individual clinical leaders or as part of trials, pilots or other comparatively small-scale activity. As the activity grows, so does the disparity in approaches and technological solutions utilised. As HMHM services in Scotland begin to move into the early stages of scaling-up, this initial 'Release 1.0' Model forms a starting point for evolutionary development. Release 1.0 aims to establish a national direction of travel and support wider participation from health and care organisations across Scotland.
Importance of the challenges / problems before starting to implement good practice Reducing variation and unnecessary cost are key drivers, as are the recognised need to drive up standards. This is applicable to any at-scale approach, so is not unique to this Good Practice.
Environment before the good practice was implemented The model itself is based on several years of experience gained through a combination of small local initiatives and Scotland's involvement in the large-scale United4Health project. All of the evidence garnered from those experiences led to the conclusion that a national model was required to facilitate at scale mainstream adoption. In other words, what was in place before was local approaches, and through the model we are moving to a national approach for HMHM.
Key innovative elements of the good practice and how the good practice improved situation compared to previous practice As per the answer to 21, the practice represents a culmination of our collective knowledge and experience to date. The framework is constructed from the following components: • A conceptual model which describes the environment in which HMHM services operate, the citizens that these interventions best serve and the ways in which citizens and pathways are supported • A set of service principles to inform service and pathway design. These describe the purposes of interventions and underpin the attainment of cost and clinically effective interventions • A core service pathway and components to inform a consistent approach to pathway development and implementation across Scotland.

Part 3: Transferability of the Good Practice

Cost-effectiveness of the good practice (including all kind of costs and outcomes such as better health, quality of life or other resources)	Lower costs, improved outcomes
Resources required for the deployment of the good practice (personnel, equipment, facilities, ICT and other resources required Creating the national model has been primarily driven by personnel requirements rather than equipment, ICT etc. Implementation of the model, which is the next phase, will require further resourcing and is the main focus for 2016/17 and 2017/18.	
Total budget of the Good Practice	€1M - €5M
Source of funding	National funding
The main actions that have to be done to deploy the Good Practice The National team has established a National HMHM Network to support local delivery partners to scale up HMHM services. The network, now named HMHM Action Group primary aim is to provide implementation support to partners as well as maximise opportunities for knowledge transfer and shared learning between the partners and national team. The national team have provided additional coaching to TEC funded partners to help establish local infrastructures to implement and spread of HMHM enabled services. This included sharing best practice to promote better engagement, recruitment strategies and learning from at other national scale national programme in particular United4Health and other international at scale programmes. The National Team and a series HMHM task and finish groups have successfully collaborated to produce a number of keys elements of the National Model for HMHM including- o Development of core components of the National HMHM service Model; o Development of logic model for HMHM; o Series of SOP & HMHM pathways/services across Scotland, early work commenced on Heart Failure. The group will run throughout the life of the programme to continue to provide a peer support network for all partnerships and support the growing of expertise in building HMHM service models, service redesign & benefit realisation activities.	
Issues during the implementation of the Good Practice More lessons learned in implementing HMHM, rather than difficulties in developing the national model (which related more to time required in negotiations etc.). Our lessons learned on implementation include: • • Important not to underestimate how much time it takes to " start up " HMHM services, redesign care pathways , identify and train up staff in their new roles.	

- • Champions are important to initiate a project. A sustainable project needs a team as well a senior strategic leadership
- • A critical element in implementing HMHM enabled services is to have key stakeholders and staff members fully onboard and engaged as early as possible.
- • Dedicated Staff – recruit early as possible
- • HMHM needs to be viewed as an inherent part of the service not additional.

Additional resources required to scale up Good Practice

No

This first release of the Model is intended as a starting point for the encouragement, development and support of service redesign and expansion rather than a definitive guide. There is still a lot of innovation in this arena and new opportunities for HMHM to be utilised to the benefit of citizens, clinicians and services alike are being uncovered. This guidance needs to reflect the rate of discovery and new learning and as such will remain a 'living' document for the foreseeable future. Two companion documents to this National Service Model are in development. The first is an Implementation Guide. It seeks to package and share the best of the current learning about the operational aspects of HMHM service start-up and implementation. It is anticipated that this will become available late in 2016. The second document is Procurement Guidance. This is being developed in response to demand from TEC Programme Partners and is being designed for use locally in the first instance and also to inform national procurement activity as opportunities arise. It is anticipated that this will become available early in 2017.

Basis to support sustainability of the Good Practice

Primarily demand - there is a recognised need. The number of patients in Scotland with long-term conditions is growing fast and this trend is set to continue for at least the next 15 years.

These growth rates suggest significant and sustained increases in demand in the short and long term and in an environment where there is limited scope to increase the size of workforce to address this.

This means that working practices must change or in future citizens will have to wait significantly longer to receive treatment. This may in turn further increase pressure on services in the event that citizens need more resource intensive care because of increasing delays.

Home and mobile health monitoring can help to alleviate some of the pressure by supporting ways of working that reduce pressure on scarce clinical resources while improving citizen outcomes and experience.
Evidence to observe the Good Practice The good practice is observed via the report - http://sctt.org.uk/programmes/community/technology-enabled-care-programme/tec-programme-reports-publications- 2/ Study visit can also be accommodated.

Part 4: Viability assessment of the Good Practice

Time needed to deploy the Good Practice Less than a year; Developing the model itself has taken less than a year. However, it is based on close to a decade of engagement, experience and lessons learned. We are anticipating the next stage (i.e. its implementation) as taking 1-3 years, with the model itself being continuously updated and improved.
Investment per citizens / patient / client in terms of financial resources No available calculation. As the model has the potential to cover a whole host of clinical pathways, and is not prescriptive in what technologies should be used, it does not attempt to provide costs. It does, however, recognise the importance of considering Return on Investment. Adopting home and mobile health monitoring as a service enhancement involves incurring additional costs. These typically take the form of one-off costs; which are incurred through the start-up or expansion of an HMHM service, and the underlying service delivery costs i.e. those costs incurred exclusively in the continuing delivery of the monitoring service. For HMHM services to become established, embedded and optimised they need to be able to deliver sufficient benefits to justify the initial investment of resources and the continued support from core budgets. It is important to include discussions about RoI as early as practical in the planning of an HMHM initiative. This helps to focus and manage expectations about what will be achieved by the introduction or expansion of HMHM services. These discussions should be multi-disciplinary and include representatives with Clinical, Financial, Technology and Service Management responsibilities.
Evidence behind the Good Practice

Documented evidence. Evidence is based on systematic qualitative and quantitative studies. As this was about creating a model for implementation as a general concept, rather than a push to deliver a specific intervention for a specific condition using a specific type of technology, the exploration of the evidence was relatively broad. There is growing and compelling body of UK and international research that evaluates the clinical and cost effectiveness benefits of home health monitoring. Included in this body of work are a number of systematic reviews that evaluate the effectiveness of services using home monitoring as a component of care for patients with specific chronic conditions. These studies are complemented by a body of evidence provided from an increasing number of large Scale UK & EU funded projects.
Maturity of the Good Practice The idea has been formulated and/or research and experiments are underway to test a 'proof of concept'. Although the model itself is based on existing work, it has not yet been implemented. That is now our current focus.
Estimated time of impact of the Good Practice Long term and sustainable impact – e.g. a long time after the pilot project ended and routine day-to-day operation began
Impact observed Not available
Transferability of the Good Practice Ready for transfer, but the innovative practice has not been transferred yet. The innovative practice has been developed on local/regional/national level and transferability has been considered and structural, political and systematic recommendations have been presented. However, the innovative practice has not been transferred yet.

Part 5: Your organisation

Name of the organisation	Scottish Government
Address of the organisation	St. Andrews House, Regent Road, Edinburgh, EH1 3DG, Scotland, UK.
Type of organisation	National public authorities
Name of the contact person	Alistair Hodgson
Email address of the contact person	Alistair.hodgson@gov.scot