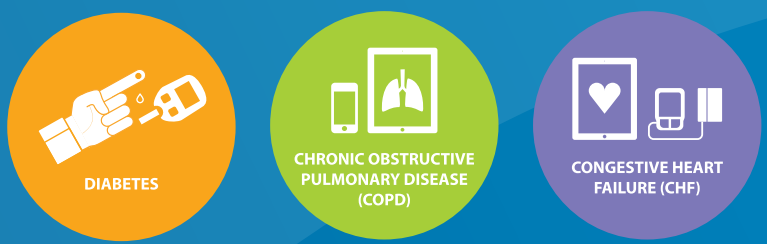
United4Health

Upscaling Telehealth

- the need for policy engagement



"Evidence has shown that successful transformational change on a large scale requires not only bottom up willingness to change but also top down policy support."

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Medical Director NHS 24

This version of the document is subject to a stakeholder consultation.

Executive Summary

United4Health is a European large-scale deployment project that has implemented and assessed the impact of innovative healthcare services for the remote monitoring of patients with chronic conditions. The project has included 19 service models in 14 regions in 10 countries. The sites deployed telemonitoring focused on managing and supporting patients with diabetes mellitus, chronic obstructive pulmonary disease, congestive heart failure or hypertension. The sites have procured any necessary technology, integrated it in their existing health care services and redesigned care pathways. They also undertook comprehensive evaluation of their activities.

Telehealth offers more accessible, equitable and sustainable services for the benefit of people in Europe. It does this in the face of considerable challenges to the sustainability of Europe's healthcare systems. In recent years, we have witnessed convergence between telehealth, mHealth, health analytics and electronic record systems in many United4Health deployment sites. This convergence will gather pace as healthcare systems are able to embrace “bring your own device” solutions and respond to the increasing realisation that telehealth is a critical component of the transformation of Europe’s healthcare

Policy makers at European, Member State, regional and local levels are now in a position to act to enable, promote and support telehealth deployment. They can do so by:

- Ensuring a policy environment that promotes and supports telehealth deployment.
- Seeking national consistency with local adaptation.
- Empowering patients, carers and healthcare professionals to take full advantage of each health.

Policy makers in European institutions are particularly asked by those involved in the United4Health large-scale deployment to:

- Ensure that the regulatory environments become more aligned across Member States so that barriers to markets are lowered, and regulation keeps pace with telehealth innovation.
- Fund scalable deployment programmes to catalyse the transformation of healthcare across Europe.
- Support those who deploy telehealth in real life through processes that enable cross-fertilisation at the European level, including collecting and sharing learnings that are aligned with United4Health's key success factors.
- Promote the use of validated evaluation methodologies and tools that can be applied in an action research approach.
- Ensure that all people involved in funding decisions (including external evaluators) assess proposals and projects in accordance with programme priorities and calls, i.e., deployment and not just research.
- Include these policy messages on the agenda of the eHealth Network and other relevant policy fora.

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1 Introduction

1.1 Purpose of this document

This document provides details of the policy messages derived from the findings and lessons learned within the United4Health project.

The key messages of United4Health were developed to be presented to a Science and Technology Options Assessment (STOA)[1] session in the European Parliament on 1 December 2015. Its purpose is to ensure that the learnings from United4Health are shared with European institutions, and national and regional policy makers.

[1] The Science and Technology Options Assessment (STOA) panel is composed of Members of the European Parliament (http://www.europarl.europa.eu/stoa/cms/home/about) and examines the impact of science and technology on European policy.

2 Background

This section of the document describes the United4Health large-scale deployment, its European context, and explains why the project has focused on telehealth.

2.1 About United4Health

United4Health is a European large-scale deployment project, the aim of which has been to implement and assess the impact of innovative healthcare services for the remote monitoring of patients with chronic conditions. The project included 19 service models in 14 regions in 10 countries that:

- Deployed innovative telehealth healthcare services.
- Procured the technology needed while addressing interoperability requirements.
- Conducted a comprehensive evaluation which included clinical outcomes, organisational assessment, economic analysis and captured lessons learned.
- Deployed telemonitoring and treatment of patients living with diabetes, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF) or hypertension (HTN).

The countries and regions involved are listed in the following table:

Table 1: Countries and regions involved in United4Health

Czech Republic	Northwest Moravia
Finland	South Karelia (Etelä-Karjala)
France	Nord Pas de Calais
Germany	Berlin
Greece	Central Greece (Στερεά Ελλάδα)
Italy	Calabria Campania
Norway	Northern Norway Southern Norway
Slovenia	Slovenia
Spain	Basque Country Galicia
United Kingdom	Scotland Wales

More information about the 14 regions in the consortium can be found on the United4Health project website[2].

[2] www.united4health.eu

Additional partners in the consortium that serve in an advisory and/or support function include:

- International Association of Mutual Benefit Societies (AIM).
- Continua Health Alliance (CHA).
- European Coordination Committee of the Radiological, Electromedical and Medical IT Industries (COCIR).
- European Health Telematics Association (EHTEL).
- European Wound Management Association (EWMA).
- Health Information Management SA (HIM SA).
- GSM Association (GSMA).

The consortium has also been supported by an Industry Advisory Team and a User Policy Advisory Board.

2.2 European policy context underpinning United4Health

The policy documents and programmes that provide the general policy context underpinning United4Health include:

- Article 14 of the 2011 Directive (2011/24/EU) on the application of patients' rights in cross-border healthcare that creates the eHealth Network, a voluntary network connecting national authorities responsible for eHealth for cooperation and exchange of information among Member States[3].
- Information and Communication Technologies Policy Support Programme (ICT PSP) of the Competitiveness and Innovation framework Programme (CIP) (2013-2015)[4].
- The Digital Agenda for Europe key action 13 related to telehealth deployment[5].
- The European Innovation Partnership on Active and Healthy Ageing, especially Action Group B3 on Integrated Care[6].

2.3 Why telehealth?

In the context of the United4Health project, the term telehealth is used to mean: "*telemonitoring as well as online tools for self-management, health monitoring and coaching via text messaging, and teleconsultations*."

Telehealth and other eHealth services are a critical component of the transformation of Europe's healthcare. They offer more accessible, equitable and sustainable services for the benefit of people in Europe. Therefore, policy-makers need to support and enable the deployment of telehealth. This has become obvious to the

[3] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011L0024
[4] http://ec.europa.eu/information_society/activities/ict_psp/index_en.htm
[5] http://europa.eu/rapid/press-release_MEMO-10-200_en.htm?locale=en
[6] http://ec.europa.eu/research/innovation-union/index_en.cfm?section=active-healthy-ageing&pg=action_group_b3

United4Health consortium members and their support environment, both through the work they have done and their observations of developments over recent years.

Telehealth is not going to go away happening now and:

- Enables health care to be provided when and where the patient needs it.
- Empowers patients and their carers to self-manage.
- Supports and deepens patient-clinician relationships.
- Meets the increasing demands of an ageing population and more prevalent chronic conditions, with a more efficient and effective use of over-stretched resources.

3 Telehealth solutions in United4Health

United4Health involved three different types of telehealth: telemonitoring including teleconsultations; health monitoring and coaching i.e., text messaging; and online health monitoring and support.

3.1 Telemonitoring including teleconsultations

United4Health partners have implemented a range of telemonitoring solutions – on smartphones, tablets, telehealth hubs linked to a telephone line – to accommodate varying patient needs, living environments and 3G/broadband strength.

A number of sites have established dedicated eHealth/telemedicine centres as part of their redesigned services model. Some regions, such as the Basque Country and Norway, have commissioned contractors to provide installation, training and technical support service.

The telehealth technology on some of the sites has enabled one or more of the following functions:

- Telemonitoring data to be integrated into the patient's personal and/or electronic health records.
- The inclusion of telehealth as a care plan option for clinicians, as part of the electronic discharge or referral communication.
- Clinicians to use smartphones to access patients' telemonitoring readings.
- Teleconsultations between a patient and their COPD specialist nurse or doctor.

3.2 Health monitoring and coaching via text messaging

Healthcare professionals have used secure text messaging (SMSs) to communicate with patients, monitor patients' vital signs and provide motivational health coaching. They have done this in health monitoring of diabetes, COPD and cardiovascular disease in Wales and NHS Lanarkshire in Scotland.

The added value for patients and service providers of this approach is that:

- Patients can easily take their vital signs at their convenience at home, work or on holiday.
- Patients and clinicians can view the readings submitted.
- Patients can receive regular, automated, personalised health coaching and medication reminders based on their vital signs.
- Patients feel cared for, more involved and more in control of their own health and well-being.
- Patients are often able to use their own mobile phone or tablet which improves ease of use, confidence and reduces the cost of the service.

- Minimal user training is needed as the user interface is intuitive.

3.3 Online health monitoring and support

To support patients to self-manage their long term condition, up-to-date educational and health care information, such as current medication and blood glucose readings, have been provided.

Healthcare organisations are investing in the development of online interactive tools. One example is NHS Scotland's implementation of My Diabetes My Way (MDMW) which enables patients to access their own diabetes electronic medical record and upload home blood glucose readings. This functionality is achieved through the integration of software (Diasend) which links the MDMW website and a diabetes clinical portal (SCI Diabetes).

This type of integrated approach to disease management aims to improve the collection and availability of information for the patient that can be reviewed at clinical appointments with healthcare professionals.

4 United4Health Key Learnings

This section of the document outlines three key learnings that have emerged from United4Health that can be grouped under the following three headings:

- A diverse and changing environment.
- People.
- Technology.

4.1 Diversity and a changing environment

The introduction of telehealth offers an opportunity to adapt and, in many cases, redesign care delivery processes to leverage real, sustainable benefits. Implementation plans for large-scale deployment of telehealth need, however, to be aligned with existing and evolving health policies, systems and practices.

It is essential for new service delivery models, and resultant care practices, to reflect a wide range of elements such as:

- Current and future local policy and strategic priorities.
- Characteristics and configurations of the healthcare system that are in place nationally, regionally or locally[7].
- A continuously evolving evidence base for clinical practice and care pathways.
- Availability, interoperability and level of maturity of the ICT infrastructure and systems in place on which telehealth relies.

Successful deployment needs an iterative evaluation process. Telehealth is happening now, so today's priority is how to extract fully the promises of telehealth, how to make care delivery processes more efficient, and how to benefit from patients' readiness to self-manage their conditions. In contrast, classical research methodologies are more suited to earlier stages of innovation, when the emphasis is on how to better understand what works and what does not work.

Large-scale deployment needs to be handled in a phased way, with appropriate evaluation and learning mechanisms included in the implementation plan. An action-oriented research approach to evaluation is implemented using data collected in real life and in routine care. It is designed to maintain and enable a focus on the critical success factors for deployment, the outcomes for the different stakeholders, and a more effective use of all available resources.

[7] Telehealth implementation will differ depending on how disease management is implemented, and whether this is at the level of primary or secondary care. Whether there are specialist nurses on the team will also have an impact.

4.2 People

As people increasingly use information technology in their daily lives, enthusiasm grows for devices, software and apps that add value. In order for healthcare systems and organisations to harness this enthusiasm effectively, telehealth programmes are needed that include activities at all levels in organisations. They need to be designed to achieve a real culture change in the way healthcare professionals deliver chronic conditions management services and support patients to self-manage.

United4Health has experienced how early involvement of healthcare professionals in such an initiative leads to greater acceptance of patients and their family and carers to the inclusion of telehealth in their care plan. It has also shown the need for strong leadership and ownership to develop a model that can be embedded across the whole healthcare system.

Many kinds of support can be offered to healthcare professionals that will facilitate their understanding of and engagement in the transformation of healthcare services, and the role of telehealth. Ways to enable the range of healthcare professionals to influence and respond to appropriate changes in their roles and responsibilities, legal and regulatory frameworks and guidance are part of planning for successful deployment of telehealth. They should not be restricted to the continuing professional development of the existing workforce, but also be incorporated into the core health professionals' training curriculum.

Additional workforce capacity is important to demonstrate early added value to build confidence and trust in the new service, and facilitate shared learning from the outset. As an example, this means reducing a doctor's case load for a defined period of time whilst the redesigned working practices are introduced, understood and normalised.

Telehealth that is attractive, affordable and an integral part of providing routine healthcare services will appeal in a much more comprehensive way to patients and their families. As an interviewee stated: "if healthcare professionals 'buy in', so too do the patients and their families."

Continuous co-production of approaches and methods, that includes patients and their formal and informal carers, is crucial to adapt telehealth to meet individual patient needs whatever their chronic condition.

The adoption of such an approach is also more likely to raise stakeholder awareness of telehealth and develop people's health literacy and ICT literacy capacity and capabilities.

United4Health deployment sites used a range of methods and mechanisms for their patient and carer engagement, implementing good practice and further developing their tools and techniques to reflect the characteristics of the local patient population.

4.3 Technology

The increasingly consumer-led adoption of technologies and apps designed to assist and support people to lead healthier lives also provides new opportunities for

healthcare systems to benefit. These benefits will only be fully realised when the relevant data from these tools and technologies are integrated into a patient's continuum of care and electronic health record. This will be achieved more readily where there is already an integrated electronic health record in existence (as opposed to the different sectors that make up a local healthcare economy each having their own records).

To be economically affordable and sustainable, the design of telehealth and related technological choices needs to align with and build on the pre-existing ICT infrastructure. In particular:

- The lack of availability of broadband internet or fast mobile internet may mean that there needs to be a lower level of sophistication of the technology.
- Nationally or regionally-based electronic health record systems and secure communication platforms can contribute to lowering the deployment cost of telehealth.

Furthermore, telehealth solutions need to be locally adaptable to reflect the diversity of service models, population cohorts, working practices and access. Solutions that keep pace with the environment of real-life continuous change are those where it is simple and cost-effective to customise and configure the software involved.

Procurement is an important point that deserves fuller attention:

- Timescales associated with procurement can lead to "quick fixes" that may impeded further deployment or development.
- Technical standards for interoperability need to be built into future procurement frameworks.
- Because of limited availability of "off-the-shelf" telehealth systems and standards-compliant solutions, implementation timelines should allow for adoption of realistic product development timescales.

Finally, it should be noted that European rules relating to technology standards, privacy and security guidelines and medical devices directives are applied differently in Member States, and this creates barriers to vendor entry.

5 Why is policy important?

Policy makers at European, Member State, regional and local levels can act now to enable, promote and support telehealth deployment because:

- Europe's healthcare systems are becoming unsustainable.
- Telehealth can contribute to making healthcare more sustainable by:
  - Providing alternative ways of delivering healthcare;
  - Ensuring better and more equitable access;
  - Using existing resources more efficiently and effectively.
- Deployment and integration of telehealth in healthcare systems still face significant challenges.

United4Health has reviewed the interim trial analysis, lessons learned, Industry Advisory Team and User Policy Advisory Board work and synthesised the outcomes and outputs into three broad actions directed towards policy makers. They relate to the policy environment itself, national consistency, and people's empowerment.

5.1 Secure a policy environment that promotes and supports telehealth deployment

- Develop and implement telehealth strategies, guidelines, and action plans, including guidance on interoperability, as official policy.
- Ensure that telehealth is regulated by relevant privacy and security guidelines.
- Acknowledge that telehealth meets clinical standards for quality of care and safety.
- Recognise telehealth formally as equivalent to face-to-face consultation.
- Ensure that telehealth services are reimbursed on an equal basis as compared to usual healthcare.
- Continue to invest in eHealth and ICT infrastructures.

5.2 Seek national consistency with local adaptation

- Establish procurement rules that remove barriers and promote the timely deployment of telehealth.
- Mandate compliance with technical interoperability standards and profiles for all telehealth technologies procured with public funds.
- Adopt standard evaluation methodologies and appropriate indicators.
- Adopt iterative evaluation methods that facilitate the transfer of service innovation into routine practice.
- Encourage structured collaboration and cross-fertilisation among telehealth stakeholders.
- Create capacity-building through tools, methodologies and guidelines.

5.3 Empower patients, carers and healthcare professionals to take full advantage of telehealth

- Support patients and their carers to adopt telehealth as an integral part of their usual healthcare services.
- Strengthen health literacy and ICT literacy.
- Support health professionals, through training, education, and skills development, to adapt to new challenges, roles and functions.
- Raise stakeholder awareness of telehealth, particularly among clinicians, patients and their families.
- Involve users in collaborative platforms and the co-design of telehealth services.

6 Proposed policy actions at European level

The three broad action points relating to the policy environment, national consistency, and people's empowerment can be further supported by six specific actions at European level. These are to:

1. Ensure that regulatory environments across Member States become more aligned – this will lower market barriers and ensure that regulation keeps pace with telehealth innovation.

2. Fund scalable deployment programmes to catalyse the transformation of healthcare in Europe.

3. Support processes that enable capacity-building and cross-fertilisation at the European level, including sharing UnitedHealth learnings.

4. Promote the use of validated evaluation methodologies and tools that can be applied using an iterative approach.

5. Ensure that all stakeholders involved in funding decisions, including external evaluators, assess proposals and projects in accordance with programme priorities, i.e., the focus on deployment and not just on research.

6. Include these policy messages on the agenda of the eHealth Network and other relevant policy fora.

7 Conclusion

For good reasons, effecting change in healthcare systems can often be very time consuming. With these actions, policymakers can help to accelerate changes, whilst ensuring the transformation is focused on addressing the real needs of patients leading to person-centred service improvement.

"Transforming the patient experience with telehealth in Europe"

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