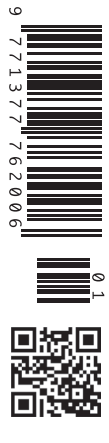




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Reimagined Hospitals



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Finland's Digital Care Network: Why is it Working So Well?

Summary: Finland is leading the way in leveraging digitalisation in healthcare for a new model of care interaction and delivery. In the making for five years, the Health Village is a scalable, comprehensive digital service that brings significant cost savings and production efficiency to healthcare providers. The objective is to offer a global digital, tailored service platform that gathers the best professionals, the latest information and better digital and local care for patients, optimising impact and cost of the services. HealthManagement.org spoke with project director, Sirpa Arvonon, about why The Health Village is such a success and what the key take-aways are for providers looking to deploy digital resources effectively.

What exactly is the Health Village network?

The project was a joint project between the university hospitals in Finland. Their population responsibility and catchment area covers all Finns.

The participants in the project include Helsinki University Hospital (HUS), which coordinated the project, Tampere University Hospital, Oulu University Hospital, Kuopio University Hospital and Turku University Hospital.

Developed by the Virtuaalisairaala (the Virtual Hospital) 2.0 project, primary healthcare in the regions, the hospital districts, the catchment areas for highly specialised medical care and the hospital areas, research institutes, the private sector, and patients and patient organisations work in cooperation.

The "Health Village" project is a national project but is based in Helsinki at HUS (Helsinki University Hospital) which is the second largest employer in Finland with almost 25,000 staff. The national healthcare database provides a huge "data lake" which feeds the various developments offered by the eHealth development programme. The system is accessible to all Finns, regardless of their place of residence or income, and is a practical tool to guide them in both everyday life and self-care, and also when they are in contact with professional health services. The digital platform is supported by almost 2000 healthcare professionals who lead the development of disease pathway management, evidence-based cost control, patient and health professional education and predictive medicine.

What foundations needed to be in place to make the network a success in terms of patient trust in data

use, interoperability and staff training?

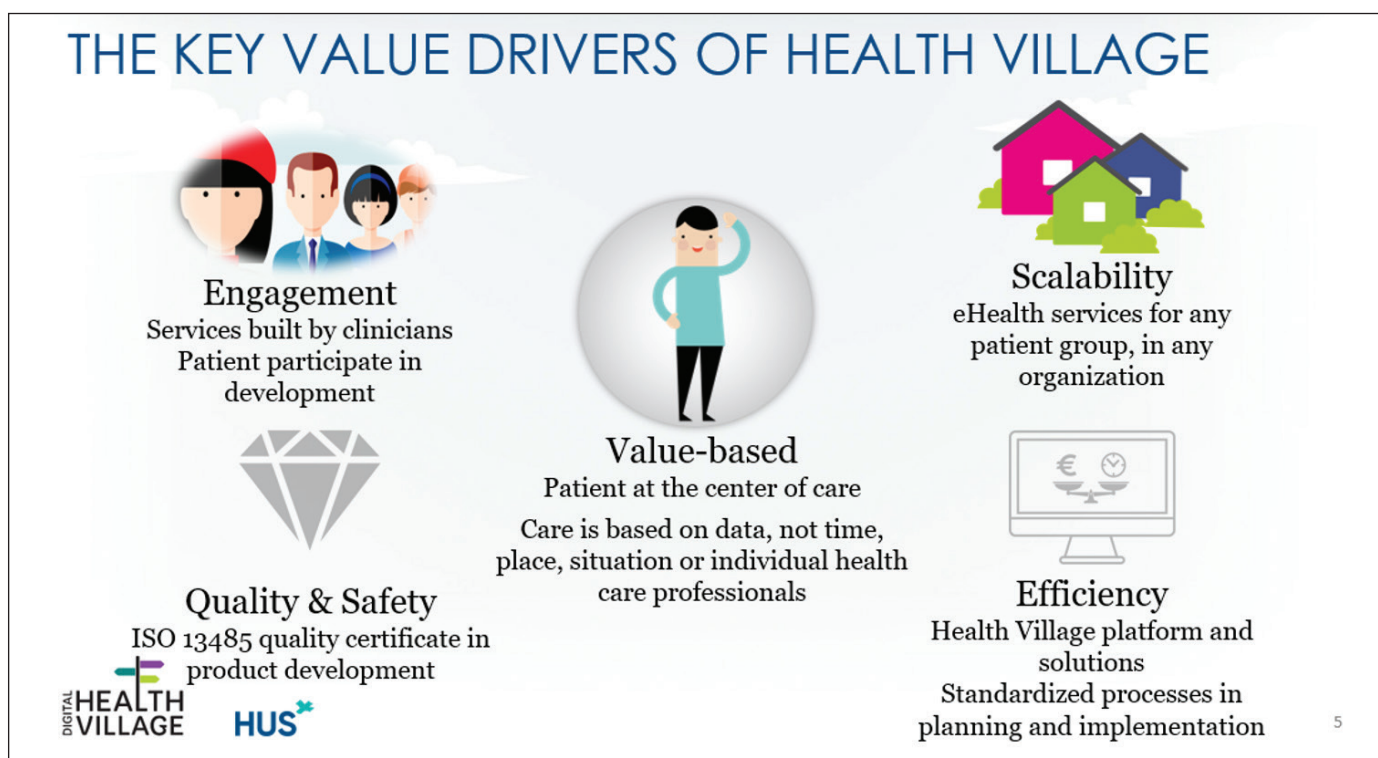
It was important to include in the reform and renewal of the services all the different professional groups working in specialised medical care. The project helped produce an enthusiastic and motivated eHealth Services network of development expertise, in which customers, professionals, patient associations and primary healthcare partners were invited to assist in the planning of services and a continuous programme of monitoring.

The ideas that emerged from working with patients and customer panels were central to development work. The cooperation and service network of experts from different fields exploited specialist skills and knowledge in the combined production of services and delivered safe, secure and reliable tools and related working methods. These teams should consist, for example, of doctors, nurses, therapists, social workers, behavioural specialists, researchers and scientists, information analysts, ICT experts and service design professionals.

What were the main challenges in setting up the virtual hospital network and how did your team overcome them?

The first step was to design the service architecture and service map. We organised workshops with the leaders and management of our different clinics. We asked them how they are delivering their services right now and what visions they share for the future.

We gathered the results of the workshops together and were able to outline processes common to all and a generic service map. Based on this map, we started to design a generic digital services platform.



Key Health Village Value Drivers

The second step was to share the vision for the project. Our leaders in organisational and IT development shared a strong vision of the benefits of digitalisation. This created a way to work in multi-professional teams among clinicians, IT professionals, data analysts and communications professionals.

The third step was to establish a co-creation network. We invited representatives from different hospitals, clinics and patient associations to network where we planned together the change brought by digitalisation and what kind of issues it would be important to take care of for the change to succeed. This created an extensive network of digital agents that continues to function. At the network, we have facilitated learning together and shared stories about successes and challenges.

What challenges do you continue to face and how are you addressing them?

The most important method of development of the Health Village concept has been the idea about supporting an operational change in the health sector - instead of just digitalising old services or providing new services within the old service framework. Culture change takes time; its not easy and there is also some fear and resistance.

The planned development programme combined network and change management methods, lean methodology, service design and flexible development working

methods, and inclusive work development methods that rely on facilitation. The project helped establish informal development forums, multi-professional teams, processes of innovation and experimentation, and realistic and practical training.

The eHealth Development Programme ensures that the development work and service design methods are standardised from the point of view of quality, risk management, engagement, customer focus, customer panels, communications and eExpertise development. The service development model also contains review points and criteria for putting the services into production.

The Health Village development network:

- Encouraged professionals to adopt a customer-oriented approach to development that relied on an appreciation of the customer experience.
- Promoted service innovation, introduced digital working methods and exploited new technology.
- Initiated cooperation at a national level on the innovation farm facility and to exploit jointly new approaches, new technology and data analytics.
- Provided companies, research partners and third sector partners with the Virtual Hospital network as a development environment for digital health solutions.
- Increased expertise among staff.
- Formed teams of experts in healthcare, health social work, research, data analytics, ICT and service

management to create forums for multidisciplinary and cross-disciplinary research.

What management advice would you give to members of the wider hospital C-suite who are considering putting an aspect of a virtual hospital into practice?

The main principles underlying the methods and approaches employed in the development of the eHealth services were:

- The involvement of the public, patients and professionals in the social welfare and healthcare sectors in the service development process.
- The use of co-creation working methods in the formulation of ideas.
- Support for innovation processes.

It was important to include in the reform and renewal of the services all the different professional groups working in specialised medical care. The project helped produce an enthusiastic and motivated eHealth Services network of development expertise, in which customers, professionals, patient organisations and primary healthcare part-

medicines and research. An electronic prescription has been in use in Finland for years. Citizens will see their own prescriptions, laboratory and imaging research results, and a record written by a healthcare professional about their visits to their personal database, called My Own Database.

Additionally, there is the national authentication solution, Suomi.fi, as well as a national email account, which is shared by public service providers, for use by every citizen. Finally, Finnish people are used to using digital apps. Perhaps Nokia taught us to use mobile services.

Is the virtual hospital network reducing healthcare costs? If so, where have you identified savings or better use of resources?

Cost-benefit analyses for each separate unit were an integral part of the development model used in the project. The digital services produced for patients are either care packages consisting of digital components or care programmes that are delivered entirely digitally. A requirement for establishing the financial impact is how successful the reform and operational changes associ-

The idea is we need to take care of more patients with the same resources

ners were invited to assist in the planning of services and a continuous programme of monitoring.

How have you addressed the challenge of the shortage of professionals with the digital skills needed for set up and operation of a virtual hospital network?

We planned the eHealth Development Programme and worked out web-based eHealth courses for professionals in our HealthVillagePRO platform.

Why do you think countries like Finland are making a success of healthcare digitalisation while other countries are struggling?

First of all, we have an electronic patient information system throughout the country. The electronic patient information system has been in use at Helsinki University Hospital for over 25 years, so data in a structured form is already available. The National Institute for Health and Welfare has been monitoring and evaluating population-level health data for over 20 years.

Secondly, there is the national social and healthcare repository. Finland has a national data repository, the Kanta, which collects data from different patient information systems. The stock is for professionals.

Thirdly, we have a national solution for electronic

ated with health services are, and, for example, the step-by-step accomplishment of working methods and changes in work.

At Helsinki University level, the average predicted annual potential healthcare capacity freed with the HealthVillage, is around €208 million in the first five years. The idea is that we need to take care of more patients with the same resources.

Most importantly, key value drivers for the healthcare producer's level were treatment calls, revisits, and treatment visits. The average predicted annual potential healthcare capacity freed with the Health Village is around €261 million at the Finnish level which amounts to around €1.3 billion during the first five years.

The Health Village aims to improve the equality of the citizens by increasing the availability and quality of healthcare services for all Finns with novel digital care and eHealth service practice.

From the perspective of opportunity costs, such technological revolution can produce significant effectiveness elsewhere. ■

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