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Conference Abstract

National Initiatives for Telehealth ICT Infrastructures in the Nordic Countries

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Abstract

Introduction: Telehealth is the use of information technology to provide healthcare services e.g. consultations and remote patient monitoring over distances. Telehealth has the potential to help lower the number and duration of hospital stays, strengthen patient empowerment etc. One of the major barriers for telehealth implementations on national scales is the lack of national ICT infrastructures to support it. This study outlines national telehealth infrastructure initiatives in the Nordic countries, where available. The starting point for this study was a 2010 report series by the European Commission on eHealth Strategies in the member states of EU and EEA. Where available and found, infrastructure documents published by the national governments are used.

Results: Denmark, as the first country worldwide, chose Continua Health Alliance's framework as the foundation for their future telehealth infrastructure [1]. In 2014 Norway was recommended to adopt Continua as of 2016 as well [2]. The Danish and Norwegian uses of the Continua framework is, however, quite different from each other. Neither Iceland or Sweden nor Finland have made a commitment to adopt of Continua yet, however Sweden has it on a list of possible future eHealth actions. In Iceland a platform connecting stakeholders across the healthcare sector has been in operation since 2007 [3]. No documentation indicating that the platform acts as a telehealth infrastructure has been found. Work in Sweden has focused on implementation of a general infrastructure/intranet for the entire care sector [4]. In Finland the focus is quite similar to the Swedish – develop an infrastructure that makes patient data available regardless of time and place [5]. Sweden and Finland have had multiple research projects on telehealth, but yet none have yet evolved into national end-to-end infrastructures.

Discussion: Following our study we recommend that the Nordic countries join the Continua organization. Continua's framework is the most complete end-to-end infrastructure for telehealth available, and in 2014 the Nordic countries (excluding Iceland) agreed to a letter of intent to foster cooperation in health informatics, especially about standards and architecture for telehealth and telecare. Hence a joint collaboration in Continua makes sense, and the more Nordic actors that are part of Continua the more influence they can get on the organization's future work and focus.

Before choosing to adopt Continua's framework there are some positive and negative effects to consider. Three examples of pros: 1) Supports plug-and-play of certified devices no matter the vendor, 2) the framework is based on state-of-the-art standards, recommended by the UN/WHO, the members include healthcare providers, hardware and software manufactures, research institutions etc., and the standardization work is based on actual use cases defined by the members, and 3) growing international interest in Continua from e.g. Singapore and USA who has both shown interest in adopting the framework or elements of it. Two important cons are: 1) the framework may not cover all requirements (e.g. lack of two-way communication) – hence it must co-exist with other standards, and 2) few commercial products are Continua certified, and the devices currently in use are not necessarily certified or certifiable.

Keywords

telehealth reference architectures; nordic countries; interoperability

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