Status of Interoperability Requirements related to IHE Integration Profiles in Finland

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Abstract

IHE (Integrating the Healthcare Enterprise) integration profiles provide means for uniform application of central interoperability standards for specific use cases in healthcare. This paper reports the results of a national survey and interviews which explored the current integration needs of healthcare organizations, application vendors and national health IT initiatives in relation to the requirements covered by IHE profiles. Factors influencing the adoption of external profiles or implementation guides of standards for local or national projects are discussed.

Keywords:

Interoperability, Standards, IHE, Health information systems

Introduction

Integrating health data from various sources is a major prerequisite for e-health. To answer such needs, initiatives such as IHE (Integrating the Healthcare Enterprise) support interoperability and sharing of information between information systems and in healthcare networks. In Finland, especially the national health information infrastructure and local integration projects require integration solutions. International interoperability models, however, have not been well known among the Finnish stakeholders. To alleviate this, the facilitation of IHE work in Finland was started in 2007 by two technology agencies: TEKES and FiHTA, in the IHE.fi project. The project conducted a survey and interviews related to IHE profiles in Finnish context and took measures to raise awareness of the subject. This paper discusses the results and findings of the work.

Materials and Methods

The material was gathered by an online survey for health IT professionals and by interviewing representatives of seven stakeholder organisations of the project. The survey was performed online in 2008 to gather information from both user and vendor organizations. The survey consisted of topics related to IHE and the field of healthcare information technology in general. The results were published in a national report along with actionable proposals on how to proceed with the future IHE deployment, participation and communication work in Finland.

Results

In the survey, we received responses form 26 respondents, of which 54% were working in healthcare provider organizations, 31% employees of healthcare IT software vendors and 15% employed by research/technology agencies and public organizations involved in healthcare IT. Both the interviewees and survey respondents saw that the most dominant development needs were related to the national infrastructure services and solutions. This could also be seen in the interest in related IHE topics such as information exchange, patient consent, security issues and workflows. The respondents saw benefits in utilizing pre-specified solutions for interoperability. The solutions were expected to be most beneficial in specification, implementation and testing phases of the projects and also in planning the investments. During the stakeholder interviews several recurring overall themes stood out:

- There are deficiencies in information exchange, but it is needed increasingly - open interoperability solutions such as IHE were seen as one of the tools in problem solving.
- Standardization and interoperability solutions (such as ISO, HL7, CEN and IHE) should be harmonized in a coordinated manner (at minimum on national level).
- Base standards provide shared building blocks, but there is still a need for more comprehensive approach (such as Enterprise Architecture) as well as implementation guidelines and profiles, which are likely to increase on the European level in the future.

The results indicate that IHE is expected to be an efficient part of a solution assisting and supporting goals on national and local level. Profiles make a major contribution to interoperability but to some extent they lack flexibility for adoption to different local conditions. Strict uniformity in application helps quick integration projects, which is one of the most important factors in the success of interoperability specifications. The results supported the organisation of IHE work in Finland as an IHE group in HL7 Finland association in 2008.

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