HL7 Standards in the global eHealth Ecosystem: What’s new?

Catherine CHRONAKI1, Kai HEITMANNb, Erwout KRAMERC, Charles JAFFEA
aHL7 International Foundation, Brussels, Belgium
bHeitmann Consulting and Services, Hürt, Germany
cFurore, Amsterdam, the Netherlands

Abstract This tutorial presents the latest developments in HL7 international in terms of services, standards, tools, and best practices, placing them in the context of the global eHealth ecosystem. It consists of four parts. The first part will introduce HL7 and some of its new member services including webinars, conformance testing, certification, and the Help desk. The second part will present Fast Health Interoperability Resources (FHIR), the next generation of HL7 standards leveraging web protocols. The next part will be on ART-DECOR, a new tool to help lower the cost of interoperability. The fourth and last part will present case studies of using the HL7 CDA to implement patient summaries around the world, raising the issue of cultural interoperability and the emerging trend of mobile health apps.

Keywords. Interoperability, HL7 standards, FHIR, Art Décor, HL7 CDA, conformance testing, eHealth policy, best practices

Introduction

Interoperability, the ability to exchange and use information, is the backbone of the global eHealth ecosystem. Founded in 1987, HL7 is a not-for-profit, Standards Developing Organization (SDO) dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services. In 2010, HL7 established the HL7 Foundation in Brussels to better serve the needs of its 19 European Affiliates and the wider European eHealth space. HL7 provides standards for interoperability that improve care delivery, optimize workflow, reduce ambiguity and enhance knowledge transfer among all of our stakeholders, including healthcare providers, government agencies, the vendor community, fellow SDOs and patients. This four part tutorial aims to familiarise attendees with the latest developments in HL7, aiming to inspire, motivate, and educate implementers, visionaries, and trend setters in the global eHealth ecosystem.

1. The Intended Audience, rationale, and prerequisites

This tutorial is addressed to MIE2014 attendees that wish to familiarise themselves with the latest trends in health information technology standards as set by HL7.

1 Corresponding Author: Catherine Chronaki: EUoffice@HL7.org
International and collaborating SDOs and learn how to create or procure eHealth applications and services that fit into the global eHealth ecosystem. The intended audience is health or IT professionals familiar with eHealth services and interoperability problems. No specific prerequisites or prior knowledge of HL7 Standards is necessary.

2. What's new with HL7? By Prof. Charles Jaffe, MD, PhD

Last year, HL7 announced that most of its widely adopted standards will be available for free. At the same time, HL7 shifted its focus towards providing significant added-value to its membership. Following a brief introduction to HL7 and its base standards, this talk will provide an overview of the HL7 webinar program, the conformance testing service, certification program, and help desk, explaining how they can be used to lower the time, cost and effort of achieving interoperability. The talk will also highlight intriguing standardization challenges that the HL7 community is facing and you can help solve.

Prof. Charles Jaffe, MD, PhD is the Chief Executive Officer of HL7 International and Professor of Medicine, University of California.

3. HL7 on Fast Health Interoperability Resources (FIHR) by Erwout Kramer

This talk will provide attendees with insights on Fast Health Interoperable Resources (FIHR –hl7.org/FIHR) FHIR® the next generation standards framework created by HL7. FHIR builds upon the learnings from the development and implementation of HL7’s Version 2, Version 3 and CDA® product lines while leveraging the latest web standards and with an emphasis on implementability. FHIR focuses strongly on ease of implementation by using open industry open web standards. It adds support for REST-style architectures used by current cloud, social media, and mobile platforms where exchanging partners will exploit FHIR’s flexibility to match the need for continuous change in these markets. It provides interoperability for the majority of health IT system interface right out-of-the box, yet has a framework for manageably extending and adapting the standard to suit specific needs. Attendees will also find out the basic building blocks of FHIR, its design and how it fits in the interoperability framework.

Erwout Kramer is a software architect and engineer, developer lead for HL7 FIHR.

4. New tool: ART-DECOR for CDA Templates and more by Dr. Kai Heitmann MD

Successful implementations for interoperable solutions in healthcare typically make use of re-usable building blocks, called templates. Meanwhile CDA template libraries exist to allow easy and standardized definitions of clinical documents for various use cases. They are maintained in template repositories and registries. ART-DÉCOR (www.art-decor.org) is a tool to support creation and maintenance of templates, to generate appropriate documentation and to effectively support implementers. With this tool templates could be created and edited or one can simply use already existing templates through shared template (building block) repositories. This tutorial highlights the
concepts of CDA templates, building block repositories and related features of the ART-DECOR tool suite.

Dr. Kai Heitmann, MD is an independent consultant for healthcare IT and is involved in education, specification and implementation projects mainly throughout Europe. He is member/contributor of several standardization organizations such as HL7 and ISO and author of several standards.

5. HL7 CDA Around the World: Many Patient Summaries one Standard, by Catherine Chronaki

This talk will present the EU Patient Summary (PS) guideline [2] adopted by the eHealth Network established by the European Commission under the EU Directive 2011/24/EU [3] on patient’s rights to cross-border care, in November 2013 focusing on the use of standards and in particular HL7 CDA standard [4] and its implementation guides [5]. The PS guideline will be compared to other approaches based on HL7 CDA adopted by EU Member States, the United States [6,7], and other countries around the world. Similarities and differences in the approaches taken will be highlighted as well as ways leverage these efforts in creating truly global Health Information Technology Standards. Catherine will bring into findings from the Trillium Bridge project (www.trilliumbridge.eu), raise the issue of cultural interoperability and illustrate how the ubiquitous mobile health apps may solve it.

Catherine Chronaki is the Secretary General of the HL7 Foundation established in Brussels in 2010. She has been involved in the eHealth Governance Initiative, member of the eHealth Stakeholders Group, and the coordinator of the Trillium Bridge Project: Bridging Patient Summaries across the Atlantic.

6. Education Goals

The educational goals of this four part (180min) workshop is to inform the participants on recent developments with HL7 International and educate them on how to best use HL7 standards and supporting services to achieve interoperability at low cost and little effort using interoperability assets available in the global eHealth ecosystem. After this tutorial, attendees will know the latest developments in eHealth standards: (a) services HL7 offers to its members (b) latest HL7 standards (c) Latest HL7 tools (d) best practices and trends in the use of HL7 standards around the world.

7. References

Companion Guide to Consolidated CDA: