

ONC Takes Action: Health Information Systems Interoperability to Support Learning Health System

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By Anna Orlova and Diana Warner

In the effort to advance secure and interoperable health information exchanges, the US Department of Health and Human Services' Office of the National Coordinator for Health Information Technology (ONC) has released *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap*.¹

In a draft for public comments, ONC committed to lead and collaborate with the health information technology (health IT) sector and health sector in defining a shared roadmap for achieving bi-directional data exchanges between healthcare delivery participants using the means of health information technology by 2014.

The roadmap is directed towards the development of a nationwide learning health system as “the increased complexity of healthcare requires a sustainable system that gets the right care to the right people when they need it, and then captures the results for improvement—the nation needs a healthcare system that learns.”² The Institute of Medicine's (IOM's) report on a learning health system in the US stated that by the year 2020, ninety percent of clinical decisions will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence. “Because of their potential to enable the development of new knowledge and to guide the development of best practices from the growing sum of individual clinical experiences, clinical data represent the resource most central to healthcare progress,” according to the report.³

To achieve the learning health system objectives, an interoperable health IT ecosystem that is person-centered and makes the right electronic health information available to the right people at the right time across products and organizations, in a way that can be relied upon and meaningfully used by recipients, must be implemented.⁴

The roadmap is focused on four actions for public and private sector stakeholders to enable nationwide interoperability of electronic health information through health IT, including:

- Establish a coordinated governance framework and process for nationwide health IT interoperability
- Improve technical standards and implementation guidance for sharing and using a common clinical data set
- Enhance incentives for sharing electronic health information according to common technical standards, starting with a common clinical data set
- Clarify privacy and security requirements that enable interoperability

In addition, the roadmap highlights the need for actions related to clinical culture, state, and organization-level policies as well as provided a timeline of selected critical actions.

The roadmap describes the following five fundamental building blocks:

1. Core technical standards and functions
2. Certification and testing to support adoption and optimization of health IT products and services
3. Privacy and security protections for health information
4. Supportive business, clinical, cultural and regulatory environments
5. Rules of engagement and governance

Within each building block, the roadmap describes functional and business requirements for a learning health system and the associated actions for making rapid near-term progress.

2015 Standards Advisory Assessment

In conjunction with the release of the roadmap, ONC also published the 2015 Interoperability Standards Advisory that represents ONC's assessment of the best standards and implementation specifications as of December 2014.⁵ This advisory is intended to serve as a model by which ONC will coordinate the identification, assessment, and determination of the best available interoperability standards and implementation specifications for industry use toward specific healthcare purposes (use cases).

The 2015 Advisory's scope focuses on clinical healthIT interoperability. The scope of future advisories may be expanded as necessary and appropriate to support the Interoperability Roadmap's evolution as well as other national priorities.⁶ The advisory document aims to provide the industry with a single, public list of the standards and implementation specifications that can best be used to achieve a specific clinical health information interoperability purpose, as well as to prompt dialogue, debate, and consensus among industry stakeholders when more than one standard or implementation specification could be listed as the best available.⁷

The Standards Advisory contents include:

1. Vocabulary/Code Set/Terminology Standards and Implementation Specifications (i.e., "semantics")
2. Content/Structure Standards and Implementation Specifications (i.e., "syntax")
3. Transport Standards and Implementation Specifications (i.e., the method by which information is moved from point A to point B)
4. Standards and Implementation Specifications for Services (i.e., the infrastructure components deployed and used to accomplish specific information exchange objectives)⁸

In the March issue of *Journal of AHIMA*, the article entitled "An Overview of Health IT Standards" provides the description of HIT standards categories and specific examples of standards required to achieve semantic, technical and functional interoperability between independent systems.⁹

AHIMA is working on developing comments for both the ONC Interoperability Roadmap and the Standards Advisory. Anyone interested in joining in developing these comments should contact Diana Warner at diana.warner@ahima.org.

Notes

[1] Office of the National Coordinator for Health Information Technology. *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap*. Draft Version 1.0. <http://www.healthit.gov/sites/default/files/nationwide-interoperability-roadmap-draft-version-1.0.pdf>.

[2] Institute of Medicine. *The Learning Health System and its Innovation Collaboratives*. Roundtable on Value and Science-Driven Health Care. Update Report. 2011.

[3] Ibid.

[4] *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap*.

[5] Office of the National Coordinator for Health Information Technology. 2015 Interoperability Standards Advisory. Best Available Standards and Implementation Specifications. http://www.healthit.gov/sites/default/files/2015interoperabilitystandardsadvisory01232015final_for_public_comment.pdf.

[6] Office of the National Coordinator for Health Information Technology. 2015 Interoperability Standards Advisory. <http://www.healthit.gov/standards-advisory>.

[7] Office of the National Coordinator for Health Information Technology. 2015 Interoperability Standards Advisory Fact Sheet. http://www.healthit.gov/sites/default/files/Advisory_Fact_Sheet.pdf.

[8] Ibid.

[9] Health Level Seven (HL7). *Coming to Terms: Scoping Interoperability for Health Care*. 2007. <https://www.hln.com/assets/pdf/Coming-to-Terms-February-2007.pdf>.

Anna Orlova, PhD, is senior director of standards at AHIMA. Diana Warner, MS, RHIA, CHPS, FAHIMA is a director of HIM Practice Excellence at AHIMA.

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