

# ONC's Standards Harmonization Efforts: ONC's S&I Framework Seeks to Harmonize Standards for Clinical Data Exchange

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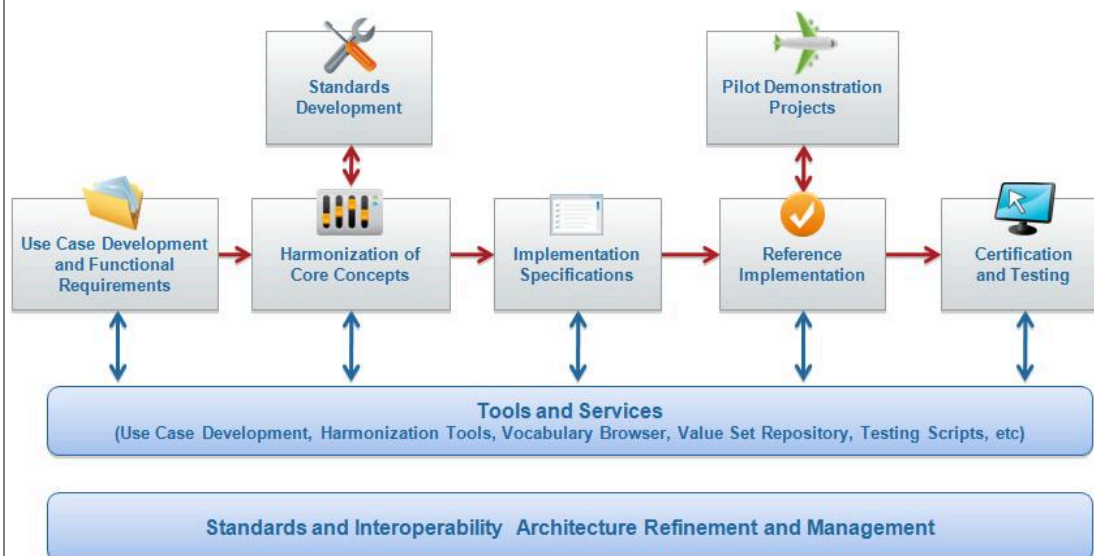
The Centers for Medicare and Medicaid Services' meaningful use program includes a set of requirements for the exchange of clinical information. The Office of the National Coordinator for Health IT outlined the EHR standards and certification requirements necessary to enable clinical information exchange. However, more work is needed to harmonize these standards to meet the program's requirements.

Recognizing the need for increased data exchange and an integrated approach for standards and interoperability, the Office of the National Coordinator for Health IT's Office of Standards and Interoperability established the Standards and Interoperability (S&I) Framework to address some of the challenges the healthcare industry will face in successfully meeting the exchange incentive requirements.

HIM professionals should become familiar with ONC's efforts so they can help their organizations meet the exchange incentives for the meaningful use program.

## S&I Framework Functions

The functions below outline those activities that must be completed to support the movement toward electronic exchange of information throughout disparate health information systems.



Source: "[S&I Framework Functions](#)." January 6, 2011.

## Framework Functions

The framework seeks to establish content and technical specifications and reusable tools and services to integrate and connect health information systems. It serves as the mechanism by which ONC will manage the implementation of specifications and the harmonization of existing health IT standards to promote interoperability nationwide.

The goal is not to develop standards but to engage the community and reach a common understanding on the standards that can be used to support interoperability.

The diagram at right outlines the work the framework must address to help ONC harmonize health IT standards and promote interoperability. The functions outline those activities that must be completed to support the movement toward electronic exchange of information throughout disparate health information systems.

The framework plans to take the following steps to address each of the functions.

**Use Case Development and Functional Requirements.** Through this initial phase the framework is working "closely with consumers, providers, government organizations and other stakeholders to identify real-world needs, prioritize them through an open, transparent process, and create explicit, unambiguous documentation of the use cases, functional requirements and exchange requirements for interoperability."<sup>1</sup>

**Harmonization of Standards and Interoperability Specifications.** Once the functional requirements have been established, the framework will merge related concepts, add new concepts, and map concepts from one view of healthcare information into another. This process will "identify gaps that can point the way towards development of interoperability standards as required."<sup>2</sup>

**Standards Development.** If the use case identifies a gap in the standards, existing standards may need to be modified or extended or new standards may need to be developed. The framework will "work with standards development organizations and research organizations to extend existing standards, or develop new ones as necessary."<sup>3</sup>

**Implementation Specifications.** In order to implement the standards necessary to support the use case's functional requirements, specifications are needed to further define the interoperability and architecture needs. The framework will "develop interoperability specifications that are independent of specific software architecture and interoperability specifications that are specific to the Nationwide Health Information Network."<sup>4</sup>

**Reference Implementation.** To provide an example of the implementation, the framework will conduct a reference implementation to demonstrate the standards and services required for the interoperability solution. The reference implementation will be accessible as a "public resource with compiled code, source code and supporting documentation."<sup>5</sup>

**Pilot Demonstration Projects.** Demonstrations enable the community to "test drive" the implementation and allow the community to assess and evaluate the performance of all components of the reference implementation. The framework will "support efforts in the refinement of the reference implementation and interoperability specifications through a number of real world demonstration and pilots."<sup>6</sup>

**Testing.** Testing validates the reference implementation for conformance to specifications and standards. The National Institute of Standards and Technology (NIST) is charged with providing testing tools and validating that a particular implementation conforms to a set of standards and specifications. The framework will "support the development of an integration testing 'harness' that will test how a particular component satisfies conformance requirements and integrates into the reference implementation."<sup>7</sup>

**Tools and Standards Repository.** The framework will "develop tools to facilitate the entire S&I Initiative lifecycle and maximize re-use of concepts and components, including tools and repository for browsing, selecting, and implementing appropriate standards."<sup>8</sup>

**Certification.** Certification and use of certified electronic health records is one requirement that must be met by eligible professionals and hospitals to qualify for incentive payments. To support the certification program, the framework will "work with NIST and other stakeholders to develop a robust certification program that will include:

1. Developing a process for certifying EHR technology;

2. Establishing technical requirements and testing infrastructure; and
3. Maintaining the master list of all Certified Electronic Health Record Technology Products and make this list available for providers and purchasers of EHR technology products to meet, in part, meaningful use requirements."<sup>9</sup>

## Harmonization Work under Way

As a precursor to its work, the Office of Standards and Interoperability launched several initiatives to address lack of standards harmonization in content exchange, vocabulary, transport, and privacy and security, including:

- The **Transition of Care Initiative**, which aims to address the transition of care requirements in stage 1 of the meaningful use program as well as other developing care models such as accountable care organizations. Its goal is to ensure that exchanged clinical summaries are understandable and actionable.
- The **Lab Results Interface Initiative**, which seeks to standardize how to incorporate lab results as structured data into EHRs (as defined by the meaningful use program) and reduce interface implementation time by 20 percent.
- The **Consolidation Project**, which aims to consolidate the Clinical Documentation Architecture (CDA) implementation guides from the Health Story Project, Indiana Health Information Exchange, and Health Level Seven International into a single library of CDA templates and tools.

The initiatives include volunteer members from industries that have a vested interest in improving the way data is exchanged as well the maintenance of data integrity for patient care. Participants include IT vendors, laboratory associations, consultants, AHIMA, the Agency for Healthcare Research and Quality, and the Department of Veterans Affairs, to name a few.<sup>10</sup>

To learn more about the framework and its work to help ONC harmonize standards and promote interoperability, visit its Wiki page at <http://jira.siframework.org/wiki/pages/viewpage.action?pageId=5605554>.

## Notes

1. "S&I Framework Functions." January 6, 2011. <http://jira.siframework.org/wiki/pages/viewpage.action?pageId=5604661>.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. Ibid.
10. Byers, Jeff. "HIMSS: Standards & Interoperability Framework Developing, Needs Input." CMIO. February 22, 2011. [www.cmio.net](http://www.cmio.net).

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