



Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap version 1.0

Calls to Action and Commitments for People and Organizations That Develop and Maintain Standards

Stakeholders include: Standards development organizations (SDOs) and their communities of participants, such as technology developers, health systems, providers, government, associations, etc.

People who receive care or support the care of others		People and organizations that deliver care and services	
Organizations that pay for care		People and organizations that support the public good	
People and organizations that generate new knowledge, whether research or quality improvement		People and organizations that provide health IT capabilities	
People and organizations that govern, certify, and/or have oversight		People and organizations that develop and maintain standards	

Goal for 2015-2017

Send, receive, find and use priority data domains to improve health care quality and outcomes

Calls to Action are opportunities where this group of stakeholders can take the lead and commit to as participants. Calls to action are prioritized actions that support achievement of the milestones.

B. Shared-decision making, rules of engagement and accountability

B2.1 Public and private sector health IT stakeholders should establish shared-decision making process to address operational issues related to standards, services, policies and practices that enable interoperability, including agreement on a nationwide learning health system technical architecture, and establishing clear, consistent feedback between SDOs and implementers about implementation successes and limitations, as well as supporting non-certification related testing of technical standards.

B2.2 Participants in the shared decision making process should agree on a nationwide technical architecture for an interoperable learning health system.

B2.5 ONC, in collaboration with stakeholders, should define a policy framework for exchange of patient-generated health data and pilot it.

B2.6 Participants in the shared decision making process should prioritize use cases based on a balance of national priorities and local needs.

B2.7 Participants in the shared decision-making process should work with ONC to establish metrics for monitoring and assessing nationwide interoperability and methods for data collection.



B. Shared-decision making, rules of engagement and accountability

B2.8 The shared decision-making process should select standards for specific use cases/functions from ONC's most recent finalized Interoperability Standards Advisory (ISA) when the ISA contains relevant standards.

D. Verifiable identity and authentication of all participants

D2.2 Health care organizations should work with identity SDOs (e.g., Safebiopharma, Kantara, OpenID foundation, OAuth2) to ensure health care use cases are addressed in identity management frameworks.

E. Consistent representation of authorization to access electronic health information

E2.3 SDOs should work with technology developers to conduct pilots of standards-based approaches, including RESTful approaches, for expressing and communicating authorization for electronic health information access/use.

F. Consistent understanding and technical representation of permission to collect, share and use identifiable electronic health information

F2.4 ONC, standards development organizations, technology developers and appropriate stakeholders should harmonize technical standards and implementation guidance for consistently capturing, communicating and processing Basic Choice across the ecosystem.¹

G. An industry-wide testing and certification infrastructure

G2.1 Technology developers, SDOs, government and other stakeholders should accelerate the development and availability of a suite of testing tools that can be used by technology users, not just developers, post-implementation to test and ensure interoperability while health IT is in use.

G2.2 SDOs should release comprehensive schema and associated testing tools for each standard and implementation guide they release in order to support more stringent testing of standards by technology developers.

H. Consistent data semantics

H2.2 Public and private stakeholders should work with SDOs to define a standard approach to federated distribution of centrally maintained code sets, including ongoing support for publicly available, API-enabled repositories like the Value Set Authority Center (VSAC).

H2.3 SDOs should advance and accelerate semantic standards for laboratory orders, other orders and other priorities for a learning health system that require updated or new semantic standards.

H2.4 SDOs should advance consumer-friendly terminologies and mappings of accepted synonyms to coded terms.

H2.6 Health IT users should provide feedback to SDOs and other stakeholders, including government, regarding additional data elements and/or data domains that should be prioritized for semantic alignment.

H2.7 NLM, FDA, CDC, CMS and other stakeholders should collaborate regarding approaches to promoting laboratory information exchange (especially through the use of LOINC, SNOMED-CT, UCUM and UDI) between in vitro diagnostic devices and database systems, including laboratory information systems and EHRs.

¹ See the Supplemental Materials Document for a detailed discussion on Basic and Granular Choice.



I. Consistent data formats

I2.1 SDOs, in coordination with ONC, should work together to align semantic standards (vocabulary, code set, value set, and structure where applicable) across health information format standards (starting with HL7 v2, C-CDA, QRDA, FHIR, and NCPDP SCRIPT) with semantic standards adopted in ONC's 2015 Edition for priority data domains and associated data elements.

I2.4 SDOs and stakeholders should document best practices and guidance on methods for exchanging unstructured health information, such as physician notes, in an interoperable manner.

I2.6 SDOs and ONC should identify necessary updates to format standards (HL7 v2, C-CDA, QRDA, FHIR and NCPDP) to ensure priority data domains are not only required in those standards, but are also represented consistently across format standards.

J. Secure, standard services

J2.1 SDOs, through efforts such as the Data Access Framework (DAF), Argonaut Project and HEART initiative should provide technology developers with profiles, reference implementations, and implementation guides (IGs) to standardize APIs for querying and retrieving priority data elements such as a C-CDA document and as discrete data elements.

J2.3 Technology developers should work with SDOs to develop standard APIs for interoperable medical devices.

L. Accurate individual data matching

L2.1 Public and private stakeholders should work with SDOs to ensure that data elements for individual data matching are standardized, and can be consistently captured and shared in all health information queries and record linking transactions.

L2.2 The industry should work together to document evidence-based best practices for individual data matching processes, data quality and matching technology.

M. Health care directories and resource location

M2.3 Through public, transparent processes, stakeholders should prioritize the participants and services that are to be discoverable using resource location and identify a near-term goal for the first small set of resources to be included in initial implementations, such as Direct addresses, electronic service information, web addresses, and multiple practice locations.

Commitments are prioritized actions that stakeholders have publicly committed to fulfilling. Commitments support achievement of the milestones. The following is a list of commitments where federal agencies have committed to working with your stakeholder group. We look forward to working with you to achieve them.

E. Consistent representation of authorization to access electronic health information

E3.1 ONC, in collaboration with stakeholders, will work to identify the technical standards and means by which a user's authority can be clearly represented among exchange partners.



F. Consistent understanding and technical representation of permission to collect, share and use identifiable electronic health information

F3.8 ONC will convene a group of industry stakeholders to determine if it is possible to create an open source mapping of the codes that capture clinical care to sensitive health conditions such as mental health. These mappings can serve as the foundation for common rules to be used by rules engines for determining what data may be shared based on individual permission.

H. Consistent data semantics

H3.1 ONC will promote and participate in collaborative processes to align SDOs and technology developers on the implementation and use of vocabularies, code sets, value sets and structure necessary to consistently represent and maintain the meaning of data elements associated with priority data domains across systems.

I. Consistent data formats

I3.1 ONC will promote and participate in collaborative processes to align semantic standards across format standards to consistently represent and maintain the meaning of data elements associated with priority data domains across systems.

J. Secure, standard services

J3.1 ONC will support implementation of new API requirements in certification by working with industry stakeholders to develop and disseminate best practices and technologies to ensure that existing and emerging APIs facilitate interoperability in a secure way.

L. Accurate individual data matching

L3.1 ONC will work with public and private stakeholders to identify and test a core set of metrics that can be used across the health IT ecosystem to consistently assess matching algorithm performance across different data sets and settings.