

*ONC Connecting Health and Care for the Nation:
A Shared Nationwide Interoperability Roadmap¹*

Overview

The [Federal Health IT Strategic Plan 2015-2020](#) outlined the Office of the National Coordinator for Health Information Technology's (ONC) vision of health information technology (health IT) for the future through three goals: Collect, Share, Use. The first goal of "collect" under the Plan is to expand the adoption of health IT. The second goal of "share" is to advance secure and interoperable health information. The third goal of "use" refers to strengthening health care delivery; advancing the health and well-being of individuals and communities; and advancing scientific research and knowledge.²

ONC laid out its vision for the second goal, "share" and a health IT ecosystem in [Connecting Health and Care for the Nation: A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure \(ONC's 10-Year Interoperability Concept Paper\)](#). This paper anticipates that by 2024 individuals, health care providers, and researchers would have access to interoperable health IT services and products that would contribute to the learning health system. This Roadmap describes the path to the Strategic Plan's second goal of secure and interoperable health information,³ and demonstrates the results of collaboration with private and public sector partners to define the Roadmap.

Nationwide interoperability is based on the following principles:

- Build upon existing Health IT infrastructure
- Maintain modularity
- One size does not fit all
- Current environment and multiple levels of advancement
- Empower individuals
- Simplify
- Protect privacy and security
- Leverage the market
- Focus on value
- Scalability and universal access

¹ Office of the National Coordinator for Health Information: *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap Draft 1.0* (Feb. 2015). Available at:

<http://www.healthit.gov/sites/default/files/nationwide-interoperability-roadmap-draft-version-1.0.pdf>.

² Office of the National Coordinator for Health Information, *Federal Health IT Strategic Plan* (2014), Available at: <http://www.healthit.gov/sites/default/files/federal-healthIT-strategic-plan-2014.pdf>, p. 5.

³ Interoperability is defined by the Institute of Electrical and Electronics Engineers (IEEE) as, "the ability of a system to exchange electronic health information with and use electronic health information from other systems without special effort on the part of the user."

The Roadmap supports the learning health system, which was originally envisioned by the Institute of Medicine’s *To Err is Human* and *Crossing the Quality Chasm* reports. The Roadmap defines a learning health system as, “an ecosystem where all stakeholders can securely, effectively and efficiently contribute, share and analyze data and create new knowledge that can be consumed by a wide variety of electronic health information systems to support effective decision-making leading to improved health outcomes.”⁴ The stakeholders who can affect change, as noted in the learning health system definition, through the Roadmap include:

- Patients, consumers, and caregivers;
- Health care providers (physicians, hospitals, behavioral, mental health and substance abuse providers, laboratories);
- Payers of health care (private, Medicare, Medicaid);
- Federal, state, local, and tribal governments;
- Researchers;
- Health IT technology developers and vendors;
- Governing and accreditation bodies (at national and local level); and
- Organizations and individuals who develop and maintain standards (Standards development organizations).

The Roadmap’s Five Fundamental Building Blocks



Core technical standards and functions

⁴ *Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap Draft 1.0*, p. 19.

- There is a need for standardized common clinical data set that is consistent and shared among providers during transitions of care.
- Secure, standard services are also key to achieving interoperability. Specifically, there must be convergence on a limited set of APIs to support necessary services, while adding new APIs to replace older or defunct ones.
- Common transport standards must be identified and implemented to advance interoperability.
- There should be a focus on consistent, accurate patient identity matching, with a standard set of terms that must be included in electronic exchanges.

Certification and testing to support adoption and optimization of Health IT products

- Certification and testing tools are critical for the implementation of a common set of technical tools and to advance interoperability. This will be coordinated between and among government and private sector entities.

Privacy and security protections of health information

- Cybersecurity protocols, including encryption, policies and procedures to respond to a security threat within an organization or across organizations, are key to advancing interoperability.
- Authentication is important to verify the identity of a patient user in order to foster an environment of trust.

Fair Information Practice Principles (FIPPs) identified as a set of overarching information principles that should be included:

- Individual access;
- Correction;
- Openness and transparency
- Individual choice
- Collection, use and disclosure limitation
- Data quality and integrity
- Safeguards
- Accountability

Supportive business, clinical, cultural, and regulatory environments

- Incentivizing value-based purchasing by federal, state and private payers.
- Cultural change focused on person-centric care including incorporating patient generated data and patient self-management tools.
- Further use of Clinical Support Tools will enhance interoperability.

Governance and Rules of Engagement

- Establish policies on secure access to personal health information.
- Entities facilitating interoperability should be transparent in their electronic exchange capabilities and promote participation by a wide variety of stakeholders.

- Standards must be in place to facilitate the exchange of health information across multiple health IT products.

Critical Actions and Key Dates

Three year agenda (2015-2017): Send, receive, find and use common clinical data set to improve health and health care quality.

Six year agenda (2018-2020): Expand interoperable health IT and users to improve health and lower costs.

Ten year agenda (2021-2024): Achieve nationwide learning health system.

Public comment period on the Roadmap Draft is open until April 3, 2015.

ONC Funding & Budget

President Obama's fiscal year 2016 budget request included a significant increase in the ONC's budget to \$92 million from \$60 million for 2014 and 2015⁵. The budget justification stated that the increased funding would go toward "advancing the interoperability of health IT so that electronic health information can be collected, shared and used by consumers, providers and others to advance care and health."⁶

Funding would be allocated as follows:

- \$13 million for the EHR incentive program.
- \$27 million for policy development and coordination, including implementation of the Federal Health IT Strategic Plan, and \$5 million allocated toward establishing a health IT safety center, which would open in 2016.
- \$33.7 million toward standards, interoperability, and certification to accelerate nationwide progress toward an interoperable learning health IT infrastructure and to developing an EHR system certification program to ensure information sharing.
- \$18.1 million for agency-wide support.

⁵ Fiscal Year 2016 Budget of the U.S. Government (Feb. 2015), Available at:

<http://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/budget.pdf>.

⁶ Department of Health and Human Services, Fiscal Year 2016, Budget Justification. Available at:

<http://www.hhs.gov/budget/fy2016/fy2016-general-departmental-budget-justification.pdf>.