ONC Objectives, Benchmarks, and Measurements

HITAC Meeting, November 10, 2021

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For the purpose of the HITAC Annual Report, Section 4003 of the 21st Century Cures Act states that:

“...the National Coordinator, in collaboration with the Secretary, shall establish, and update as appropriate, objectives and benchmarks for advancing and measuring the advancement of the priority target areas...”

• ONC sets the objectives and benchmarks used in the development of the HITAC Annual Report

• ONC objectives and benchmarks support implementation of the 2020-2025 Federal Health IT Strategic Plan

• ONC welcomes feedback from HITAC members about the objectives and benchmarks, in particular please share how they advance the priority target areas
2020-2025 Federal Health IT Strategic Plan

Objectives

- Advance the development and use of health IT capabilities
- Establish expectations for data sharing

Goal

Connect Healthcare with Health Data
Connect Healthcare with Health Data

Establish **equity by design** as a core principle for the development and use of health IT

Modernize **public health data systems** and integrate public health with clinical care systems to effectively respond to public health emergencies

Standardize health information sharing by supporting health IT users in FHIR and USCDI implementation

Create simplified **nationwide connectivity** for healthcare providers, health plans, individuals, and public health organizations to allow for universal interoperability across the care continuum
ONC Activities for Benchmarking Progress

- Standards
- Certification
- Exchange
### FY21 ONC Standards Activities

#### USCDI
- Published USCDI Version 2, which includes new data classes and elements

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<tr>
<th>Assessment and Plan of Treatment</th>
<th>Care Team Member(s)</th>
<th>New Data Class &amp; Elements</th>
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<td>• SDOH Assessment</td>
<td>• Care Team Member Name</td>
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<td>• Care Team Member Identifier</td>
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<td>• Care Team Member Telecom</td>
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<th>New Data Class &amp; Elements</th>
<th>Encounter Information</th>
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<td><strong>Diagnostic Imaging</strong></td>
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<td>• Diagnostic Imaging Test</td>
<td>• Encounter Disposition</td>
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<td>• Encounter Type</td>
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<tr>
<th>New Data Class &amp; Elements</th>
<th>Problems</th>
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<td><strong>Patient Demographics</strong></td>
<td>• SDOH Problems/Health Concerns</td>
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<td>• SDOH Interventions</td>
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<td>• Clinical Test Result/Report</td>
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FY21 ONC Standards Activities

SVAP
- Completed first cycle of SVAP process

FHIR
- Published HL7 FHIR US Core Implementation Guide STU 3.2.0 and 4.0.0
- Published FormatCode Implementation Guide
- Published Mobile Access to Health Documents Implementation Guide
- Published Patient Identifier Cross-reference for Mobile Implementation Guide
- Published Patient Demographics Query for Mobile Implementation Guide

Public Health
- Balloted first version of the COVID-19 FHIR Profile Library
- Standardized over 1,800 lab test order names
- Developed 75 COVID-19 and public health related LOINC special use codes
- Launched the Strengthening the Technical Advancement & Readiness of Public Health via Health Information Exchange Program (STAR HIE Program)
- Published Situation Awareness for Novel Epidemic Response (SANER) Implementation Guide
FY21 ONC Certification Activities

• Published Certification Fact Sheets:
  o Highlighted Regulatory Dates – ONC Health IT Certification Program
  o Application Programming Interfaces (APIs) – Conditions and Maintenance of Certification
  o Standards-based API Certification Criterion

• Compliance requirements went into effect for several Conditions of Certification, including for Information Blocking, Assurances, API, and Communications
FY21 ONC Exchange Activities

• Information Blocking applicability for Health Care Provider, Health Information Network/Health Information Exchange, and Health IT Developer of Certified Health IT (for data elements in USCDI Version 1)
  • Published 36 Information Blocking Frequently Asked Questions (FAQs) and 5 Fact Sheets
  • Held public webinars on Information Blocking and Healthcare Provider Information Sharing
• TEFCA public engagement webinars, HITAC engagement, and Common Agreement Work Group sessions
FY22 ONC Standards Plans

**USCDI**
- Update versions of USCDI with additional data classes/data elements

**SVAP**
- Publish National Coordinator-approved updated versions of health IT standards and implementation specifications via SVAP process

**FHIR**
- Release HL7 FHIR R5
- Update HL7 US FHIR Core Implementation Guide to align with USCDI updates
- Collaborate with Standards Development Organizations (SDOs) to Accelerate FHIR API Standards' Ability to Support Use Cases for Population-Level Query Services
- Publish FHIR-related guidance on Integrating the Healthcare Enterprise® (IHE) profiles
FY22 ONC Standards Plans

Standards Development Organizations
- Develop FHIR resources to address disease, chronic conditions, and environmental factors
- Develop and update standards and Implementation Guides related to privacy, security, and consent
- Encourage the adoption of FHIR Bulk Data Access (Flat FHIR) Implementation Guide
- Support HL7 US Realm

Lab Standards
- Develop COVID-19 and public health-related LOINC special use codes that describe laboratory tests ordered and taken
- Standardize the lab test order names to reduce erroneous lab orders and/or results

Standards for Federal Partners
- Facilitate testing, final balloting, and real-world deployment of Situational Awareness for Novel Epidemic Response Implementation Guide for use by Federal partners
FY22 ONC Certification Plans

• Initial Real-World Testing Plans due (December 15, 2021)
• Initial Attestations to Conditions and Maintenance of Certification due (April 1, 2022)
FY22 ONC Exchange Plans
Information Blocking

• From April 5, 2021, to October 6, 2022, the definition of information blocking is limited to the EHI that is also represented in the USCDI.

• On and after October 6, 2022, the definition of EHI is no longer limited to the elements represented in the USCDI. EHI means electronic protected health information (ePHI) to the extent that the ePHI would be included in a designated record set as these terms are defined for HIPAA.

  • Except for psychotherapy notes (45 CFR 164.501) and information compiled in reasonable anticipation of, or for use in, a civil, criminal, or administrative action or proceeding.
FY22 ONC Exchange Plans
Trusted Exchange Framework and Common Agreement

• Final Trusted Exchange Framework, Final Common Agreement (CA) Version 1, and Final Qualified Health Information Network (QHIN) Technical Framework (QTF) QTF Version 1 Published

• QHINs begin signing Common Agreement

• QHINs selection, onboarding, and sharing begins
FY22 ONC Exchange Plans
Health Information Exchange Services

• Advance innovative health information exchange services that benefit public health agencies

• Improve the health information exchange services available to support communities disproportionately impacted by the COVID-19 pandemic
Health Information Technology Advisory Committee
Target Areas in the Cures Act

Use of Technologies that Support Public Health:
The facilitation of bidirectional information sharing between the clinical and public health communities

Interoperability:
Achieving a health information technology infrastructure that allows for the electronic access, exchange, and use of health information

Privacy and Security:
The promotion and protection of privacy and security of health information in health IT

Patient Access:
The facilitation of secure access by an individual and their caregiver(s) to such individual’s protected health information
Discussion

Phone: 202-690-7151

Health IT Feedback Form: https://healthit.gov/feedback

Twitter: @onc_healthIT

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API Measurement and the Current State of Patients’ Access to their Electronic Health Information

HITAC Data Update

ONC, Data Analysis Branch
Measurement of Patient Access to their Electronic Health Information

Availability of FHIR-based APIs

Implementation and adoption of FHIR-based APIs

Patient access to their electronic health information (EHI)

Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs
Current ONC Measurement Activities

• **Availability of FHIR-based APIs**
  • Programmatic data from the ONC Certified Health IT Product List (CHPL) provide insights on the number of certified API products that support FHIR.

• **Implementation and adoption of FHIR-based APIs among healthcare providers**
  • American Hospital Association IT Supplement Survey of hospital CEOs and CIOs, which ONC uses to track the adoption of EHRs, and their use of technology to exchange electronic health information and provide patients access to their health information.

• **Availability of patient-facing health apps and the use of FHIR-based APIs among health apps**
  • Publicly available app gallery data published by EHR developers and other health IT stakeholders provides information on the number and types of third-party apps that integrate with EHRs.

• **Patient access to their EHI and use of smartphone health apps**
  • Health Information National Trends Survey (HINTS) of U.S. adults, which ONC uses to track consumers’ access and use of patient portals and smartphone health apps.
Measurement of Patient Access to their Electronic Health Information

Availability of FHIR-based APIs

Implementation and adoption of FHIR-based APIs

Patient access to their electronic health information (EHI)

Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs
91% of hospitals and 72% of clinicians have adopted or could adopt 2015 Edition certified technology enabled with FHIR.

Percent of hospitals and clinicians that adopted or could adopt (but did not) 2015 Edition certified API technology enabled with FHIR, 2019

Notes: (1) All U.S. non-federal acute care hospitals. (2) All Merit-based Incentive Payment System (MIPS) eligible clinician types. (3) Could adopt represents the percentage of hospitals and clinicians who have not adopted 2015 Edition technology but possess certified technology with a 2015 Edition version enabled with FHIR.
Measurement of Patient Access to their Electronic Health Information

Availability of FHIR-based APIs

Implementation and adoption of FHIR-based APIs

Patient access to their electronic health information (EHI)

Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs
Hospitals’ enabling patient access to their health information using an app nearly doubled between 2017 and 2019.

Percent of non-federal acute care hospitals that enabled patients to access health information using apps and view clinical notes in their portal, 2017-2019.

Note: Denominator represents all non-federal acute care hospitals that provide inpatient care.
*Significantly different from previous year (p<0.05).
Measurement of Patient Access to their Electronic Health Information

Availability of FHIR-based APIs → Implementation and adoption of FHIR-based APIs → Patient access to their electronic health information (EHI) → Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs
As of the end of 2020, more than 700 apps were listed in EHR app galleries, this represented a 20% increase from 2019.

The number of apps added and removed across publicly available marketplaces between 2019 and 2020.

Notes: (1) Figure represents the number of apps discovered in the online app marketplaces hosted by Allscripts, Athenahealth, Cerner, Epic, and SMART from December 30, 2019 to December 15, 2020. (2) The “All 5 Marketplaces” group reflects unique apps.
Overall, 1 in 5 apps support FHIR, however, this varies by functional category.

Number of apps that use the FHIR standard by functional category.

Notes: (1) Functional categories are not mutually exclusive. (2) Figure represents the number of apps discovered in the online app marketplaces hosted by Allscripts, Athenahealth, Cerner, Epic, and SMART from December 30, 2019 to December 15, 2020.
Measurement of Patient Access to their Electronic Health Information

- Availability of FHIR-based APIs
- Implementation and adoption of FHIR-based APIs
- Patient access to their electronic health information (EHI)
- Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs
About six in 10 individuals nationwide were offered a patient portal in 2020 – this represents a 17-percentage point increase since 2014.

Percent of individuals nationwide who were offered and accessed a patient portal, 2014-2020.

Source: HINTS 4 Cycle 4 (2014); HINTS 5, Cycles 1-4 (2017-2020)
Note: *Significantly different from previous year (p<0.05). Denominator represents all individuals. Percentage reflects weighted national estimate for individuals offered a patient portal by a health care provider or insurer. The HINTS survey was not fielded in 2015 and 2016.
Measurement of Patient Access to their Electronic Health Information

Availability of FHIR-based APIs

Implementation and adoption of FHIR-based APIs

Patient access to their electronic health information (EHI)

Smartphone health app use to access and use EHI

Availability of apps leveraging FHIR-based APIs

Smartphone health app use to access and use EHI

Source: HINTS 5, Cycle 4 (2020)

Notes: Denominator represents individuals who accessed their patient portal at least once within the past year. Individuals who access their portal at least once in the past year are referred to as “patient portal users”.
Future Measurement
Implementation of FHIR-based APIs

• Current program/survey data provide limited insight on:
  • Capabilities and characteristics of FHIR APIs, including whether they have been “turned on”
  • The number and types of organizations that have turned on their FHIR based APIs

Lantern Project (Website: lantern.healthit.gov)

• The ONC Cures Final Rule requires Certified API Developers (by December 2022) to publish service base URLs (endpoints) for all health IT modules certified to the Standardized API criterion that can be used by patients to access their electronic health information.

• Lantern Project is designed to monitor FHIR API endpoints to identify the locations and capabilities of nationwide FHIR deployments.
Third-party apps & their usage

• Current program/survey data provide limited insight on:
  • Usage of third-party apps to access EHI
  • Availability and characteristics of apps to support patient access and use of EHI is limited to app galleries

EHR Reporting Program

• Proposed measures by the HITAC for the EHR Reporting Program can provide insights into patient access and use of EHI.
  • Examples of Potential Measures:
    • Percentage of patients who access their electronic health information using different methods
    • The availability of apps using certified API technology (170.315(g)(10)) using SMART on FHIR
Discussion
Contact ONC

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