



Office of the National Coordinator
for Health Information Technology

EMS Opportunities and Data Needs

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Office of Policy, ONC

August 22, 2022



Agenda

- Who is ONC?
- USCDI/USCDI+
- Interoperability Standards Advisory (ISA)
- FHIR (Fast Healthcare Interoperability Resources)
- TEFCA (Trusted Exchange Framework and Common Agreement)
- How can EMS Participate?



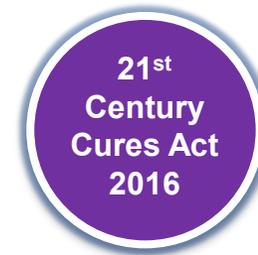
Office of the National Coordinator for Health IT

- Founded in 2004 by executive order, established in statute in 2009
- ONC is charged with formulating the **federal government's health IT strategy** to advance national goals for better and safer health care through an **interoperable nationwide health IT infrastructure**



Laying the foundation of EHRs across the industry

- \$40B CMS investment to subsidize EHRs for hospitals and ambulatory providers
- ONC certification of EHR systems to support CMS and CDC programs



Leveraging EHRs to drive value

- Information blocking: Prohibits providers, technology developers, and health information networks from interfering with access, exchange, and use of electronic health information
- Standards: Requires access to information through APIs “without special effort”
- TEFCA: Requires nationwide governance for health information exchange networks – Trusted Exchange Framework and Common Agreement



**New Data
Standards and
Policies are
Transforming
Digital Health
Data**

Create a Core Set of Standardized Data Elements for Health

US Core Data for Interoperability (USCDI)

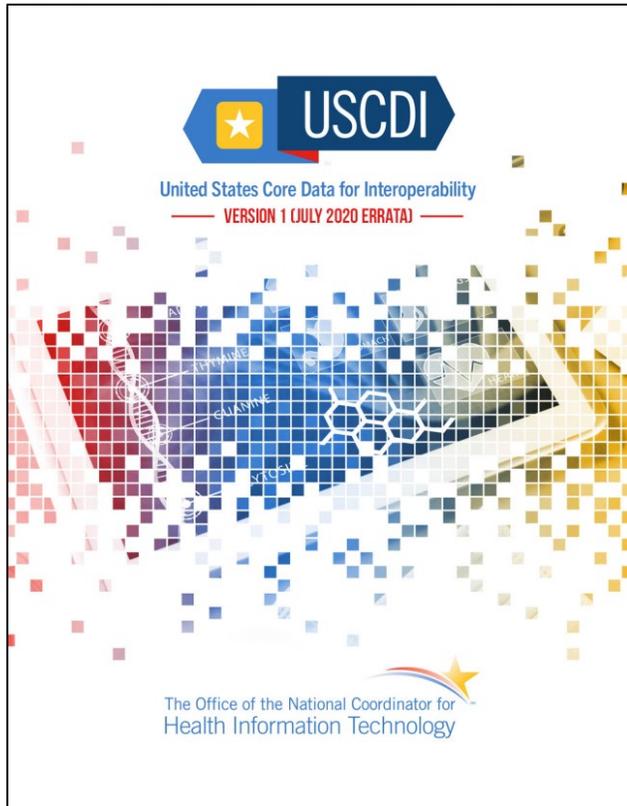


Common core of standardized data to support treatment, payment, healthcare operations, requests from patients, post-market surveillance, research, public health, and other authorized uses.

<https://www.healthit.gov/topic/interoperability/uscdi-plus>

<https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi>

Certified EHR Currently Adopting USCDI V1



USCDI v1 Summary of Data Classes and Data Elements		
Allergies and Intolerances <ul style="list-style-type: none"> Substance (Medication) Substance (Drug Class) Reaction 	Laboratory <ul style="list-style-type: none"> Tests Values/Results 	Smoking Status <ul style="list-style-type: none"> Smoking Status
Assessment and Plan of Treatment <ul style="list-style-type: none"> Assessment and Plan of Treatment 	Medications <ul style="list-style-type: none"> Medications 	Unique Device Identifier(s) for a Patient's Implantable Device(s) <ul style="list-style-type: none"> Unique Device Identifier(s) for a Patient's Implantable Device(s)
Care Team Members <ul style="list-style-type: none"> Care Team Members 	Patient Demographics <ul style="list-style-type: none"> First Name Last Name Previous Name Middle Name (incl Middle Initial) Suffix Birth Sex Date of Birth Race Ethnicity Preferred Language Current Address Previous Address Phone Number Phone Number Type Email Address 	Vital Signs <ul style="list-style-type: none"> Diastolic Blood Pressure Systolic Blood Pressure Body Height Body Weight Heart Rate Respiratory Rate Body Temperature Pulse Oximetry Inhaled Oxygen Concentration BMI Percentile (2 - 20 Years) Weight-for-length Percentile (Birth - 36 Months) Head Occipital-frontal Circumference Percentile (Birth - 36 Months)
Clinical Notes <ul style="list-style-type: none"> Consultation Note Discharge Summary Note History & Physical Imaging Narrative Laboratory Report Narrative Pathology Report Narrative Procedure Note Progress Note 	Problems <ul style="list-style-type: none"> Problems 	
Goals <ul style="list-style-type: none"> Patient Goals 	Procedures <ul style="list-style-type: none"> Procedures 	
Health Concerns <ul style="list-style-type: none"> Health Concerns 	Provenance <ul style="list-style-type: none"> Author Time Stamp Author Organization 	
Immunizations <ul style="list-style-type: none"> Immunizations 		

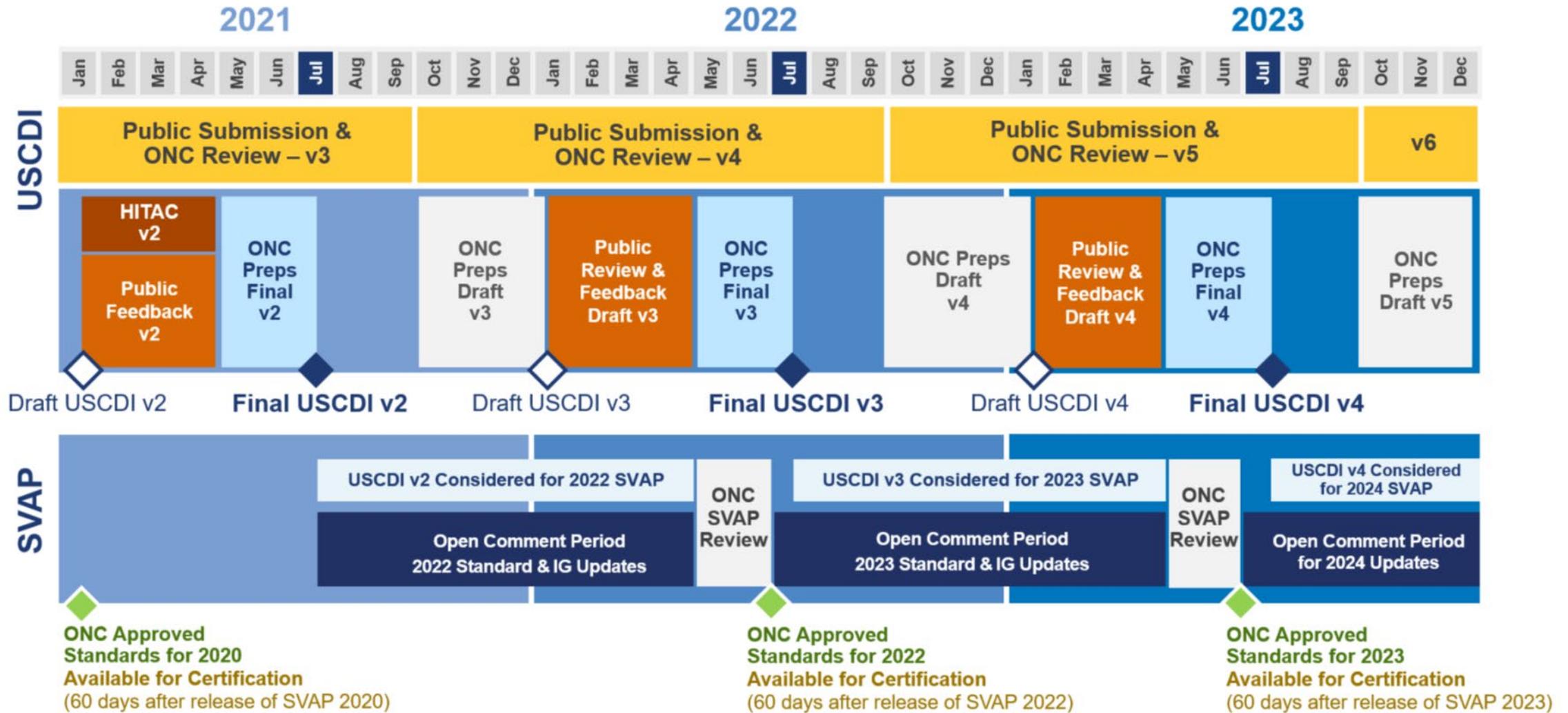
- ONC standard for minimum dataset required for interoperability**
 - Defines required data elements and vocabulary standards
 - Agnostic to format
- Updated on annual cycle with federal agency and industry input**
 - Updates based on multiple criteria including standards maturity and public/industry priority



Allergies and Intolerances <ul style="list-style-type: none"> Substance (Medication) Substance (Drug Class) Reaction 	Clinical Tests <ul style="list-style-type: none"> Clinical Test Clinical Test Result/Report 	Health Status/ Assessments ★★ <ul style="list-style-type: none"> Health Concerns → Functional Status ★ Disability Status ★ Mental Function ★ Pregnancy Status ★ Smoking Status → 	Patient Demographics/ Information ★★ <ul style="list-style-type: none"> First Name Last Name Middle Name (Including middle initial) Name Suffix ★★ Previous Name Date of Birth Date of Death ★ Race Ethnicity Tribal Affiliation ★ Sex ★★ Sexual Orientation Gender Identity Preferred Language Current Address Previous Address Phone Number Phone Number Type Email Address Related Person's Name ★ Related Person's Relationship ★ Occupation ★ Occupation Industry ★ 	Procedures <ul style="list-style-type: none"> Procedures SDOH Interventions Reason for Referral ★
Assessment and Plan of Treatment <ul style="list-style-type: none"> Assessment and Plan of Treatment SDOH Assessment 	Diagnostic Imaging <ul style="list-style-type: none"> Diagnostic Imaging Test Diagnostic Imaging Report 	Immunizations <ul style="list-style-type: none"> Immunizations 		Provenance <ul style="list-style-type: none"> Author Organization Author Time Stamp
Care Team Member(s) <ul style="list-style-type: none"> Care Team Member Name Care Team Member Identifier Care Team Member Role Care Team Member Location Care Team Member Telecom 	Encounter Information <ul style="list-style-type: none"> Encounter Type Encounter Diagnosis Encounter Time Encounter Location Encounter Disposition 	Laboratory <ul style="list-style-type: none"> Test Values/Results Specimen Type ★ Result Status ★ 		Unique Device Identifier(s) for a Patient's Implantable Device(s) <ul style="list-style-type: none"> Unique Device Identifier(s) for a patient's implantable device(s)
Clinical Notes <ul style="list-style-type: none"> Consultation Note Discharge Summary Note History & Physical Procedure Note Progress Note 	Goals <ul style="list-style-type: none"> Patient Goals SDOH Goals 	Medications <ul style="list-style-type: none"> Medications ★ Dose ★ Dose Units of Measure ★ Indication ★ Fill Status ★ 	Problems <ul style="list-style-type: none"> Problems SDOH Problems/Health Concerns Date of Diagnosis Date of Resolution 	Vital Signs <ul style="list-style-type: none"> Systolic blood pressure Diastolic blood pressure Heart Rate Respiratory rate Body temperature Body height Body weight Pulse oximetry Inhaled oxygen concentration BMI Percentile (2 - 20 years) Weight-for-length Percentile (Birth - 24 Months) ★★ Head Occipital-frontal Circumference Percentile (Birth - 36 Months)

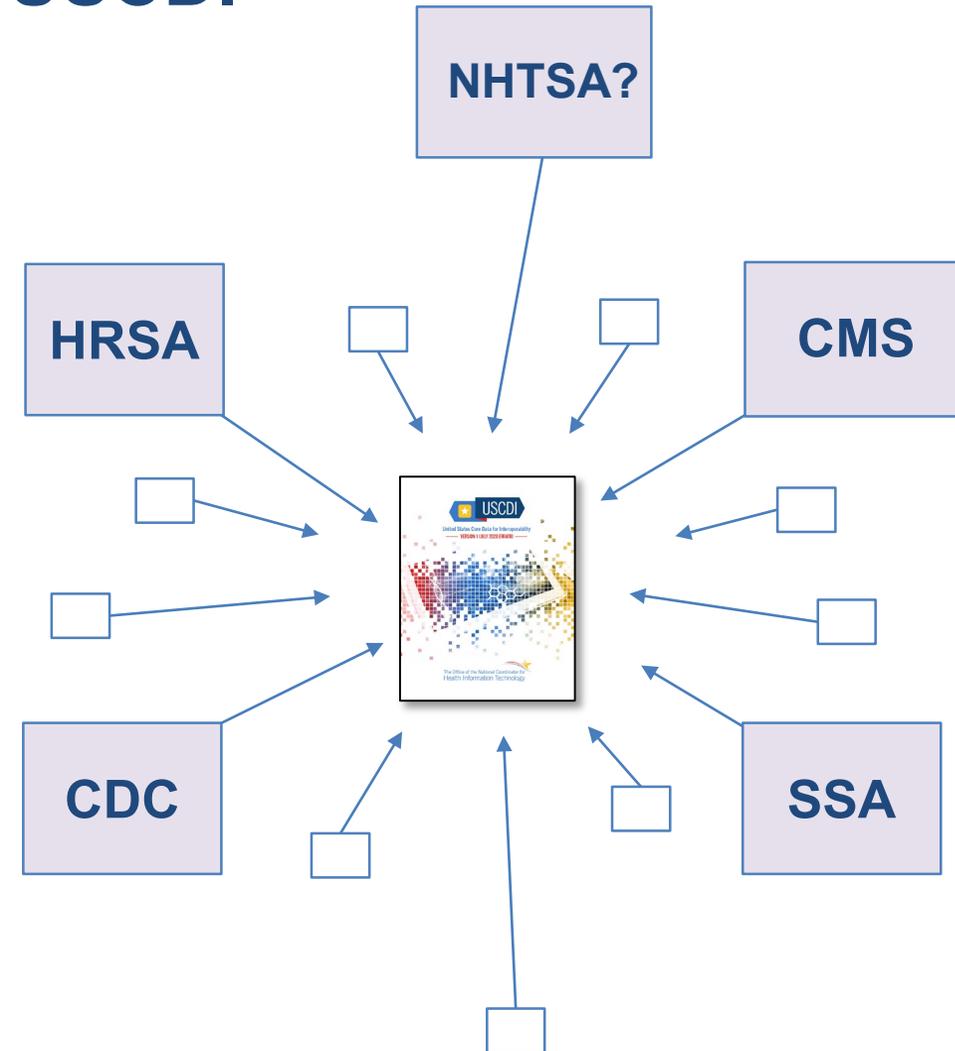


USCDI Continues to Evolve



USCDI+: Extending Beyond the USCDI

- Unique agency or program-specific data systems and requirements sometimes not fully met by USCDI
- ONC USCDI+ initiative helps federal partners build on USCDI to support specific program needs
- Allows ONC to better serve federal partners, assures that extensions build from the same foundation, and creates the opportunity for aligning similar data needs across agency programs



What is the Interoperability Standards Advisory (ISA)?



- Single, public list of the standards and implementation specifications that can best be used to address specific interoperability needs.
- Reflects the results of ongoing dialogue, debate, and consensus among industry stakeholders.
- Documents known limitations, preconditions, and dependencies as well as other helpful information.
- Serves as an informational resource, is non-binding and does not create or confer any rights or obligations for or on any person or entity.
- www.healthit.gov/ISA



How is the ISA used and by whom?

- Informs policy and implementation efforts, including limitations, dependencies or preconditions for use.
- Stakeholders who administer government and non-governmental procurements
- Developers of health IT
- Implementers and users of health IT products

ISA Interoperability Need

Vocabulary/Code Set/Terminology

Representing Health Care Data for Emergency Medical Services							
Type	Standard / Implementation Specification	Standards Process Maturity	Implementation Maturity	Adoption Level	Federally required	Cost	Test Tool Availability
Standard	NEMESIS Version 3.4	Final	Production	Feedback Requested	No	Free	Yes
Standard	Current Procedural Terminology (CPT)	Final	Production	Feedback Requested	No	\$	N/A
Standard	RxNorm	Final	Production	●●●●○	Yes	Free	N/A
<i>Emerging Standard</i>	<i>NEMESIS Version 3.5</i>	<i>Final</i>	<i>Production</i>	<i>Feedback Requested</i>	<i>No</i>	<i>Free</i>	<i>Yes</i>

Limitations, Dependencies, and Preconditions for Consideration	Applicable Value Set(s) and Starter Set(s)
<ul style="list-style-type: none"> The National Emergency Medical Services Information System (NEMESIS) administered by the National Highway Traffic Safety Administration's Office of Emergency Medical Services provides a universal standard for the collection and transmission of emergency medical services (EMS) operations and patient care data. Using NEMESIS-compliant electronic patient care record (ePCR) 	<ul style="list-style-type: none"> CPT 99281 - 99285: patient evaluation, examination, and medical decision making for emergency department services CPT 99288: direction of emergency care to EMS personnel by a physician or other qualified health care professional



Access and Share Health Information Seamlessly

Fast Healthcare Interoperability Resources (FHIR)



Set of best practices and open standards being developed and adopted by a global community to make data sharing more flexible and effective.

ONC FHIR API Requirements: Access “without special effort”



Open “application programming interfaces” (APIs) and apps are what make it easy to check your bank account or buy stocks or order meal delivery on your smartphone

- We want providers and patients to have that same experience the health care system

21st Century Cures Act requires availability of APIs that can be accessed “without special effort”

- ONC rule takes steps to prevent business and technical barriers to information-sharing

By December 31, 2022, all certified technology developers required to deploy a standard FHIR API across their entire customer base

- Will create a climate for innovation as apps can now be developed that will work across all EHR systems

21st Century Cures Act - Section 4003(b)

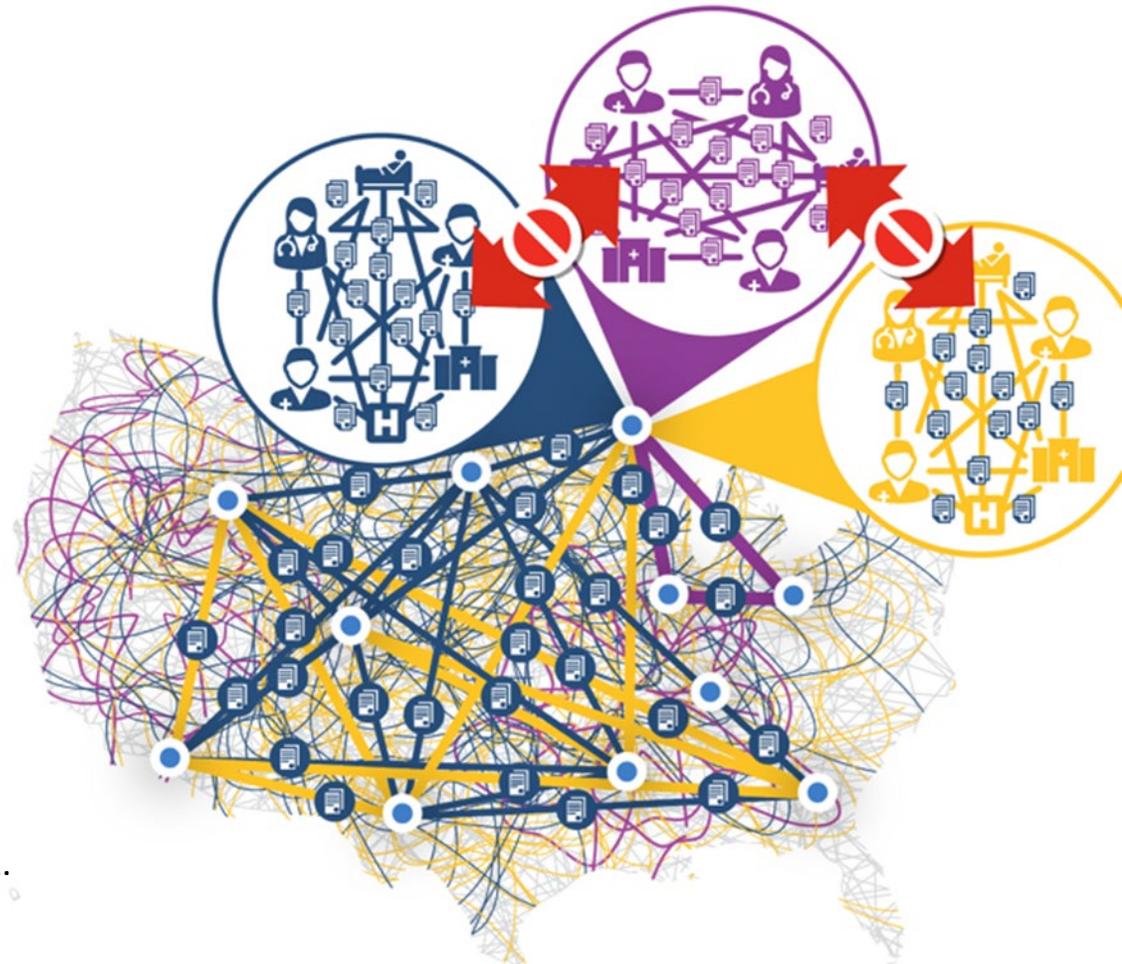
“[T]he National Coordinator shall convene appropriate public and private stakeholders to **develop or support a trusted exchange framework for trust policies and practices and for a common agreement for exchange between health information networks.**”

[emphasis added]



TEFCA Will Simplify Health Data Exchange

- **Proliferation of Agreements**
- **While there has been growth in national networks, many organizations must join multiple Health Information Networks (HINs)*, and many HINs do not share data with each other.**
- **The COVID pandemic also underscored the need to share information for care and public health purposes.**
- **Health data exchange must be simplified in order to scale.**



*Capitalized terms have the definitions set forth in the Common Agreement Version 1.

TEFCA Timeline

2021

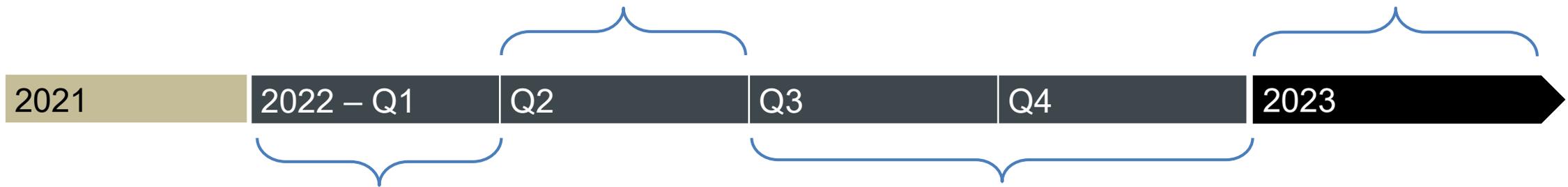
- Public engagement
- Common Agreement Work Group sessions
- RCE and ONC use feedback to finalize TEFCA

Q2 of 2022

- QHINs begin signing Common Agreement and applying for designation

2023

- Establish Governing Council
- Follow change management process to iterate Common Agreement, SOPs, and QTF, including to support FHIR-based exchange



Q1 of 2022

- Publish Common Agreement Version 1
- Publish QHIN Technical Framework (QTF) Version 1 and FHIR Roadmap
- Initiate work to enable FHIR-based exchange
- Public education and engagement

Q3 and Q4 of 2022

- Onboarding of initial QHINs
- Additional QHIN applications processed
- RCE establishes Transitional Council
- RCE begins designating QHINs to share data
- Prepare for TEFCA FHIR exchange pilots

New HHS Policy on Alignment of Health IT Activities

Interoperability

E Pluribus Unum

Micky Tripathi and Steven Posnack | AUGUST 5, 2022



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As our nation transitions to a digital healthcare system, our stakeholders are discovering new opportunities for using health information technology to advance health care delivery, public health, and research to improve people's lives. The federal government is no exception in this regard; agencies across the Department of Health and Human Services (HHS) are beginning to leverage the data and capabilities available through electronic health records for a broad range of federal activities and programs, including product safety and surveillance, real world data and real world evidence for regulatory approvals, research, pandemic response, and social service integration, to name just a few.

While this is an exciting development for HHS overall, it does call for more proactive alignment and coordination of health IT activities across the department to ensure that we are operating as efficiently and cohesively as possible. To that end, Secretary Becerra has put into place a department-wide management policy directing ONC to engage with HHS agencies to align and coordinate health IT-related activities in support of HHS health IT and interoperability goals. Specifically, the secretary has directed ONC to establish and oversee a consistent HHS-wide approach for: 1) incorporating standard health IT requirements language in all applicable HHS funding programs, contracts, and policies; and 2) providing direct ONC assistance to HHS agencies to maximize the use of HHS-approved standards and authorities (such as [Section 3004 of the Public Health Service Act](#)) in their agency programs.

While it won't happen overnight, what we expect to see over time is greater consistency in health IT-based activities across HHS, which should result in lower cost and higher effectiveness agency programs, more sharing of data and health IT infrastructure across programs and agencies, and lower burden on health care providers, technology developers, and other stakeholders who engage with multiple HHS agencies. Maximizing federal use of open-industry, non-proprietary, scalable standards and approaches – such as the US Core Data for Interoperability (USCDI) and FHIR APIs as called for by the 21st Century Cures Act – will multiply the impact of the department's regulations and purchasing power to reinforce HHS health IT and interoperability goals. It will also directly support key Biden-Harris Administration priorities in [health equity](#), [federal customer experience and service delivery](#), and [promoting competition](#). ONC already works collaboratively with our federal agency partners, and we are excited to be able to better support our sister HHS agencies and ensure that HHS is more than the sum of its parts.

Specifically, the secretary has directed ONC to establish and oversee a consistent HHS-wide approach for: 1) incorporating standard health IT requirements language in all applicable HHS funding programs, contracts, and policies; and 2) providing direct ONC assistance to HHS agencies to maximize the use of HHS-approved standards and authorities (such as [Section 3004 of the Public Health Service Act](#)) in their agency programs.

How Can EMS Participate?



USCDI/USCDI+--ONC is accepting submissions for new data elements through the ONDEC system and comments on existing data elements until September 30, 2022. ONC plans on releasing Draft USCDI v4 in January 2023: <https://www.healthit.gov/uscdi>

ISA—Continue to learn about and contribute additional standards it is open on a rolling basis: <https://www.healthit.gov/isa/>

FHIR—Various active HL7 Workgroups that affect EMS: <https://confluence.hl7.org/pages/viewpage.action?pageId=4489802>

TEFCA—The Recognized Coordinating Entity—The Sequoia Project—has regular public meetings: <https://rce.sequoiaproject.org/community-engagement/>

2022 ONC Tech Forum—Attend it is free: <https://www.healthit.gov/news/events/2022-onc-virtual-tech-forum>



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<https://www.healthit.gov/form/healthit-feedback-form>



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