FHIR® Frequently Asked Questions

CDC Public Health FHIR® Implementation Collaborative (PHFIC)

1. What is FHIR®*?

FHIR® stands for Fast Healthcare Interoperability Resources® and is a health data standard (like Health Level Seven® family of standards) that utilizes modern world wide web technology to facilitate data exchange.[i] A health data standard, like FHIR®, is a set of guidelines or rules that describe how health information should be organized, shared, and interpreted. It helps ensure that health data are consistent, accurate, and can be easily understood and used by different healthcare providers and systems.[ii]

- Since December 2022, the Office of the National Coordinator for Health Information Technology (ONC) has required FHIR® in electronic health records as part of the Certification Program .[iii]
- FHIR® is easy to use, reducing the time and cost to share data.
- FHIR® is designed to make it simpler to share data, coordinate care, and make informed decisions.
- FHIR® makes it possible for more software developers to help with public health.

2. What is United States Core Data for Interoperability (USCDI)?

USCDI is a standardized set of health data elements that healthcare providers and systems in the United States (US) use to exchange patient health information. These data elements include things like patient demographics, medical problems, medications, lab results, and more. By using USCDI, healthcare providers can share patient information more easily and accurately, which can improve care and outcomes. ONC 21st Century Cures Act (Cures Act) Final Rule[iv] mandates USCDI v1.[v] USCDI data elements are updated yearly and included in the Certification Program for electronic health records.

3. How is USCDI related to FHIR® and US Core?

Drawing from USCDI, Health Level Seven® (HL7®) developed the US Core FHIR® standards as the standard for FHIR® interoperability in the US.[vi] US Core is based on FHIR® Version R4 and defines the minimum requirements for FHIR® resources.

4. What is a FHIR® Accelerator?

HL7® designed and leads the FHIR® Accelerator program[vii] to assist communities and collaborative groups with the promotion and implementation of FHIR® within a specific focus area. There are currently eight Accelerators, and the most relevant for public health are:
- Helios — Focus is on public health to healthcare data exchange.[viii]
- Gravity — Focus is on exchanging social determinates of health data.[ix]
- FHIR® at Scale Taskforce (FAST) Accelerator — Focus is on mechanisms for scaling FHIR®.[x]

5. What is Bulk FHIR®?

Bulk FHIR® is a way to communicate large amounts of information at once.[xi] For example, if you have population-level public health questions, Bulk FHIR® is the right tool to gather population information on groups of individuals with a specific condition or symptomology within a database and other large dataset operations.

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6. What is the Trusted Exchange Framework and Common Agreement (TEFCA)?

TEFCA is a set of policies and technical standards to ensure secure and interoperable exchange of electronic health information across a nationwide network of entities.[xii] One of the main challenges in public health is the need to coordinate care across different entities and jurisdictions. TEFCA provides a way to potentially exchange information in a standardized and secure manner, which is essential for effective disease management, population health management, and emergency response. Additional [benefits for state governments and public health](#)[xiii] can be found on the TEFCA Recognized Coordinating Entity, [the Sequoia Project](#).[xiv]

7. What is a FHIR® Questionnaire?

[FHIR® questionnaire](#) is an electronic form that uses the FHIR® standard to collect health-related information from individuals, healthcare providers, or populations.[xv] It can be used for a variety of purposes, such as gathering patient health history, tracking symptoms or side effects, or assessing the effectiveness of treatments. This information can be used to improve public health outcomes, such as tracking disease outbreaks, monitoring health behaviors, or identifying health disparities. FHIR® questionnaires can be administered online, through mobile devices or in-person, depending on the specific population and the research or clinical purpose. With the correct setup, FHIR® questionnaires can reduce manual entry, eliminate dual documentation entry errors, make captured data more discrete, and improve analysis with web forms and FHIR® communications.

* FHIR® is the registered trademark of Health Level Seven International® and the use does not constitute endorsement by HL7®.

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[i] ONC's FHIR® Fact Sheets, available at https://www.healthit.gov/topic/standards-technology/standards/fhir-fact-sheets

[ii] Institute of Medicine (US) Committee on Data Standards for Patient Safety; Aspden P, Corrigan JM, Wolcott J, et al., editors. Patient Safety: Achieving a New Standard for Care. Washington (DC): National Academies Press (US); 2004. 4, Health Care Data Standards. Available from: https://www.ncbi.nlm.nih.gov/books/NBK216088/

[iii] ONC's Certification Program Requirements, available at https://www.healthit.gov/topic/certification-ehrs/certification-health-it#:~:text=The%20ONC%20Health%20IT%20Certification,and%20Human%20Services%20(HHS)

[iv] Cures Act Final Rule, USCDI, available at https://www.healthit.gov/sites/default/files/page2/2020-03/USCDI.pdf

[v] USCDI versions, available at https://www.healthit.gov/isa/united-states-core-data-interoperability-uscdi

[vi] HL7® US Core Implementation Guide available at https://www.hl7.org/fhir/us/core/

[vii] HL7® FHIR® Accelerator Program available at https://www.hl7.org/about/fhir-accelerator/

[viii] Helios, HL7® FHIR® Accelerator for Public Health available at https://www.hl7.org/helios/

[ix] Gravity Accelerator available at https://www.hl7.org/gravity/

[x] FHIR® at Scale Taskforce Accelerator available at https://www.hl7.org/fast/

[xi] Overview HL7® FHIR® and Bulk FHIR® available at https://www.cdc.gov/surveillance/pubs-resources/dmi-summary/overview-hl7.html

[xii] Trusted Exchange Framework and Common Agreement available at https://www.healthit.gov/topic/interoperability/policy/trusted-exchange-framework-and-common-agreement-tefca

[xiii] Benefits for State Governments and Public Health available at https://rce.sequoiaproject.org/benefits-for-state-governments-and-pubic-health/

[xiv] The Sequoia Project website available at https://rce.sequoiaproject.org/

[xv] HL7® Resource Questionnaire available at https://www.hl7.org/fhir/questionnaire.html