

FHIR Alignment with USCDI Panel

C-CDA on FHIR

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- HL7 Consult Note
- HL7 Diagnostic Imaging Report
- HL7 Discharge Summary
- HL7 History and Physical
- HL7 Operative Note
- HL7 Procedure Note
- HL7 Unstructured Documents
- HL7 Progress Notes
- HL7 Continuity of Care Document
- HITSP/C84 Consult and History & Physical Note Document
- HITSP/C32 Summary Documents Using HL7 CCD
- HITSP/C48 Referral and Discharge Summary Document constructs
- HITSP/C62 Scanned document





Consolidate and harmonize various standalone documents into one master implementation guide for the primary care use case.

Later versions added additional document types:

- Care Plan
- Transfer Summary
- Referral Note



Grahame's Law:

• You can hide complexity, or **make it worse**, but you can't make it go away.

HL7 V3 was more complex than necessary.

• Simple technical problems became road-blocks for many implementers.

CDA was the stable, simpler part of HL7 V3.

- But inherited much of the V3 complexity
- Never had a viable API complement
- Filled vacuum including inappropriate use cases

FHIR makes many simple problems simple again.

- Lets implementers focus on solving the hard problems.
- Lets CDA be about documents; FHIR be about data transfer
- CDA can use the V3 syntax or FHIR



US Realm FHIR Implementation Guide (IG)

- Goal
 - FHIR profiles for the C-CDA use case
 - Foundation for transitional roadmap
- Scope
 - Represent C-CDA templates using FHIR profiles.
 - Focus on C-CDA document-level profiles using the Composition Resource.
 - Use US Core profiles for coded data.
 - Where no US Core profile exists, point to appropriate unprofiled resources.
- Location
 - http://hl7.org/fhir/us/ccda/

C-CDA on FHIR Implementation Guide

C-CDA on FHIR Implementation Guide (IG)

Summary

C-CDA is one of the most widely implemented implementation guides for CDA and covers a significant scope of clinical care. Its target of the 'common/essential' elements of healthcare is closely aligned with FHIR's focus on the '80%'. There is significant interest in industry and government in the ability to interoperate between CDA and FHIR and C-CDA is a logical starting point. Implementers and regulators have both expressed an interest in the ability to map between FHIR and C-CDA.

This Implementation Guide defines a series of FHIR profiles on the Composition resource to represent the various document types in C-CDA. This release does not directly map every C-CDA template to FHIR profiles, rather tries to accomplish the C-CDA use case using Composition resource profiles created under this project (the equivalent of Level 2 CDA documents), and linking to the profiles created under the Data Access Framework (DAF) project for any code entries that would normally be included in C-CDA sections. The hope is that this results in a simpler, more streamlined standard that reuses existing work and focuses on the 80% that implementers actually need in production systems (the hope is that DAF represents that 80% needed for coded entries).

The Composition profiles in this IG do not require coded data in any section. This is a departure from C-CDA, which requires coded data for Problems, Results, Medications, etc. This departure is intentional, as the C-CDA requirement for coded one or more coded entries in these sections resulted in some very complicated workarounds using nullFlavors to handle the fact that sometimes a patient is not on any medications, or has no current problems. In general, FHIR takes the approach that if something is nullable, it should simply be optional to ease the burden on implementers, thus C-CDA on FHIR does not require any coded entries, but rather uses the "required if known" approach, meaning that if an implementer's system has data for a section that requires data under Meaningful Use, they need to sent it, but if they have no data there is no need for a null entry.

We encourage feedback on these Composition profiles, and the general approach to the project as a whole. We also encourage implementers who wish to see more of the coded data from C-CDA mapped to FHIR to comment on the DAF project and make their requests known there. Once DAF creates new profiles, this project can reference them.

Scope

To represent Consolidated CDA Templates for Clinical Notes (C-CDA) 2.1 templates using FHIR profiles. This first stage of the project defines all the C-CDA document-level profiles on the Composition resource and contained sections.

Any coded data used by sections will be accomplished by referencing relevant U.S. Data Access Framework (DAF) FHIR profiles.

Resource Profiles

This guide defines the following profiles.

Profile Name	Description
C-CDA on FHIR US Realm Header	This profile defines constraints that represent common administrative and demographic concepts for US Realm clinical documents. Further specification, such as type, are provided in document profiles that conform to this profile.



Why?

- HIE in a heterogenous environment:
 - Use preferred syntax/format
 - Bi-directional transforms as bridge.
 - Get US Core resources into FHIR
 - Continuity with better syntax and API
 - Comply with regulation
- CDA implementers
 - Create in CDA
 - Can convert to FHIR to support transition
- New implementers
 - Create in FHIR
 - Convert to CDA

Example:

- ONC-HIP Pharmacist Care Plan (PhCP)
 - <u>https://www.healthit.gov/techlab/ipg/nod</u> e/4/submission/1376
- Dual IG development
- Open source transformations (XSLT)
 - <u>https://github.com/lantanagroup/PhCP-</u> <u>Public-Transforms</u>
- 22 vendors engaged
 - Most chose FHIR IG
 - Those with CDA infrastructure used CDA
- Care plan recipients
 - Community Care of North Carolina
 - Planned CDA back end; switched to FHIR
 - EHRs could receive either



C-CDA to FHIR mapping project

- CDA logical model
- HL7 sanctioned mappings using FHIR Mapping Language
- May 2018, completion planned for September 2019

Creating dual CDA/FHIR IGs with transforms

- Updated Pharmacist Care Plan (PhCP) (STU ballot May 2019)
- Healthcare Associated Infection (HAI) Reports (STU ballot Sept 2018)
- Electronic Initial Case Report (eICR) (STU ballot Sept 2018)

Adding Unstructured Documents (US Core DocumentReference profile) Updating C-CDA on FHIR

- FHIR R4
- Updated US Core Profiles
- Create profiles not covered by US Core deemed high priority

