

# Implementation Guide for using SNOMED CT with FHIR

## Introduction to using SNOMED with FHIR

### General Implementation Considerations

#### SNOMED specific behaviours

- Emphasise use of Code field.
- Links to other SNOMED using profiles (held elsewhere)
- Considerations that were made as part of these profiles
- Pull summary from [Dion's validate code page](#)
  
- Validate code (ValueSet and CodeSystem)
- [Expand \(ValueSet\)](#)
- Lookup (CodeSystem)
- Search
- Terminology Capabilities Resource (check latest release of HAPI for support?).

### Implementing Terminology Services with SNOMED CT

#### FHIR Frequently Asked Questions

#### Design Notes specific to Client Applications

Option for "pass-through" terminology requests so that FHIR server acts as proxy for Terminology Server. Operations such as Expand may need to make calls on to Terminology before collating results.

### SNOMED Specific profiles (clinical resources)

<http://build.fhir.org/profiling.html>

### Terminology Binding

## Assumptions and Audience

Introducing SNOMED to a FHIR audience and FHIR to a SNOMED Audience! Explanation of 4 levels of binding.

Code, Coding, Codeable Concept as specific to SNOMED CT (include link to introduction and points about display terms & multiple languages).

## Existing Documentation to Pull In

[4.2.1.0 Using SNOMED CT with FHIR](#)

[SNOMED CT canonical CodeSystem resource](#)

<https://hl7.org/implement/standards/fhir/snomedct.html>

## Comparable Implementation Guides

[Rob Hausam](#) to supply

See also <https://simplifier.net/guides>

## Child Documents

- [Expand \(ValueSet\)](#)
- [FHIR Frequently Asked Questions](#)
  - [Accessing Historical Associations](#)
  - [Lookup and Expand](#)
- [General Implementation Considerations](#)
- [Implementing Terminology Services with SNOMED CT](#)
  - [Find Matches](#)
- [Introduction to using SNOMED with FHIR](#)
- [System Architects working with SNOMED and FHIR](#)
- [Terminology Binding](#)
- [Working with Languages](#)

## Feedback for HL7

**19 March 2019**

These two pages seem to be very similar?

<http://hl7.org/fhir/2018Sep/codesystem-operation-find-matches.html>

<http://hl7.org/fhir/2018Sep/operation-codesystem-find-matches.html>

## Publishing Notes

**4 June** - group agreed to target R4 in the first instance but to indicate any future changes inline. Also (PJ) suggested section on major changes from STU3 to R4 where relevant to SNOMED eg \$compose is now \$find-matches

**2 July** - PJ: question over specific content for different stakeholders (FHIR spec does this) and how we present that - separate pages for developers (details) vs architect (integration, general 'use' of terminology services eg off the shelf solution. Why use the FHIR API at all?) vs business level?

**16 July** - PJ suggested initial page to target specific stakeholders (jumping off pages). Compare with FHIR "Getting Started" Page - "see the Overviews: [General](#), [Developers](#), [Clinical](#), and [Architects](#)"

ML suggestion that we introduce SNOMED "through the lens of FHIR", so stay away from language reference sets and stick with what can be seen directly from FHIR resources. (But we can have links to the detail & implementation course - PJ)

## Test Suites for using SNOMED with FHIR Servers

[Peter G. Williams](#) Move into own page and link.

- Examples of REST calls and their expected results (using SNOMED where possible), with narrative including any associated business logic.
- Be sure to make FHIR version and SNOMED CT Edition for each test clear
- Pick SNOMED concepts that aren't likely to be retired any time soon. Some tests will be more vulnerable than others eg checking the number of concepts subsumed.
- Suggested to use and extend the test scripts used in previous Connectathons.
- Potential to save resources from "Postman" as an aide.
- Would be beneficial if SNOMED International server could use test script resources in a generic way as part of unit / integration testing.

[Dion McMurtrie](#) Is any test related tooling that you've created re-usable?

[Peter Jordan](#) & [Michael Lawley](#) update on in-week discussion. Update: IG command line tooling having issues building SNOMED IG. RobH says he's got a fix for that - will commit.

[Rob Hausam](#) commit fix for SNOMED Implementation Guide (issue with NPM name)

File	Modified 
Microsoft Excel Spreadsheet FHIR Connectathon 18 Terminology Formal Tests Version Parameters.xlsx	2019-Mar-05 by Peter G. Williams
Microsoft Excel Spreadsheet FHIR Connectathon 16 - Additional Terminology Server Tests.xlsx	2019-Mar-05 by Peter G. Williams
Microsoft Excel Spreadsheet FHIR Connectathon 17 - Additional Terminology Server Tests.xlsx	2019-Mar-05 by Peter G. Williams

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