# Update on the OHDSI Standardized Vocabularies

04 March 2025

# Overview

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**Release highlights** → **Deep dive** → **Community contributions**

# Release overview & highlights

# Extended Vocabulary Team

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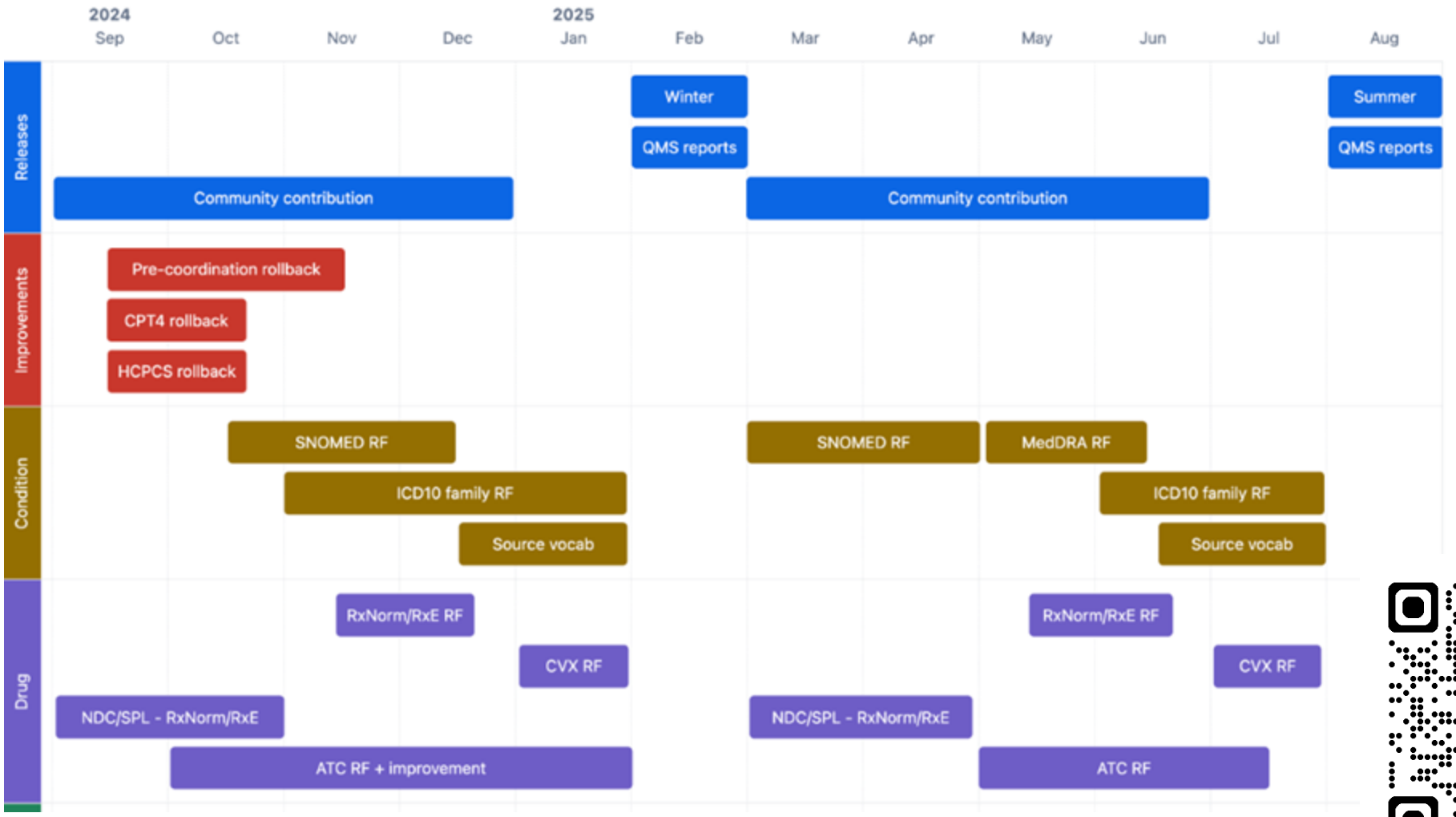
# Release scope

Refresh

Rollback/ improvement activities

Community contribution

# Roadmap and releases: February release 2025



# Why you need to download this release

## 1. New procedures, lab tests and drugs

If you have **August 24** release:
you are missing out on 35,107 new NDC drugs (US)

Detailed release notes:

# Why you need to download this release

## 1. New procedures, lab tests and drugs

If you have **February 24** release:

- 59,969 new NDC drugs (US)
- 38,833 new EDI drugs (Korea)
- 483 new ATC codes (Europe)
- 1,620 new ingredients in OMOP Invest Drug (all)
- 500+ drugs in CPT4, HCPCS, CVX, ICD10PCS, etc.

# Why you need to download this release

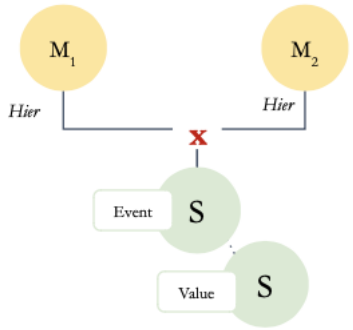
2. Better mappings for conditions: ICD10CM, ICD10, KCD7, CIM10, Read, etc.

| Source ICD10CM code | Source ICD10CM name | Old target SNOMED code | Old target SNOMED name |
|---|---|---|---|
| C44.62 | Squamous cell carcinoma of skin of upper **limb**, including shoulder | 285307007 | Squamous cell carcinoma of skin of upper **lip** |

New target: 24111000119105 Primary squamous cell carcinoma of upper limb

# Why you need to download this release

## 3. Easier concept sets with expanded measurement, drug and procedure hierarchies




**ATC**: expanded hierarchy for drugs

**MedDRA**: new hierarchy for conditions + links to SNOMED

**LOINC-SNOMED**: expanded hierarchy for labs (in partn. With Regenstreif)

**CPT4-ICD10PCS-SNOMED**: expanded and cleaned hierarchy for procedures

* Each accounts for thousands of new/improved relationships

# Vocabularies maintenance

# Vocabulary refresh

- SNOMED package
- LOINC
- CPT4
- HCPCS
- ICD10PCS
- ICD10GM
- MedDRA
- CVX
- RxNorm/RxNorm Extension
- ATC

# SNOMED refresh

Int - Aug 2024

US - Sep 2024

UK - Oct 2024

**+ 4,802 new concepts**

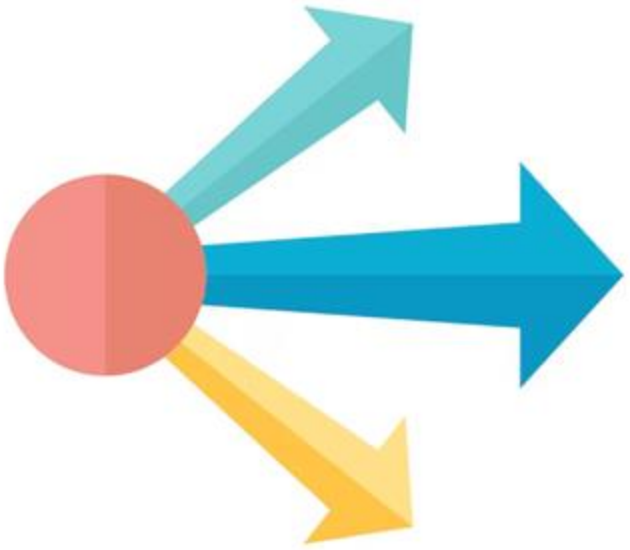
**+ 2,322 replacement relationships**

Synonyms in Spanish added

Pre-coordination and manual domain revision of Evaluation Findings:

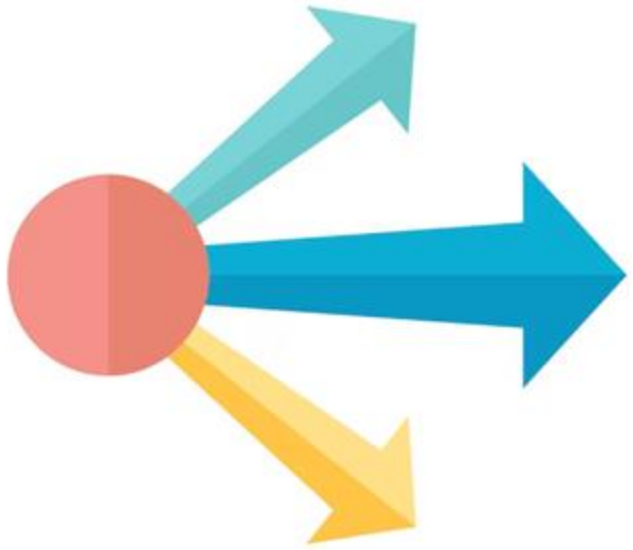
**2,782 concepts affected**

# Affected vocabularies: mappings changed



- ICD9CM
- ICD10CN
- CIM10
- ICD9Proc
- OMOP Invest Drug
- CDISC
- EDI
- CIEL
- CO-CONNECT TWINS
- MeSH
- OPCS4
- UK Biobank
- GRR

# Affected vocabularies: mappings changed



- ICD9CM
- ICD10CN
- CIM10
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- OMOP Inve
- CDISC
- EDI

- CIEL
- INECT
- ICD10
- ICD10CM
- KCD7
- Read
- ank
- GRR

# LOINC refresh

Version 2.78:

**+ 3,463 new concepts**

LOINC Consumer Name added as concept synonym:

LOINC - SNOMED hierarchy was expanded:

**+ 939 new 'Is a' relationships**

| concept_code | concept_name | concept_synonym |
|---|---|---|
| 100746-7 | Glucose [Moles/volume] in Mixed venous blood | Glucose, Blood |
| 14743-9 | Glucose [Moles/volume] in Capillary blood by Glucometer | Glucose, Blood |

# CPT4 refresh

Version 2024AB UMLS:

**+ 267 new concepts**

**+ 27 historical codes**

CPT4-Visit relationships:

**'Has asso visit'** instead of **'Maps to'**

CPT4 - SNOMED hierarchy:

**+ 2,915 new 'Is a' relationships**

# HCPCS refresh

Version Jan 2025:

**+227 new concepts**

HCPCS-Visit relationships:

**'Has asso visit'** instead of **'Maps to'**

HCPCS-SNOMED hierarchy:

**+284 'Is a' relationships**

# ICD10PCS refresh

Version 2025:

**+662 new concepts**

**+ 22 drug concepts mapped**

ICD10PCS-SNOMED hierarchy refinement:

**- 8,120 wrong 'Is a' relationships**

# MedDRA refresh

Version 27.1:

**+640 new concepts**

MedDRA-SNOMED:

**+ 1,169 new 'Is a'/'Subsumes' relationships**

**+ 1,062 new 'Maps to' relationships**

**~ 300 mappings improved**

# ATC refresh

Version December 2024:

**+92 new concepts**

ATC-RxNorm hierarchy refinement:

**- significant reduction in 1: many relationships (max ATC codes per RxNorm dropped from 45 to 17)**

# Other vocabularies

- **CVX** was updated to its 20240905 version.
- **RxNorm/RxNorm Extension** were updated to the Dec 2024 version.
- **UCUM:** one new unit was added, one concept name was fixed, four mappings from deprecated to valid concepts were added.
- **NUCC:** one concept name was fixed to correspond to the source.
- **NDC/SPL** were updated to their 20250223 version.

# Rollback activity based on learnings from user experience and feedback

1. Post-coordination of Evaluation Findings

2. Mapping of CPT4/HCPCS procedure codes to the Visit domain

# Evaluation Findings, part 1: Domain revision

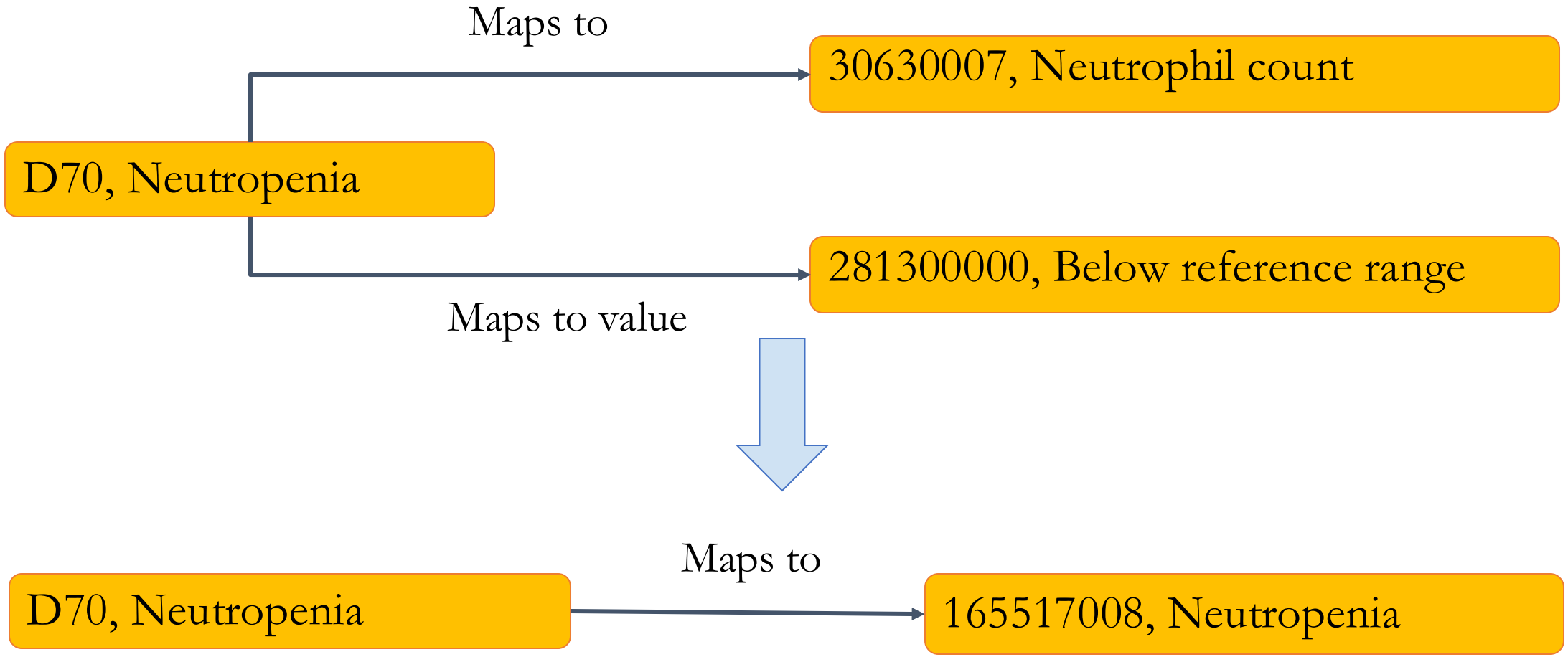
## Condition domain

1. **Syndromes** (e.g. Agranulocytosis)
2. **Procedure results** (e.g. Colonoscopy abnormal)
3. Concepts **without specific analyte** (e.g. Liver enzymes abnormal)

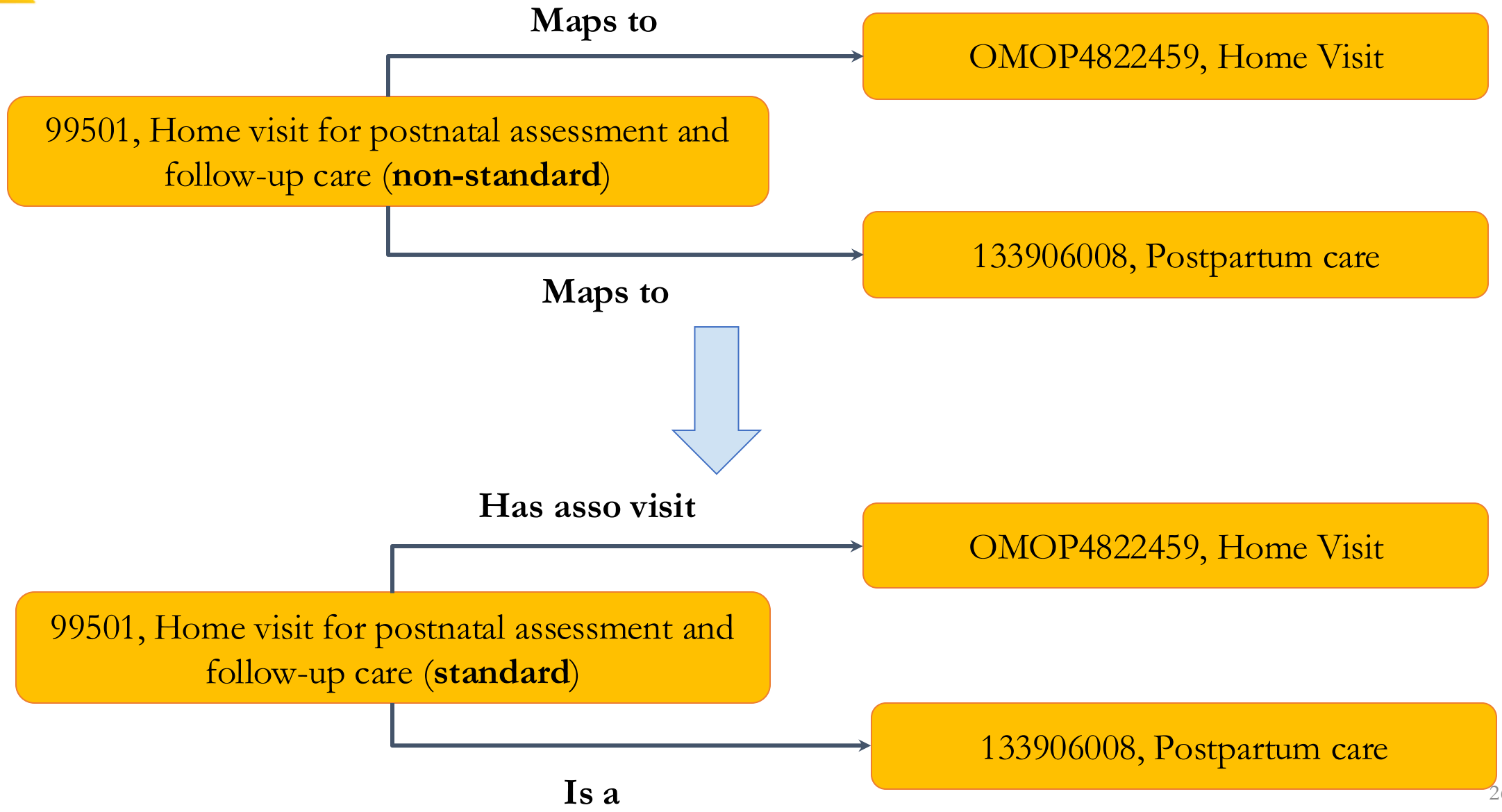
## Measurement domain

1. **Both test and its result** (e.g. PSA level above reference range)
2. **Result of a single test**

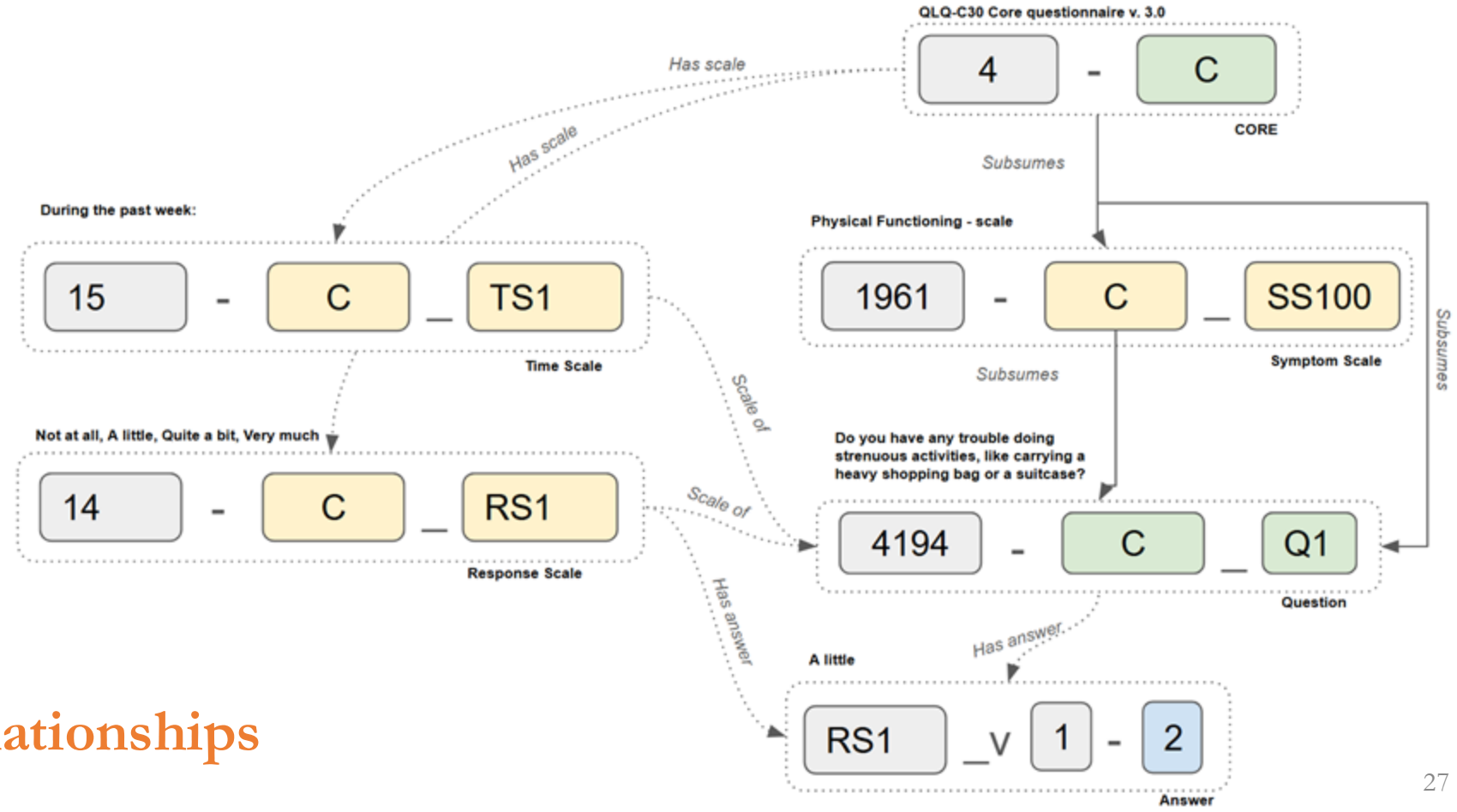
# Evaluation Findings, part 2: Pre-coordination



# CPT4/HCPCS - Visit mapping



# **New vocabulary: EORTC** (European Organization for Research and Treatment of Cancer)




+ 4,094 concepts

+ 15,732 internal relationships

# Community contributions

# Community Contribution

Alexander Davydov: community contribution lead

- **Hierarchy of Routes**

by Theresa Burkard

- **HemOnc** refresh

by Robert Miller

- **SNOMED Veterinary** refresh

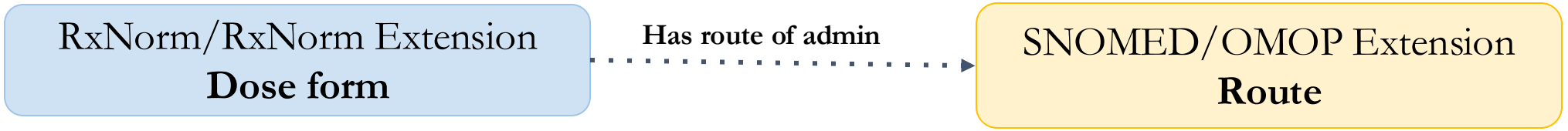
by Julie Green

- Simple contributions

# Hierarchy of routes: support dose calculation

by Theresa Burkhard

New links from routes to dose forms:




New OMOP Extension Routes:

- Injectable
- Implant

# HemOnc refresh: regimens for cancer

by Robert Miller

Version effective Dec 19, 2024:

**~ 3,500 new Regimens**

**~ 750 Regimen Classes**

New relationships:

**+ 200k internal relationships (e.g., links from drugs to indications & populations)**

**+ 14k new relationships to SNOMED, RxNorm, RxNorm Extension**

# SNOMED Veterinary refresh: support 4+ large veterinary institutions

by Julie Green

- Version effective Jan 01, 2025
- First update since 2019!

# Simple contributions: easy filling with Excel spreadsheets

| # \| GitHub | What |
|---|---|
| 1\|920 | Immune effector cell-associated neurotoxicity syndrome mapping fix (Dima Dymshyts) |
| 2\|944 | ICD-10 CM G56.0x mapping fix (Gongliang Zhang) |
| 3\|979 | C83.0*, C83.1*, C91.1*, D03.*, F03.9* ICD10CM mapping improvement (Dima Dymshyts) |
| 4\|996 | Encounter procedures improvement (Dima Dymshyts) |
| 5\|1050 | ICD10CM mapping improvement (Dima Dymshyts) |

**Many thanks to all the contributors!**

# One more thing…

CPT4.jar