

OMOP CDM v5.5

What's new, should you upgrade, and what's changing in the CDM documentation

A focused, additive update to v5.4 built from real-world community use cases.

OHDSI Common Data Model Working Group

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Agenda

Four questions for today.

01

Why v5.5?

Why the Working Group chose a focused, additive release.

02

What changed?

Clinical table enhancements and new Vocabulary capabilities.

03

Should you move?

What v5.5 means for existing implementations, new ETLs, and studies.

04

What else is improving?

The Quarto migration, documentation cleanup, and website improvements.

Why v5.5?

A small release with a specific job: close real-world gaps without destabilizing v5.4.

1 Real-world use cases

Support needs the community could not cleanly represent in v5.4.

2 Better source fidelity

Preserve useful source-level context and improve consistency across clinical tables.

3 Vocabulary evolution

Surface richer vocabulary metadata and support drug-pack representation.

The design constraint

Add capability without taking capability away.

v5.5 adds 7 optional fields to existing tables and 3 vocabulary metadata tables. No fields or tables are removed or renamed.

VALUE PROPOSITION

If the new capabilities matter to your data, v5.5 gives you a low-burden path to use them. If they do not, v5.4 remains a viable near-term option.

What's new in OMOP CDM v5.5?

Seven focused changes, grouped here by the problem they solve.

What's New in OMOP CDM v5.5

CDM v5.5 introduces a focused set of additions that are additive, optional, and driven by real-world use cases from the OHDSI community.

1



Visit IDs in SPECIMEN

Adds visit_occurrence_id and visit_detail_id to SPECIMEN to better link specimens to the clinical encounter and visit context in which they were collected.

Table updated:

SPECIMEN

2



Date Values in OBSERVATION

Adds value_as_date to OBSERVATION to capture date-valued results (e.g., culture collection date, report date) from source systems.

Table updated:

OBSERVATION

3



PACK_CONTENT Table

Introduces the PACK_CONTENT table to represent the contents of drug packs and multi-ingredient products.

Table added:

PACK_CONTENT

4



Concept Metadata Tables

Adds CONCEPT_METADATA and CONCEPT_RELATIONSHIP_METADATA tables to provide richer provenance, classification, and other metadata about vocabulary content and relationships.

Tables added:

CONCEPT_METADATA

CONCEPT_RELATIONSHIP_METADATA

5



value_as_source_concept_id in MEASUREMENT and OBSERVATION

Adds value_as_source_concept_id to MEASUREMENT and OBSERVATION to capture the source concept that best represents the raw value reported by the source system.

Tables updated:

MEASUREMENT

OBSERVATION

6



unit_source_concept_id in OBSERVATION

Adds unit_source_concept_id to OBSERVATION to capture the source concept that best represents the unit of measurement reported by the source system. This aligns the OBSERVATION table with the MEASUREMENT table as MEASUREMENT already has unit_source_concept_id.

Table updated:

OBSERVATION

7



cdm_release_identifier in CDM_SOURCE

Adds cdm_release_identifier to CDM_SOURCE to identify the CDM release assigned by the data owner when source data is converted to the CDM. This identifier will be used in standard OHDSI outputs.

Table updated:

CDM_SOURCE



These changes are additive and optional. Existing v5.4 fields and structures remain intact, and analytic code developed on v5.4 will continue to work with v5.5.

Clinical data enhancements

Targeted additions improve context, source fidelity, and consistency.



SPECIMEN → visit context

Adds `visit_occurrence_id` and `visit_detail_id` so specimens can link to the encounter in which they were collected.



Date-valued observations

Adds `value_as_date` to `OBSERVATION` for observations whose value is naturally a date.



Source value concepts

Adds `value_as_source_concept_id` to `MEASUREMENT` and `OBSERVATION` to preserve the source concept representing the value.



Source unit concepts

Adds `unit_source_concept_id` to `OBSERVATION`, aligning it with `MEASUREMENT` where the field already exists.



Release identification

Adds `cdm_release_identifier` to `CDM_SOURCE`: a data-owner-assigned identifier for the CDM release, intended for standard OHDSI outputs.

All five are optional additions to existing OMOP tables.

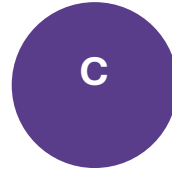
Strengthening the OMOP Vocabulary

Three new tables bring additional vocabulary information into the CDM structure.



PACK_CONTENT

Represent the contents of drug packs and multi-ingredient products.



CONCEPT_METADATA

Expose concept-level metadata such as category and reuse status.



CONCEPT_RELATIONSHIP_METADATA

Expose metadata about vocabulary relationships, including mapping source, confidence, tool, mapper and reviewer.

Why this matters for upgrading

The latest OMOP Vocabulary can still be used with v5.4, but the v5.4 CDM structure cannot surface these new tables.

Should I move to v5.5?

The answer depends on whether the new capabilities add value for your data and studies.

Should I move to OMOP CDM v5.5?

v5.4

Stay on v5.4

Keep doing what works today



Existing workflows and studies continue

No immediate need to rework a functioning v5.4 ETL. You can remain on v5.4 in the near term.



No access to v5.5 additions

Your database will not include the new fields and vocabulary tables.



Some future studies may require an upgrade

If a study uses a v5.5-specific field, participating databases will need to move to v5.5.



v5.5

Move to v5.5

Be ready for the next generation of OMOP



Relatively small lift

v5.5 is an incremental, additive update rather than a major redesign.



Latest vocabulary structure

Take advantage of the new vocabulary tables and metadata capabilities.



Populate new fields when relevant

Adopting the structure does not mean every new field must immediately contain data.



Our recommendation: plan your move to v5.5 when practical.

v5.4 will continue to work. v5.5 keeps you aligned with the latest vocabulary structure and prepared for future OHDSI studies.

What does upgrading actually mean?

v5.5 is intentionally a small step, not a major-version migration.

-  **Additive** Existing v5.4 fields and tables remain intact.
-  **Optional** The new fields are non-required; adopting v5.5 does not mean every new field must immediately contain data.
-  **Compatible** Analytic code developed against v5.4 continues to work with a v5.5 database.
-  **Study-driven** If a study uses a v5.5-specific field or table, participating databases need that v5.5 structure.

Building a new CDM or refreshing an ETL now? **Target v5.5.**

A better CDM documentation experience

The v5.5 work also gave us a chance to modernize how the CDM is documented and maintained.



Quarto migration

Move the documentation build from R Markdown to Quarto to simplify maintenance and future development.



Documentation cleanup

Resolve accumulated issues, improve definitions and conventions, and make the specification more internally consistent.



Website improvements

Improve navigation and organization so versions, changes, DDLs, conventions, support resources and proposals are easier to find.

The result is a CDM specification that is easier for the community to navigate and easier for the Working Group to keep correct.

What should you do?

A simple decision framework for data partners and implementers.

Already on v5.4?

Review the new capabilities. Upgrade when they add value for your data or studies.

Building or refreshing an ETL? Target v5.5.

Joining an OHDSI study?

Check whether the study uses v5.5-specific fields or tables.

Need the technical details?

Use the v5.5 specification and changes page in the CommonDataModel repository.

v5.4 continues to work. v5.5 gives the community access to what comes next.

Technical details: ohdsi.github.io/CommonDataModel/cdm55Changes.html

Helpful Links

CDM v5.5 Documentation <https://ohdsi.github.io/CommonDataModel/cdm55.html>

Changes from CDM v5.4 <https://ohdsi.github.io/CommonDataModel/cdm55Changes.html>

CDM v5.5 DDL Specifications <https://github.com/OHDSI/CommonDataModel>

CDM v5.4 -> CDM v5.5 Scripts https://github.com/OHDSI/CommonDataModel/tree/main/extras/migration/v54_to_v55

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