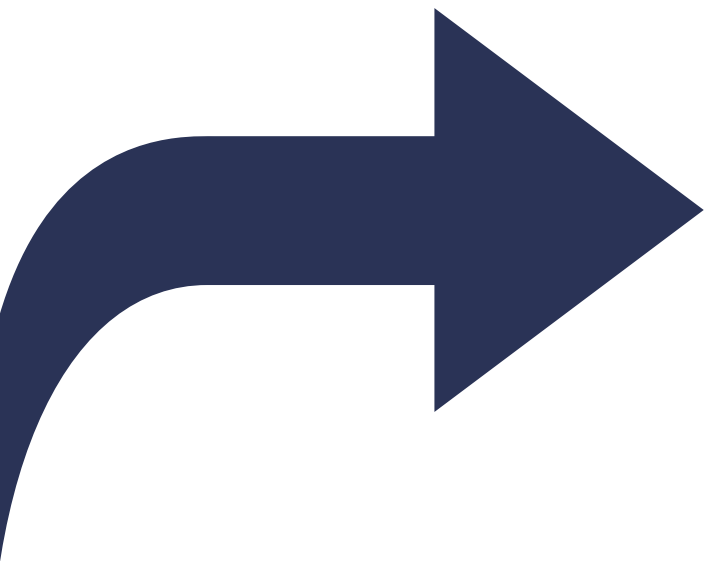


Introducción al modelo OMOP-CDM

Alberto Labarga – Febrero 2026





I am Alberto



alabarga



alabarga



/in/albertolabarga



alberto.labarga@gmail.com

Febrero
2026 

OMOP-CDM

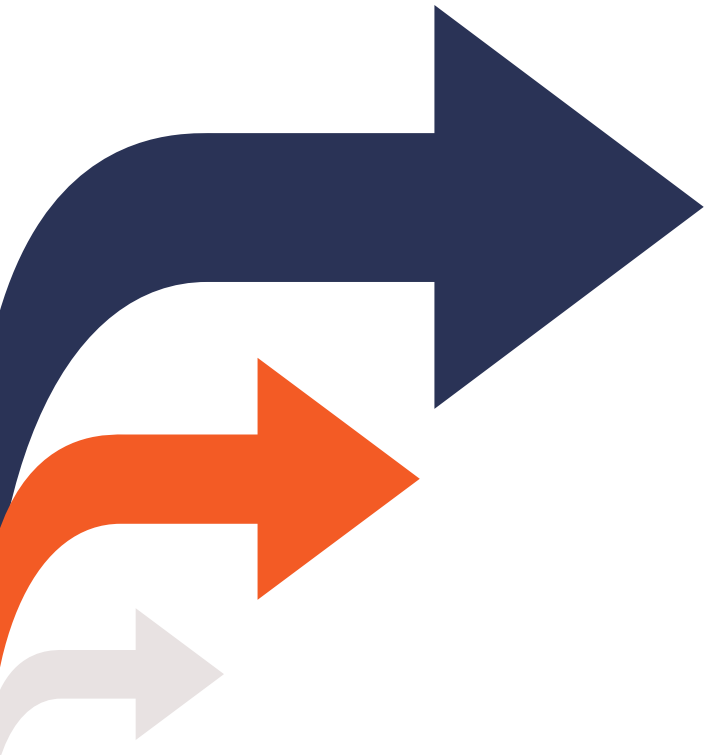
El curso

El curso tiene como objetivo proporcionar una comprensión profunda del modelo de datos **OMOP-CDM** de la OHDSI, incluida su **estructura**, tablas clave y **vocabularios**.

Abordaremos también como **transformar** datos al modelo y explorar y analizar la **calidad** de los datos transformados.

L M X J V S D						
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	1
2	3					

Objetivos del curso



01

Introducción al modelo OMOP-CDM, a sus tablas y sus vocabularios

02

Transformación de datos al modelo OMOP-CDM utilizando la suite de herramientas de la OHDSI

03

Análisis de calidad y explotación de una base de datos OMOP-CDM

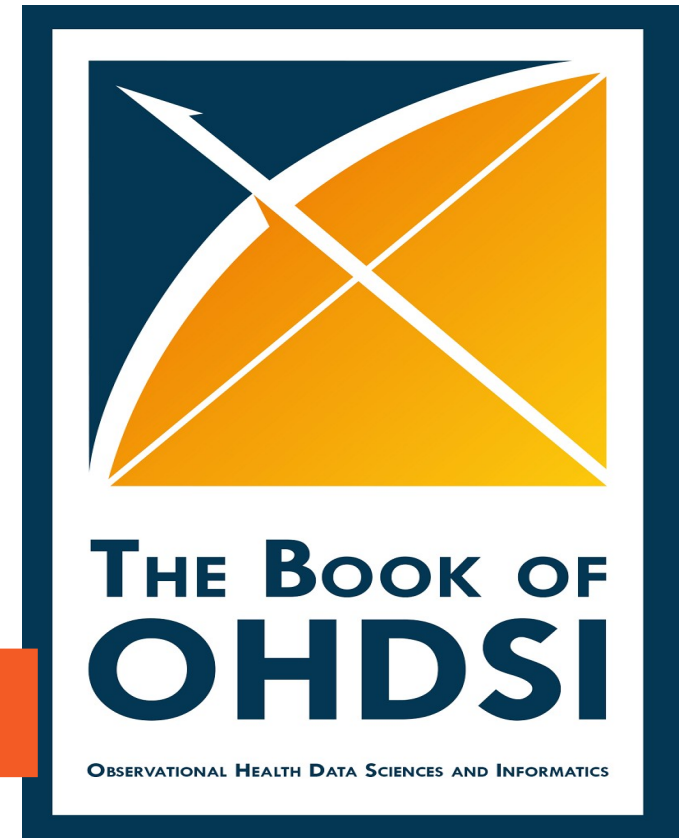
Recursos de aprendizaje



Sitio web: <https://github.com/alabarga/curso-omop-cdm>



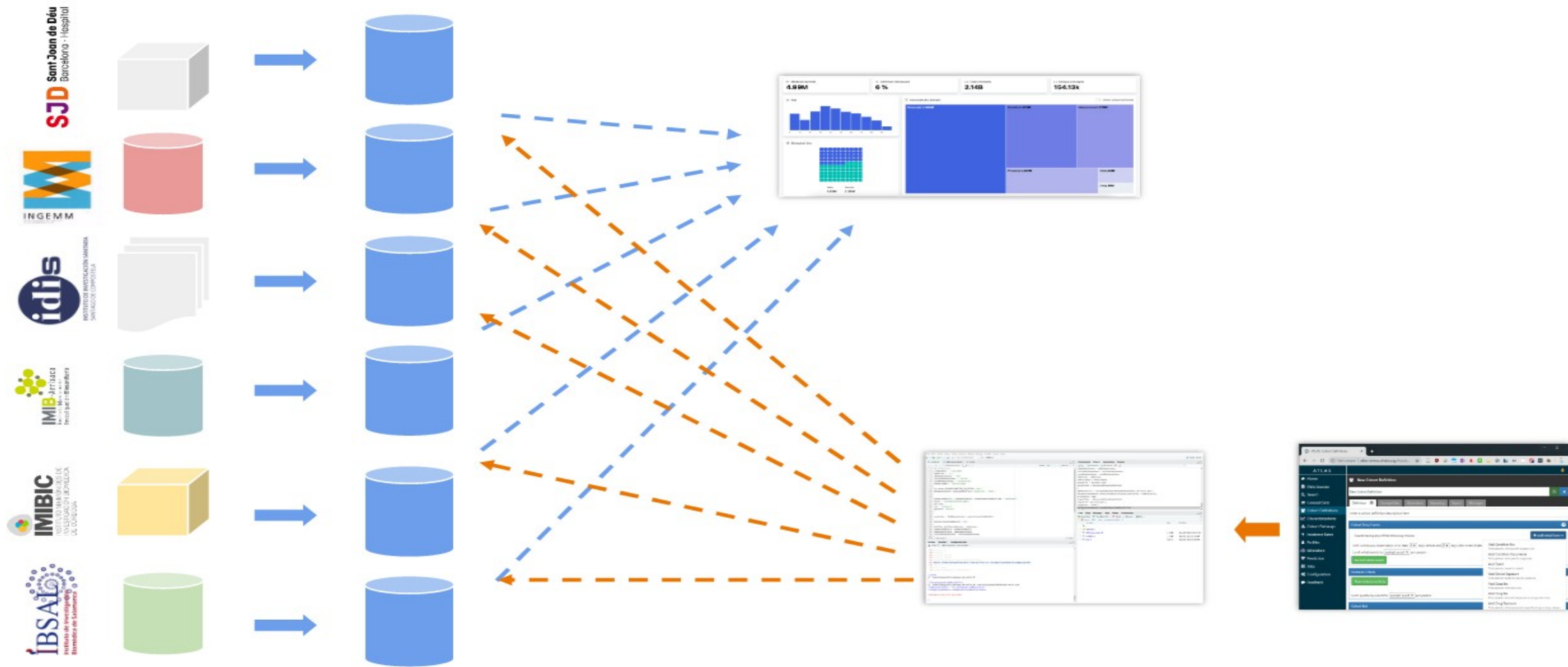
Libro <https://ohdsi.github.io/TheBookOfOhdsi/>





OMOP-CDM^{*}

VOCABULARIOS

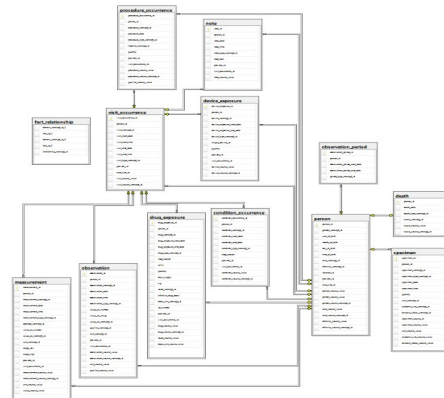



OMOP-CDM

Common Data Model

OMOP-CDM pretende servir como modelo de datos común para poder comprender los datos clínicos sin importar su origen. Este es un estándar de **licencia abierta** cuyo objetivo es estandarizar los datos y estructurarlos para permitir análisis y observaciones eficientes cuyos resultados sean fiables.


Propone **interoperabilidad sintáctica** (modelo de datos) e **interoperabilidad semántica** (vocabularios)





ATHENA


SEARCH

DOWNLOAD


Alberto Laguarda



SEARCH BY KEYWORD



cancer

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1

2

3

4

5

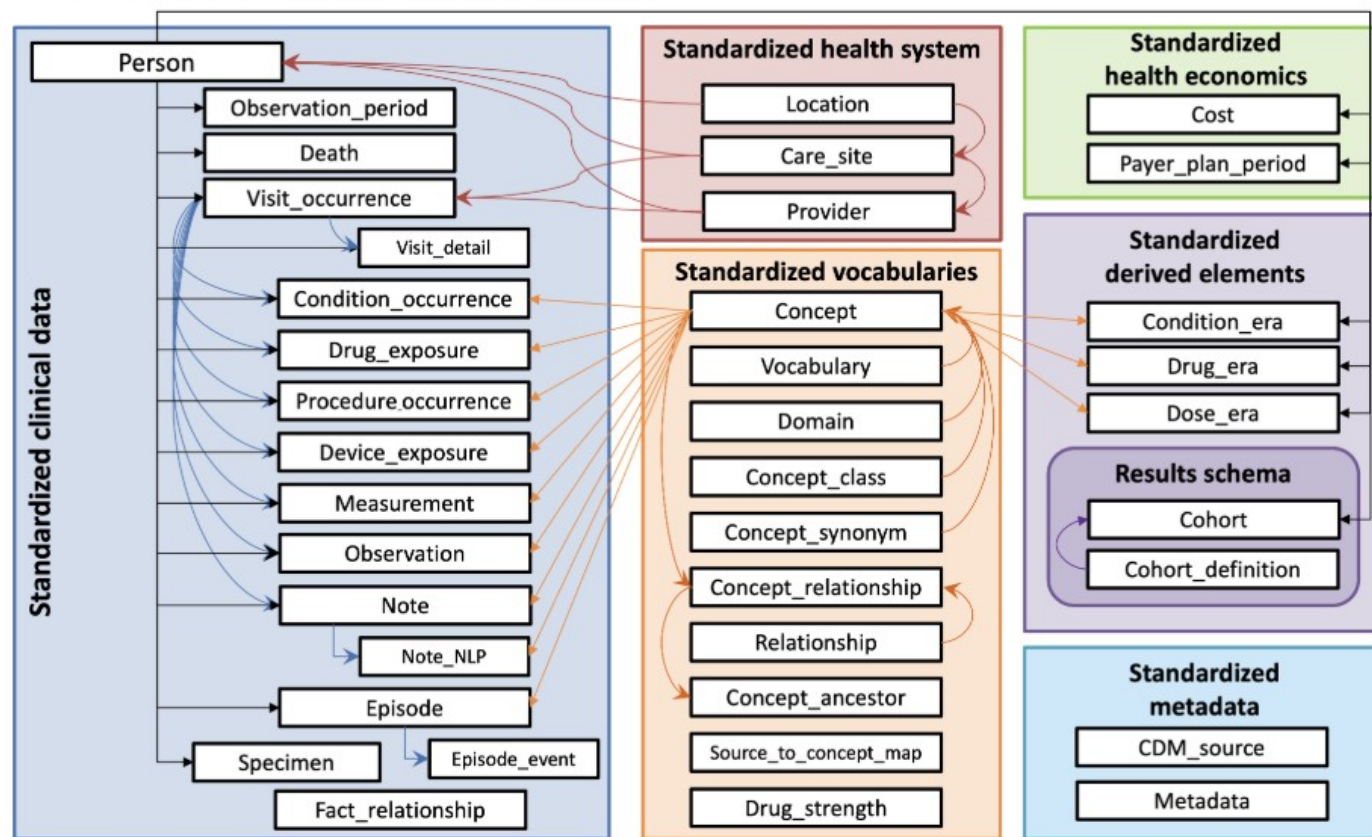
...

324

ID	CODE	NAME	CLASS	CONCEPT	VALIDITY	DOMAIN	VOCAB
40877275	L410324-8	Cancer	Answer	Standard	Valid	Mass Value	LONG
4191405	36001008	Cancer confirmed	Control-dependent	Standard	Valid	Condition	ENCRMD
4229936	36001001	Cancer register	Social Context	Standard	Valid	Observation	ENCRMD
1284553	CancerGenCnDNo_RN_CANCER	Cancer Conditions: No Cancer	Answer	Standard	Valid	Observation	RN
4073024	34037008	Cancer educational	Procedure	Standard	Valid	Procedure	ENCRMD
4408309	722720000001-02	Colorectal cancer	Qualifier Value	Standard	Valid	Observation	ENCRMD
40757663	545232-30	Cancer	Survey	Standard	Valid	Observation	LONG

The current CDM version is [CDM v5.4](#), depicted below. This CDM version was developed over the course of a year by considering requests that were sent via our [issues page](#). The list of proposed changes was then shared with the community in multiple ways: through discussions at the weekly OHDSI Community calls, discussions with the OHDSI Steering Committee, and discussions with all potentially affected workgroups. The [final changes](#) were then delivered to the Community through a new R package designed to dynamically generate the DDLs and documentation for all supported SQL dialects. Looking for an entity-relationship diagram? Click [here](#)!

- [Link to DDLs for CDM v5.4](#)
- [Link to ReadMe for instructions on how to use the R package](#)



[CommonDataModel](#) / [inst](#) / [ddl](#) / [5.4](#) / [🔗](#)

[clairblacketer](#) Removing codespell and older ddl folder for CRAN submission

Name

- ..
- bigquery
- duckdb
- hive
- impala
- netezza
- oracle
- pdw
- postgresql
- redshift
- snowflake
- spark
- sql_server
- sqlite
- sqlite_extended
- synapse

Show all



SHOW HISTORY

DOWNLOAD VOCABULARIES

<input type="checkbox"/>	ID (CDM V4.5)	CODE (CDM V5)	NAME	REQUIRED	LATEST UPDATE
<input checked="" type="checkbox"/>	1	SNOMED	Systematic Nomenclature of Medicine - Clinical Terms (IHTSDO)		01-Mar-2025
<input checked="" type="checkbox"/>	2	ICD9CM	International Classification of Diseases, Ninth Revision, Clinical Modification, Volume 1 and 2 (NCHS)		01-Oct-2014
<input checked="" type="checkbox"/>	3	ICD9Proc	International Classification of Diseases, Ninth Revision, Clinical Modification, Volume 3 (NCHS)		01-Oct-2014
<input checked="" type="checkbox"/>	4	CPT4	Current Procedural Terminology version 4 (AMA)	EULA required	05-May-2025
<input checked="" type="checkbox"/>	5	HCPCS	Healthcare Common Procedure Coding System (CMS)		01-Jul-2025
<input checked="" type="checkbox"/>	6	LOINC	Logical Observation Identifiers Names and Codes (Regenstrief Institute)		26-Feb-2025
<input type="checkbox"/>	7	NDFRT	National Drug File - Reference Terminology (VA)		06-Aug-2018
<input checked="" type="checkbox"/>	8	RxNorm	RxNorm (NLM)		02-Jun-2025
<input checked="" type="checkbox"/>	9	NDC	National Drug Code (FDA and manufacturers)		17-Aug-2025

TRANSFORMACIÓN AL MODELO OMOP-CDM

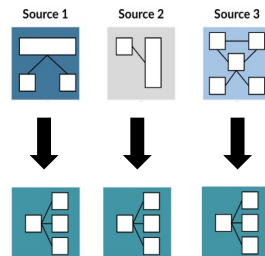


TRANSFORMACIÓN AL MODELO OMOP-CDM

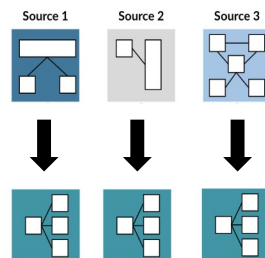


TRANSFORMACIÓN

AL MODELO OMOP-CDM

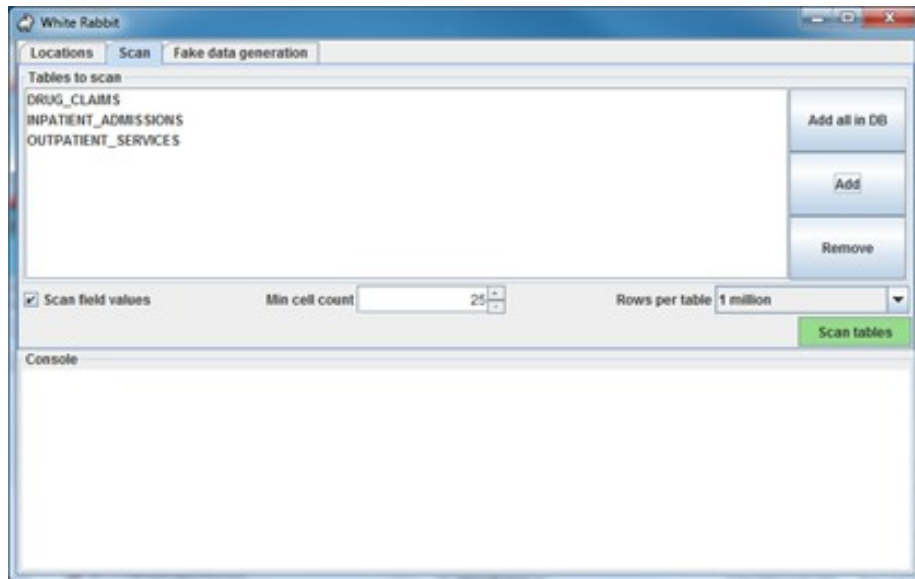


TRANSFORMACIÓN AL MODELO OMOP-CDM



WhiteRabbit

DATA PROFILING

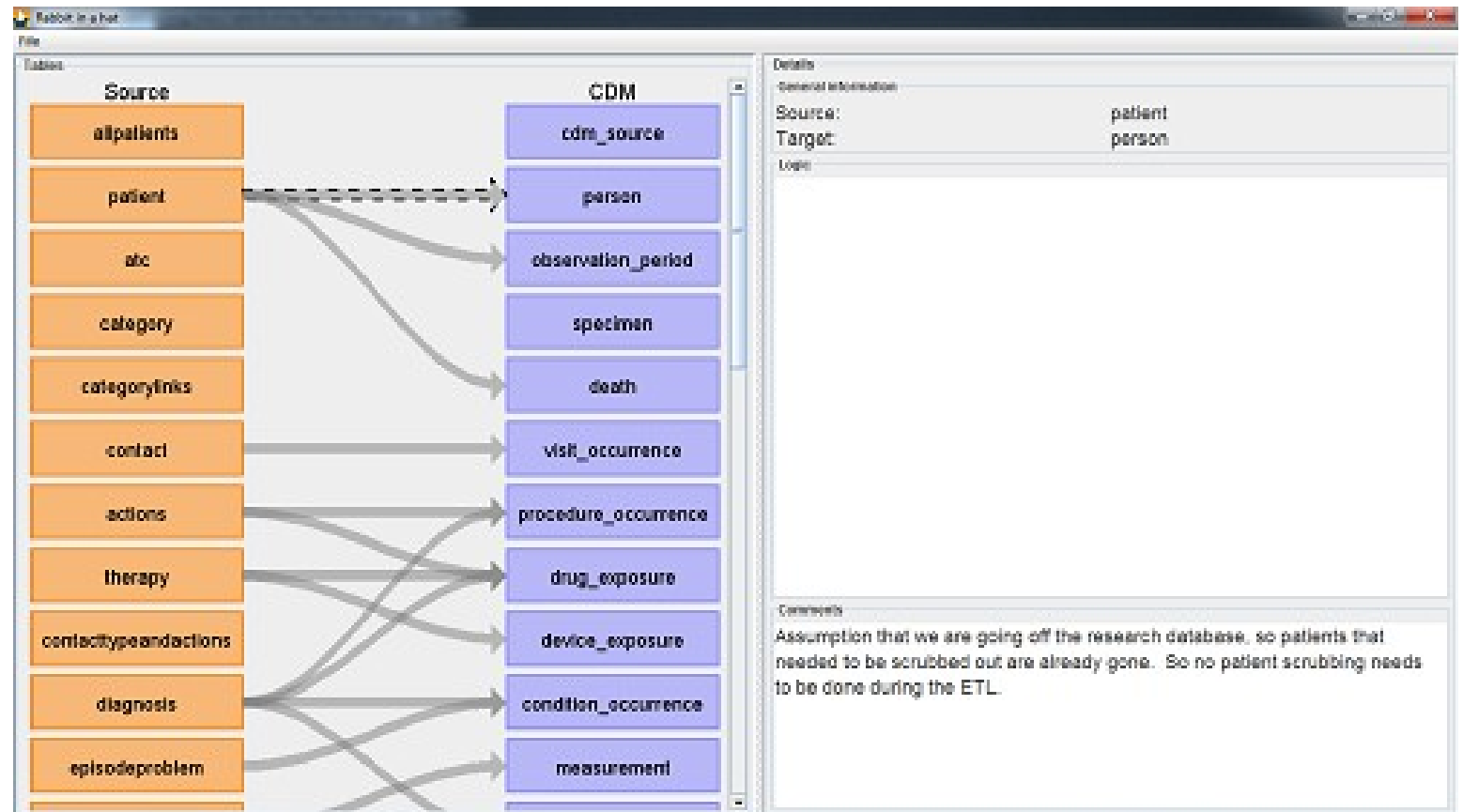


File Edit View Insert Format Styles Sheet Data Tools Window Help							
Liberation Sans 10 pt B I U A							
F7		fx Σ = 100000					
	A	B	C	D	E	F	G
1	Table	Field	Type	Max length	N rows	N rows checked	Fraction empty
2	atc	atc	text	7	6231	6231	0
3	atc	txt	text	58	6231	6231	0
4	atc	dddhp	double precision	8	6231	6231	0.951693147167389
5							
6	contact	expatidx	numeric	7	100000	100000	0
7	contact	prakid	numeric	9	100000	100000	0
8	contact	patid	numeric	9	100000	100000	0
9	contact	contactid	numeric	5	100000	100000	0
10	contact	contactd	date	10	100000	100000	0.00182
11	contact	dateperiod	text	1	100000	100000	0
12	contact	rawcodsys	text	6	100000	100000	0.61758
13	contact	rawcod	text	9	100000	100000	0.30036
14	contact	rawcodtxt	text	62	100000	100000	0.38449
15	contact	codsys	text	6	100000	100000	0.39153
16	contact	cod	text	5	100000	100000	0.39153
17	contact	codtxt	text	151	100000	100000	0.39153
18	contact	employeeid	numeric	9	100000	100000	0.50622
19							

<https://github.com/OHDSI/WhiteRabbit>

Rabbit -in-a-Hat

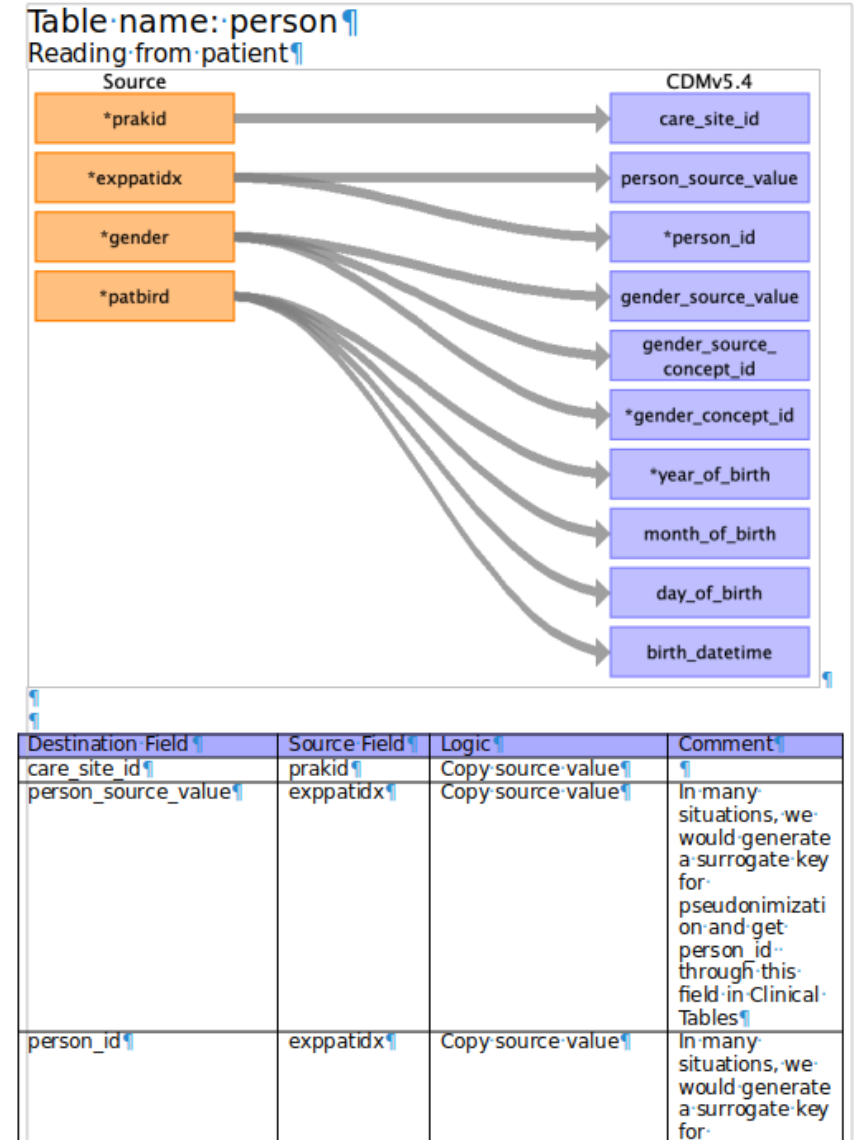
DATA MAPPING



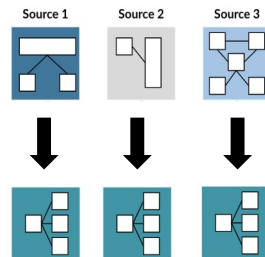
<https://github.com/OHDSI/WhiteRabbit>

Rabbit -in-a-Hat

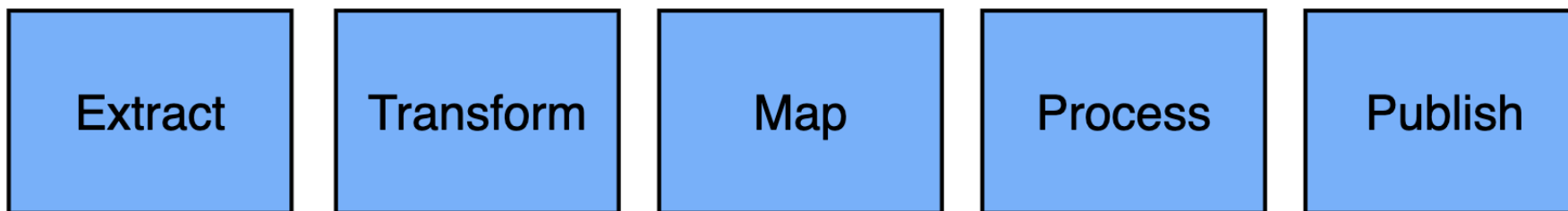
DATA MAPPING



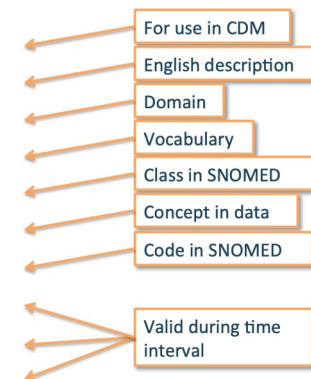
TRANSFORMACIÓN AL MODELO OMOP-CDM



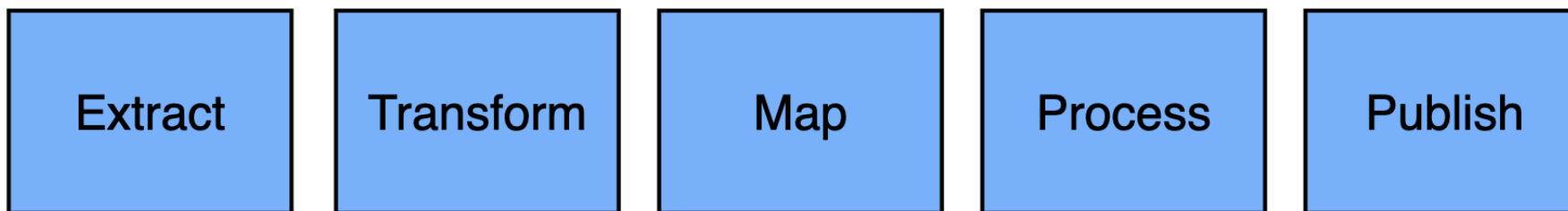
TRANSFORMACIÓN AL MODELO OMOP-CDM



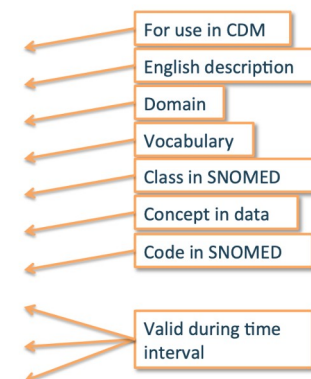
CONCEPT_ID	313217
CONCEPT_NAME	Atrial fibrillation
DOMAIN_ID	Condition
VOCABULARY_ID	SNOMED
CONCEPT_CLASS_ID	Clinical Finding
STANDARD_CONCEPT	S
CONCEPT_CODE	49436004
VALID_START_DATE	01-Jan-1970
VALID_END_DATE	31-Dec-2099
INVALID_REASON	



TRANSFORMACIÓN AL MODELO OMOP-CDM



CONCEPT_ID	313217
CONCEPT_NAME	Atrial fibrillation
DOMAIN_ID	Condition
VOCABULARY_ID	SNOMED
CONCEPT_CLASS_ID	Clinical Finding
STANDARD_CONCEPT	S
CONCEPT_CODE	49436004
VALID_START_DATE	01-Jan-1970
VALID_END_DATE	31-Dec-2099
INVALID_REASON	



Usagi

CONCEPT MAPPING

Usagi - testicpcCodesMapping.csv

File Edit View Help

Status	Source code	Source term	Frequency	CodeText	Match score	Concept ID	Concept name	Domain	Concept class	Vocabulary	Concept code	Standard con...	Parents	Children	Comment
Approved	K87.00	Hypertension...	694195	Hypertensie ...	0.81	316866	Hypertensive...	Condition	Clinical Findi...	SNOMED	38341003	S	1	27	
Approved	L99.00	Other diseas...	680422	Andere ziekte...	0.47	0	Unmapped						0	0	Too generic
Approved	D01.00	Abdominal p...	678588	Gegeneralis...	0.61	197988	Generalized ...	Condition	Clinical Findi...	SNOMED	102614006	S	1	0	
Unchecked	S99.00	Skin disease...	675817	Andere ziekte...	0.75	4317258	Disorder of s...	Condition	Clinical Findi...	SNOMED	95320005	S	2	193	
Unchecked	T86.00	Hvnothvroidi...	667283	HvnothvroenA...	1.00	4113642	Hvnothvroidi...	Condition	Clinical Findi...	SNOMED	286910004	S	1	0	

Source code

Source code	Source term	Frequency	CodeText
S99.00	Skin disease, other	675817	Andere ziekte(n) huid/subcutis

Target concepts

Concept ID	Concept name	Domain	Concept class	Vocabulary	Concept code	Standard concept	Parents	Children
4317258	Disorder of skin	Condition	Clinical Finding	SNOMED	95320005	S	2	193

Remove concept

Search

Query

☒ Use source term as query

☐ Query:

Filters

☐ Filter by user selected concepts

☒ Filter standard concepts

☒ Include source terms

☐ Filter by concept class: 2-dig nonbill code

☐ Filter by vocabulary: ABMS

☒ Filter by domain: Condition

Results

Score	Term	Concept ID	Concept name	Domain	Concept class	Vocabulary	Concept code	Standard concept	Parents	Children
0.75	Skin disease	4317258	Disorder of skin	Condition	Clinical Finding	SNOMED	95320005	S	2	193
0.65	Skin Disease, Fungal	137213	Dermal mycosis	Condition	Clinical Finding	SNOMED	14560005	S	3	12
0.57	AIDS with skin dise...	4224566	Skin disorder associated with AIDS	Condition	Clinical Finding	SNOMED	421394009	S	2	2
0.56	Chronic skin disease	4134132	Chronic disease of skin	Condition	Clinical Finding	SNOMED	128236002	S	2	26
0.55	Disease, Otologic	378161	Disorder of ear	Condition	Clinical Finding	SNOMED	25906001	S	4	43
0.55	Disease, Hers	4163346	Glycogen storage disease, type VI	Condition	Clinical Finding	SNOMED	29291001	S	2	0
0.55	Other peripheral va...	321052	Peripheral vascular disease	Condition	Clinical Finding	SNOMED	400047006	S	1	44
0.55	Other peripheral va...	4119612	Lower limb ischemia	Condition	Clinical Finding	SNOMED	233961000	S	2	3
0.55	Disease, Ormond	4176725	Retroperitoneal fibrosis	Condition	Clinical Finding	SNOMED	49120005	S	1	3
0.54	Pathological fractur...	73571	Pathological fracture	Condition	Clinical Finding	SNOMED	268029009	S	1	21
0.52	Disease, Tooth	4122115	Tooth disorder	Condition	Clinical Finding	SNOMED	234947003	S	3	58
0.52	Disease, Lip	135858	Disorder of lip	Condition	Clinical Finding	SNOMED	90678009	S	3	35
0.51	Disease, Ollier	4113600	Multiple congenital exostosis	Condition	Clinical Finding	SNOMED	254044004	S	6	0

Replace concept Add concept

Comment:

Approved / total: 5 / 1037 8.8% of total frequency

Approve

<https://github.com/OHDSI/Usagi>

TRANSFORMACIÓN

AL MODELO OMOP-CDM



El paciente acude con su madre **Pepita PER**, con la que vive en **Calle Córcega 23 LOC**, refiriendo dolor abdominal.

El paciente acude con su madre **Lucía PER**, con la que vive en **Calle Londres LOC**, refiriendo dolor abdominal.

TRANSFORMACIÓN AL MODELO OMOP-CDM

Extract

Transform

Map

Process

Publish

Acude con dolor abdominal derecho de 2 días de duración. Pauta de vacunación completa.

Finding *dolor abdominal.*

Spatial Concept *derecho.*

Temporal Concept *2 días, duración.*

Therapeutic or Preventive Procedure *vacunación.*

Qualitative Concept *completa.*

PROCESADO

DEL LENGUAJE NATURAL

Estadísticas generales de los resultados obtenidos con el procesamiento de notas.

- Number of patients with notes: 934.000
- Number of notes: 46.430.000
- Average length: 700
- Average number of entities detected per note: 56

Domain	Events in structure data	Events retrieved by NLP
Condition	2.562.120	537.854.624
Procedure	800.717	205.344.592
Observation	335.659	1.621.526.706
Drug	5.002.550	132.818.091
Measurement	185.752.461	158.167.899
Total	194.4M	2.650M

TRANSFORMACIÓN AL MODELO OMOP-CDM

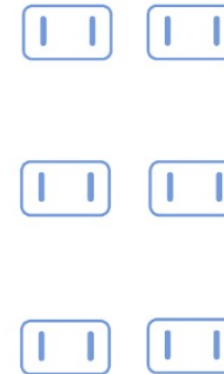
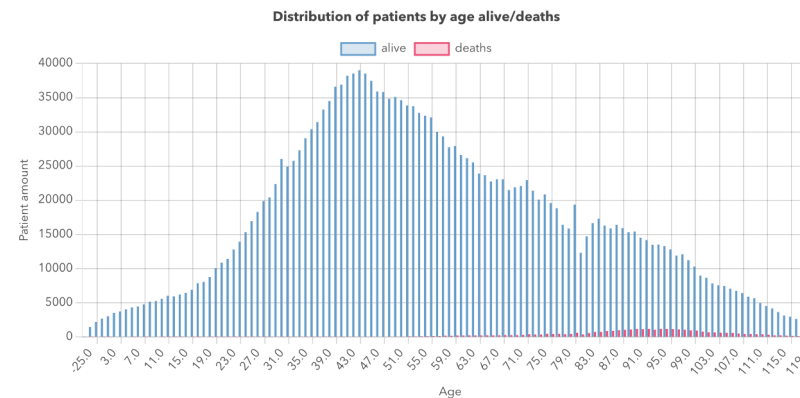
Extract

Transform

Map

Process

Publish



Preguntas?

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