



# Update on OHDSI Standardized Vocabularies

OHDSI Community Call  
Aug. 29, 2023 • 11 am ET



# Upcoming Community Calls

Date	Topic
Sept. 5	DARWIN EU® Progress and Roadmap
Sept. 12	OHDSI 2023 Global Symposium Conference & Activities Preview
Sept. 19	Journal Club: 11th Revision of the ENCePP Guide on Methodological Standards in Pharmacoepidemiology
Sept. 26	Publications Presentation
Oct. 3	Workgroup Reports, pt 1
Oct. 10	Workgroup Reports, pt 2
Oct. 17	Symposium Week! Final Logistics
Oct. 24	Welcome to OHDSI



# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# OHDSI Shoutouts!



Congratulations to the team of **Qiong Wu, Martijn J. Schuemie, Marc A. Suchard, Patrick Ryan, George M. Hripcsak, Charles A. Rohde, and Yong Chen** on the publication of **Padé approximant meets federated learning: A nearly lossless, one-shot algorithm for evidence synthesis in distributed research networks with rare outcomes** in the *Journal of Biomedical Informatics*.



Journal of Biomedical Informatics

Available online 19 August 2023, 104476

In Press, Journal Pre-proof [?](#) [What's this?](#) [↗](#)



Original Research

Padé approximant meets federated learning: A nearly lossless, one-shot algorithm for evidence synthesis in distributed research networks with rare outcomes

[Qiong Wu](#)<sup>a</sup>, [Martijn J. Schuemie](#)<sup>b c d</sup>, [Marc A. Suchard](#)<sup>b d e</sup>, [Patrick Ryan](#)<sup>b c f</sup>, [George M. Hripcsak](#)<sup>f g</sup>, [Charles A. Rohde](#)<sup>h</sup>, [Yong Chen](#)<sup>a b</sup> [?](#) [✉](#)

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<https://doi.org/10.1016/j.jbi.2023.104476> [↗](#)

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Abstract

Objective:

We developed and evaluated a novel one-shot distributed algorithm for evidence synthesis in distributed research networks with rare outcomes.





# OHDSI Shoutouts!



Congratulations to the team of **Elisa Henke, Yuan Peng, Ines Reinecke, Michéle Zoch, Martin Sedlmayr, and Franziska Bathelt** on the publication of **An Extract-Transform-Load Process Design for the Incremental Loading of German Real-World Data Based on FHIR and OMOP CDM: Algorithm Development and Validation in *JMIR Dermatology*** .

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An ETL-process design for incremental loading German real-world data based on FHIR and OMOP CDM: Algorithm Development and Validation  
Elisa Henke; Yuan Peng; Ines Reinecke; Michéle Zoch; Martin Sedlmayr; Franziska Bathelt

**ABSTRACT**

**Background:**  
In the Medical Informatics in Research and Care in University Medicine (MIRACUM) consortium, an IT-based clinical trial recruitment support system (CTRSS) was developed based on the Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM). Currently, OMOP CDM is populated with German Fast Healthcare Interoperability Resources (FHIR) using an Extract-Transform-Load (ETL)-process, which was designed as bulk load. However, the computational effort that comes with an everyday full load is not sufficient for daily recruitment.

**Objective:**  
The objective of this study is to extend our existing ETL-process with the option of incremental loading to efficiently support daily updated data.

**Methods:**  
Based on our existing bulk ETL-process, we performed an analysis to determine requirements of incremental loading. Furthermore, a literature review was conducted to identify adaptable approaches. Based on this, we implemented three methods to integrate incremental loading into our ETL-process. Lastly, a test suite was defined, to evaluate the incremental loading for data correctness and performance compared to bulk loading.

**Results:**  
The resulting ETL-process supports bulk and incremental loading. Performance tests show that the incremental load took 87.5% less execution time than the bulk load related to changes of one day while no data differences occurred in OMOP CDM.

**Conclusions:**  
Since incremental loading is more efficient than a daily bulk load and both loading options result in the same amount of data, we recommend using bulk load for an initial load and switching to incremental load for daily updates. The resulting incremental ETL-logic can be applied internationally, since it is not restricted to German FHIR profiles.



# OHDSI Shoutouts!



Congratulations to the team of **Jasmin Carus, Leona Trübe, Philip Szczepanski, Sylvia Nürnberg, Hanna Hees, Stefan Bartels, Alice Nennecke, Frank Ückert, and Christopher Gundler** on the publication of **Mapping the Oncological Basis Dataset to the Standardized Vocabularies of a Common Data Model: A Feasibility Study** in *Cancers*.



Article

## Mapping the Oncological Basis Dataset to the Standardized Vocabularies of a Common Data Model: A Feasibility Study

Jasmin Carus <sup>1,2,3,\*</sup>, Leona Trübe <sup>1</sup>, Philip Szczepanski <sup>2</sup>, Sylvia Nürnberg <sup>1</sup>, Hanna Hees <sup>1</sup>, Stefan Bartels <sup>3</sup>, Alice Nennecke <sup>2</sup>, Frank Ückert <sup>1</sup> and Christopher Gundler <sup>1,\*</sup>

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<sup>2</sup> Hamburg Cancer Registry, Authority for Science, Research, Equality, and Districts, 20097 Hamburg, Germany; philip.szczepanski@bwfgb.hamburg.de (P.S.); alice.nennecke@bwfgb.hamburg.de (A.N.)

<sup>3</sup> University Cancer Center Hamburg, University Medical Center Hamburg-Eppendorf, 20251 Hamburg, Germany; st.bartels@uke.de

\* Correspondence: j.carus@uke.de (J.C.); c.gundler@uke.de (C.G.)

**Simple Summary:** Resident physicians and medical institutions in Germany are required to report diagnostics, treatments, progression, and follow-up information for tumor patients to the respective state cancer registries. The information is transmitted electronically according to a defined data scheme (oncological basis dataset [oBDS]). In this study, we first mapped oBDS elements to the standardized vocabularies, a metadata repository of the observational medical outcomes partnership (OMOP) common data model (CDM). The mapping of the oBDS to the standardized vocabularies promotes the semantic interoperability of oncological data in Germany and provides the opportunity to participate in network studies of observational health data sciences and informatics under the usage of federated analysis.

**Abstract:** In their joint effort against cancer, all involved parties within the German healthcare system are obligated to report diagnostics, treatments, progression, and follow-up information for tumor patients to the respective cancer registries. Given the federal structure of Germany, the oncological basis dataset (oBDS) operates as the legally required national standard for oncological reporting. Unfortunately, the usage of various documentation software solutions leads to semantic and technical heterogeneity of the data, complicating the establishment of research networks and collective data analysis. Within this feasibility study, we evaluated the transferability of all oBDS characteristics to the standardized vocabularies, a metadata repository of the observational medical outcomes partnership (OMOP) common data model (CDM). A total of 17,844 oBDS expressions were mapped automatically or manually to standardized concepts of the OMOP CDM. In a second step, we converted real patient data retrieved from the Hamburg Cancer Registry to the new terminologies. Given our pipeline, we transformed 1773.373 cancer-related data elements to the OMOP CDM. The mapping of the oBDS to the standardized vocabularies of the OMOP CDM promotes the semantic interoperability of oncological data in Germany. Moreover, it allows the participation in network studies of the observational health data sciences and informatics under the usage of federated analysis beyond the level of individual countries.



**Citation:** Carus, J.; Trübe, L.; Szczepanski, P.; Nürnberg, S.; Hees, H.; Bartels, S.; Nennecke, A.; Ückert, F.; Gundler, C. Mapping the Oncological Basis Dataset to the Standardized Vocabularies of a Common Data Model: A Feasibility Study. *Cancers* **2023**, *15*, 4059. <https://doi.org/10.3390/cancers15164059>

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[ohdsi.org/europe2023-showcase](https://ohdsi.org/europe2023-showcase)





# #OHDSISocialShowcase

## MONDAY

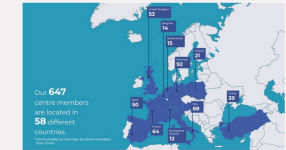
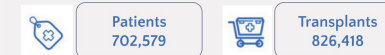
# Automatic Data Import from OMOP to REDCap

(**Matteo Gabetta**, Francesco Pozzoni, Mauro Bucalo, Cristiana Larizza, Nicola Barbarini)

Transforming the EBMT dataset to OMOP-CDM 5.3 has been challenging. We have encountered technical and vocabulary challenges.

### Ongoing Transformation of the EBMT Registry to the OMOP CDM 5.3

**Background:** In April 2021, EBMT was granted funds from the EHDEN - Data Partner Call to map its registry data onto the OMOP CDM. Members of the EBMT are centres and individuals, active in the field of transplantation of any kind of haematopoietic cells, or any other organisation involved in the care of donors and recipients of haematopoietic cells.



### Results & Discussion

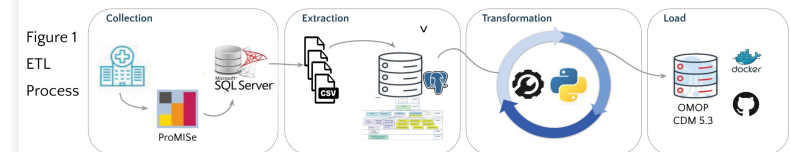
- ETL design is completed (see Figure 1) and is being tested and iterated on.
- ETL design driven by data size (> 4 million records)
- Mappings through SQL queries (memory-efficient)

### Encountered Issues

- Handling special characters in free text
- Custom concepts for very specific collected items
- Technical challenges due to DB size
- Genomic concepts
- Dates

### Methods

The EBMT data is transformed to OMOP-CDM 5.3 through a custom-designed Extract-Transform-Load (ETL) process written primarily in the Python (v3.10) programming language. All transformations (source to PERSON, source to DEATH, etc.) are implemented in SQL and performed sequentially in an order predetermined based on table constraints and transformation dependencies.



**Challenges:** We have encountered technical challenges as well as vocabulary mapping challenges along the way. Dedicated functions and tools were developed to handle the technical hurdles. Where needed, custom vocabulary concepts are being created to ensure that the granularity of the source data can be maintained. We look forward to finalizing the work and collaborating with other EHDEN data-partners.



EBMT: Maria Paula Busto, Marina Atlija  
Edence Health: Freija Descamps, Ben Burke





# #OHDSISocialShowcase

## TUESDAY

### European Health Data & Evidence Network – Learnings from Building out a Standardized International Health Data Network

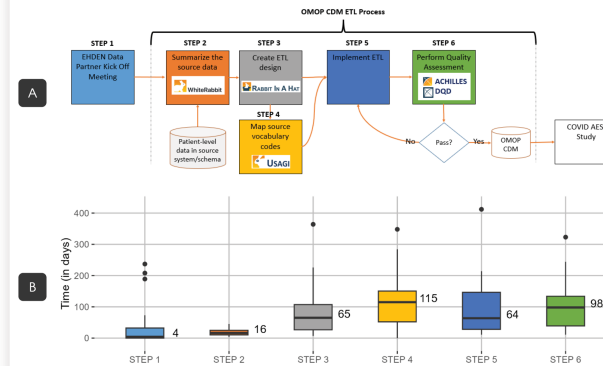
(**Erica A. Voss**, Clair Blacketer, Sebastiaan van Sandijk, Maxim Moinat, Michael Kallfelz, Michel Van Speybroeck, Dani Prieto-Alhambra, Martijn J. Schuemie, Peter R Rijnbeek)

Success factors to an OMOP CDM ETL: having the right people, planning that vocabulary mapping can have complexity, and proactively preparing to deal with data governance issues.

European Health Data & Evidence Network (EHDEN) – Learnings from Building out a Standardized International Health Data Network

**Background:** An ETL converts health data to the OMOP CDM. During EHDEN COVID-19 data call, 25 data partners (DPs) transformed health data to the OMOP CDM. This data call provided an opportunity to evaluate ETL development success factors based on timely development and network research involvement. This study investigates OMOP CDM conversion success.

#### Results



- 25 DPs participated in this EHDEN data call, representing 11 different countries, collectively covering more than 67 million patient records
- 21 of these DPs, the median time it took to complete the ETL process was 358 days, with the shortest time being 172 days and the longest being 622 days
- Of the 21 DPs, 52% had built their CDM in under 365 days, 43% participated in the COVID-19 AESI study [1], and 33% had both a timely study and participated in the COVID AESI study

Figure 1 – OHDSI Extract, Transform, & Load (ETL) Development Process with 1A ETL process map, 1B box plots showing the length in days for each step

#### Methods

- Each DP was expected to follow the current OMOP CDM ETL development process (Figure 1A).
- The process was tracked in 3 ways (1.) through surveys of DP, (2.) tracking data associated to ETL process, and (3.) DataQualityDashboard results.
- Success was measured as total days to transform source data into the OMOP CDM (success: < 365 days) and if a DP participated successfully in network research (COVID-19 AESI study [1])

[1] Voss EA, Shoaibi A, Yin Hui Lai L, et al. Contextualising adverse events of special interest to characterise the baseline incidence rates in 24 million patients with COVID-19 across 26 databases: a multinational retrospective cohort study. *EClinicalMedicine*. 2023;58:101932. doi:10.1016/j.eclinm.2023.101932



Erica A. Voss, Clair Blacketer, Sebastiaan van Sandijk, Maxim Moinat, Michael Kallfelz, Michel Van Speybroeck, Dani Prieto-Alhambra, Martijn J. Schuemie, Peter R Rijnbeek





# #OHDSISocialShowcase

## WEDNESDAY

# Extending OMOP-CDM for registering tomography imaging metadata and subsequent annotation and curation processes

(**Varvara Kalokyri**, Haridimos Kondylakis, Stelios Sfakianakis, Katerina Nikiforaki, Simone Mazzetti, Nikolaos Tachos, Konstantinos Marias, Manolis Tsiknakis)

## RT-CDM: Extending OMOP-CDM for Tomography Imaging Data

Varvara Kalokyri<sup>1</sup>, Haridimos Kondylakis<sup>1</sup>, Stelios Sfakianakis<sup>1</sup>, Katerina Nikiforaki<sup>1</sup>, Simone Mazzetti<sup>2,3</sup>, Nikolaos Tachos<sup>4</sup>, Dimitrios I. Fotiadis<sup>4</sup>, Konstantinos Marias<sup>1</sup>, Manolis Tsiknakis<sup>1</sup>

### 1. Motivation

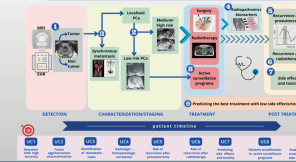
#### ProCancer-1 EU project

- > The largest dataset of **anonymized prostate cancer (PCa) mpMRI** images worldwide
- > Develop robust **AI vendor-specific** and **vendor-neutral AI** models for **9 PCa clinical scenarios**

#### Challenges with the current OMOP-CDM model

- > Locate datasets for **UC1** or to develop a **Lesion Segmentation, Vendor Specific** (e.g. Siemens) model:
  - For patients with **gleason score >= 3+3** and **PIRADS>3**, retrieve all the **T2w Axial DICOM** series from a Siemens scanner with **slice\_thickness<=3** and their corresponding **lesion segmentations**.

Use cases mapped along the prostate cancer management continuum



### 2. Methods

- **Clinical experts** defined all **clinical, imaging, pathology, and follow-up** data that needed to be collected
- Existing approaches on the domain were **reviewed** along with existing **OMOP-CDM extensions** (**oncology extension, radiology extension**)
- **Iterative discussions** between **clinical experts** and **AI model experts** (defined a set of **possible queries** needed to be addressed)

### 3. Contribution

#### Our proposed model:

1. Incorporates **standardized imaging** attributes for the most important **DICOM tags** as well as **measurements** derived from medical images for three types of tomography imaging
2. Extends the model for **registering annotation** and **curation** processes
3. Allows for **utilizing direct annotations** on medical images and all levels of the **ontology hierarchy** of the **Radlex** lexicon for **deducing** useful data.

e.g., a lesion is a PI-RADS score-4 could be derived by exploiting the ontology, if lesion characteristics were coded by using Radlex annotations - enabling an image to be associated with specific lesion descriptors.

### 4. Results

The results section displays several database tables and a diagram. The diagram shows the relationship between OMOP-CDM and RT-CDM, with RT-CDM extending the Imaging and Observation tables. The tables shown include:

- DICOM Metadata**: A table with columns for ID, Name, Value, and Unit.
- Imaging Study**: A table with columns for ID, Name, Value, and Unit.
- Imaging Series**: A table with columns for ID, Name, Value, and Unit.
- Image Curation**: A table with columns for ID, Name, Value, and Unit.
- Image Annotation**: A table with columns for ID, Name, Value, and Unit.
- Provider**: A table with columns for ID, Name, Value, and Unit.

### 5. OMOP & RT-CDM on Prostate Cancer

Data from more than **9,600 patients** with more than **69,000 mpMRI series** and **5,600,000 images**, acquired from the ProCancer-1 platform have already been **integrated** using the **RT-CDM extension**

The results section displays several database query results. The tables shown include:

- Person**: A table with columns for ID, Name, Value, and Unit.
- Observation**: A table with columns for ID, Name, Value, and Unit.
- Imaging Study**: A table with columns for ID, Name, Value, and Unit.
- Imaging Series**: A table with columns for ID, Name, Value, and Unit.
- Image Curation**: A table with columns for ID, Name, Value, and Unit.
- Image Annotation**: A table with columns for ID, Name, Value, and Unit.
- Provider**: A table with columns for ID, Name, Value, and Unit.



<sup>1</sup>Institute of Computer Science, Foundation of Research and Technology Hellas, Nik. Plastria 100, Heraklion, 70013, Crete, Greece  
<sup>2</sup>Department of Surgical Sciences, University of Turin, Corso Duca degli Abruzzi, 14, 10126 Turin (TO), Italy  
<sup>3</sup>Radiology Unit, Cancer Research Institute, FPO-IRCCS, Sesto San Giovanni, 142 - I.M. S.95, 10150, Cervineto (TO), Italy  
<sup>4</sup>Biomedical Research Institute, Foundation of Research and Technology Hellas, University Campus of Ioannina, 45110, Ioannina, Greece

This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under grant agreement No 952159





# #OHDSISocialShowcase

## THURSDAY

# Short-, medium-, and long-term psychiatric and neuropsychiatric consequences of COVID-19: A multinational pilot study

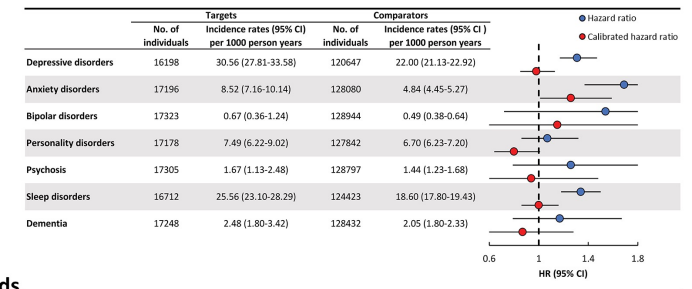
(**Yi Chai**, Ivan C. H. Lam, Eric Y. F. Wan, Celine S. L. Chui, Xue Li, Kenneth K. C. Man, Wallis C. Y. Lau, Xiaoyu Lin, Can Yin, Fan Min, Jing Li, Sarah Seager, Mui Van Zandt, Hao Luo, Ian C. K. Wong)

People with **COVID-19** are at an increased risk of subsequent **psychiatric disorders**

*Short-, medium-, and long-term psychiatric and neuropsychiatric consequences of COVID-19: A multinational pilot study*

**Background:** The COVID-19 pandemic has raised concerns regarding the psychiatric and neuropsychiatric complications following the infection. It is uncertain whether existing findings from a few countries can be generalized to other societies. This population-based multinational network study is to comprehensively investigate the short-, medium-, and long-term psychiatric and neuropsychiatric consequences of COVID-19 in France, Germany, Italy, the UK, and the US.

**Result:** Incidence rates per 1000 person-years and risks of seven outcomes associated with COVID-19 infection



### Methods

- **Data sources:** France IQVIA, Germany IQVIA, Italy IQVIA, UK IMRD THIN, and US Open Claims
- **Study period:** 01/12/2018-01/12-2022
- **Target cohort:** Individuals diagnosed with COVID-19 or received a positive screening test result for SARS-Cov-2 between 01/12/2019-01/12-2020. The earliest date of COVID-19 confirmation was designated as the index date
- **Comparator pool:** Individuals who did not have any diagnosis or positive test results of COVID-19 during the study period. The index date was the same date as their matched targets
- Up to ten **comparators** were randomly matched for each target based on the propensity score matching approach with a caliper width of 0.2
- **Outcomes:** Depressive disorders, anxiety disorders, alcohol misuse or dependence, substance misuse or dependence, bipolar disorders, personality disorders, psychosis, sleep disorder, and dementia
- **Cox proportional hazard regression** models were fitted to estimate the six-month, six-month to one-year, and one- to two-year risks of interested outcomes associated with the COVID-19 infection
- Ninety-one **negative control** outcomes were included to perform the empirical calibration
- **Sex and age group** (i.e., <18 years, 18-24 years, 25-64 years, and 65+ years) stratified analyses

**Conclusion:** The empirical evidence generated from this study can help healthcare providers and policymakers anticipate and respond to the evolving mental health needs of COVID-19 survivors.



Yi Chai, Ivan C. H. Lam, Eric Y. F. Wan, Celine S. L. Chui, Xue Li, Kenneth K. C. Man, Wallis C. Y. Lau, Xiaoyu Lin, Can Yin, Fan Min, Jing Li, Sarah Seager, Mui Van Zandt, Hao Luo\*, Ian C. K. Wong\*





# #OHDSISocialShowcase

## FRIDAY

# PlasmodeSim: R package to simulate data with known treatment assignment and outcome generating processes

(Gidius van de Kamp, Alexandros Rekkas)

## PlasmodeSim: A package to simulate data with a known outcome generating process

**Background:** In order to compare new or existing methods we aimed at developing a package that simulates data with a known outcome generating process while staying close to the real life data. To this extent, we develop the R package *PlasmodeSim*.

Result 1: Code for simulating new outcomes from an existing and a modified prediction model.

```
# Derived model
plpPrediction <- PatientLevelPrediction::predictPlp(
  plpModel = plpResultModel,
  plpData = plpData,
  population = population
)

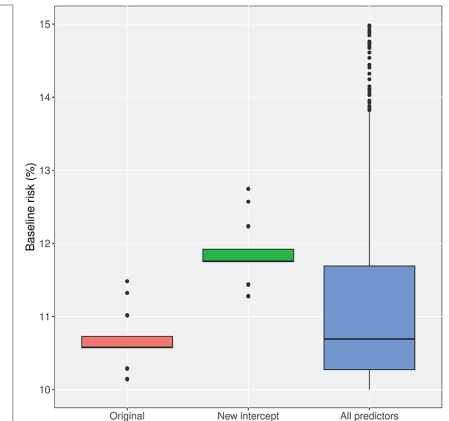
newOutcomesFittedModel <- PlasmodeSim::newOutcomes(
  noPersons = 2000,
  probs = plpPrediction
)

# Modified model
unfittedModel <- plpResultModel$coefficients
unfittedModel[3:5, 1] <- 0.4
unfittedModel[1, 1] <- -0.4

plpModelUnfitted <- PlasmodeSim::makeLogisticModel(unfittedModel)
newProbs <- PatientLevelPrediction::predictPlp(
  plpModel = plpModelUnfitted,
  plpData = plpData,
  population = population
)

newOutcomesUnfittedModel <- PlasmodeSim::newOutcomes(
  noPersons = 2000,
  probs = newProbs
)
```

Result 2: Distribution of baseline risk for a binary outcome in the original (Economia) and simulated datasets.



### Methods

The most important features implemented are:

- Functions to simulate datasets by sampling the original data with replacement.
- Functions that simulate binary or survival outcomes.
- Functions for visual diagnostics.



Gidius van de Kamp, Alexandros Rekkas







# OHDSI Shoutouts!



**Any shoutouts from the community? Please share and help promote and celebrate OHDSI work!**

Do you have anything you want to share? Please send to [sachson@ohdsi.org](mailto:sachson@ohdsi.org) so we can highlight during this call and on our social channels.

Let's work together to promote the collaborative work happening in OHDSI!





# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# Upcoming Workgroup Calls



Date	Time (ET)	Meeting
Wednesday	10 am	Surgery & Perioperative Medicine
Thursday	7 pm	Dentistry
Friday	9 am	GIS – Geographic Information Systems Development
Friday	1 pm	Clinical Trials
Monday	9 am	Vaccine Vocabulary
Monday	10 am	Africa Chapter
Monday	6 pm	OMOP & FHIR
Tuesday	9 am	ATLAS
Tuesday	10 am	Common Data Model



## Sept. 8: OMOP CDM Survey

# OMOP CDM Survey 2023

Please fill in the responses below for **each database** at your institution that has been converted to the OMOP Common Data Model. This information will be used to build our list of databases currently using the OMOP CDM and Standard Vocabularies. Our most recent list can be found on pages 46-47 of the 2022 [Our Journey](#) publication. **If you would like to be included in the 2023 edition of *Our Journey* be sure to fill out the survey by *September 8th!***

OHDSI will not use your contact information for any purpose other than to inquire about your responses or if you select “yes” as the answer to the final question about your interest in your database becoming a network study candidate. To be compliant with GDPR, your name and email will not be shared.







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# Sept. 15: HowOften Phenotype Library Contribution Deadline



## HowOften: Community contributions wanted

General



Patrick\_Ryan

2h

Friends:

As we discussed on the [20June2023](#) and [15August2023](#) community calls, [@hripcsa](#) and I would like to encourage our community to think big and collaborate together in a effort toward large-scale incidence characterization. HowOften is be a community-wide study to define a broad set of target cohorts T that'll serve as denominators, and another broad set of outcome cohorts O that'll serve as numerators. And for a defined list of time-at-risk windows (e.g. 30d, 1yr, all-time), stratified by age/sex/index year, we will compute the incidence of O in T for all T-O combinations within each database in our participating network, and then meta-analyze the results to produce composite summaries.

As with all OHDSI network studies, we will use [GitHub](#) to share study materials, including protocol and source code, which should be based where possible off of existing HADES packages. And we intend to make the full resultset publicly available through an interactive website, likely initially taking advantage of the RShiny modules built by the HADES team as part of the Strategus workflow. As we've seen with prior OHDSI work, background incidence rates can be used for a wide range of clinical applications, including providing [disease natural history](#), providing context for [pharmacovigilance](#) by quantifying the magnitude of risk for known effects, and reporting digital quality measures (see [@bnhamlin](#)'s talk [here](#)).

# Europe Symposium Presentations Are Posted!

## Presentations

### Journey of OHDSI: Where have we been and where we can go together?



**Speaker: Patrick Ryan, PhD**, Janssen Research and Development, Department of Biomedical Informatics, Columbia University Medical Center

### Closure



Peter Rijnbeek — with a little bit of help — provides the closing remarks for the 2023 OHDSI Europe Symposium.

### European Initiatives Using the OMOP CDM



**Moderator: Renske Los, PhD**, Assistant Professor of Medical Informatics, Department of Medical Informatics, Erasmus MC

1. European Health Data and Evidence Network: building a sustainable ecosystem for generating reliable evidence in Europe – Speaker: **Carlos Diaz**, Synapse
2. Harmonizing rare cancer data: lessons learned in EURACAN – Speaker: **Maaïke van Swieten**, IKNL
3. HONEUR: Building a federated network in haematology – Speaker: **Michel van Speybroeck**, Janssen Pharmaceutica
4. PIONEER and OPTIMA, two EU-IMI funded big data projects led by the European Association of Urology – Speaker: **Monique Roobol**, Professor Decision Making in Urology, Erasmus MC
5. Panel Discussion and Q/A

### Collaborator Showcase: Rapid-Fire Presentations



**Moderator: Katia Verhamme, MD**, Associate Professor of Use and Analysis of Observational Data, Department of Medical Informatics, Erasmus MC, Rotterdam

- 0:44 – Tools for the collaborative maintenance of national vocabularies and mappings (Speaker: **Javier Gracia-Tabuenca**)
- 6:09 – Implementation of the ARES application to monitor network-wide data quality and mapping coverage for 16 unique OMOP sources across Rwanda (Speaker: **Jared Houghtaling**)
- 12:11 – Multi-site Cost-effectiveness and Markov Chain analysis of heart failure (Speaker: **Markus Haug**)
- 18:41 – Deep Learning Comparison (Speaker: **Henrik John**)
- 24:21 – The association of short-, medium and long-term cardiovascular sequelae with COVID-19 infection: a multinational pilot study (Speaker: **Ian Wong**)
- 27:54 – Supporting pharmacovigilance signal validation and prioritization with analyses of routinely collected health data – lessons learned from an EHDEN network study (Speaker: **Judith Brand**)
- 35:54 – Pattern of long COVID symptoms and conditions: clustering analysis based on large multinational cohorts as part of an EHDEN Study-A-Thon (Speaker: **Marti Catala Sabate**)
- 42:36 – Evaluation of treatment effect heterogeneity in the LEGEND-Hypertension study (Speaker: **Alexandros Rekkas**)
- 48:36 – Characteristics and outcomes of over a million inflammatory bowel disease subjects in seven countries: a multinational cohort study (Speaker: **Chen Yanover**)
- 57:13 – Prediction of 30-day, 90-day and 1 year mortality after colorectal cancer surgery using a data-driven approach (Speaker: **Ismail Gögenur**)

### Real-World Evidence use in Medicines Regulation



**Moderator: Dani Prieto-Alhambra, PhD**, Professor of Pharmaco- and Device Epidemiology at Oxford University

- 1:20 – Development (Speaker: **Ed Burn**)
- 20:03 – Study Operations (Speaker: **Katia Verhamme**)
- 20:17 – The SIDIAP experience as Data Partner in DARWIN EU® (Speaker: **Talita Duarte-Salles**)
- 30:34 – Drug utilisation of valproate-containing medicinal products in women of childbearing age: a network study part of DARWIN EU® (Speaker: **Albert Prats-Urbe**)
- 40:07 – Drug utilisation of antibiotics in the 'Watch' category of the WHO AWaRe classification of antibiotics for evaluation and monitoring of use: a network study part of DARWIN EU® (Speaker: **Johnmary Arinze**)
- 47:53 – Panel Q&A session



# APAC Symposium Presentations Are Posted!

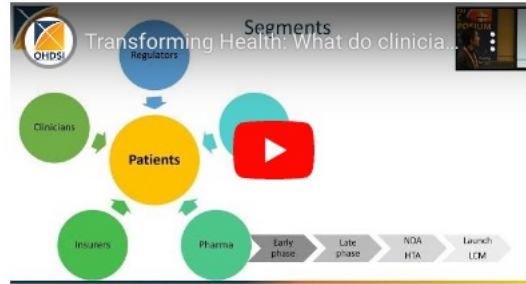
## Symposium Presentations

### Welcome, Keynote



**Speakers:** Nicole Pratt (President OHDSI Australia Chapter, University of South Australia) and Patrick Ryan (Vice President, Observational Health Data Analytics, Janssen Research and Development)

### Transforming health: What do regulators, clinicians, and consumers really want to know about healthcare and how can OHDSI help



**Speaker:** Asieh Golozar (Vice President, Global Head of Data Science at Odysseus Data Services, Inc. Professor of the Practice & Director of Clinical Research at the OHDSI Center, Northeastern University)

### Research Study presentation: Fluroquinolones antibiotics and the risk of aortic aneurysm and dissection – A study of 12 million patients



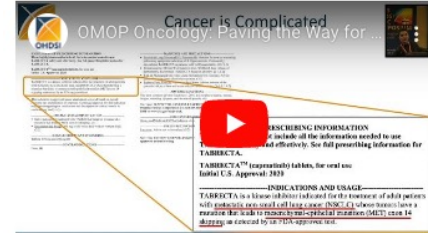
**Speaker:** Jack Janetzki (University of South Australia)

### Panel discussion: Regulators, Clinicians and Consumers



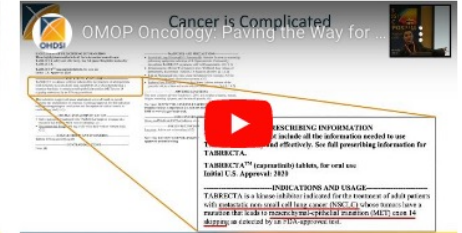
**Panelists:** Grant Pegg (Regulator), Seng Chan You (Policymaker/ Clinician), Anne McKenzie (Consumer), Yong Chen (Researcher)

### OMOP/FHIR: challenges of each model and how the collaboration can resolve those challenges



**Speaker:** Grahame Grieve (Principal at Health Intersections Pty Ltd)

### OMOP Oncology: Paving the Way for Patient-Centric Cancer Care



**Speakers:** Kim Carter (Data Science Manager, Minderoo Foundation) & Georgina Kennedy (Ingham Institute for Applied Medical Research)

### Lightning Talks



0:10 – Gusto Data Vault: Laying the Foundations for an Open Science System with OMOP Data Catalogue. **Speaker:** Cindy Ho (Singapore)  
 4:40 – Establishment of Evidence Sharing Network Through Common Data Model for Chinese Clinical Research: an Overview. **Speaker:** Lei Liu (China)  
 11:28 – Internationalization Efforts for Real-World Evidence Creation at Core Hospitals for Clinical Research in Japan. **Speaker:** Yoshihiro Aoyagi (Japan)  
 17:21 – Successes and Challenges of a Multi-State Electronic Medical Record (EMR) to OMOP Conversion Project. **Speaker:** Roger Ward (Australia)  
 22:54 – The association of short-, medium- and long-term cardiovascular sequelae with COVID-19 infection: a multinational pilot study. **Speaker:** Ivan Lam (Hong Kong)  
 28:56 – Comparative Risk for Neuropsychiatric Events in Leukotriene Receptor antagonists versus Inhaled Corticosteroids in Children with Asthma. **Speaker:** Subin Kim (Korea)  
 34:20 – Prediction of Dementia incidence among patients with Type 2 Diabetes. **Speaker:** Thanh-Phuc Phan (Taiwan)

### Regional Chapter Panel + Closing Talk



Panel: We have the ingredients, now let's generate evidence!  
**Panelists:** APAC Regional Chapter leads (seated left to right): Nicole Pratt, Australia; Jason Hsu, Taiwan; Tatsuo Hiramatsu, Japan; Seng Chan You, Korea; Lei Liu, China; Mengling 'Mornin' Feng, Singapore.  
 39:37 – Closing: Nicole Pratt and Patrick Ryan



# Titan Award Nominations Are Open!

To recognize OHDSI collaborators (or collaborating institutions) for their contributions towards OHDSI's mission, the OHDSI Titan Awards were introduced at the 2018 Symposium and have been handed out at the Global Symposium each year since.



[bit.ly/2023TitanNominations](https://bit.ly/2023TitanNominations)





# OHDSI Got Talent!

Please join us for the first **OHDSI Got Talent!** competition at our 2023 Global Symposium.

We are looking for anybody with a special talent – singing, dancing, playing an instrument, comedy, magic, etc. – to join us for this fun event in October. Please use the link below to share your interest in participation!



[bit.ly/OHDSIGotTalent2023](https://bit.ly/OHDSIGotTalent2023)



# Global Symposium



**Oct. 20-22 • East Brunswick, NJ, USA**  
**Hilton East Brunswick Hotel & Executive Meeting Center**

[ohdsi.org/OHDSI2023](https://ohdsi.org/OHDSI2023)





# Global Symposium Weekend Agenda

	Friday, Oct. 20	Saturday, Oct. 21	Sunday, Oct. 22
7:00 am	Registration/Lite Breakfast	Lite Breakfast	Lite Breakfast
8:00 am	Welcome to OHDSI2023!	Intro to OHDSI Tutorial & OHDSI Workgroup Activities	OHDSI collaborative workshop: HowOften (part 2)
9:00 am	State of the Community		
10:00 am	Community Networking		
11:00 am	Plenary Session		
12:00 pm	Buffet Lunch		
1:00 pm	Panel: Network Studies	OHDSI collaborative workshop: HowOften (part 1)	OHDSI workgroup activities
2:00 pm	Collaborator Showcase: Lightning Talks		
2:45 pm	Collaborator Showcase: Posters & Demos		
3:30 pm	Collaborator Showcase: Lightning Talks		
4:15 pm	Collaborator Showcase: Posters & Demos		
5:00 pm	Closing Talk & Titan Awards	Free time	We'll see you again in 2024!
6:00 pm	Networking Reception		
7:00 pm	OHDSI Got Talent!		

\* this agenda is tentative and subject to change



# Global Symposium

		2023 OHDSI Global Symposium										
		Friday, October 20- Sunday, October 22 Hilton East Brunswick Hotel and Meeting Center										
<b>Friday, October 20</b>												
Start	End Time	Grand Ballroom										
7:00	8:00	Registration/ Light Breakfast										
8:00	9:00	Welcome to OHDSI2023										
9:00	10:00	State of the Community										
10:00	11:00	Community Networking/ Meet the Mentors										
11:00	12:00	Plenary Session										
12:00	13:00	Buffet Lunch										
13:00	14:00	Panel: Network Studies										
14:00	15:00	Collaborator Showcase - Posters and Software Demonstrations	Exhibits									
15:00	16:00	Collaborator Showcase - Lightning Talks										
16:00	17:00	Collaborator Showcase - Posters and Software Demonstrations										
17:00	18:00	Closing Talk										
18:00	19:00	Networking Reception										
19:00	20:00	OHDSI Got Talent!										
<b>Saturday, October 21</b>		Grand Ballroom										
8:00	9:00											
9:00	10:00	Introduction to OHDSI Tutorial	Exhibits	Industry Special Interest	Perinatal & Reproductive	Oncology	HADES	CDM/Network Data Quality	Health Equity	Phenotype Evaluation	Medical Imaging	Natural Lang. Processing
10:00	11:00											
11:00	12:00	Collaborator Showcase (and buffet lunch)										
12:00	13:00											
13:00	14:00											
14:00	15:00	HowOften Large-scale Characterization Workshop										
15:00	16:00											
16:00	17:00											
<b>Sunday, October 22</b>		Grand Ballroom										
8:00	9:00											
9:00	10:00	HowOften Large-scale Characterization Workshop										
10:00	11:00											
11:00	12:00											
12:00	13:00	Collaborator Showcase (and buffet lunch)	Exhibits									
13:00	14:00											
14:00	15:00											
15:00	16:00											
16:00	17:00											



# Where Are We Going?

**Any other announcements  
of upcoming work, events,  
deadlines, etc?**





# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**







# Aug. 29: Update on OHDSI Standardized Vocabularies



**Alexander Davydov**

Lead of the Vocabulary Team, Odysseus Data Services, Inc.



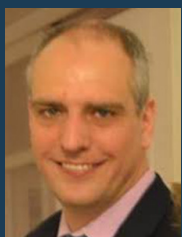
**Anna Ostropolets**

Director, Head of the Innovation Lab, Odysseus Data Services, Inc.



**Oleg Zhuk**

Vocabulary Tech Lead, Odysseus Data Services, Inc.



**Christian Reich**

Professor of Practice, Northeastern University