



A Look Inside #OHDSI2024

OHDSI Community Call
Aug. 13, 2024 • 11 am ET



Upcoming Community Calls

Date	Topic
Aug. 13	Global Symposium Plenary and Tutorial Preview
Aug. 20	Building The OHDSI Evidence Network Sprint – Open Discussion
Aug. 27	canceled due to ISPE 2024
Sept. 3	New Standardized Vocabularies Release
Sept. 10	Asia-Pacific Regional Updates



Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?





OHDSI Shoutouts!



Digital Square announces three new Global Goods

APPROVED FROM THE FIRST REVIEW CYCLE OF OUR ONGOING OPEN CALL FOR GLOBAL GOODS



Global Goods Guidebook

◀ All Global Goods

Observational Medical Outcomes Partnership Common Data Model (OMOP CDM)

The Observational Medical Outcomes Partnership Common Data Model (OMOP CDM) is a data standard designed to harmonize the structure and content of different types of health data such as electronic health records, insurance claims data, health surveys, and other clinical data sources for federated health research and reporting. Developed by the Observational Health Data Sciences and Informatics (OHDSI) community, the OMOP CDM organizes data into domains or tables representing patient demographics, visits, diagnoses, drugs, measurements (lab tests), procedures, and clinical notes. Interoperability is achieved by sharing computer programs written for the OMOP CDM without the need to share the source data, thereby ensuring patient privacy, and allowing data owners to retain control over their data.



Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?





Upcoming Workgroup Calls



Date	Time (ET)	Meeting
Tuesday	12 pm	Generative AI and Analytics
Tuesday	12 pm	Common Data Model Vocabulary Subgroup
Tuesday	3 pm	OMOP CDM Oncology Outreach/Research Subgroup
Wednesday	9 am	Patient-Level Prediction
Wednesday	12 pm	Health Equity
Wednesday	4 pm	Joint Vulcan/OHDSI Meeting
Thursday	8 am	OHDSI India Community Call
Thursday	9 am	OMOP CDM Oncology Vocabulary/Development Subgroup
Thursday	9:30 am	Themis
Thursday	12 pm	HADES
Thursday	7 pm	Dentistry
Friday	10 am	GIS-Geographic Information System
Friday	10:30 am	Open-Source Community
Friday	11:30 am	Clinical Trials
Friday	11:30 am	Steering Group
Monday	10 am	Africa Chapter
Monday	10 am	CDM Survey Subgroup
Monday	11 am	Data Bricks User Group
Monday	2 pm	Electronic Animal Health Records



OHDSI network study on semaglutide-NAION seeking data partners

← → ↻ 🔍 github.com/ohdsi-studies/SemaglutideNaion

📖 README ✎ ☰

Estimation of risk of NAION and other vision disorders from exposure to semaglutide

Study Status Started

- Analytics use case(s): Population-Level Estimation
- Study type: Clinical Application
- Tags: Eye Care & Vision Research, Type 2 Diabetes
- Study lead: Cindy X. Cai
- Study lead forums tag: [\[Cindy X. Cai\]](#)
- Study start date: -
- Study end date: -
- Protocol: [docs/Semaglutide and NAION Research Protocol.pdf](#)
- Publications: -
- Results explorer: -

OHDSI network study for population-level effect estimation of risk of NAION and other vision disorders from exposure to semaglutide.



The Center for Advanced Healthcare Research Informatics (CAHRI) at Tufts Medicine welcomes:



Ismail Gögenur, MD, DMSc

Dr. Gögenur is Chair of Surgery at the University of Copenhagen and Director of the Center for Surgical Science at Zealand University Hospital.

Andreas Weinberger Rosen, MD, MPM

Dr. Weinberger Rosen is a Researcher at the Center for Surgical Science at Zealand University Hospital.



'AI-augmented decision support for surgical oncology – The Danish experience'

August 29, 2024, 11am-12pm EST Virtually via [Zoom](#)

Please contact Marty Alvarez at malvarez2@tuftsmedicalcenter.org for calendar invite or questions.

TuftsMedicine
Tufts Medical Center



#OHDSISocialShowcase

MONDAY

Harmonising Surgical Data: Experience from the Hip Fracture ‘Mini Federated Network of Registries’

(**Marissa G. Fiorello**, Kristin Kostka, Justin Manjourides, Xavier L. Griffin, Jennifer C.E Lane)

Five Hip Fracture Registries are now standardized into the OMOP CDM to Create a Mini Federated Network

Harmonising Surgical Data: Experience from the Hip Fracture ‘Mini Federated Network of Registries’

Background:

National hip fracture registries collect rich surgical, perioperative and outcome data to monitor and compare hip fracture care, aiming to optimize patient outcomes. This project aimed to map their complex and non-standardized data into the OMOP CDM for enhanced international collaboration, audit and research

Result 1:

40 participants contributed to the HIPSTAR project during an in-person studyathon at the Fragility Fracture Network (FFN) Congress Oct 2023



Result 2: Five registries adapted a standardized ETL process to establish a relational databases and instantiate instances of Atlas for the first time and are now developing the HIPSTAR characterization study



Methods

- 1 Data Sources and Expertise**
 - Open call for data partners with hip fracture registries to harmonize their registry data supported by EHDEN
 - Collaboration of experts in nursing, physiotherapy, surgery, medicine, epidemiology, statistics, and data analysis
- 2 Extract, transform, and load (ETL) process**
 - Based upon existing Minimum Common Dataset in FFN
 - Iteration of ETL using expert opinion in NHFD data with SME support for procedure, device, anaesthetic & outcome data
 - Comparison of each registry of surgical data to standardized ETL
- 3 Hip Fracture Studyathon - October 3, 2023**
 - Stakeholders from Canada, Denmark, Norway, Sweden, Australia & New Zealand, Ireland, Germany, and Spain, came together in Oslo, Norway to finalize the HIPSTAR phenotypes, study design and protocol
- 4 Study generation**
 - 5 registries across three continents completed their data transformation into the OMOP CDM by Studyathon
 - Initial characterization studies running in first 5 registries
 - Additional registries following ETL process for future studies

Limitations:

Establishing a robust network in this field faces challenges due to a lack of standardization of surgical data within the CDM in addition to data heterogeneity and fewer OMOP knowledge experts in this area. Clear protocols, robust data management, and technical support for first time adopters are crucial for successful network operation.



Marissa G. Fiorello¹, Kristin Kostka¹, Justin Manjourides^{1,2}, Xavier L. Griffin³, Jennifer C.E Lane³

¹ The OHDSI Center at the Roux Institute, Northeastern University, Portland, ME, USA
² Department of Health Sciences, Northeastern University, Boston, MA, USA
³ Barts Bone and Joint Health, Queen Mary University of London, London, UK





#OHDSISocialShowcase This Week

TUESDAY

Structured and unstructured data from first and second line care combined in OMOP data warehouses

(**Thibault Helleputte**, A. Kanfoud, M. Borshchivska, G. Vanhalst, T. Klein, P. Olivier)

Adoption of OMOP CDM in the DPI4INAH Project: Enhancing Healthcare Data

Integration in Wallonia, Belgium

PRESENTER: Thibault Helleputte
AUTHORS: T.Helleputte, A. Kanfoud, M. Borshchivska, G. Vanhalst, T. Klein, P. Olivier

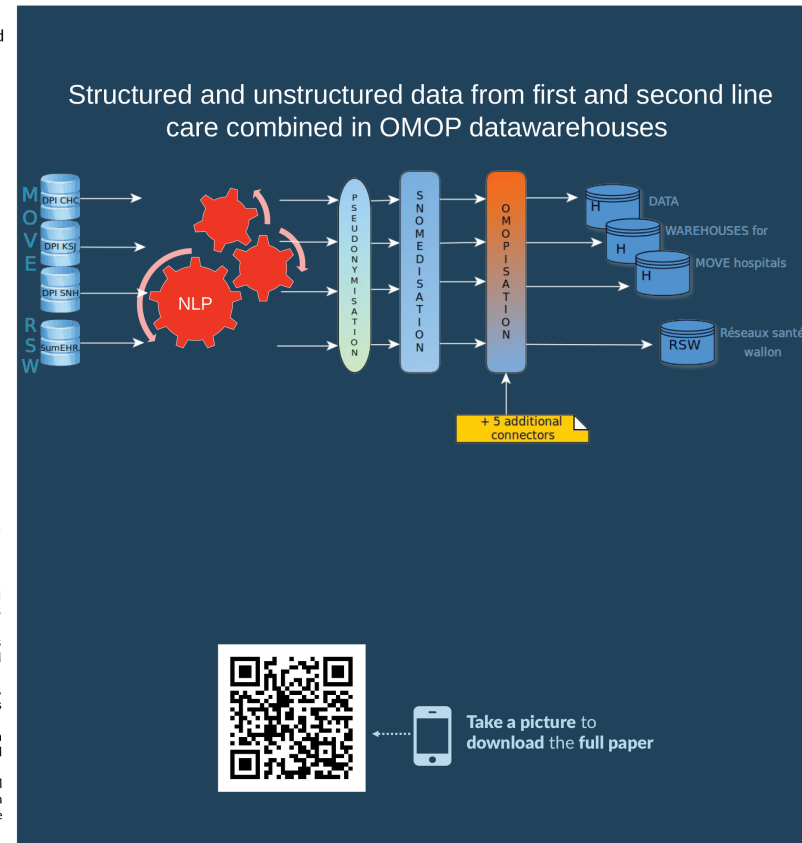
INTRO
Explore the adoption of OMOP CDM within the DPI4INAH (Electronic Patient Record (EPR) - Dossier Patient Informatisé (DPI) for the Institute of Analytics for Health) project in Wallonia, Belgium.

DPI4INAH extends INAH by integrating additional medical data from primary and secondary care into an interoperable OMOP datalake. Specifically, it focuses on extracting information from natural language reports concerning allergies, vaccination, and oncology.

Diverse contributors are involved in this project: the Hospital network MOVE (CHC Liège, St. Nikolaus-Hospital at Eupen, Klinik St. Josef à St. Vith), RSW (Réseau Santé Wallon, managed by the non-profit FRATEM) and private companies (DNAnalytics, Effixis, Solstisse).

METHODS
DPI4INAH achieves data interoperability through several key steps:

1. Clinical information from the DPI system will be extracted using NLP techniques and transformed into standardized representations in SNOMED CT terminology.
2. A double pseudonymisation mechanism has been implemented, involving a trusted third party in the loop.
3. Data is mapped to the OMOP CDM, ensuring uniformity and compatibility across different healthcare systems.
4. Medical data will undergo validation at both the individual hospital level and on a global scale.
5. In addition to DPI and SumEHR, the final data warehouse will incorporate the data coming from the five connectors of the previously developed INAH platform.



RESULTS
DPI4INAH maximizes internal data utilization within each institution operating its own warehouse.

It also allows exporting allergy and vaccination data in FHIR Careset format for the MOVE Hospital network. This initiative aims to enhance specialization and rationalize internal practices. It will facilitate clinical research queries, allowing researchers to analyze standardized data sets for insights and advancements in healthcare practices.

Furthermore, it will support internal queries from participating hospitals, aiding in decision-making processes and improving overall healthcare delivery.

DPI4INAH enables feasibility analysis for multicentric clinical studies including both hospital and General Practitioner data in the fields of vaccines, allergies, and oncology.



Take a picture to download the full paper





#OHDSISocialShowcase

WEDNESDAY

Lessons Learned from EHDEN Data Partner Reviews: Improving ETL Processes and Data Quality in OMOP CDM Conversions

(Evanette K Burrows, Clair Blacketer, Erica Voss, Frank J DeFalco, Dmitry Dymshyts, Patrick Ryan)

A systematic review process enhances the reliability and utility of datasets

Title: Lessons Learned from EHDEN Data Partner Reviews: Improving ETL Processes and Data Quality in OMOP CDM Conversions

Background: As part of the European Health Data & Evidence Network (EHDEN) initiative to transform data sources to the Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM), data partners undergo milestone assessments to evaluate their progress in implementing the ETL (Extract, Transform, Load) process and ensuring data quality.

Figure 1: Tools utilized in systematic review

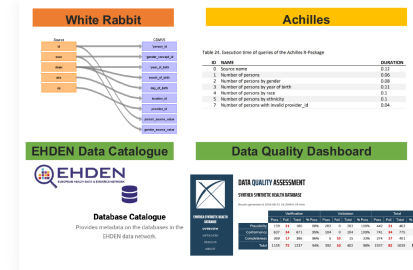
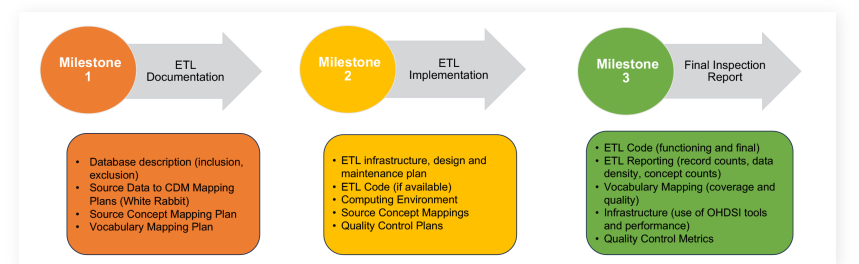


Table 1: Examples of identified areas of improvement

Improvement Area	Reviewer Suggestions
Data Loss Evaluation	Implement a process to compare source counts to target counts
Source Code Mapping Coverage	Evaluate unmapped source codes, retain valid records in the CDM and iterate on mappings over time
Source Code Mapping Quality	Evaluate the accuracy of source code mapping and implement a process to detect deprecated and/or updated codes
Implausible Records	Review potential erroneous records with future or implausible dates
Data Model Conformance	Review failures observed for data model conformance and ensure alignment with CDM specifications

Figure 2: Description of Milestone Assessment



Key Takeaway: The identified areas for improvement in the review process highlight the complexity and challenges inherent in transforming diverse healthcare datasets into a standardized format. By addressing the identified issues and improving data quality, the data partners enhanced the reliability and utility of their datasets for healthcare research and analysis within the EHDEN network.



Evanette K Burrows, Clair Blacketer, Erica A Voss, Frank J DeFalco, Dmitry Dymshyts, Patrick B Ryan

Johnson & Johnson



#OHDSISocialShowcase

THURSDAY

Implementing value based oncology care at European cancer hospitals

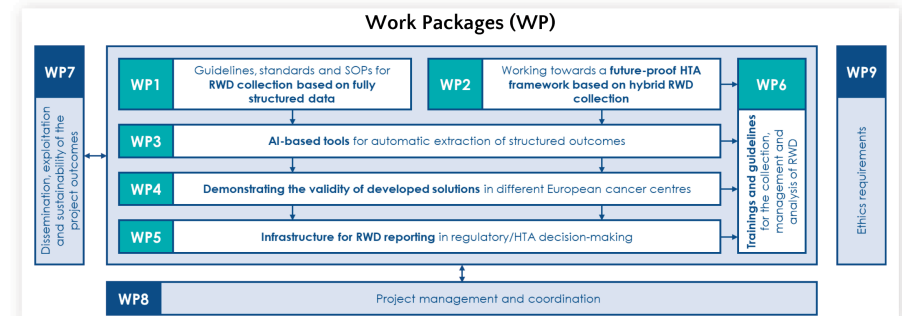
(Mads Andersen, Juho Lähteenmaa, Johanna Mattson, Ulrik Lassen, Andreas Bjerrum)

Implementing value-based oncology care at European cancer hospitals



Background: Patients in clinical trials never perfectly represent the patients met in the clinic due to strict in- and exclusion criteria. Consequently, this may lead to a disconnection between clinical efficacy in a controlled environment and the real effectiveness that is seen in clinical practice. Furthermore, new treatments targeting individual genetic alterations create opportunities for many patients with cancer, but they also represent a challenge for regulators, who are faced with the challenge of balancing access for patients and high cost of novel treatments. For rare cancers and rare subtypes of certain cancers, low patient volumes can lead to uncertainties in clinical evidence.

An opportunity for establishing real-world effects lies in unlocking the real-world data (RWD) that is collected in standard clinical practice. Advances in technology have led to hospitals creating centralized repositories or "data lakes", containing large amounts of structured, semi-structured, and unstructured data. However, unlocking this data comes with obstacles, as different hospitals use different electronic medical record (EMR) systems, in which data structure does not conform to a common standard.



Aims and methods: ONCOVALUE is a Horizon Europe-funded project that aims to improve cancer care by enabling cancer clinics to collect, harmonize, and analyze high-quality RWD. To address the challenge of varying data models used across clinics, we aim to implement the OMOP common data model (CDM). This will enable us to perform multicenter phase IV studies and create improved Health Technology Assessment (HTA) models capable of assessing real-life effectiveness of novel anti-cancer treatments across several cancer centers in Europe.

The real-world oncology data will need to be structured, collected, and processed from various EMR systems in multiple cancer hospitals. ONCOVALUE will ensure the implementation of the developed methods by creating guidelines and trainings for the collection and management of high-quality RWD.

Besides the structured data, unstructured data originating from medical notes and medical images will be transformed into structured data with the use of artificial intelligence technologies that are developed for this project by Siemens Healthineers and IQVIA.

Conclusion: Innovative solutions based on RWD are needed to address the increasing demand and cost of new anti-cancer medications. To scale such solutions to national and international scopes, the OMOP CDM will be an essential component, allowing streamlined analyses and aggregated results based on data originating from multiple European cancer centers.



Mads Andersen¹, Juho Lähteenmaa², Johanna Mattson², Ulrik Lassen¹, Andreas Bjerrum¹
¹Department of Oncology, Rigshospitalet, Denmark, ²IT Management and Comprehensive Cancer Center, Helsinki University Hospital, Finland



#OHDSISocialShowcase

FRIDAY

OHDSI meets Flowise to Streamline Biomedical Data Discovery and Analysis

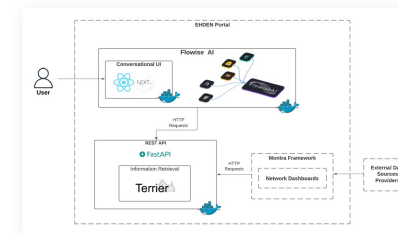
(**João Reis**, João Almeida, Tiago Almeida, José Oliveira)

A Chatbot to help discover OMOP CDM databases within EHDEN Network

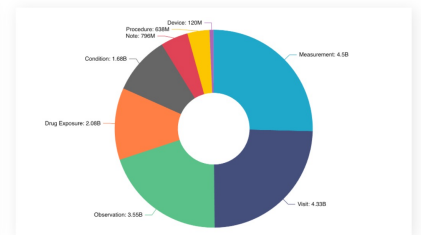
OHDSI meets Flowise to Streamline Biomedical Data Discovery and Analysis

Background: The EHDEN Portal hosts information from almost 200 OMOP CDM databases. Discovering them often involves manual searching and evaluation, which can be time-consuming and susceptible to human error.

Overview of the system architecture using EHDEN Portal information



Data domain distribution that supported the Information Retrieval models



Results

- 1 EHDEN Database Catalogue**
- 2 EHDEN Network Dashboards**
- 3 Chatbot Finder**

Conclusion: A conversational search tool addresses the significant challenge of navigating a growing repository of medical databases. By enabling natural language dialogue, it simplifies the process of database identification for researchers of all experience levels.



João Reis, João Almeida, Tiago Almeida, José Oliveira





Opening: Sr AD, Real World Evidence & Analytics Boehringer Ingelheim

SR AD, Real World Evidence & Analytics

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JOB ID - 13278

Description

The purpose of this job is to:

- Generate real world evidence (RWE) to support in-line and pipeline products.
- Provide statistical advice on the analysis of real world data (RWD) to various internal and external stakeholders.
- Contribute to the RWD acquisition strategy and tool evaluation.



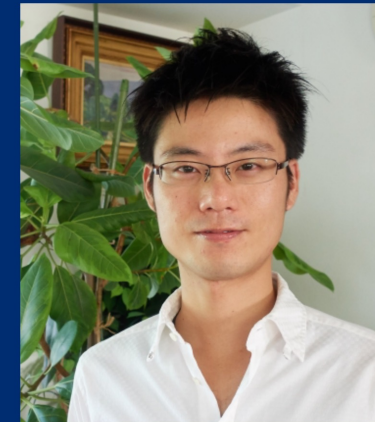
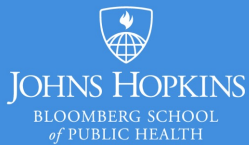
Openings: Postdoctoral Fellow, Johns Hopkins Univ.

PHARMACOEPIDEMIOLOGY POST-DOCTORAL TRAINING PROGRAM

Co-Directors: Caleb Alexander, MD, MS and Jodi Segal, MD, MPH

The **Pharmacoepidemiology Training Program** at the Johns Hopkins Bloomberg School of Public Health (BSPH) is currently **seeking to support postdoctoral fellows**. All supported trainees work with core faculty on existing or newly developed research projects on pharmacoepidemiology, so as to optimize the safe and effective use of medicines to treat heart, lung and blood diseases in the United States. |

Deadline for applications: rolling





Where Are We Going?

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





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#OHDSI2024 Registration Is Open!

Registration is OPEN for the 2024 OHDSI Global Symposium, which will be held **Oct. 22-24** at the **Hyatt Regency Hotel in New Brunswick, N.J., USA.**

Tuesday: Tutorials

Wednesday: Plenary/Showcase

Thursday: Workgroup Activities

ohdsi.org/OHDSI2024





An Introduction to the Journey from Data to Evidence Using OHDSI

October 22, 2024

8AM – 12PM EST



What & Who

WHAT

- Introduce newcomers to OHDSI
- Learn about tools, practices, and open-science approach to evidence generation in OHDSI Community

WHO

- Newcomers
- People who have never been to OHDSI Symposium before
- Someone who is looking to become an active member in the community



What to Expect

- Open Community Data Standards
 - OMOP Common Data Model
 - OHDSI Standardized Vocabularies
- Open-Source Analytic Tools
 - Health Analytics Data-to-Evidence Suite (HADES)
 - ATLAS
- Conducting Network Research
 - Characterization
 - Population-level Estimation (PLE)
 - Patient-level Prediction (PLP)
- Clinical Application of Network Studies
- Community Collaboration and how can you get started in OHDSI



Faculty



**Daniel Prieto-
Alhambra**
*University of
Oxford; Erasmus
M.C.*



Jenna Reps
*Johnson &
Johnson*



Mui Van Zandt
IQVIA



Erica A Voss
*Johnson &
Johnson*



Linying Zhang
*Washington
University in St.
Louis*



Any Knowledge Necessary?

- No previous knowledge necessary
- Homework assignment to read a publication we will share – it will serve as the theme for the course as well as introduce ideas you'll hear during the plenary

Developing and Evaluating your Extract, Transform, Load (ETL) Process to the OMOP CDM



*Evanette
Burrows*



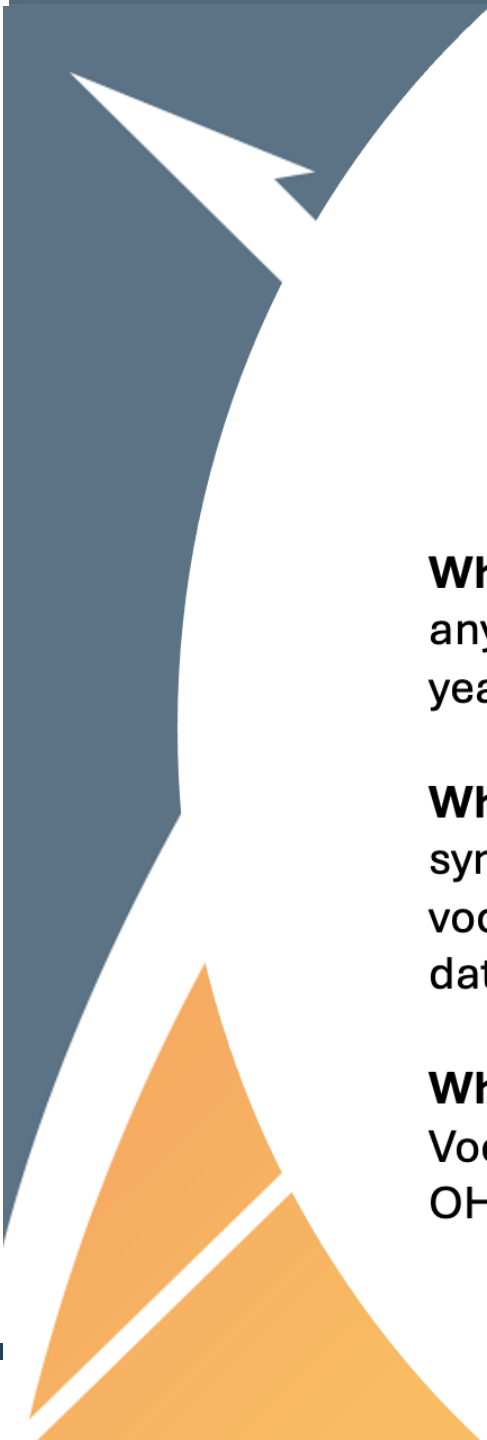
*Katy
Sadowski*



*Melanie
Philofsky*



*Clair
Blacketer*



Developing and Evaluating your Extract, Transform, Load (ETL) Process to the OMOP CDM

Who Would Benefit: Anyone with data to standardize who is starting on their journey, anyone who would like to learn more about ETL and the advancements over the last few years

What to Expect: A fun environment that will give you hands-on experience with mapping synthetic data to the OMOP CDM. You will learn about how to apply OHDSI community vocabulary mapping, data standards, conventions, and tools to get the most out of your data.

What to Know Beforehand: A basic knowledge of the OMOP Common Data Model and Vocabularies is highly encouraged. Check out the EHDEN Academy course or the Book of OHDSI if you need a refresher!



Using the OHDSI Standardized Vocabularies for Research

The OHDSI Standardized Vocabularies serves as a foundation to data standardization process within the OMOP CDM. It also can be tremendously useful tool for enabling the appropriate design of analyses that can be executed across a network of databases. A core component within essentially all analysis is the specification of phenotypes and associated code lists to represent exposures, outcomes, and other features.

In this tutorial, students will learn how to take advantage of the OHDSI standardized vocabularies as an analytic tool to support your research, including searching for relevant clinical concepts, navigating concept relationships, creating Conceptsets and understanding source codes that map within these expressions. Students will also learn where the OHDSI standardized vocabularies is used throughout OHDSI's standardized analytic tools.

Faculty



Anna Ostropolets
Janssen Research & Development



Vlad Korsik
Odysseus Data Services, Inc.



Azza Shoaibi
Janssen Research & Development



Polina Talapova
SciForce



Oleg Zhuk
Odysseus Data Services, Inc.



So, You Think You Want To Run an OHDSI Network Study?

Reliable real-world evidence generation requires appropriate analyses applied to data sources fit-for-purpose for the research question of interest. The OHDSI community has developed open-source standardized analytics tools that can be executed across a network of OMOP CDM databases and processes to facilitate collaborations between researchers throughout the evidence generation process from design through implementation and dissemination.

In this tutorial, students will learn about the steps along the journey to turn your research question into reliable evidence and how to lead an OHDSI network study.

Faculty



Yong Chen
*University of
Pennsylvania*



Nicole Pratt
*University of South
Australia*



Anthony Sena
*Janssen Research &
Development*



Andrew Williams
Tufts University



Seng Chan You
*Yonsei University Health
System*



Conducting 'Off-The-Shelf' Characterization Studies Using DARWIN EU® Tools and the OMOP CDM

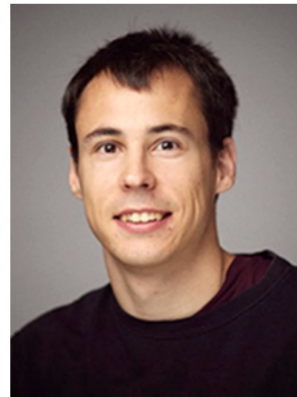
The European Medicines Agency (EMA) and the European Medicines Regulatory Network established the Data Analysis and Real-World Interrogation Network (DARWIN EU®) coordination center to provide timely and reliable evidence on the use, safety and effectiveness of medicines for human use, including vaccines, from real world healthcare databases across the European Union (EU). The DARWIN EU team has established a data network standardized to the OMOP CDM and has developed a series of open-source analytics tools that run atop the OMOP CDM to conduct characterization studies for disease natural history, drug utilization, and treatment patterns.

In this tutorial, students will learn from leaders in the DARWIN EU team about how to execute characterization analyses against their OMOP CDM instance using DARWIN EU packages, including how to define inputs to the standardized analytics and how to interpret standardized results. Students will also learn how DARWIN EU tools relate to and connect with OHDSI's broader open-source analytics ecosystem.

Faculty



Daniel Prieto-Alhambra
*University of Oxford;
Erasmus M.C.*



Martí Català Sabaté
University of Oxford



Edward Burn
University of Oxford



Maarten van Kessel
Erasmus M.C.



Ger Inberg
Erasmus M.C.



OHDSI2024 Conference Agenda

Time (ET)	Topic (Presenters)
7:30 - 8:30 am	Registration and Lite Breakfast
8:30 - 9:15 am	State of the OHDSI Community (George Hripcsak, Columbia Univ.)
9:15 - 10:15 am	Plenary: Clinical Insights from LEGEND-T2DM Introduction to LEGEND-T2DM (Moderator: Aline Pedrosa, Brazil) Comparative Effectiveness of Second-line Antihyperglycemic Agents (Arya Aminorroaya, Yale Univ.) Effectiveness of First-line Antihyperglycemia Agents (Phyllis Thangaraj, Yale Univ.) Comparative Safety of SGLT2 for Risk of Diabetic Ketoacidosis (Hannah Yang/Evan Minty, Univ. of Calgary) Comparative Safety of GLP1-RA and the Risk of Thyroid Tumors (Daniel Morales, Univ. of Dundee)
10:15 - 10:35 am	Networking Break
10:35 - 11:20 am	Plenary: Value Proposition for Participating in OHDSI Network Studies like LEGEND-T2DM Introduction to OHDSI Evidence Network / Marketplace (Moderator: Clair Blacketer, Johnson & Johnson) Reflections from US Department of Veterans Affairs (Scott Duvall, VA) Reflections from SIDIAP (Spain) (Talita Duarte-Salles, IDIAP) Reflections from Taipei Medical University (Thanh-Phuc Phan, Taipei Medical Univ.) Reflections from a Global Commercial Data Provider (Sarah Seager, IQVIA)
11:20 am - 12 pm	Plenary Q&A: Lessons Learned on LEGEND-T2DM Journey (Moderator: Fan Bu, Univ. of Michigan; Panelists: LEGEND-T2DM co-authors)
12 - 12:45 pm	Lunch

12:45 - 1:30 pm	Plenary Panel: JACC-OHDSI Partnership (Moderators: Nicole Pratt, Univ. of South Australia/Marc Suchard, UCLA; Panelists: Harlan Krumholz, Yale Univ./Seng Chan You, Yonsei Univ./ Yuan Lu, Yale Univ.)
1:30 pm - 2 pm	Plenary Activity: OHDSI Scavenger Hunt - Form Your Network Study Dream Team
2 pm - 3 pm	Collaborator Showcase: Posters and Software Demos
3 pm - 4 pm	Collaborator Showcase: Lightning Talks
4 pm - 5 pm	Collaborator Showcase: Posters and Software Demos
5 pm - 6 pm	Closing Talk & Titan Awards (Patrick Ryan, Johnson & Johnson/Columbia Univ.)
6 pm - 8 pm	Game Night and Network Reception

Agenda is subject to change

ohdsi.org/ohdsi2024



The weekly OHDSI community call is held every Tuesday at 11 am ET.

Everybody is invited!

Links are sent out weekly and available at:
ohdsi.org/community-calls