

CDM/ DQD Workgroup Updates + Phenotype Phebruary Report

OHDSI Community Call Feb. 15, 2022 • 11 am ET



n ohdsi



Future OHDSI Community Calls

Date	Topic	
Feb. 15	Workgroup Updates (Common Data Model, Data Quality), Phenotype Phebruary Report	
Feb. 22	Workgroup Updates (ATLAS/WebAPI, Medical Imaging), Phenotype Phebruary Report	
Mar. 1	Breakout Sessions (Characterization, Estimation, Prediction)	
Mar. 8	CDM Workshop (Part 1)	
Mar. 15	CDM Workshop (Part 2)	
Mar. 22	OHDSI Vocabulary Journey	
Mar. 29	Reproducibility	







Future OHDSI Community Calls

Date	Topic	
Feb. 15	Workgroup Updates (Common Data Model, Data Quality), Phenotype Phebruary Report	
Feb. 22	Workgroup Updates (ATLAS/WebAPI, Medical Imaging), Phenotype Phebruary Report	
Mar. 1	Breakout Sessions (Characterization, Estimation, Prediction)	
Mar. 8	CDM Workshop (Part 1)	
Mar. 15	CDM Workshop (Part 2)	
Mar. 22	OHDSI Vocabulary Journey	
Mar. 29	Reproducibility	







February 22 OHDSI Community Call



ATLAS/Web API Workgroup Update
Anthony Sena



Medical Imaging Workgroup Update
Paul Nagy



Phenotype Phebruary Update #3
Patrick Ryan



Three Stages of The Journey

Where Have We Been? Where Are We Now? Where Are We Going?







Erasmus Awarded DARWIN EU Contract





Search

Medicines 🗸

Human regulatory regulatory

Committees 🗸

Partners network About v

Initiation of DARWIN EU® Coordination Centre advances integration of real-world evidence into assessment of medicines in the EU <share

News 09/02/2022

EMA is initiating today the establishment of the Coordination Centre for the Data Analysis and Real World Interrogation Network (DARWIN EU®).

The role of the Coordination Centre is to develop and manage a network of real-world healthcare data sources across the EU and to conduct scientific studies requested by medicines regulators and, at a later stage, requested by other stakeholders.

The vision of DARWIN EU® is to give EMA and <u>national competent authorities</u> in EU Member States access to valid and trustworthy real-world evidence, for example on diseases, patient populations, and the use, safety and effectiveness of medicines, including vaccines, throughout the lifecycle of a medicinal product.

By supporting decision-making on the development, authorisation and surveillance of medicines, a wide range of stakeholders will benefit, from patients and healthcare professionals to <u>health technology assessment</u> <u>bodies</u> and the pharmaceutical industry. Additionally, DARWIN EU[®] will provide an invaluable resource to prepare for and respond to future healthcare crises and pandemics.

Real-world healthcare data

Erasmus MC contracted to establish DARWIN EU® Coordination Centre for the European Medicines Agency

The Erasmus MC will work closely with the European Medicines Agency on the establishment of the Coordination Centre for the Data Analysis and Real World Interrogation Network (DARWIN EU®).

https://www.ohdsi.org/ohdsi-news-updates

n ohds



Phenotype Phebruary



Phenotype Phebruary Daily Updates

"Phenotype Phebruary" is a community-wide initiative to both develop and evaluate phenotypes for health outcomes that could be investigated by the community. Patrick Ryan introduced this initiative in both <u>a video</u> <u>presentation</u> and <u>a forum post</u>, and each of the conversations around the "28 phenotypes for 28 days" are being held within the OHDSI forums.

This page will provide direct links to each forum post, which is where conversations around each specific phenotype should be held.

Please be active in these discussions. What ways can you contribute?

1. Join the conversation

- Discussions will be here on forums.ohdsi.org
- · Each day will be a new thread
- Ex: Look for: "Phenotype Phebruary Day 1 Type 2 diabetes mellitus"
- · Explore the definitions and review the results provided
- · Reply with your thoughts, reflections, insights and question

2. Evaluate the cohort definitions in your data

- · Execute cohort definitions and CohortDiagnostics in your CDM
- · Share insights you learn from your data on the forums
- · Share results to compile across the network on data.ohdsi.org

3. Lead a discussion

Patrick will be leading the discussion for the first 7 days, but if others would like to similarly lead a phenotype development and evaluation
activity, contact ryan@ohdsi.org or chat with him in OHDSI MSTeams, tell me your desired phenotype target and calendar date you want to
commit to.

28 Days, 28 Phenotypes



Join The Conversations!

Daily Phenotype February Links

- Feb. 1 Type 2 Diabetes Mellitus
- Feb. 2 Type 1 Diabetes Mellitus
- Feb. 3 Atrial Fibrillation
- Feb. 4 · Multiple Myeloma
- Feb. 5 Alzheimer's Disease
- Feb. 6 · Hemorrhagic Events
- Feb. 7 · Neutropenia
- Feb. 8 Kidney Stones
- Feb. 9 Delirium
- Feb. 10 · Systemic Lupus Erythematosus
- Feb. 11 . Suicide Attempts
- Feb. 12 · Parkinson's Disease and Parkinsonism
- Feb. 13 · Attention Deficit Hyperactivity Disorder
- Feb. 14 · Hypertension
- Feb. 15 Acute Myocardial Infarction
- Feb. 16 ·
- Feb. 17 •
- Feb. 18 •
- Feb. 19 •
- Feb. 20 •
- Feb. 21 •
- Feb. 22 •
-
- Feb. 23 Feb. 24 •
- Feb. 25 •
- Feb. 26 •
- Feb. 27 •
- Feb. 28 •

https://www.ohdsi.org/phenotype-phebruary

n ohdsi



OHDSI Shoutouts!



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

Have a study published? Please send to sachson@ohdsi.org so we can share 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
Tuesday	1 pm	Common Data Model
Wednesday	9 am	FHIR and OMOP Data Model Harmonization Subgroup (Zoom)
Wednesday	9 am	Africa Chapter
Wednesday	10 am	FHIR and OMOP Digital Quality Measurements Subgroup (Zoom)
Wednesday	12 pm	Health Equity Journal Club
Thursday	8 am	Psychiatry
Thursday	12 pm	HADES
Thursday	12 pm	FHIR and OMOP Oncology Subgroup
Thursday	6 pm	FHIR and OMOP Terminologies Subgroup (Zoom)
Friday	10 am	Vaccine Vocabulary
Friday	10:30 am	Clinical Trials
Monday	10 am	GIS-Geographical Information System

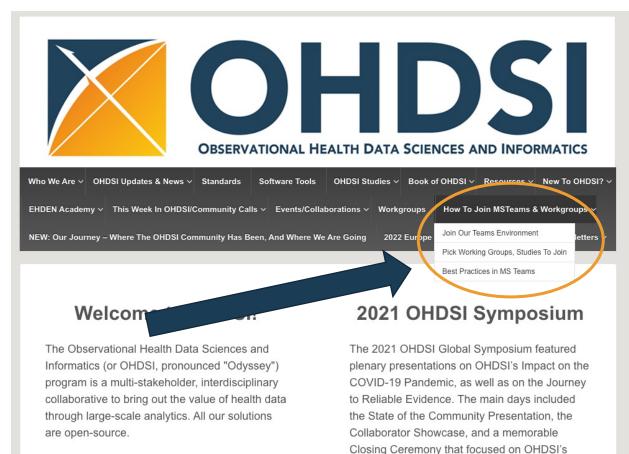
www.ohdsi.org/upcoming-working-group-calls



in ohdsi



Get Access To Different Teams/WGs/Chapters



5. Select the workgroups you want to join (you can refer to the WIKI for work group objectives www.ohdsi.org/web/wiki/doku.php?id=projects:overview) ATLAS Psychiatry Clinical Trials Registry (formerly UK Biobank) Common Data Model Surgery and Perioperative Medicine Data Quality Dashboard Development Vaccine Evidence Early-stage Researchers Vaccine Vocabulary Education Work Group FHIR and OMOP 6. Select the chapter(s) you want to join Geographic Information System (GIS) Africa HADES Health Analytics Data-to-Evidence Suite Australia Healthcare Systems Interest Group (formerly EHR) China Europe Health Equity Japan Latin America Korea Medical Devices Singapore Medical Imaging Taiwan Natural Language Processing OHDSI APAC 7. Select the studies you want to join OHDSI APAC Steering Committee HERA-Health Equity Research Assessment OHDSI Steering Committee PIONEER for Prostate Cancer (study-a-thon ended) Oncology SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses) Open-source Community Phenotype Development and Evaluation Population-Level Effect Estimation / Patient-Level Prediction

OHDSI has established an international network

of researchers and observational health

harrand at Calumbia I Inicamity

databases with a central coordinating center



work through the perspective of a patient.

There were also a pair of full-day activities.

including the first OLIDCI Depreducibility



Get Access To Different Teams/WGs/Chapters



Select the workgroups you want to join (you can refo www.ohdsi.org/web/wiki/doku.php?id=projects:over	
ATLAS	
Clinical Trials	Psychiatry
Common Data Model	Registry (formerly UK Biobank)
	Surgery and Perioperative Medicine
Data Quality Dashboard Development	☐ Vaccine Evidence
Early-stage Researchers	☐ Vaccine Vocabulary
Education Work Group	
FHIR and OMOP	6. Select the chapter(s) you want to join
Geographic Information System (GIS)	Africa
HADES Health Analytics Data-to-Evidence Suite	Australia
Healthcare Systems Interest Group (formerly EHR)	China
Health Equity	Europe
Latin America	Japan
Medical Devices	☐ Korea
Medical Imaging	Singapore
Natural Language Processing	Taiwan
OHDSI APAC	
	7. Select the studies you want to join
OHDSI APAC Steering Committee	HERA-Health Equity Research Assessment
OHDSI Steering Committee	☐ PIONEER for Prostate Cancer (study-a-thon ended)
Oncology	SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses)
Open-source Community	
Phenotype Development and Evaluation	
Population-Level Effect Estimation / Patient-Level Prediction	1





Next CBER Best Seminar

Speaker: Dr. Nicole Pratt

Professor, University of South Australia

Description: As recently approved COVID-19 vaccines are rolled out globally, safety signals will be identified from spontaneous reports and other data sources. Although some work has been done to assess the validity of methods for vaccine safety surveillance, discussion remains on the best way to perform analyses in real-world data to ensure rigorous and rapid identification of safety signals. In this talk, we will discuss the "Evaluating Use of Methods for Adverse Event Under Surveillance (for vaccines) (EUMEAUS)" task force and its findings on the comparative performance of different analytical methods for the assessment of comparative vaccine safety. We will discuss our findings to-date describing our evaluation of different surveillance methods (historic rate, cohort, self-controlled, etc).

Feb 23, 2022 11:00 AM in Eastern Time (US and Canada)

Speakers



Dr. Nicole Pratt

Deputy Director of the Quality Use of Medicines and Pharmacy Research Centre @University of South Australia

Dr. Nicole Pratt is the Deputy Director of the Quality Use of Medicines and Pharmacy Research Centre, University of South Australia. She is a member of the Drug Utilisation Subcommittee (DUSC) of the Australian Department of Health Pharmaceutical Benefits Advisory Committee (PBAC). She has a particular interest in new statistical methodologies to study the effectiveness and safety of medicine use and in the development of tools for post-marketing surveillance of medicines. Nicole leads the evaluation of the Department of Veterans Affairs, Veterans' Medicines Advice and Therapeutics Education Service (Veterans' MATES) program which uses administrative claims data to develop and evaluate interventions to improve use of medicines in the veteran population in Australia. She was a chief investigator of an NHMRC Cenre of Research Excellence in post-market surveillance of medicines and medical devices.

Wed., Feb. 23, 11 am ET



Scaling OHDSI open source community projects

♣ PRESENTER: Shilpa Ratwani

- 1. The OHDSI community's success lies in The CHUSI community's success lies in strong thought leadership for innovation, adoption, market acceptance and providing structured ways for community member to participate and contribute
 The inclusive membership model of the CHUSI community enables us to produce open source software, standards, model
- Extending OMOP
 CDM/Vocabulary/Analytics to support represents a large community effort that requires active leadership, management, technical and research contributions

- clear vision of the group mission and goals
- 2. The working group is divided into 4 subgroups with a specialized primary
- 3. Project manager track project's mission, goals, and objectives, setting concrete
- goals
 Documentation follows a structured approach and makes it available to the community
 Dissemination efforts of the group include
- tutorials, workshops, conference presentations, publications, proactive outreach to standard and research

described above, the WORKGROUP was able to implement:

- 2. ETL/Post-ETL guidelines and convention
- Adoption, education, and dissemination
 Run network studies

Scaling OHDSI open source community projects, lessons learned by Oncology WORKGROUP

- Integration of ICDO-3, NAACCR, CAP, HemOnc, NCIt

ETL and Post-ETL - Vocabulary driven ETL and Post ETL regimen extraction

Submissions to major oncology informatics

- Treatment pattern and outcomes of patients with
- Long-term Outcomes of Prostate Cancer Patients Undergoing Non-Interventional Management (i.e. Watchful Waiting) and the Impact of Comorbiditie and Life Expectancy

Product and project management positively affected productivity and efficiency of the Oncology Workgroup efforts demonstrating that even relatively simple changes in the operational



MONDAY

Scaling OHDSI open-source community projects, lessons learned by Oncology Workgroup

Authors: Shilpa Ratwani, Asieh Golozar, Michael Gurley, Andrew Williams, Robert Miller, Christian Reich, Dmitry Dymshyts, Michael Kallfelz, Rimma Belenkaya





CemConnector.

A RESTFul application programing interface and client library for the Common Evidence Model (CEM)

PRESENTER: Jamie Gilbert

INTRO:

- The common evidence model is an incredibly useful resource containing information from clinical trials, drug labels, literature and spontaneous reports (1,2).
- This is commonly used to assist in the selection of negative control outcomes/exposures, but combines available pharmacovigilance information in a single resource
- Currently, access is limited and too few people are taking advantage of this resource.
- CemConnector makes it easier to access this repository of information

METHODS

- 1. The code is written in R and is fully open source
- Uses pre-computed lookup across OMOP standard vocabulary to improve performance
- Queries concept sets can be made with RXNorm ingredients or SNOMED terms
- Data can be accessed from public API (after requesting a key) or via a database directly

RESULTS

- Negative control outcomes and exposure sets can be generated in a few seconds.
- Shiny application provides convenient interface to search controls
- · API allows easy integration into other tools
- Controls can now be programmatically selected in population level estimation studies directly



https://github.com/OHDSI/CemConnector

CemConnector is an R

Package and RESTful API

for utilizing the Common

Evidence Model for

selecting negative

controls, enriching studies

and exploring

relationships between

outcomes and exposures





CemConnector: A RESTFul application programing interface and client library for the Common Evidence Model (CEM)

Authors: James P. Gilbert, Erica A. Voss, Christopher A. Knoll, Patrick B. Ryan

n ohdsi





WEDNESDAY

Disease Progression Modeling Workbench 360

Authors: Parthasarathy Suryanarayanan, Prithwish Chakraborty, Piyush Madan, Nelson Bore, William Ogallo, Rachita Chandra, Mohamed Ghalwash, I. Buleje, Sekou Lionel Remy, Shreyans Sethi, Shilpa Mahatma, P. Meyerr, Jianying Hu





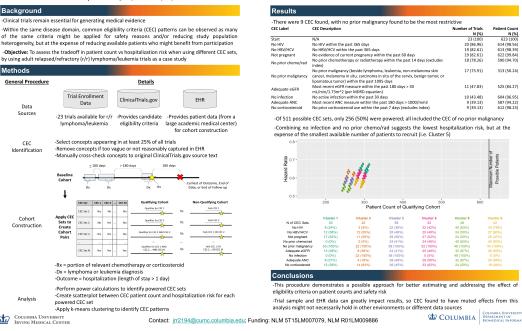




Evaluating Patient Count Vs Hospitalization Risk for Common Clinical Trial Eligibility Criteria: A Case Study for Relapsed/Refractory Lymphoma/Leukemia

James R. Rogers¹; Casey N. Ta¹; Cong Liu¹; Ali Soroush^{1,2}; Ying Kuen Cheung³; George Hripcsak^{1,4}; Chunhua Weng¹

¹Department of Biomedical Informatics, Columbia University, New York, NY, USA; ²Division of Gastroenterology, Department of Medicine, Columbia University Irving Medical Center, New York, NY, USA; ³Department of Biostatistics, Columbia University, New York, NY, USA; ⁴Medical Informatics Services, New York-Presbyterian Hospital, New York, NY, USA



THURSDAY

Evaluating Patient Count Vs Hospitalization Risk for Common Clinical Trial Eligibility Criteria: A Case Study for Relapsed/Refractory Lymphoma/Leukemia Authors: James Rogers, Casey N. Ta, Cong Liu, Ali Soroush, Ying Kuen Cheung, George Hripcsak, Chunhua Weng







OHDSI Symposium 2021

Representation of investigational drugs in the OMOP CDM

♣ PRESENTER: Michael Kallfelz

INTRO:

· To date, investigational drugs or treatments have to be created as local concepts making network studies virtually impossible. Also, the effort fo identifying these drugs in the ETL process can be substantial. We therefore propose the creation of an OMOP standardized vocabulary for investigational drugs.

- 1. Requirements were collected and it was ascertained that
- a) A general need for availability of investigational drugs on ingredien level exists
- b) In source data these drugs are often represented with their research code designations
- c) An integration with the regular RxNorm model is warranted. including building relationships to other vocabularies such as HemOn-
- 2. Several potential sources for identifying investigational drugs together with their various designations or synonyms were investigated and an approach defined.

RESULTS

A combination of potential source vocabularies are targeted to build a comprehensive vocabulary representing investigational drugs including their research designation as synonyms. This will support the ETL process and enable researchers to execute network studies based on unique OMOP concept IDs. We see a particular potential in the oncology area and for the reuse of previously collected clinical trial data.

Reduce effort in ETL and enable network studies by introducing a standardized vocabulary for investigational drugs.





- A representation of the exposure to investigational drugs in the OMOP CDM can become much easier by making use of a standardized vocabulary providing those. including their pre-market names
- The approach to build a dedicated vocabulary is as follows Identify items on ingredient level as investigational with a certain cut off date (e.g. 10 years back) Introduce alternative designations
- as synonyms · Test for existence of these ingredients in the RyNorm vocabulary and create respective relationships or new ingredients in



- Most interesting source vocabularies:
- InXight NClt drugs DrugBanl
- Representation of status and investigational > approved) will be subject of more analysis and design
- AUTHORS: Michael Kallfelz¹. Dmitry Dymshyts¹, Meera Patel2, Christian Reich3, Jeremy Warner⁴, Rimma Belenkaya5 1 Odvsseus Data Services, 2 Memorial Sloan Kettering Cancer Center 3 IOVIA 4 Vanderbilt University







FRIDAY

Representation of investigational drugs in the OMOP CDM Authors: Michael Kallfelz, Dmitry Dymshyts, Meera Patel, Christian Reich, Jeremy Warner, Rimma Belenkaya

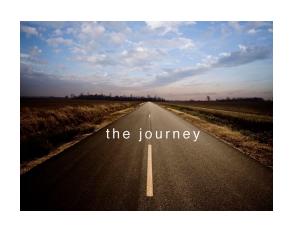






Where Are We Going?

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







Welcome To OHDSI Newcomers

Are there any new people to the OHDSI community call who would like to introduce themselves?

Please raise your hand and share why you are interested in joining the OHDSI community.





Three Stages of The Journey

Where Have We Been? Where Are We Now? Where Are We Going?







February 15 OHDSI Community Call



Common Data Model Workgroup Update
Clair Blacketer



Data Quality Dashboard Workgroup Update
Clair Blacketer



Phenotype Phebruary Update #2
Patrick Ryan