CDM Workshop, Part 2

OHDSI Community Call
March 15, 2022 • 11 am ET
# Future OHDSI Community Calls

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<tr>
<th>Date</th>
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<tr>
<td>March 22</td>
<td>OHDSI Vocabulary Journey</td>
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March 22: The OHDSI Vocabulary Journey

Patrick Ryan  
Vice President, Observational Health Data Analytics • Janssen Research & Development  
Adjunct Assistant Professor • Columbia University

Christian Reich  
Vice President, RWE Systems • IQVIA

Michael Kallfelz  
Physician Executive • Odysseus Data Services
Three Stages of The Journey

Where Have We Been?
Where Are We Now?
Where Are We Going?
OHDSI Shoutouts!

Congratulations to the team of Matthew Spotnitz, Anna Ostropolets, Victor G. Castanob, Karthik Natarajan, Genna Waldman, Michael Argenziano, Ruth Ottman, George Hripcsak, Hyunmi Choi, and Brett Youngerman on the publication of “Patient characteristics and antiseizure medication pathways in newly diagnosed epilepsy: Feasibility and pilot results using the common data model in a single-center electronic medical record database” recently in Epilepsy & Behavior.

Patient characteristics and antiseizure medication pathways in newly diagnosed epilepsy: Feasibility and pilot results using the common data model in a single-center electronic medical record database

Matthew Spotnitz, Anna Ostropolets, Victor G. Castanob, Karthik Natarajan, Genna J. Waldman, Michael Argenziano, Ruth Ottman, George Hripcsak, Hyunmi Choi, Brett E. Youngerman

Epilepsy & Behavior

Abstract

Introduction: Efforts to characterize variability in epilepsy treatment pathways are limited by the large number of possible antiseizure medication (AEM) regimens and sequences, heterogeneity of patients, and challenges of measuring confounding variables and outcomes across institutions. The Observational Health Data Science and Informatics (OHDSI) collaboration is an international data network comprising over 1 billion patient records using common data standards. However, few studies have applied OHDSI’s Common Data Model (CDM) to the association with epilepsy of cluster-based validated concepts. The goals of this study were to demonstrate the feasibility of characterizing adult patients with epilepsy and AEM treatment pathways using the CDM in an electronic medical record (EMR)-derived database.

Methods: We calculated a phenotype algorithm for epilepsy in adults using the CDM as an EMR-derived database (2011-2020), against prior records and a prospectively maintained database of patients with confirmed epilepsy. We obtained the frequency of all antineurological conditions and procedures for patients meeting the epilepsy phenotype criteria and characterized AEM exposure sequence over time and by age and sex.

Results: The phenotype algorithm identified epilepsy with 72.0-80.0% positive predictive value and 66.3% sensitivity. Many patients had neurocognitive conditions and diagnosed meningitis in meeting epilepsy criteria. Anticonvulsants incrementally replaced phenytoin as the most common first-line agent, but significant heterogeneous agents, particularly in second-line and subsequent agents. Drug sequences included up to 8 unique agents and a total of 1,222 unique pathways were observed. Consistency: Drug availability of additional AEMs in the model 2 decades and accumulated guidelines and evidence, AEM exposure significantly varied in practice, particularly in second-line and subsequent agents. Multi-center OHDSI studies have the potential to better characterize the full extent of variability and support observational comparative effectiveness research, but additional work is needed to validate concepts and outcomes.
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

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<th>Date</th>
<th>Time (ET)</th>
<th>Meeting</th>
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<tr>
<td>Tuesday</td>
<td>1 pm</td>
<td>Common Data Model</td>
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<tr>
<td>Wednesday</td>
<td>9 am</td>
<td>Africa Chapter</td>
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<tr>
<td>Wednesday</td>
<td>9 am</td>
<td>FHIR and OMOP Data Model Harmonization Subgroup (ZOOM)</td>
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<tr>
<td>Wednesday</td>
<td>10 am</td>
<td>FHIR and OMOP Digital Quality Measurements Subgroup (ZOOM)</td>
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<tr>
<td>Wednesday</td>
<td>12 pm</td>
<td>Health Equity Journal Club</td>
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<tr>
<td>Thursday</td>
<td>12 pm</td>
<td>HADES</td>
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<tr>
<td>Thursday</td>
<td>12 pm</td>
<td>FHIR and OMOP Oncology Subgroup</td>
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<tr>
<td>Thursday</td>
<td>6 pm</td>
<td>FHIR and OMOP Digital Quality Measurements Subgroup (ZOOM)</td>
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<tr>
<td>Friday</td>
<td>10:30 am</td>
<td>Clinical Trials</td>
</tr>
<tr>
<td>Tuesday</td>
<td>9 am</td>
<td>OMOP CDM Oncology – Genomic Subgroup</td>
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</tbody>
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[www.ohdsi.org/upcoming-working-group-calls]
Get Access To Different Teams/WGs/Chapters

Welcome to OHDSI

The Observational Health Data Sciences and Informatics (or OHDSI, pronounced “Odyssey”) program is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data through large-scale analytics. All our solutions are open-source.

OHDSI has established an international network of researchers and observational health databases with a central coordinating center, located at Columbia University, in New York City.

There were also a pair of full-day activities, one of which was the 2021 OHDSI Symposium.

2021 OHDSI Symposium

The 2021 OHDSI Global Symposium featured plenary presentations on OHDSI’s impact on the COVID-19 Pandemic, as well as on the journey to Reliable Evidence. The main days included the State of the Community Presentation, the Collaborator Showcase, and a memorable Closing Ceremony that focused on OHDSI’s work through the perspective of a patient.

5. Select the workgroups you want to join (you can refer to the wiki for group objectives) www.ohdsi.org/web/wiki/doku.php?id=projects:overview

- ATLAS
- Clinical Trials
- Common Data Model
- Data Quality Dashboard Development
- Early-stage Researchers
- Education Work Group
- FHIR and OMOP
- Geographic Information System (GIS)
- HADES Health Analytics Data-to-Evidence Suite
- Healthcare Systems Interest Group (formerly EHR)
- Health Equity
- Latin America
- Medical Devices
- Medical Imaging
- Natural Language Processing
- OHDSI APAC
- OHDSI APAC Steering Committee
- OHDSI Steering Committee
- Oncology
- Open-source Community
- Phenotype Development and Evaluation
- Population-Level Effect Estimation / Patient-Level Prediction

6. Select the chapter(s) you want to join

- Africa
- Australia
- China
- Europe
- Japan
- Korea
- Singapore
- Taiwan

7. Select the studies you want to join

- HSMA-Health Equity Research Assessment
- PIONEr for Prostate Cancer (study-a-than-ended)
- SCYLLA (SARS-CoV-2 Large-scale, Longitudinal Analysis)
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

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   - Africa
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   - Taiwan

7. Select the studies you want to join
   - HEMR-Health Equity Research Assessment
   - PIONEER for Prostate Cancer (study-a-than-ended)
   - SCYLLA (SARS-CoV-2 Large-scale, Longitudinal Analysis)

* Required

1. First and Last Name *
   Enter your answer
The 2022 OHDSI U.S. Symposium will be held Oct. 14-16 at the Bethesda North Marriott Hotel & Conference Center in Bethesda, Md. The main symposium day is scheduled to be Friday the 14th, while activities will be held the next two days.
The Open-Source Community is hosting the first Dev Con as a way of accepting and mentoring new contributors to our environment. We are planning multiple workshops, talks and a panel discussion to both welcome and engage both current and future developers within OHDSI.

Don’t miss this opportunity! Use the link at the bottom to register!

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<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tr>
<td>8 am</td>
<td>Open-Source Workshops</td>
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<tr>
<td>10 am</td>
<td>State of the OHDSI Community (Paul Nagy, Adam Black)</td>
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<tr>
<td>10:20 am</td>
<td>Keynote – Grand Vision for OHDSI Software Ecosystem (Martijn Schuemie)</td>
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<tr>
<td>11 am</td>
<td>Industry Panel Discussion (How Do/Should We Connect It All Together?)</td>
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Are You Interested In ...

- participating with an OHDSI project team?
- seeing ‘under the hood’ of the OHDSI engine?
- being mentored by professional developers?

Use This Link To Register Today!

bit.ly/OHDSIDev22
Phenotype Phebruary “Phun Phacts”

Phenotype Phebruary Day 10 - Systemic Lupus Erythematosus

Phenotype Phebruary Day 25 - Depression

Phenotype Phebruary Day 14 - Hypertension (emphasis on clinical description)

Phenotype Phebruary Day 24 - Anaphylaxis
EHDEN Hosts 4\textsuperscript{th} (and final) Open SME Call

**APPLY NOW**

Fourth open call for SMEs wanting to be trained and certified in mapping health data to the OMOP common data model.

- Free training via the EHDEN Academy
- Virtual certification meeting
- Grow your business working with real world health data

**March 15\textsuperscript{th} - April 13\textsuperscript{th}**

Ehden.eu
Next CBER Best Seminar

Topic
CBER BEST Seminar Series - Addressing Selection and Confounding Bias in Test-Negative Study Designs for Flu and COVID-19 Monitoring

Description: The test-negative design (TND) has become a standard approach to evaluate vaccine effectiveness against the risk of acquiring infectious diseases such as Influenza, Rotavirus, Dengue fever and more recently COVID-19 in real world settings. Despite the TND’s potential to reduce unobserved differences in healthcare seeking behavior (HSB) between vaccinated and unvaccinated subjects, substantial variability in unobserved HSB may remain among study participants. As latent HSB is likely also a strong predictor of selection into the TND sample, confounding bias of the vaccine’s causal effect by latent HSB may be induced by collider stratification bias resulting from the TND.

Speakers

Dr. Eric Tchetgen Tchetgen
Luddy Family President's Distinguished Professor @ Wharton School of the University of Pennsylvania

Eric J. Tchetgen Tchetgen is the Luddy Family President’s Distinguished Professor at the Wharton School of the University of Pennsylvania. Professor Tchetgen Tchetgen comes to the University of Pennsylvania from Harvard University where he has served since 2008 as Professor of Biostatistics and Epidemiologic Methods with joint appointments in the departments of Biostatistics and Epidemiology at the T.H. Chan School of Public Health. He researches infectious diseases, including HIV/AIDS, and the role of genetic and social factors in the patterns, causes, and effects of public health. Professor Tchetgen Tchetgen has received grants from the National Institutes of Health and the Centers for Disease Control. He completed his Ph.D. in Biostatistics at Harvard University in 2006 under the supervision of Professor James M. Robins. He received his B.S. in Electrical Engineering from Yale University in 1999.

Wed., April 27, 11 am ET
Opening at Oxford

Job Details

IT System Manager and Database Administrator

Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Botnar Research Centre, Windmill Road, Oxford

We are seeking to appoint a highly qualified and dedicated IT System Manager and Database Administrator to join the research groups led by Professor Daniel Prieto-Alhambra at the Botnar Research Centre, Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS), Oxford. The Big Health Data Research group and the Pharmaco- and Device Epidemiology Research group are involved in a number of national and international studies. The former studies prevalent and rare conditions while the latter investigates the use and the risk-benefit of a number of licensed drugs, devices, and vaccines for the prevention and treatment of human disease in ‘real world’ conditions.

As an IT System Manager and Database Administrator, reporting to an experienced computer scientist you will identify and lead highly technical IT projects from conception to completion defining the standards and making decisions that improve quality and efficiency of data harmonisation, curation, and processing within the Department. You will have responsibility for strategic planning, design, implementation, optimisation and oversight of the Group’s IT infrastructure, server facilities and IT support services to meet evolving research requirements. You will contribute to data analyses and Group’s publications, establish and maintain effective communication and collaborative working relationships within the Group and wider research and IT community.

You will have a degree in electronic engineering, computer science, health informatics, software engineering or an equivalent combination of training and relevant work experience in a computing environment. Experience in server setup and server administration, including virtualisation (e.g. Hyper-V), encryption, authentication (e.g. Active Directory), firewalls and backups technologies as well as experience as relational DBMS administrator (e.g. PostgreSQL, MySQL) combined with excellent skills in at least one high level programming language (e.g. C#, C++, Python) are essential. Working experience in a Microsoft server/client environment and experience in database programming and/or performance optimisation in PostgreSQL are desirable.

This is a full-time fixed-term appointment for 2 years.
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?
March 15: CDM Workshop, Part 2

Clair Blacketer
Associate Director
Janssen Research & Development

Anthony Molinaro
Manager, Epidemiology Analytics
Janssen Research & Development

Melanie Philofsky
Senior Business Analyst
and Project Manager
Odysseus Data Services, Inc.

Frank DeFalco
Director, Observational Health Data Analytics
Janssen Research & Development