Building Organizational Support Within Your Community

OHDSI Community Call
Aug. 2, 2022 • 11 am ET
### Upcoming OHDSI Community Calls

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<tr>
<th>Date</th>
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<tr>
<td>Aug. 9</td>
<td>Around The Asia-Pacific (APAC) Community</td>
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<tr>
<td>Aug. 16</td>
<td>OHDSI “Speed Dating”</td>
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<td>Workgroup Updates</td>
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<td>Aug. 30</td>
<td>EHDEN Academy/EHDEN Portal</td>
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<td>Sept. 6</td>
<td>OHDSI Studies</td>
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<td>Sept. 13</td>
<td>Registries And Their Adoption To OMOP</td>
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<td>Sept. 20</td>
<td>OHDSI2022 Preview</td>
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<td>Sept. 27</td>
<td>HTA Challenge</td>
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## Upcoming OHDSI Community Calls

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Aug. 9: Asia-Pacific (APAC) Regional Updates

Jason Hsu
Taiwan Chapter

Nicole Pratt
Australia Chapter

Seng Chan You
Korea Chapter

Mengling Feng
Singapore Chapter

Tatsuo Hiramatsu
Japan Chapter

Lei Liu
China Chapter
Three Stages of The Journey

Where Have We Been?
Where Are We Now?
Where Are We Going?
Congratulations to the team of Karoline Bräuner, Andreas W. Rosen, Adamantia Tsouchnika, Julie S. Walbech, Mikail Gögenur, Viviane A. Lin, Johan Clausen, and Ismail Gögenur on the publication of Developing prediction models for short-term mortality after surgery for colorectal cancer using a Danish national quality assurance database in the International Journal of Colorectal Disease.
OHDSI Shoutouts!

Congratulations to the team of Carina Nina Vorisek, Moritz Lehne, Sophie Anne Ines Klopfenstein, Paula Josephine Mayer, Alexander Bartschke, Thomas Haese, and Sylvia Thun on the publication of Fast Healthcare Interoperability Resources (FHIR) for Interoperability in Health Research: Systematic Review in JMIR Medical Informatics.
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?
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<tr>
<th>Date</th>
<th>Time (ET)</th>
<th>Meeting</th>
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<tr>
<td>Wednesday</td>
<td>2 am</td>
<td>Patient-Level Prediction/Population-Level Estimation</td>
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<td>Wednesday</td>
<td>9 am</td>
<td>Psychiatry</td>
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<td>Wednesday</td>
<td>10 am</td>
<td>FHIR and OMOP Digital Quality Measurements Subgroup (ZOOM)</td>
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<td>Wednesday</td>
<td>12 pm</td>
<td>Health Equity</td>
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<td>Wednesday</td>
<td>4 pm</td>
<td>FHIR and OMOP Data Model Harmonizations Subgroup (ZOOM)</td>
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<td>Thursday</td>
<td>10 am</td>
<td>Medical Devices</td>
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<td>Thursday</td>
<td>12 pm</td>
<td>Patient-Level Prediction/Population-Level Estimation</td>
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<td>Thursday</td>
<td>12 pm</td>
<td>FHIR and OMOP Oncology Subgroup</td>
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<td>Thursday</td>
<td>6 pm</td>
<td>FHIR and OMOP Terminologies Subgroup (ZOOM)</td>
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<tr>
<td>Friday</td>
<td>9 am</td>
<td>GIS-Geographic Information System Development</td>
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<td>Friday</td>
<td>10:30 am</td>
<td>Clinical Trials</td>
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<tr>
<td>Monday</td>
<td>11 am</td>
<td>Early-Stage Researchers Speaker Series</td>
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www.ohdsi.org/upcoming-working-group-calls
Early-Stage Researcher Speaker Series

The first edition of the Early-Stage Researcher Career Speaker Series will take place Monday, Aug. 8 (11 am ET), with Asieh Golozar set to discuss her career in life science research and medicine, and how her OHDSI journey has impacted her career.

bit.ly/OHDSILEaders
Latest OHDSI Newsletter Is Available

The Journey Newsletter (August 2022)

The OHDSI 2022 Global Symposium in Bethesda, Md., is getting closer, and there are new details on the event. A new CDM Update Process was unveiled this month to help you figure out what to do when your data does not fit into the OMOP CDM. All that and numerous community updates are shared in our latest newsletter. #JoinTheJourney

New CDM Process Includes Decision Tree, Clarifies How New Requests Are Made, Codified

The July 26 community call featured a session led by Clair Blacketer, Paul Nagy and Doerena Gabriel on what to do when your data does not fit into the OMOP CDM.

Our community continues to expand globally, and both individuals and organizations often look for new enhancements to the CDM. There will be a new decision tree and process implemented to try and streamline this procedure and to clarify how data model requests are made and codified, and these were presented and discussed during this meeting.

The presentation can be seen below, and it includes specific use cases presented by both Nagy and Gabriel to help show how the decision tree and process happens.

August Video Podcast

Where Have We Been?

- Clair Blacketer and the CDM Workgroup team recently led a presentation about a new CDM Update Process, which includes a new decision tree and process that is implemented to both streamline the procedure and clarify how data model requests are made and codified. You can watch that presentation now.
- The Scientific Review Committee met recently to discuss a record-setting amount of submissions to the OHDSI2022 Collaborator Showcase. If you sent in a brief report, you should hear soon whether your submission has been accepted.

Where Are We Now?

- Numerous peer-reviewed studies that include OHDSI tools and/or practices were published in July and shared later in this newsletter. The new OHDSI publication dashboard tracks community publications, citations, new authors and more, and is available on the front page of OHDSI.org.
- Nominations are OPEN for the 2022 OHDSI Awards, which recognize those who have gone above and beyond to foster community engagement, lead research and development efforts, and make significant contributions towards OHDSI’s mission. If there are members or institutions who have made significant contributions that you would like to recognize, please nominate them before the Sept. 2 deadline!
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.

2022 OHDSI Symposium

The 2022 OHDSI Symposium will be held October 14-16 at the Bet Cy Vinson Conference Center.

We will hold the 2021 review Friday, Oct. 14, which will include a full-day case.

On Saturday, Oct. 15, we will hold a full-day...
The most recent OHDSI APAC community call provided updates on two of the four focus studies in 2022: **Comparison of mortality, morbidities & healthcare resources utilization between patients with and without a diagnosis of COVID-19**, and **Real world safety of treatments for multiple sclerosis**.

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<th>Date</th>
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<tr>
<td>July 14</td>
<td>APAC Study Quarterly Updates, Part 1</td>
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<td>July 28</td>
<td>APAC Study Quarterly Updates, Part 2</td>
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<td>Aug. 11</td>
<td>Working Group Updates #3</td>
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<td>Aug. 25</td>
<td>Working Group Updates #4</td>
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<td>Sept. 8</td>
<td>EU Chapter Sharing Session, Part 1</td>
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<tr>
<td>Sept. 22</td>
<td>EU Chapter Sharing Session, Part 2</td>
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Titan Awards Nominations Are Open

Nominations for the 2022 Titan Awards are now OPEN! Please use the form below to nominate an individual or institution for a top contribution to the OHDSI community this past year!

2022 Nomination Form

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 U.S./Global Symposium each year since. Annually, community members are invited to nominate individuals or institutions they feel have made significant contributions towards advancing OHDSI’s mission, vision and values. Once nominations are submitted, the OHDSI Titan Award Committee will select the award winners. Award winners will be announced before the networking reception at the annual symposium. The award categories, as well as all previous recipients, can be found below.

Titan Award for Data Standards – to recognize extraordinary contributions by an individual, organization, or team in development or evaluation in community data standards, including OMOP common data model and standardized vocabularies
  • 2021 – Maxim Moinat, The Hyve-Einstein University Medical Center
  • 2020 – Clare Blacketer, Janissem Research and Development
  • 2019 – Oncology Workgroup (Michael Gurley, Northwestern Univ.; Rimma Belenkoaya, Memorial Sloan Kettering Cancer Center; Robert Miller, Tufts CTSI)
  • 2018 – Vocabularity Team (Christian Reich, IQVIA; Anna Ostropolski, Columbia Univ.; Dmitry Dymshyts, Odyssey Data Services)

Titans for 2021:
- Maxine Moinat
- Anna Ostropolski
- Dmitry Dymshyts
- Christian Reich
- Robert Miller
- Rimma Belenkoaya
- Michael Gurley
- Erica Vera
- Erica Vera
- Erica Vera

ohdsi.org/titan-awards
Job Openings

Professor **Dani Prieto-Alhambra** and his team at the University of Oxford will be hiring two Research Assistants in Health Data Sciences.

The application deadline is August 8, 2022.

The link and more information will be available on the community calls page.
Job Openings

Peter Rijnbeek and his team at Erasmus University is hiring a Secretary for the Darwin EU Coordination Center and Department of Medical Informatics.

This position will be responsible for the day-to-day administrative tasks as the personal assistant for Peter Rijnbeek, and will also work as senior secretary for the Department of Medical Informatics.

The application deadline is Aug. 14.
Assistant professor Brianne Oliveri-Mui announced an opening for a Postdoctoral Fellow to work at the Roux Institute at Northeastern University.

If you are interested, please reach out to Dr. Mui at b.mui@northeastern.edu.

The link and more information will be available on the community calls page.
Registration is OPEN for #OHDSI2022!

The 2022 OHDSI Symposium will be held Oct. 14-16 at the Bethesda North Marriott Hotel & Conference Center.

www.ohdsi.org/ohdsi2022symposium
The OHDSI Journey: Where Are We Going?
Patrick Ryan

OMOP Common Data Model and Vocabulary
Clair Blacketer

ETL – A Source Database Into OMOP CDM
Melanie Philofsky

Creating Cohort Definitions
Asieh Golozar

Phenotype Evaluations
Gowtham Rao

Characterization
Kristin Kostka

Estimation
Martijn Schuemie

Prediction
Jenna Reps

The OHDSI Journey: Where Do We Go From Here?
George Hripcsak
# Workgroup Activities

**Saturday, Oct. 15, and Sunday, Oct. 16**

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<td>FHIR-OMOP: Increasing the Value of Data Through a Rich Set of Attributes</td>
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<td>CDM and Data Quality</td>
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2022 OHDSI Symposium
Oct. 14-16 • Bethesda North Marriott Hotel & Conference Center

We are thrilled to announce that registration for the 2022 OHDSI Symposium, which will be held Oct. 14-16 at the Bethesda North Marriott Hotel & Conference Center, is now open!

It is so exciting to bring our community back together this fall. Our collaborative showcase will return; please click the link to see how you can take part in our poster presentations, software demos and lightning talks. The full agenda for our conference is still being developed, so please continue to check the OHDSI website (www.ohdsi.org) and our social platforms for updates as we plan for the 2022 Symposium.

The main conference will be held Friday, Oct. 14. A full-day tutorial will be held Saturday, Oct. 15, while other community activities will be held both Oct. 15 and Oct. 16.

Symposium Registration Details
Friday, Oct. 14 – Main Conference

Registration Fee: $900*

* This is an open and inclusive event; if the registration fee represents a burden to you, please contact symposium@ohdsi.org.

Should you need to make changes or cancel your registration ticket, please follow the instructions you will receive on your Eventbrite confirmation upon registration completion. Please note that tickets can be refunded up to 7 days prior to the event; Eventbrite fees are not refundable.

Register For The Main Conference - Friday, Oct. 14

Saturday, Oct. 15 – Full-Day Tutorial: An Introductory Journey From Data To Evidence

Registration Fee: $200

* This is an open and inclusive event; if the registration fee represents a burden to you, please contact symposium@ohdsi.org.

Should you need to make changes or cancel your registration ticket, please follow the instructions you will receive on your Eventbrite confirmation upon registration completion. Please note that tickets can be refunded up to 7 days prior to the event; Eventbrite fees are not refundable.

Register For The Full-Day Tutorial - Saturday, Oct. 15

What Will Be Taught At This Tutorial?

Saturday, Oct. 15 and Sunday, Oct. 16 – Community Activities

A highlight of the OHDSI Symposium will be a full weekend of workshop activities and meetings within the Bethesda North Marriott Hotel & Conference Center. You are now able to register for any workshop sessions as long as there is no overlap between any two sessions; registration is free, but please do so early, as this will be first-come, first-served due to room capacity.

See The Schedule & Agenda For Workgroup Activities - Weekend of Oct. 15-16

Register For Workgroup Activities - Weekend of Oct. 15-16

Hotel Information and Sleeping Room Block

Hotel: Bethesda North Marriott Hotel & Conference Center
Address: 7971 Marriott Road, Rockville, Maryland, 20852
Hotel Main Number: (301) 832-8200
Reservations Toll Free: (877) 212-7672
Reservations Local Phone: (301) 822-8200

This year, OHDSI is holding a sleeping room block for the nights of Oct. 13 and 14 with a special room rate of $179 plus taxes. Please note that all sleeping rooms are on a first-come, first-served basis. To help us in the planning process, we ask that you do not cancel your hotel room reserved through the OHDSI Room Block. If you must cancel, please let us know prior to Thursday, Sept. 1, so that we can offer the room to others who may need one. Once the room block is full, or if specific nights are sold out, you may make additional room reservations on the hotel’s website or by calling the hotel phone number above. Please note that OHDSI is not holding any sleeping rooms on Saturday, Oct. 15. Therefore, please call the hotel phone number or make this reservation online should you plan to stay Saturday night.

ohdsi.org/ohdsi2022symposium
Comparing Data Quality Dashboard results from two ETL iterations: two new visualizations and one utility script

**Lead:** Anne van Winzum

**Background**
The Data Quality Dashboard (DQD) has been widely used to evaluate the quality of an OMOP-CDM data set resulting from an ETL process. In practice, during the conversion to the OMOP CDM we perform several ETL iterations. However, interpreting the differences in quality is not always straightforward.

We developed three new utilities as part of mapping of the UK Biobank (UKB) data under the European Health Data Evidence Network (EDEN) COVID19 rapid data partners call, and in collaboration with University College London.

**Methods**

**Thresholds editing**
As part of the ETL iterations, we needed to change the fail-thresholds of individual checks. We created a separate table to list the changed thresholds in a user-friendly way. Our utility script takes this new table to produce a customized thresholds that is accepted by the default DQD scripts.

**Comparison of DQD results**
This visualization script selects the checks for which the percentage of records that satisfy said check has experienced a significant change over iterations. In other words, the percentage of records satisfying the checks had modestly improved (Fig 1). In an example, there is an outlier that left cohort that prompted us to investigate and update the ETL accordingly.

**Visualising and comparing DQD results**
Visualising and comparing DQD results is an important step to interpret the data quality and to find actionable data quality issues.

**On the other hand**, we improved the standard record completeness. In the observation table the completeness is above 80%. Both visualizations are produced directly from DQD output.

**Coverage per domain**
An important part of the conversion quality is the concept mapping coverage. It is hard to get this overview from the DQD result tables alone. The new bar plot shows the concept mapping coverage across all OMOP domains. This ETL iteration achieved a high coverage throughout all domains and units (Fig 2) in terms of records mapped to standard concepts. The number of unique terms mapped was low for assessment and observation units (1.43%) and for measurement (1.6%).

**MONDAY**
Comparing Data Quality Dashboard results from consecutive ETL iterations: two new visualizations and one utility script

**Lead:** Anne van Winzum

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**#OHDSISocialShowcase This Week**

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### Figure 1: Bar plot that represents the change in the complete percentage of raw fields between the iterations. The percentage of raw fields is ranked in the x-axis for the earlier run, and in the y-axis for the latter run.

### Figure 2: Bar plot for the mapping overview in an ETL. In this bar, the percentage of records in each domain that have at least one domain concept mapped in the process of records mapped is ranked in standard (OMOP) concepts.
OHDSI-On-A-Pi: Containerization of OHDSI Software Tools for Use on a Raspberry Pi

Lead: Jared Houghtaling

TUESDAY
Integration prospects of the Ukrainian healthcare system with OMOP CDM

Lead: Mariia Kolesnyk

WEDNESDAY
#OHDSISocialShowcase This Week

**Title:** Patient treatment trajectory modeling with Markov chains  
**Lead:** Markus Haug

**METHODS**
1. CohortTrajectory  
2. Importing relevant target and state trajectories  
3. Reading cohort overlap/collocation  
4. Creating trajectories in custom settings  
5. Output: CTD with trajectories  

**TrajectoryMarkovAnalysis**
1. Importing treatment trajectories  
2. Using the then iencediscrete or continuous time Markov chain models  
3. Generating data from specific  
4. Transition models for state transition analysis  
5. Out: Markov model with: cost estimates, synthetic medical costs  

**RESULTS**
- To showcase the functionalities of the 9 packages we reproduce the study of heart failure patients carried out in the UK (Pelecky et al., 2009) on data supplied by the Esriest Health Managed Fund  
- The package can be implemented in large-scale studies with regard to patient trajectory trajectories.

**CASE STUDY**
- Study by Pelecky et al. for comparing traditional care with additional telemonitoring in heart failure patients  
- Output: Markov models for heart failure progression and death  

**OHDSI**
- Share the results of the heart failure project  
- www.ohdsi.org  
- JoinTheJourney ohdsi

**THURSDAY**

### Constructing patient treatment trajectories and producing Markov chain models for cost analysis.

- **Cohort2Trajectory**
- **TrajectoryMarkovAnalysis**
- **Scan QR for link to github repository.**
# Assessing treatment effect heterogeneity using the RiskStratifiedEstimation R-package

**Lead:** Alexandros Rekkas

**INTRODUCTION**
In the presence of a truly effective treatment, randomised controlled trials should ensure that benefits are extended across the entire population, as baseline risk is broad and varies across the study population.

**METHODS**
- We present existing ACT guidelines to the observational setting.
- We created an open-source software package for the application of our framework.
  - **Hypertension:** We identified ACE/ARB blockers with regard to 5 main outcomes (acute myocardial infarction, HF hospitalisation with heart failure, and stroke) and 5 white outcomes (diabetes, weight gain, angina, cough, hyperkalemia, hyperkalemia, and hypertension) in IBM MarketScan Commercial Claims and Encounters (EC), IBM MarketScan Medicare (MSC), and IBM MarketScan Medicare Supplemental Beneficiaries (MSC).
  - **Osteoporosis:** We compared the effect of non-pharmacological interventions on osteoporosis among patients over the age of 65, diagnosed with osteoporosis in CACR Onco-Identified Electronic Health Record Dataset (EHR) and CACR Onco-Identified Clinical Oncology Mortal Database (COC) using EHR.

**RESULTS**
- **Hypertension:** With increasing systolic BP risk, we observed increasing absolute benefits in terms of acute MI and hospitalisation with heart failure with ACE inhibitors.
- We also observed large cough risk increase with ACE inhibitors across all systolic BP risk strata.
  - **Osteoporosis:** Strong evidence of residual confounding limits our ability to draw conclusions.

**Large-scale evaluation of treatment effect heterogeneity is feasible**

**Assessing treatment effect heterogeneity using the RiskStratifiedEstimation R-package**

**Lead:** Alexandros Rekkas
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. 2 Community Call: Building Organizational Support Within Your Community

Greg Klebanov
CTO/SVP • Odysseus Data Services, Inc.

Ajit Londhe
Senior Manager, Center for Observational Research • AMGEN

Keran Moll
Director, HEOR Real World Data & Analytics Research • Regeneron

Paul Nagy
Program Director for Graduate Training in Biomedical Informatics and Data Science • Johns Hopkins University