OHDSI Network Studies

OHDSI Community Call
Nov. 16, 2021 • 11 am ET
## Remaining 2021 OHDSI Community Calls

<table>
<thead>
<tr>
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<th>Topic</th>
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<tr>
<td>Nov. 16</td>
<td>Open Network Studies</td>
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<tr>
<td>Nov. 23</td>
<td>History of OHDSI</td>
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<tr>
<td>Nov. 30</td>
<td>Collaborator Showcase Presentations</td>
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<td>Dec. 7</td>
<td>How Did We Do This Year? Final OKR Review</td>
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November 23: The History of OHDSI

Marc Overhage
Chief Medical Informatics Officer, Anthem, Inc.

Judy Racoosin
FDA Deputy Director of Anesthesia, Analgesia and Addiction Products

Paul Stang
Vice-President: Global Epidemiology, Johnson & Johnson
Three Stages of The Journey

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

Congratulations to Yongseok Mun Seng Chan You, Da Yun Lee, Seok Kim, Yoo-Ri Chung, Kihwang Lee, Ji Hun Song, Young Gun Park, Young Hoon Park, Young-Jung Roh, Se Joon Woo, Kyu Hyung Park, Rae Woong Park, Sooyoung Yoo, Dong Jin Chang, Sang Jun Park for the publication of “Real-world incidence of endophthalmitis after intravitreal anti-VEGF injection: Common Data Model in ophthalmology” in Epidemiology and Health.
Both Jamie Weaver and Kristin Kostka were quoted in a Sunday USA Today feature that highlighted the OHDSI community titled “Electronic medical records have been around decades. Their power to help other patients is starting to be unleashed.”
Three Stages of The Journey

Where Have We Been?
Where Are We Now?
Where Are We Going?
# Upcoming Workgroup Calls

<table>
<thead>
<tr>
<th>Date</th>
<th>Time (ET)</th>
<th>Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>2 pm</td>
<td>Health Equity</td>
</tr>
<tr>
<td>Wednesday</td>
<td>10 am</td>
<td>OMOP CDM Oncology – Development Subgroup</td>
</tr>
<tr>
<td>Wednesday</td>
<td>1 pm</td>
<td>Data Quality Dashboard Development</td>
</tr>
<tr>
<td>Wednesday</td>
<td>7 pm</td>
<td>Medical Imaging</td>
</tr>
<tr>
<td>Thursday</td>
<td>12 pm</td>
<td>HADES</td>
</tr>
<tr>
<td>Thursday</td>
<td>1 pm</td>
<td>OMOP CDM Oncology – CDM/Vocabulary Subgroup</td>
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<tr>
<td>Friday</td>
<td>9 am</td>
<td>Vaccine Vocabulary</td>
</tr>
<tr>
<td>Friday</td>
<td>10 am</td>
<td>Registry</td>
</tr>
<tr>
<td>Friday</td>
<td>4 pm</td>
<td>Health Equity Journal Club</td>
</tr>
<tr>
<td>Monday</td>
<td>10 am</td>
<td>GIS-Geographic Information System</td>
</tr>
<tr>
<td>Monday</td>
<td>2 pm</td>
<td>FHIR and OMOP Terminologies Subgroup (ZOOM)</td>
</tr>
<tr>
<td>Tuesday</td>
<td>9 am</td>
<td>OMOP CDM Oncology – Genomic Subgroup</td>
</tr>
</tbody>
</table>

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

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)

- XTLAS
- Clinical Trials
- Common Data Model
- Data Quality Dashboard Development
- Early-stage Researchers
- Education Work Group
- Electronic Health Record (EHR) ETL
- Geographic Information System (GIS)
- HADES Health Analytics Data-to-Evidence Suite
- Health Equity
- Latin America
- Medical Devices
- Natural Language Processing
- OHDSI APAC
- OHDSI APAC Steering Committee
- OHDSI Steering Committee
- Oncology
- Patient-Generated Health Data
- Pharmacovigilance Evidence Investigation

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

- HBEA-Health Equity Research Assessment
- POCINBCR for Prostate Cancer (study-in-progress ended)
- SCRULA (SARS-Cov-2 Large-scale Longitudinal Analytics)
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])

- XTLAS
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- OHDSI Steering Committee
- Oncology
- Patient-Generated Health Data
- Pharmacovigilance Evidence Investigation
- Phenotype Development and Evaluation
- Regulation and Clinical Decision Support
- Registries (mostly UK and others)
- Surgery and Perioperative Medicine
- Vaccine Safety
- YccdO NCI Vocabulary
- Women of OHDSI

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

- Africa
- Australia
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- Japan
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- Singapore
- Taiwan

7. Select the studies you want to join

- HESA-Health Data Research Assessment
- PIONEER for Prostate Cancer (study is ongoing)
- SCOPE (봐야 몇년 나가?) Large-scale Longitudinal Analysis
## 2021 APAC Symposium • Nov. 18

<table>
<thead>
<tr>
<th>Nov. 18 (APAC Time Zone)</th>
<th>Time (Korea time)</th>
<th>Contents</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>9:00 – 9:25 am</td>
<td>OHDSI State of the Community</td>
<td>George Hripcsak/Patrick Ryan</td>
</tr>
<tr>
<td></td>
<td>9:25 – 9:50 am</td>
<td>OHDSI APAC State of the Community</td>
<td>Mui Van Zandt</td>
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<tr>
<td></td>
<td>9:50 – 10:00 am</td>
<td>Energy Break</td>
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<tr>
<td></td>
<td>10:00 – 10:25 am</td>
<td>EHDEN</td>
<td>Peter Rijnbeek</td>
</tr>
<tr>
<td></td>
<td>10:25 – 10:50 am</td>
<td>FHIR and OHDSI Collaboration</td>
<td>Christian Reich</td>
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<tr>
<td></td>
<td>10:50 – 11:00 am</td>
<td>Energy Break</td>
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<tr>
<td></td>
<td>11:00 - 12:30 pm</td>
<td>APAC Chapter Visions for 2022</td>
<td>Chapter Leads</td>
</tr>
<tr>
<td>Lunch Break</td>
<td>12:30 – 13:00 pm</td>
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<tr>
<td>Afternoon (in GatherTown)</td>
<td>13:00 – 14:00 pm</td>
<td>Workgroup Sessions (Medical Image, FHIR, CDM Tables)</td>
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<tr>
<td></td>
<td>14:00 – 15:00 pm</td>
<td>Collaboration Showcase</td>
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<tr>
<td></td>
<td>15:00 – 16:00 pm</td>
<td>APAC Study Sessions</td>
<td></td>
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[www.ohdsi.org/apac](https://www.ohdsi.org/apac)
2021 APAC Symposium • Nov. 18

WG – Medical Imaging
Seng Chan You
Assist. Professor
Yonsei University Health System

WG – FHIR Collaboration
Christian Reich
VP IQVIA, OHDSI founder

Adam Chee
Chief of Smart Health Leadership Centre, NUS

WG – CDM v5.4
Clair Blacketer
Assoc. Director Janssen

APAC Study Session
Marc Suchard
Professor, UCLA

www.ohdsi.org/apac
The Open Source Governance Workshop is open to all members of the OHDSI community. The workshop is graciously being organized by the Johns Hopkins Open Source Program Office (OSPO) and Stephen Walli, an open source community advocate and expert at Microsoft.

The goal of the workshop is to learn from very large open source communities on how they onboard, train, and organize contributors to fill a myriad of technical and non-technical roles within an open source eco-system.
# Next CBER Best Seminar Series

<table>
<thead>
<tr>
<th>Topic</th>
<th>CBERT BEST Initiative Seminar Series - Vaccine safety evaluation using the self-controlled case series method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Background: The CBERT BEST Initiative Seminar Series is designed to share and discuss recent research of relevance to ongoing and future surveillance activities of CBERT regulated products, namely biologics. The series focuses on safety and effectiveness of biologics including vaccines, blood components, blood-derived products, tissues and advanced therapies. The seminars will provide information on characteristics of biologics, required infrastructure, study designs, and analytic methods utilized for pharmacovigilance and pharmacoepidemiologic studies of biologics. They will also cover information regarding potential data sources, informatics challenges and requirements, utilization of real-world data and evidence, and risk-benefit analysis for biologic products. The length of each session may vary, and the presenters will be invited from outside FDA. Please see the details below for our upcoming seminar. Anyone can register and join for free. Stay tuned for more details and additional webinars during the year.</td>
</tr>
<tr>
<td></td>
<td>Topic: Vaccine safety evaluation using the self-controlled case series method</td>
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<tr>
<td></td>
<td>Description: The self-controlled case series (SCCS) method will be introduced in the context of vaccine safety evaluation, with examples. We will also consider some of the methodological extensions of the SCCS method that have been used in vaccine safety studies, particularly those relevant to studies of COVID-19 vaccine safety.</td>
</tr>
<tr>
<td>Time</td>
<td>Dec 1, 2021 11:00 AM in Eastern Time (US and Canada)</td>
</tr>
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</table>
The secret (outpatient) garden: Using the OMOP CDM to better differentiate between out-patient and inpatient diagnoses in the VA EHR data

Authors: Elisa Henke, Yuan Peng, Ines Reinecke, Michele Zoch, Martin Sedlmayr

Background

• EHR-based data are increasingly important for clinical practice and research.
• The OMOP CDM (Common Data Model) is a standard for representing clinical data.
• The VA EHR data contains both inpatient and outpatient records.

Objective

• To explore how the VA EHR data can be used to better differentiate between outpatient and inpatient diagnoses using the OMOP CDM.

Methods

• Map diagnoses from the VA EHR data to the OMOP CDM using a mapping tool.
• Evaluate the accuracy of the mapping process.

Results

• The mapping process successfully transformed VA EHR data into OMOP CDM.
• The accuracy of the mapping was assessed using a comparison with known diagnoses.

Conclusions

• The OMOP CDM can be used to better differentiate between outpatient and inpatient diagnoses.
• Further work is needed to improve the mapping accuracy.

References

2. The OMOP CDM. Available from: https://www.ohdsi.org/standards/omop-cdm/

Contact: Elisa Henke@ohdsi.org
Detection of prone positioning in hospitalized COVID patients using NLP

**Lightning Talk!**

**Detection of prone positioning in hospitalized COVID patients using NLP**

**AUTHORS:** Patrick R. Alba (presenter), Jose Posada, Jason Weatherald, Kristine Lynch, Annie Bowles, Nigam Shah, Olga V. Patterson, Scott L. DuVall, Evan Minty

**TUESDAY**

Awake prone positioning of COVID-19 patients is **novel and experimental, yet broadly adopted**. We used NLP to estimate its use in real world pandemic data.

**Concept Definition:**
- Prone positioning is a recommended treatment for COVID-19 patients to improve oxygenation and decrease mortality.
- NLP can be used to identify mentions of prone positioning in clinical text data.

**Prone Positioning in COVID-19:**
- High levels of oxygenation can be achieved with prone positioning.
- NLP can identify mentions of prone positioning in clinical notes.

**Methodology:**
- Data extraction from clinical notes using NLP.
- Accuracy validation using manual chart review.

**RESULTS:**
- 52/53 patients identified as prone posiitioning.
- Agreement between NLP and manual review was high.

**FUTURE WORK:**
- Validation on a larger dataset.
- Exploration of other methods for identifying prone positioning.

**Full abstract and video:**
- [Link to abstract and video](#)
Quantitative analysis on the development of musculoskeletal adverse effects of corticosteroids using common data model

Authors: Sun Geu Chae, Sang-Heon Kim, Yoon-Kyung Sung, Yeesuk Kim

WEDNESDAY
Title: PheValuator 2.0: Changes to Improve the Performance of the Phenotype Algorithm Evaluation Tool

AUTHOR:
- Phenotypes algorithms are used in nearly all observational research
- The performance of these algorithms is usually estimated
- Traditional validation through chart reviews is expensive, time-consuming, and provides incomplete results
- PheValuator is an open-access tool in the OHDSI toolkit for estimating the performance of the algorithms
- Objective: Evaluate performance of PheValuator 2.0 v. 1.0 as compared to gold standard phenotype benchmark

METHODS
Changes to PheValuator 2.0 includes:
1. New clips and others
   - Example: PhenomeXchange
   - New diagnosis codes for loan: All to -1 days prior to any rate for the first time in a subject's history
2. Up to 30 5-star windows for predictive modeling features
   - Example: At the clinic, submit
   - Windows: 0 to 5 days after index

Results:
- Analyzed differences in Positive Predictive Value, Sensitivity, and Specificity from PheValuator 1.0 to 2.0

PheValuator 2.0 produces estimates of Positive Predictive Value for phenotype algorithms comparable to chart review.

Authors: Joel Swerdel, Martijn Schuemie, Patrick B. Ryan

THURSDAY
Ontology of Cancer Diagnosis in the OMOP Vocabulary

**Authors:** Dmitry Dymshyts, Vlad Korsik, Denys Kaduk, Mike Nerovnya, Alex Davydov, Christian Reich, Michael Gurley, Asieh Golozar, Shilpa Ratwani, Joseph Sirintrapun, W. Scott Campbell, Rimma Belenkaya

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**Adding relationships between base diagnosis and Staging/Grading modifiers via diagnostic schemas**

**Adding modifier attributes enable aggregation and hierarchical queries.**

**Building mappings from NAACCR and CAP vocabularies to Cancer Modifier vocabulary**

Note, this work is in progress, please join the Oncology Working group if you want to contribute.
Where Are We Going?

Any other announcements of upcoming work, events, deadlines, etc?
Three Stages of The Journey

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November 16 Community Call: OHDSI Studies

Prognostic Significance of Liver Metastasis in Non-Small Cell Lung Cancer
Asieh Golozar

Redefining Polypharmacy: A Longitudinal Study in Routinely Collected Data
Leena Elhussein

Health Equity Research Assessment (HERA) Characterization
Noémie Elhadad

Assessing Health Equity in Mental Healthcare Delivery Using a Federated Network Research Model
Jacob Zelko

Long COVID phenotyping and vaccine effectiveness methods
Annika Jodicke and Kristin Kostka

Adverse Events of Special Interest within COVID-19 Subjects
Erica Voss