April Olympians #4 / CDM & Themis Process Overview

OHDSI Community Call
April 23, 2024 • 11 am ET
<table>
<thead>
<tr>
<th>Date</th>
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<tr>
<td>April 23</td>
<td>April Olympians Update</td>
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<td>May 7</td>
<td>DevCon 2024 Review</td>
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<td>May 14</td>
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<td>June 4</td>
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<td>June 25</td>
<td>Recent OHDSI Publications</td>
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Three Stages of The Journey

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

Congratulations to the team of Roger Ward, Christine Mary Hallinan, David Ormiston-Smith, Christine Chidgey, and Dougie Boyle on the publication of The OMOP common data model in Australian primary care data: Building a quality research ready harmonised dataset in PLOS One.
Congratulations to the team of Christian Gulden, Philipp Macho, Ines Reinecke, Cosima Strantz, Hans-Ulrich Prokosch, and Romina Blasini on the publication of
recruitT: A cloud-native clinical trial recruitment support system based on Health Level 7 Fast Healthcare Interoperability Resources (HL7 FHIR) and the Observational Medical Outcomes Partnership Common Data Model (OMOP CDM) in Computers in Biology and Medicine.
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>
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<tr>
<td>Wednesday</td>
<td>9 am</td>
<td>OMOP CDM Oncology Outreach/Research Subgroup</td>
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<tr>
<td>Wednesday</td>
<td>10 am</td>
<td>Surgery and Perioperative Medicine</td>
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<td>Wednesday</td>
<td>12 pm</td>
<td>Latin America</td>
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<td>Wednesday</td>
<td>1 pm</td>
<td>Perinatal and Reproductive Health</td>
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<td>Wednesday</td>
<td>3 pm</td>
<td>Joint Vulcan/OHDSI Meeting</td>
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<td>Thursday</td>
<td>9:30 am</td>
<td>Network Data Quality</td>
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<td>Thursday</td>
<td>12 pm</td>
<td>Medical Devices</td>
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<td>Thursday</td>
<td>7 pm</td>
<td>Dentistry</td>
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<tr>
<td>Friday</td>
<td>9 am</td>
<td>Phenotype Development and Evaluation</td>
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<td>Friday</td>
<td>10 am</td>
<td>GIS-Geographic Information System</td>
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<tr>
<td>Friday</td>
<td>11:30 am</td>
<td>Clinical Trials</td>
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<tr>
<td>Monday</td>
<td>10 am</td>
<td>Africa Chapter</td>
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DevCon 2024: April 26, 9 am-3 pm ET

Morning Agenda
9:00 am – Introduction (Adam Black, Paul Nagy)
9:15 am – Developers Panel and Lightning Talks (Katy Sadowski)
  • OHDSI/OMOP – The hard way is the easy way! (Vishnu V Chandrabalan)
  • Moving OMOP to the Cloud With DBT and Snowflake (Roger Carlson)
  • Use cases for ORMs in OMOP (Georgina Kennneddy)
  • Carrot: code-free OMOP ETL without full data access (Sam Cox)
  • Rabbit-in-a-blender - an ETL pipeline to transform your EMR data into OMOP (Pieter-jan Lammertyn)
10:45 am – Darwin EU® Developers Update (Adam Black)
12:00 pm – Break

Afternoon Agenda
12:30 pm – OHDSI Ecosystem Updates
  • TAB Update (Frank DeFalco)
  • Strategus Update (Anthony Sena)
  • Broadsea Update (Lee Evans)
  • Kheiron Updates (Paul Nagy)
1:15 pm – JACKALOPE PLUS The Power of ML for Healthcare Data Mapping & Management (Denys Kaduk)
2:00 pm - An Introduction to Knowledge Graphs using PheKnowLator and OMOP2OBO with Example Applications in Drug Surveillance and Computational Phenotyping (Tiffany Callahan)
#OHDSI2024 Registration Is Open!

Registration is now 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]
#OHDSI2024 Collaborator Showcase

Submissions are now being accepted for the 2024 Global Symposium Collaborator Showcase.

All submissions are due by 8 pm ET on Friday, June 21.

Notification of acceptance will be made by Tuesday, Aug. 20.

[ohdsi.org/OHDSI2024]
Maternal Health Data Science Fellowship

This program is designed to empower clinical investigators to leverage emerging technologies for improved maternal and neonatal care while reducing morbidity and mortality.

Three main components of this program:

1) **Career Development** (create evidence, leverage data models, build skills on network studies)
2) **Practice** (design effective observational research protocols, master tools, write papers/grants)
3) **Networking** (build relationships with mentors, learners, coordinate with global OHDSI collaborators)

Application deadline: May 15

Want to build your career?
Generate reproducible evidence by leading multi-institutional studies!

Learn more & apply!
RWE Workshop at AIME24: Call for Submissions!

Workshop: **AI for Reliable and Equitable Real-World Evidence Generation in Medicine**

[https://medicine.utah.edu/dbmi/aime/ai-reliable](https://medicine.utah.edu/dbmi/aime/ai-reliable)

**Organizing Committee**
Linying Zhang
Adam Wilcox
Yves Lussier

**Scientific Program Committee**
Peter Rijnbeek
Larry Han
Xiaoqian Jiang
Mattia Prosperi
Xia Ning
Yifan Peng

**Opening Keynote**
George Hripcsak

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**IMPORTANT DATES**

- **May 31, 2024 | Submission Deadline**
- **June 14, 2024 | Notice of Acceptance**
- **July 12, 2024 | Workshop**

**AIME 2024**

22nd International Conference on Artificial Intelligence in Medicine
Salt Lake City, Utah, USA, July 9-12
Hosted by the University of Utah
CBER BEST Seminar Recording Is Posted

CBER BEST Seminar Series

The CBER BEST Initiative Seminar Series is designed to share and discuss recent research of relevance to ongoing and future surveillance activities of CBER 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.

Below you will find details of upcoming CBER BEST seminars, including virtual links that will be open to anybody who wishes to attend. Speakers who give their consent to be recorded will also have their presentations included on this page; you can find those sessions below the list of upcoming speakers.

ohdsi.org/cber-best-seminar-series
Enhancing Data Quality Management: Introducing Capture and Cleanse Modes to the Data Quality Dashboard

(Frank DeFalco, Clair Blacketer)

**MONDAY**

**Capture** data quality issues and **Cleanse** them from your data to ensure your organization uses **Research Quality Data**.

```java
DataQualityDashboard::executeDqChecks(
  runMode = "capture"
)
```

**CAPTURE MODE**
- Provides the ability to identify data records that fail specific data quality checks and captures copies of the affected records to a user-specified schema.
- With capture mode, organizations can preserve and characterize the failing records, gaining valuable insights for further analysis and investigation of their data quality issues.

**CLEANSE MODE**
- This mode provides the ability to automatically remove failing records from a data source.
- By leveraging the cleanse mode, organizations can maintain a cleaner and more reliable dataset by eliminating records that fail data quality checks, ensuring data integrity and accuracy.
- A systematic approach to data cleansing provides a reproducible way to eliminate failing records as part of a data operations pipeline.

Frank DeFalco, Clair Blacketer
#OHDSISocialShowcase This Week

**TUESDAY**

Making OMOP Happen: An Implementation Science Approach

(Maya Younoszai, Pam Dasher, Danielle Boyce, Smith Heavner)

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Having a strategic plan for implementation and utilizing tools like the EPIS framework from the outset of projects can improve efficiency, reduce redundancy, and expedite problem solving.

(Nag Mani, Xiwen Huang, Li Tao, Hu Li)
Title: Validation and Comparison of Frailty Indexes: An OHDSI Network Study

INTRO
A frailty index (FI) is a marker of overall health status and vulnerability, used to identify those at increased risk for adverse health outcomes; typically, a sum of health indicators ("deficits") across diverse health domains. We aimed to validate and compare electronic health record (EHR)-based FIs across multiple health care settings and geographies.

METHODS
- Study design: A multinational cohort study using routinely collected healthcare data from 5 OMOPed DBs.
- Study population: Individuals ≥40 years old, with ≥1 year of observation prior to an index date – a random visit for UK data sources and PhareMetics; and 1 year following recruitment date in the AoU data.
- EHR-based FIs: UK electronic Frailty Index (eFI) and US Veterans Affairs Frailty Index (VA-FI), computed on 1Y lookback period.

RESULTS

Frailty Status Shows Similar Trends across Healthcare Systems, but Different Prevalence

- Data sources:
  - IQVIA™ Adjudicated Health Plan Claims
  - PhareMetics
  - All of Us Research Program
  - AuLoD
  - IQVIA™ Medical Research Data – EMIS
  - HES - EHR
  - IQVIA™ Medical Research Data – UK
  - HES - UK
  - The UK Biobank
  - UK Biobank

- Geographies:
  - USA
  - UK

- Data types:
  - Claims data
  - EHR data
  - Questions from patients

- Included states:
  - Outpatient
  - Inpatient

CONCLUSIONS
- Expected FI and deficit trends (e.g., age, osteoporosis F + M)
- Substantial differences in frailty prevalence between USA, UK

LIMITATIONS
- FI code lists (originally, Read, ICD) may be incomplete
- Potential differences in coding, reporting within the various healthcare systems

Example of Deficits (VA-FI): Osteoporosis vs. PVD

(Chen Yanover, Louisa Smith, Tal El-Hay, Brianne Olivieri-Mui, Maytal Bivas-Benita, Robert Cavanaugh, Pinchas Akiva, Chelsea N. Wong, Ariela Orkaby)
#OHDSISocialShowcase This Week

**FRIDAY**

**Broadsea 3.0: "BROADening the ohdSEA"**

(Ajit Londhe, Lee Evans, Sanjay Udoshi)

**OHDSI Broadsea Evolution**

"Broadsea is the easiest way to install (& upgrade) the OHDSI tools"

- **v1.0**: Atlas/WebAPI & RStudio Docker images on Mac/Linux/Windows
- **v2.0**: Pre-populated demo postgres database image & Traefik reverse proxy
- **v3.0**: Docker profiles for a-la-carte services, more Traefik networking, environment variable driven deployment, new OHDSI apps, build from Git

```
docker-compose --profile default up -d
```

https://github.com/OHDSI/Broadsea
Opening: Research Assistant, University of Oxford

Job Details

Research Assistant in Health Data Sciences
Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Botnar Research Centre, Windmill Road, Oxford, OX3 7LD

We have an exciting opportunity for a Research Assistant in Health Data Sciences to join the Pharmacoe- and Device epidemiology research group led by Professor Daniel Fritschi-Althambra at the Botnar Research Centre, NOORMS, University of Oxford. The NOORMS Pharmacoe- and Device epidemiology research group is involved in a number of national and international studies exploring the conditions of use (adherence, compliance, off and on-label use) of a number of licensed drugs, devices, and vaccines for the prevention and treatment of human disease in "real world" (routine practice) conditions.

As a Research Assistant in Health Data Sciences you will contribute to the programming of analytical pipelines for the analysis of routinely collected data mapped to the OMOP Common Data Model. You will analyse real world data to address regulatory questions related to the prevalence/incidence of disease, use of medicines/vaccines, and the risks or benefits of medicines/vaccines or devices. You will prepare analytical packages to run a number of pre-specified analyses, contribute to wider project planning, including ideas for new research projects and gather, analyse, and present scientific data from a variety of sources.

You will hold a relevant BA or MSc degree in Mathematics, Engineering, or a related field. Knowledge of medical statistics and experience analysing large datasets, experience in biostatistics and/or health data sciences and experience in the programming of R packages are essential. Experience in propensity scores, overlap weighting, inverse probability weighting and/or similar methods, expertise in pharmacoe or vaccine epidemiology and experience of working with electronic medical records/routinely collected data are desirable.

This is a full-time fixed-term appointment for 2 years.

The closing data for this position is 12 noon on 10 May 2024. You will be required to upload a CV and supporting statement as part of your online application.

Vacancy ID: 172348
Closing Date & Time: 10-May-2024 12:00

Contact Person: HR Team, NOORMS
Contact Email: hr@nordms.ox.ac.uk
Pay Scale: STANDARD GRADE 6
Opening: Biomedical Informatics Data Scientist at Stanford

1.0 FTE  Full time  Day - 08 Hour  R2335119  Hybrid  84866 IT RESEARCH  Technology & Digital Solutions  455 Broadway, REDWOOD CITY, California

If you’re ready to be part of our legacy of hope and innovation, we encourage you to take the first step and explore our current job openings. Your best is waiting to be discovered.

Day - 08 Hour (United States of America)

This is a Stanford Health Care job.

A Brief Overview

The Biomedical Informatics Data Scientist will partner with researchers and clinicians to enable effective and efficient use of data and resources available via Stanford’s research clinical data repository (STARR) including the Electronic Health Records in the OMOP Common Data Model, radiology and cardiology imaging data and associated metadata, and new data types as they get integrated along with their databases and respective cohort query tools and interfaces e.g., OHDSI ATLAS. This individual will enable researchers to maximize their understanding, interpretation and use of these clinical and research tools for more informed and productive research, clinical trials, patient care and quality outcome projects.

Clean, extract, transform and analyze various kinds of clinical data to create analysis-ready datasets that follow the FAIR (Findable, Accessible, Interoperable and Re-useable) principles. Partner with researchers and clinicians to enable effective and efficient use of Stanford Clinical data and resources for the advancement of research and the educational mission.
The Zhang Lab at Washington University School of Medicine in St. Louis has one postdoc/senior data analyst position to work on causal machine learning and responsible AI for reliable real-world evidence generation.

- More details at https://linyingzhang.com
  - Postdoc: https://linyingzhang.com/files/Postdoc.pdf
  - Data analyst: https://linyingzhang.com/files/Analyst.pdf
- If interested, please send CV and cover letter to linyingz@wustl.edu
Director, RWE - Data Science - OHDSI

Responsibilities:
Collaborate with researchers and data scientists to understand project requirements and translate them into OHDSI-compatible solutions. Work with databases, ensuring data integrity and optimization for OHDSI-related queries and analyses. Perform data analyses in OHDSI-related tools like ATLAS. Customize and extend OHDSI tools and applications to meet specific project needs. Collaborate with cross-functional teams to troubleshoot and resolve technical issues related to OHDSI implementations. Stay informed about OHDSI community updates, best practices, and emerging trends in observational health data research. Contribute to the development and documentation of data standards and conventions within the OHDSI community.
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?
April 23: CDM & Themis Process Overview

Clair Blacketer
Director, Observational Health Data Analytics
Janssen Research & Development

Melanie Philofsky
Senior Business Analyst and Project Manager
Odysseus Data Services, Inc.
The weekly OHDSI community call is held every Tuesday at 11 am ET.

Everybody is invited!

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