Recent OHDSI Publications

OHDSI Community Call

Sept. 26, 2023 • 11 am ET

Upcoming Community Calls

Date	Topic
Oct. 3	Workgroup Reports, pt 1
Oct. 10	Workgroup Reports, pt 2
Oct. 17	Symposium Week! Final Logistics + Mad Minutes
Oct. 24	Welcome to OHDSI
Oct. 31	TBA
Nov. 7	Meet The Titans
Nov. 14	Collaborator Showcase Honorees

Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?

OHDSI Shoutouts!

Congrats to our 2023 Titan Award Nominees!

Alexander Davydov • Aniek Markus • Anna Ostropolets • Anthony Sena • Asieh Golozar • Asiyah Lin • Atif Adam • Azza Shoaibi • Can Yin • Carlos Diaz • Center for Surgical Science team • Christian Reich • Christie Quarles • Chungsoo Kim • Cindy Cai • Clair Blacketer • Clark Evans • Craig Sachson • Cynthia Sung Dana Zakrzewski • Danielle Boyce • Davera Gabriel • Debo Wei • Eleanor Davies • Elisse Katzman • Erica Voss • Evan Minty • Frank DeFalco • Geert Byttebier • Georgina Kennedy • Gowtham Rao • Grahame Grieve • Gregory Klebanov • Gyeol Song • Henrik John • Hugo Vernooij • IQVIA OMOP Productized Analytics • Ismail Gogenur • Jack Brewster • James Brash • James Gilbert • Jared Houghtaling • Jasmine Gratton • Jenna Reps • Jiawei Qian • Jiayi (Jessie) Tong • Jing Li • Joel Swerdel • John Gresh • Katherine Duszynski • Katy Sadowski • Kyle Zollo-Venecek • Kyrylo Simonov • LAISDAR Study Team • Lee Evans • Lydia Liu • Manlik Kwong • Marc Suchard • Marc Twagirumukiza • Marcel de Wilde • Masha Khitrun • Marti Catala • Martijn Schuemie • Martin Lavallee • Marty Alvarez • Meghan Pettine • Mengyuan Shang • Michael Matheny • Michelle Hribar • Milou Brand • Montse Camprubi • Nathan Buesgens • Nathan Hall • Nicole Pratt • Nigel Hughes • Nikolai Grewe • OHDSI Vocabulary Team • Oleg Zhuk • Paul Dougall • Paul Nagy • Polina Talapova • Raivo Kolde • Renske Los • Sally Baxter • Sarah Seager • Stephen Town • Tal El-Hay • Thamir Alshammary • Thomas Falconer • Timur Vakhitov • Varvara Savitskaya • Vipina Keloth • Xiaoyu Lin

Winners will be announced during the #OHDSI2023 Closing Talk!

OHDSI Shoutouts!

2020

2021

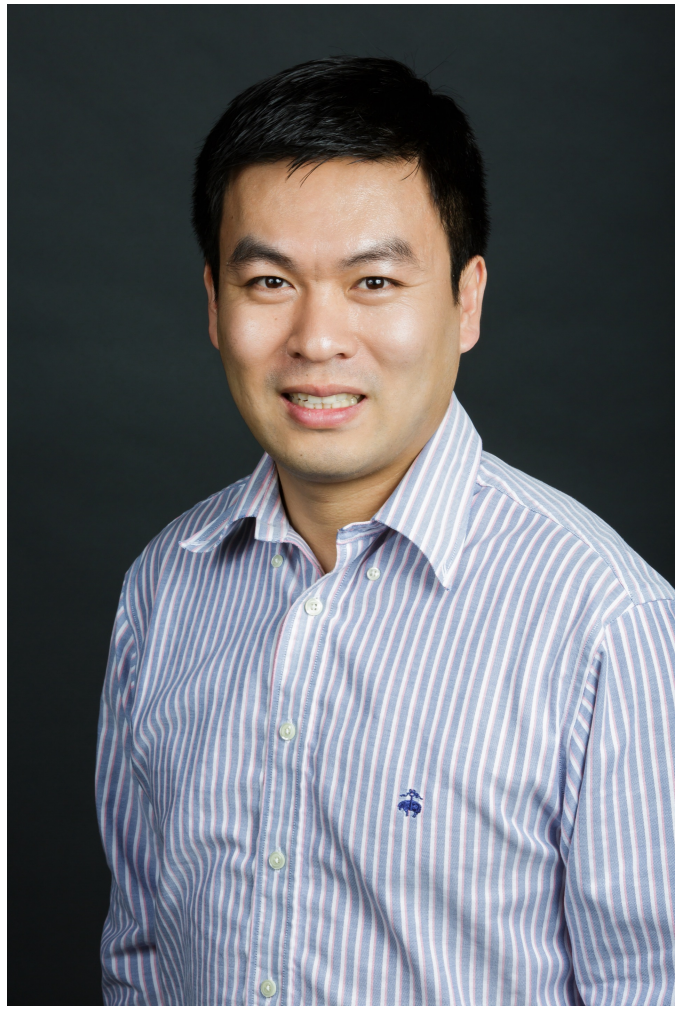
2022

OHDSI Shoutouts!

Congratulations to Columbia DBMI Chair **Noémie Elhadad** on being selected to receive the **2023 Donald A.B. Lindberg Award for Innovation in Informatics**. This award will be presented at the AMIA 2023 Annual Symposium, Nov. 11-15, in New Orleans.

OHDSI Shoutouts!

Congratulations to Penn Professor of Biostatistics **Yong Chen** on being named one of the **23 new Fellows who will be inducted into the American College of Medical Informatics** during the AMIA 2023 Annual Symposium, Nov. 11-15, in New Orleans.



OHDSI Shoutouts!

Congratulations to Columbia DBMI graduate and current Odysseus Director, Head of Innovation Lab, **Anna Ostropolets** on earning Honorable Mention in the **AMIA 2023 Edward H. Shortliffe Doctoral Dissertation Award** competition: *Generating Reliable and Responsive Observational Evidence: Reducing Pre-analysis Bias*.

OHDSI Shoutouts!

Congratulations to **Dr. Ross Williams** on successfully defending his dissertation (*A model, not a prophet: operationalising patient-level prediction using observational data networks)* at Erasmus MC today.

#OHDSISocialShowcase

ohdsi.org/europe2023-showcase

#OHDSISocialShowcase

Power in numbers: overcoming the scarcity of rare cancer data by harmonizing European sarcoma registries

MONDAY

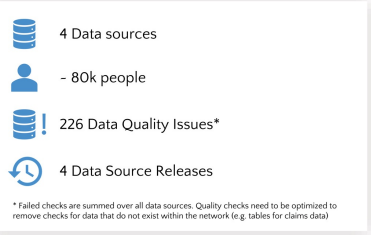
Standardizing European sarcoma registry data to the OMOP Common Data Model

(Maaike van Swieten, Vittoria Ramella, Anna Alloni, Matteo Gabetta, Peter Prinsen, Chiara Attanasio, Espen Enerly, Siri Larønningen, Roberto Lillini, Paolo Lasalvia, Joanna Szkandera, Stefan Janisch, Andreas Muth, Emelie Styring, Julien Bollard, Annalisa Trama, Gijs Geleijnse)

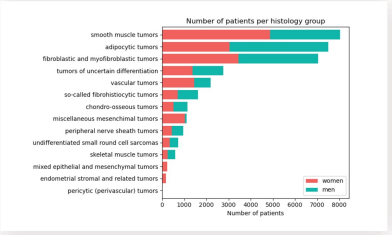
Title: Standardizing European sarcoma registry data to the OMOP Common Data Model

Background: Research in rare cancers is hampered by low patient numbers, dispersed clinical data and tumor samples, and a limited number of experts per rare cancer diagnosis. The ERN EURACAN (European Reference Network for Rare Adult Solid Cancers) was established to bring together data and knowledge of European Healthcare professionals. The Blueberry project, funded by the Dutch Cancer Society (KWF), is part of EURACAN and aims to develop a blueprint for a harmonized sarcoma registry using the OMOP Common Data Model.

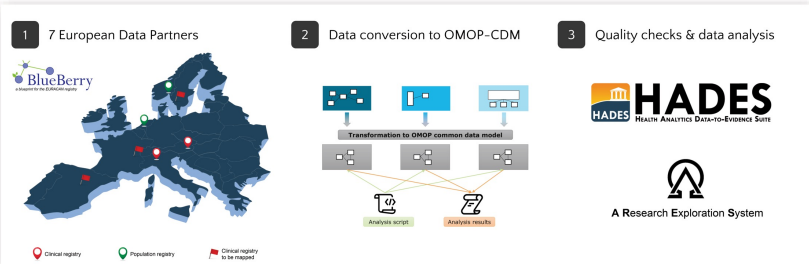
Result 1: Current overview of data within the Blueberry network provided by ARES.



Result 2: Distribution of the number of patients of 14 histological sarcoma subgroups across four data sources.



Methods



Limitation: The data conversion is not yet complete due to implementation issues resulting from missing ICDO-3 codes in the OMOP vocabulary, invalid ICDO-3 codes in the source data, and differences in how data was originally coded. Clinical input will be needed to finalize the data mappings across the network.

OHDSI

Maaike van Swieten[1], Vittoria Ramella[2], Anna Alloni[2], Matteo Gabetta[2], Peter Prinsen[1], Chiara Attanasio[1], Espen Enerly[3], Siri Larønningen[3] Roberto Lillini[4], Paolo Lasalvia[4], Joanna Szkandera[5], Stefan Janisch[5], Andreas Muth[6], Emelie Styring[7], Julien Bollard[8], Annalisa Trama[4], Gijs Geleijnse[1]

[1] Comprehensive Cancer Organization Netherlands (IKNL)
[2] Biometis
[3] Cancer Registry of Norway
[4] Fondazione IRCCS Istituto Nazionale dei Tumori
[5] Medical University of Graz
[6] Sahlgrenska University Hospital
[7] Lund University
[8] Centre Léon Bérard

#OHDSISocialShowcase

TUESDAY

Quality Management System of the OHDSI Standardized Vocabularies

(Vlad Korsik, Anna Ostropolets, Christian Reich, Alexander Davydov)

Quality Management System of the OHDSI Standardized Vocabularies

Vlad Korsik[1], Anna Ostropolets[1], Alexander Davydov[1]
[1]Odysseus Data Services Inc.

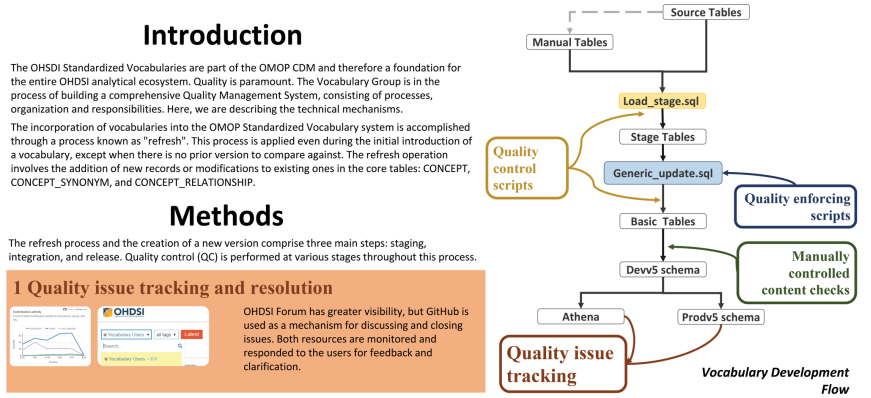
Introduction

The OHSDI Standardized Vocabularies are part of the OMOP CDM and therefore a foundation for the entire OHDSI analytical ecosystem. Quality is paramount. The Vocabulary Group is in the process of building a comprehensive Quality Management System, consisting of processes, organization and responsibilities. Here, we are describing the technical mechanisms.

The incorporation of vocabularies into the OMOP Standardized Vocabulary system is accomplished through a process known as "refresh". This process is applied even during the initial introduction of a vocabulary, except when there is no prior version to compare against. The refresh operation involves the addition of new records or modifications to existing ones in the core tables: CONCEPT, CONCEPT_SYNONYM, and CONCEPT_RELATIONSHIP.

Methods

The refresh process and the creation of a new version comprise three main steps: staging, integration, and release. Quality control (QC) is performed at various stages throughout this process.



1 Quality issue tracking and resolution

OHDSI Forum has greater visibility, but GitHub is used as a mechanism for discussing and closing issues. Both resources are monitored and responded to the users for feedback and clarification.

2 Quality control scripts

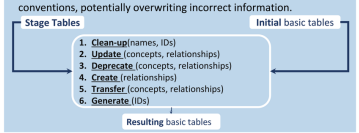
These scripts contain tests to detect deviations from the rules of how the content of the vocabulary tables is expected to behave. Currently, these are part of the:

- intermediate check (*check_stage_table*) - **conformance checks**

- final check (*get_checks*) scripts – **logic checks.**

3 Quality enforcing scripts

The *Generic_Update* script not only integrates staged vocabularies into the existing base but also enforces rules and conventions, potentially overwriting incorrect information.



4 Semantic checks

Concept Level

1. **Unique identifiers check:** Concepts Changing concept_code and concept_id: This check verifies that concepts do not change their unique identifiers (concept_code and concept_id), ensuring consistency and stability of the vocabulary.
2. **Duplicate concepts:** This check ensures that there are no duplicate concepts in the vocabulary, indicating potential processing errors or duplicate content in the source vocabulary.
3. **Concepts changing domain:** This step verifies the correctness and compliance of domain_id for concepts, ensuring that domain changes are justified and aligned with conventions and approaches.
4. **Domain of newly added concepts:** This check reviews the domain assignments for newly added concepts, ensuring their plausibility and adherence to conventions and approaches.
5. **Concepts Changing Name:** This check identifies changes in concept names, prioritizing significant modifications and ensuring that semantic changes are not allowed, except for minor alterations in precision.
6. **Concepts changing synonyms:** Similar to concept names, this check examines changes in concept synonyms, allowing minor modifications but disallowing significant semantic changes or flaws in synonym processing.
7. **New concepts lacking mapping:** This check identifies new concepts that lack "Maps to" links to Standard concepts, allowing for various scenarios depending on the nature of the concepts and their standard representation.
8. **Concepts became non-standard with no replacement mapping:** This check focuses on concepts that have become non-standard without having a replacement mapping, addressing cases where source vocabularies do not provide updated concepts or flawed designs exist.

Relationship Level

1. **New concepts and their mapping:** This check ensures the completeness and alignment of mappings for new concepts, including mapping to self or other concepts within or across vocabularies.
2. **Concepts changing their mapping:** This check examines changes in mappings for concepts, including cases where mappings have changed, are missing, or multiple mappings exist, requiring review and resolution.
3. **Concepts lacking hierarchical relationships:** This check identifies concepts that lack hierarchical "Is a" relationships, taking into account various scenarios such as non-standard concepts or source vocabularies without hierarchical links.
4. **Concepts changed their hierarchical relationships:** This check detects changes in hierarchical "Is a" relationships for concepts, ensuring consistency and identifying cases where ancestor concepts have changed or are missing.
5. **Concepts with 1-to-many "Maps to" mappings:** This check examines concepts that have multiple mappings to different targets, particularly relevant for complex concepts that may be split into multiple targets.
6. **Concepts are presented in CRM with "Maps to" link but end up with no valid "Maps to" in basic tables:** This check ensures that concepts manually mapped within the CONCEPT_RELATIONSHIP_MANUAL table have valid "Maps to" links in the basic tables, ensuring proper processing and alignment.
7. **Mapping of vaccines:** This check involves a comprehensive manual review of the mapping of vaccines, considering their unique attributes and complexities.
8. **Mapping of COVID-19 concepts:** This check focuses on the mapping of COVID-19 concepts to Standard targets, acknowledging the complexity and potential need for manual review due to mapping intricacies.
9. **Concepts have replacement links but miss "Maps to" link:** This check verifies that concepts with replacement links also have the necessary "Maps to" link used in the ETL process, ensuring consistency and proper handling of replacements.

Vocabulary development is a nuanced and iterative process that necessitates diligent quality tracking, involving collaboration between CDM users and ontology builders.

ODYSSEUS DATA SERVICES OHDSI EUROPE

#OHDSISocialShowcase

WEDNESDAY

A reusable method to assess the quality of the ETL process

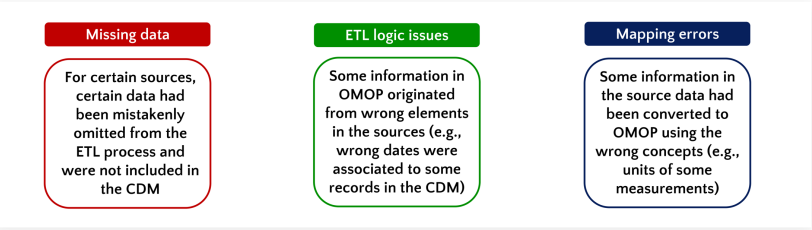
(Dan Vittoria Ramella, Matteo Gabetta, Mauro Bucalo, Nicola Barbarini)

Two R scripts to evaluate the quality of the ETL and identify different type of errors.

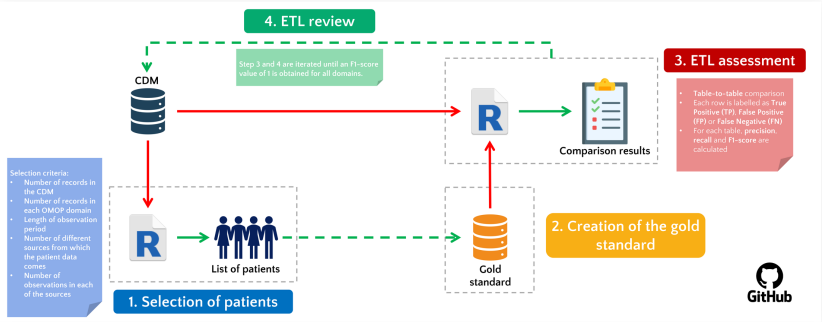
A reusable method to assess the quality of the ETL process.

Background: Creating an extract, transform, and load (ETL) process to get from the source data to the OMOP Common Data Model (CDM) is usually a large task effort. The ETL process is often quite complex and may require changes over time.
Hence, it is important to have a method that tests that the ETL does what it is supposed to do and continues to do so.

Result: Various types of errors are detected when applying this approach to different CDMs.



Methods



Conclusion: This process has three main advantages:

1. Using a CDM with real data allows you to consider the variety and the complexity of clinical data during the quality control process.
2. Once the gold standard has been created, it can be reused to run the comparison script quickly and effortlessly and re-evaluate the ETL after the review.
3. While leaving maximum flexibility in the choice criteria for patient selection (step 1) and comparisons to be performed (step 3), the R scripts can be used with any database in the OMOP CDM. Furthermore, these scripts will be made available as open-source on GitHub.

OHDSI

Vittoria Ramella, Matteo Gabetta, Mauro Bucalo, Nicola Barbarini

BIOMERIS

#OHDSISocialShowcase

THURSDAY

The use of WHO 'Watch List' Antibiotics in Europe: a DARWIN-EU® network population-based network cohort study

(Johnmary T. Arinze, Maria de Ridder, Talita Duarte-Salles, Marti Catala-Sabate, Antonella Delmestri, Hezekiah Omulo, James Brash, Hanne van Ballegooijen, Juan Manuel Ramírez-Anguita, Angela Leis, Miguel-Angel Mayer, Romain Griffier, Peter Rijnbeek, Dani Prieto Alhambra, Katia MC Verhamme)

In the general population, the use of antibiotics from the WHO Watch list is relatively low, increases with age, and varies across care settings in terms of choice and duration.

Title: The use of WHO 'Watch List' Antibiotics in Europe: a DARWIN-EU® network population-based network cohort study

Background: The WHO developed the AWaRe (Access, Watch, Reserve) antibiotic lists to support local, national, and international antibiotic stewardship efforts. The antibiotics on the 'Watch list' have a high potential for bacterial resistance and are primarily used to treat severe infections. In response to a request from the European Medicines Agency, we investigated the incidence and duration of use of antibiotics from the 'Watch list' in routine health care settings in 6 databases from DARWIN EU® data partners.

Table 1. Incidence rate (per 100,000 PY, with 95% confidence intervals) of antibiotics from the WHO Watch list – top 10.

CPRD GOLD (UK)		IPCI (NI)		SIDIAP (Spain)		IMASIS (Spain)		CHUBX (France)		IQVIA Germany	
Primary Care		Primary Care		Primary Care		Secondary Care		Secondary Care		Primary and secondary Care	
Incidence	Antibiotic	Incidence	Antibiotic	Incidence	Antibiotic	Incidence	Antibiotic	Incidence	Antibiotic	Incidence	Antibiotic
3,577 (3,571; 3,583)	Clarithromycin	1,862 (1,853; 1,870)	Azithromycin	3,165 (3,160; 3,169)	Fosfomycin	1,218 (1,202; 1,234)	Levofloxacin	961 (952; 970)	Ceftriaxone	1353 (1350; 1355)	Cefuroxime
2,073 (2,068; 2,078)	Erythromycin	1,462 (1,455; 1,470)	Ciprofloxacin	2,567 (2,563; 2,571)	Azithromycin	1,213 (1,197; 1,229)	Ciprofloxacin	493 (487; 499)	Piperacillin_tazobactam	985 (983;987)	Ciprofloxacin
1,023 (1,020; 1,026)	Ciprofloxacin	1,190 (1,184; 1,197)	Fosfomycin	2,098 (2,094; 2,101)	Ciprofloxacin	980 (966; 994)	Ceftriaxone	204 (200; 208)	Ofloxacin	981 (979; 984)	Azithromycin
868 (865; 871)	Lymecycline	628 (622; 634)	Clarithromycin	1,485 (1,482; 1,488)	Levofloxacin	831 (818; 844)	Azithromycin	191 (187; 195)	Ciprofloxacin	587 (585; 589)	Fosfomycin
518 (515; 520)	Oxytetracycline	517 (512; 521)	Pheneticillin	959 (956; 961)	Cefuroxime	830 (817; 843)	Fosfomycin	133 (129; 136)	Vancomycin	537 (535; 539)	Cefaclor
361 (359; 363)	Azithromycin	206 (204; 209)	Minocycline	813 (810; 815)	Clarithromycin	351 (343; 360)	Cefotaxime	131 (128; 134)	Levofloxacin	479 (477; 480)	Clarithromycin
73 (72; 73)	Ofloxacin	156 (153; 158)	Norfloxacin	623 (621; 625)	Norfloxacin	277 (270; 285)	Meropenem	125 (122; 128)	Spiramycin	377 (375; 378)	Roxithromycin
48 (48; 49)	Minocycline	142 (139; 144)	Oxytetracycline	345 (344; 347)	Cefixime	194 (188; 200)	Cefixime	89 (86; 92)	Tobramycin	326 (324; 327)	Levofloxacin
43 (43; 44)	Cefaclor	102 (100; 104)	Erythromycin	188 (187; 189)	Moxifloxacin	170 (164; 176)	Vancomycin	79 (77; 82)	Rifampicin	285 (284; 287)	Cefpodoxime-proxetil
31 (30; 31)	Fosfomycin	79 (78; 81)	Levofloxacin	173 (172; 174)	Rifaximin	161 (155; 167)	Ceftazidime	75 (73; 78)	Azithromycin	252 (251; 254)	Ofloxacin

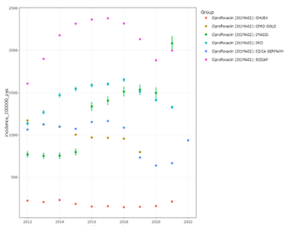
Results: We identified the use of 78 of the 137 (57%) antibiotics from the WHO Watch list category in at least one of the contributing databases. Few antibiotics (azithromycin, clarithromycin, erythromycin, fosfomycin, ciprofloxacin, levofloxacin, and cefuroxime) had incidence rates above 1,000/100,000 person-years (PY) (table 1). Antibiotic use in children was lower than in adults and increased with age. Ciprofloxacin, clarithromycin, fosfomycin, and azithromycin were frequently used in primary care, whereas ceftriaxone, vancomycin, and meropenem were commonly prescribed in secondary care. In secondary care, antibiotics were prescribed for a shorter duration than in primary care (median duration of use: one day versus one week).

Table 2. Duration (in days) of the commonly used WHO Watch list antibiotics

Database name	CPRD GOLD UK	SIDIAP Spain	IPCI NL	IQVIA Germany	IMASIS Spain	CHUBX France
Duration in days	Duration (median, p25-p75)	Duration (median, p25-p75)	Duration (median, p25-p75)	Duration (median, p25-p75)	Duration (median, p25-p75)	Duration (median, p25-p75)
Azithromycin	3 [1 - 3]	4 [4 - 4]	3 [3 - 3]	3 [3 - 3	1 [1 - 1]	3 [1 - 3]
Cefaclor	7 [5 - 7]	9 [8 - 9]	7 [6 - 7]	5 [1 – 7]	1 [1 - 1]	4 [2 - 4]
Ceftriaxone	7 [4 - 7]	5 [2 - 5]	30 [1 - 30]	7 [2 - 10	2 [1 - 2]	4 [2 - 4]
Cefuroxime	7 [7 - 7]	8 [6 - 8]	7 [7 - 7]	6 [6 - 7]	1 [1 - 1]	2 [1 - 2]
Ciprofloxacin	5 [5 - 5]	8 [8 - 8]	7 [7 - 7]	5 [5 - 10]	2 [1 - 2]	4 [2 - 4]
Clarithromycin	7 [7 - 7]	8 [8 - 8]	7 [7 - 7]	7 [5 - 7]	1 [1 - 1]	5 [3 - 5]
Erythromycin	7 [5 - 7]	9 [8 - 9]	7 [7 - 7]	30 [8 - 30]	1 [1 - 1]	4 [2 - 4]
Fosfomycin	1 [1 - 1]	3 [3 - 3]	1 [1 - 1]	1 [1 - 1]	1 [1 - 1]	1 [1 - 1]
Levofloxacin	10 [7 - 10]	8 [8 - 8]	14 [7 - 14]	7 [5 - 10]	1 [1 - 1]	4 [1 - 4]
Lymecycline	56 [28 - 56]					4 [2 - 4]
Ofloxacin	14 [14 - 14]	11 [8 - 11]	14 [7 - 14]	30 [5 - 30]		4 [2 - 4]
Oxytetracycline	28 [7 - 28]	8 [4 - 8]	17 [12 - 17]	5 [5 - 7]	1 [1 - 1]	
Pheneticillin			7 [7 - 7]			
Piperacillin_tazobactam	28 [28 - 28]		37 [18 - 37]	30 [30 - 30]	6 [3 - 6]	6 [3 - 6]
Vancomycin	10 [10 - 10]	11 [6 - 11]	10 [7 - 10]	7 [5 - 10]	4 [2 - 4]	4 [2 - 4]

Methods: This European network drug utilization study analysed data from the Netherlands, Spain, the United Kingdom, Germany, and France between 2012 and 2021. The incidence rate and duration of Watch antibiotics use were estimated among new users who had not been exposed to the specific antibiotic of interest in the previous 30 days. Specialized R packages, "DrugUtilisation" and "IncidencePrevalence," developed for Darwin EU®, were used for the data analysis.

Figure 1 illustrates the incidence rates of ciprofloxacin use.



Authors: Johnmary T. Arinze, Maria de Ridder, Talita Duarte-Salles, Marti Catala-Sabate, Antonella Delmestri, Hezekiah Omulo, James Brash, Hanne van Ballegooijen, Juan Manuel Ramírez-Anguita, Angela Leis, Miguel-Angel Mayer, Romain Griffier, Peter Rijnbeek, Dani Prieto Alhambra, Katia MC Verhamme. **Funding:** European Medicines Agency (EMA) Darwin-EU project

#OHDSISocialShowcase

FRIDAY

Developing a phenotype algorithm to identify natural menopausal women in secondary data: A multi-country, large-scale OHDSI network study

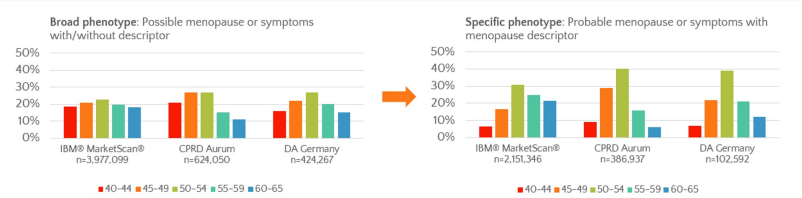
(Siir Su Saydam, Carina Dinkel-Keuthage, Cecilia Caetano, Cecile Janssenswillen, Carsten Moeller, Nils Schoof, James Brash, Victoria Banks)

Menopause is under-represented in RWD and needs a **specific phenotype algorithm** to define a representative cohort.

Developing a phenotype algorithm to identify natural menopausal women in secondary data: A multi-country, large-scale OHDSI network study

Background: Around 47 million women enter menopause each year globally with up to 80% experiencing vasomotor symptoms (VMS) which can negatively impact their quality of life. Menopause research has been impeded by inadequate capture and inconsistent definitions, resulting in varied epidemiological data. This study aims to identify women in natural menopause by developing a common phenotype algorithm across multiple data sources and countries.

Results: Age distributions are representative of natural menopause cohort with more specific inclusion criteria.



Methods

This was a retrospective observational cohort study to define a phenotype algorithm to identify natural menopausal women aged 40-65 from January 2009 up to the latest available date in administrative claims and EHR databases including more than 312 million women from five countries: France, Germany, Japan, UK and US.

OHDSI '**Cohort Diagnostics**' and '**FeatureExtraction**' packages were used which was followed by manual comparison of age, comorbidities and medication use for each phenotype algorithm. **PheValuator** was used to support the review of results (not shown).

Table 1 Cohort definitions for natural menopause were determined with differing specificity of inclusion and exclusion criteria.

Conclusions : This OHDSI network study worked towards establishing a menopause phenotype algorithm by using more specific criteria for identifying natural menopausal women in RWD. Limitations include under-reporting and suboptimal coding practices in menopause. The results will help develop a consistent definition of menopause for future research in secondary databases.

Siir Su Saydam*, **Carina** Dinkel-Keuthage*

*Bayer AG, Berlin, Germany

OHDSI Shoutouts!

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

Do you have anything you want to share? Please send to sachson@ohdsi.org so we can highlight 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
Wednesday	10 am	Surgery and Perioperative Medicine
Wednesday	12 pm	Latin America
Thursday	9:30 am	Network Data Quality
Thursday	12 pm	Medical Devices
Thursday	7 pm	Dentistry
Friday	9 am	GIS – Geographic Information System Development
Friday	11:30 am	Steering Group
Friday	1 pm	Clinical Trials
Monday	9 am	Vaccine Vocabulary
Monday	10 am	Africa Chapter
Monday	6 pm	OMOP & FHIR
Tuesday	9 am	ATLAS/WebAPI
Tuesday	10 am	Common Data Model

Global Symposium

Oct. 20-22 • East Brunswick, NJ, USA

Hilton East Brunswick Hotel & Executive Meeting Center

bit.ly/OHDSI2023Registration

Global Symposium Conference Agenda

Time	Topic
7:30 - 8:30 am East Brunswick Room + Grand Ballroom Foyer	Symposium Registration, Lite Breakfast Buffet, All-Day Exhibits
8:30 - 9:30 am Grand Ballroom	State of the Community OHDSI: Where have we been? Where are we going? George Hripcsak, Columbia Univ. Community Highlights: • OMOP CDM users and the OHDSI data network Clair Blacketer, Johnson & Johnson • OHDSI standardized vocabularies Alexander Davydov, Odysseus Data Services • OHDSI's open-source community Katy Sadowski, Boehringer Ingelheim • OHDSI Europe 2024 Peter Rijnbeek, Erasmus MC • OHDSI Asia-Pacific 2024 Mengling Feng, National Univ. of Singapore
9:30 - 10:30 am Grand Ballroom	OHDSI Community Networking Moderators: • Faaizah Arshad, Univ. of California-Los Angeles • Cynthia Sung, Duke-NUS Medical School
10:30 am - 12:00 pm Grand Ballroom	Plenary: Improving the reliability and scale of case validation Presenters: • Patrick Ryan, Johnson & Johnson, Columbia Univ. • Anna Ostropolets, Odysseus Data Services • Martijn Schuemie, Johnson & Johnson, Univ. of California-Los Angeles
12:00 pm - 1:00 pm Grand Ballroom Foyer	Buffet Lunch

All events take place at the Grand Ballroom Level • Exhibits will be available throughout the day

Time	Topic
1:00 pm - 2:00 pm Grand Ballroom	Panel: Lessons learned from OHDSI network studies Presenters: • Insights from LEGEND-T2DM Marc Suchard, Univ. of California-Los Angeles • Intravitreal anti-VEGF and risk of kidney failure: A Sisyphus Challenge Study Cindy X Cai, Johns Hopkins Univ. • Fluoroquinolones and the risk of aortic aneurysm: A Sisyphus Challenge study Seng Chan You, Yonsei Univ. • Lessons learned applying the Strategus framework across the OHDSI network Anthony Sena, Johnson & Johnson Moderator: Sarah Seager, IQVIA
2:00 pm - 2:45 pm Grand Ballroom	Collaborator Showcase, Lightning Talk Session #1: Data Standards and Methods Research • Mapping of Critical Care EHR Flowsheet data to the OMOP CDM via SSSOM Polina Talapova, SciForce • Paving the way to estimate daily dose in OMOP CDM for Drug Utilisation Studies in DARWIN EU® Theresa Burkard, Univ. of Oxford • Generating Synthetic Electronic Health Records in OMOP using GPT Chao Pang, Columbia Univ. • Comparing concepts extracted from clinical Dutch text to conditions in the structured data Tom Seinen, Erasmus MC • Finding a constrained number of predictor phenotypes for multiple outcome prediction Jenna Reps, Johnson & Johnson Moderator: Davera Gabriel, Johns Hopkins University
2:45 - 3:30 pm Grand Ballroom	Collaborator Showcase, Poster / Demo Session #1 Poster walk leads: • Data standards: Mui Van Zandt, IQVIA • Methods research: Christophe Lambert, Univ. of New Mexico • Open-source development: Paul Nagy, Johns Hopkins Univ. • Clinical applications: Kristin Kostka, Northeastern University

All events take place at the Grand Ballroom Level • Exhibits will be available throughout the day

Time	Topic
3:30 pm - 4:15 pm Grand Ballroom	Collaborator Showcase, Lightning Talk Session #2: Methods Research and Clinical Applications • Synthesizing Evidence for Rare Events: a Novel Zero-Inflated Bivariate Model to Integrate Studies with Double-Zero Outcomes Lu Li, Univ. of Pennsylvania • Active Safety Surveillance Using Real-world Evidence (ASSURE): An application of the Strategus package Kevin Haynes, Johnson & Johnson • Patient's outcomes after endoscopic retrograde cholangiopancreatography (ERCP) using reprocessed duodenoscope: a descriptive study using real-world data Jessica Maruyama, Precision Data • Quantification of Racial Differences in Post-acute Sequelae of SARS-CoV-2 Infection (PASC) in Children: an EHR-Based Cohort from the RECOVER Program Bingyu Zhang, Univ. of Pennsylvania • Eye Care and Vision Research Workgroup: First Year Update Michelle Hribar, National Institutes of Health – National Eye Institute Moderator: Atif Adam, IQVIA
4:15 - 5:00 pm Grand Ballroom	Collaborator Showcase, Poster / Demo Session #2 Poster walk leads: • Data standards: Melanie Philofsky, Odysseus Data Services • Methods research: Andrew Williams, Tufts Univ. • Open-source development: Nsikak Akpakpan, Accenture • Clinical applications: Hanieh Razzaghi, Childrens Hospital of Pennsylvania
5:00 pm - 6:00 pm Grand Ballroom	Closing session: Scaling community, scaling collaboration • Titan Awards • Group Photo Presenter Patrick Ryan, Johnson & Johnson, Columbia Univ.
6:00 pm - 7:00 pm East Brunswick Room Grand Ballroom Foyer	Networking Reception and Exhibits
7:00 pm - 8:00 pm Grand Ballroom	OHDSI Got Talent!

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Register

Global Symposium Conference Agenda

Agenda • Saturday, Oct. 21

Time	Topic
7:00 - 8:00 am Grand Ballroom Foyer	Lite Breakfast Buffet, All-Day Exhibits
8:00 am - 12:00 pm Various rooms	Introduction to OHDSI Tutorial Common Data Model/Network Data Quality WG Meeting Health Analytics Data-to-Evidence Suite (HADES) Hackathon Health EquityWG Meeting Medical Imaging WG Meeting Natural Language Processing WG Meeting OHDSI Industry WG Kickoff Meeting Oncology WG Meeting Phenotype Development & Evaluation WG Meeting Pregnancy and Reproductive Health Group (PRHeG) WG Meeting
12:00 - 1:00 pm Ballroom Foyer/ Ballroom	Lunch Buffet, Collaborator Showcase, All-Day Exhibits
1:00 pm - 5:00 pm Grand Ballroom	HowOften Large-Scale Characterization Workshop
5:00 pm	Free Time

Agenda • Sunday, Oct. 21

Time	Topic
7:00 - 8:00 am Grand Ballroom Foyer	Lite Breakfast Buffet, All-Day Exhibits
8:00 am - 12:00 pm Grand Ballroom	HowOften Large-Scale Characterization Workshop
12:00 - 1:00 pm Ballroom Foyer/ Ballroom	Lunch Buffet, Collaborator Showcase, All-Day Exhibits
1:00 pm - 5:00 pm Various Rooms	Africa Chapter Workshop Eye Care & Vision Research WG Meeting Health Analytics Data-to-Evidence Suite (HADES) Hackathon Healthcare Systems Interest Group (HSIG) WG Meeting HL7 FHIR-OMOP Connectathon ISPE RWE for Pharmacovigilance Medical Devices WG Meeting Psychiatry WG Meeting Vocabulary WG Meeting
5:00 pm	Symposium Closing

bit.ly/OHDSI2023-Agenda

Register

Welcome, 1st-Time Attendees!

All OHDSI first-time attendees are welcome to attend an orientation on Friday at 7:45 am within the Woodbridge/ Piscataway room. **Paul Nagy**, a 2022 Titan honoree for community leadership, will lead this session.

OHDSI

1st Time Attendees

ohdsi.org/ohdsi2023

Register

Global Symposium

Oct. 20-22 • East Brunswick, NJ, USA

Hilton East Brunswick Hotel & Executive Meeting Center

bit.ly/OHDSI2023Registration

OHDSI HADES releases: SqlRender 1.16.0

SqlRender 1.16.0 | Reference | Articles | SqlDeveloper | Changelog | HADES

SqlRender

R-CMD-check passing | codecov 81% | CRAN 1.16.0 | downloads 4115/month

SqlRender is part of HADES.

Introduction

This is an R package for rendering parameterized SQL, and translating it to different SQL dialects. SqlRender can also be used as a stand-alone Java library and a command-line executable.

Features

- Supports a simple markup syntax for making SQL parameterized, and renders parameterized SQL (containing the markup syntax) to executable SQL
- The syntax supports defining default parameter values
- The syntax supports if-then-else structures
- Has functions for translating SQL from one dialect (Microsoft SQL Server) to other dialects (Oracle, PostgreSQL, Amazon RedShift, Impala, IBM Netezza, Google BigQuery, Microsoft PDW, Snowflake, Azure Synapse, Apache Spark and SQLite)
- Can be used as R package, Java library, or as stand-alone executable through a command-line interface

Links

View on CRAN

Browse source code

Report a bug

Ask a question

License

Apache License 2.0

Citation

Citing SqlRender

Developers

Martijn Schuemie
Author, maintainer

Marc Suchard
Author

OHDSI HADES releases: CohortDiagnostics 3.2.4

CohortDiagnostics 3.2.4 Reference Articles Changelog HADES

CohortDiagnostics

R-CMD-check failing codecov 90%

CohortDiagnostics is part of HADES.

Introduction

CohortDiagnostics is an R utility package for the development and evaluation of phenotype algorithms for OMOP CDM compliant data sets. This package provides a standard, end to end, set of analytics for understanding patient capture including data generation and result exploration through an R Shiny interface. Analytics computed include cohort characteristics, record counts, index event misclassification, captured observation windows and basic incidence proportions for age, gender and calendar year. Through the identification of errors, CohortDiagnostics enables the comparison of multiple candidate cohort definitions across one or more data sources, facilitating reproducible research.

Features

- Show cohort inclusion rule attrition.
- List all source codes used when running a cohort definition on a specific database.
- Find orphan codes, (source) codes that should be, but are not included in a particular concept set.
- Compute cohort incidence across calendar years, age, and gender.

Links

Browse source code

Report a bug

Ask a question

License

Apache License

Citation

Citing CohortDiagnostics

Developers

Jamie Gilbert
Author, maintainer

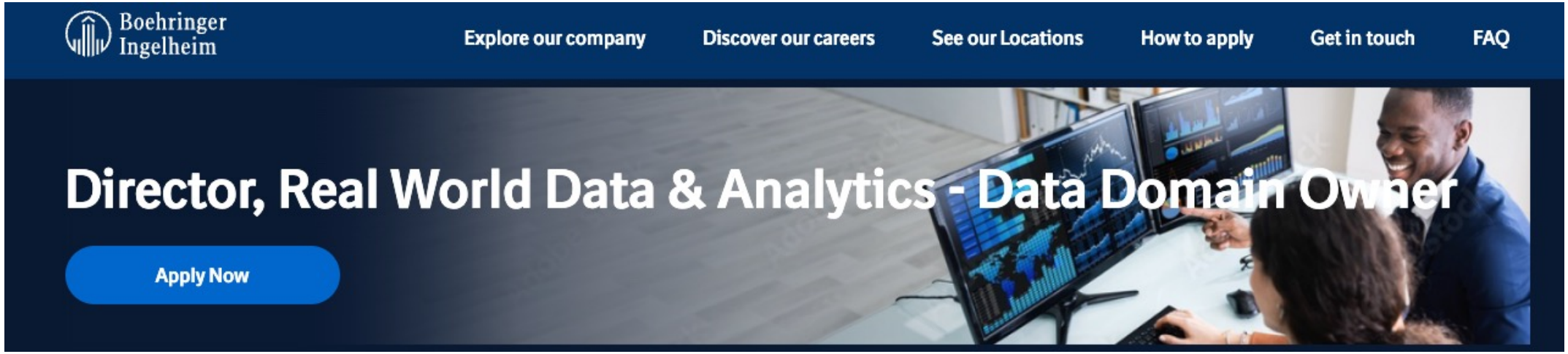
Gowtham Rao
Author

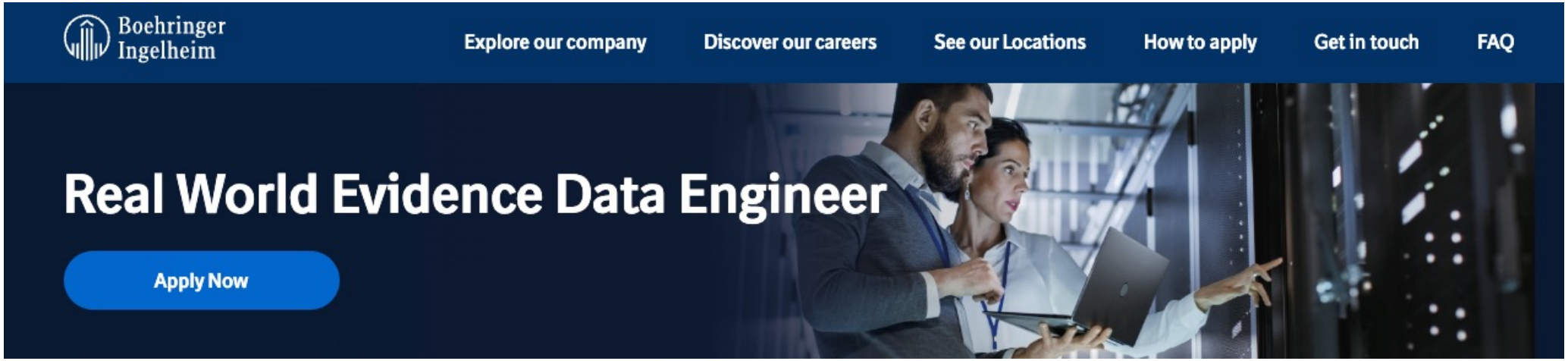
Martijn Schuemie
Author

Patrick Ryan
Author

James Weaver

Openings at Boehringer Ingelheim





Opening: Postdoctoral Associate/Data Analyst

Job Announcement: Postdoctoral Associate/Data Analyst - LEGEND Hypertension Project

Position: Postdoctoral Associate/Data Analyst

Organization: Yale University, School of Medicine

Location: 195 Church Street, 5th floor, New Haven, CT, 06510

Application Deadline: Rolling basis

Job Description:

We are seeking a talented and dedicated Postdoctoral Associate/Data Analyst to join our dynamic team. In this role, you will play a pivotal part in advancing our mission of improving health outcomes through data-driven research. You will have the opportunity to work with diverse healthcare datasets, develop innovative analytical methods, and collaborate with experts in the field.

The Postdoctoral Associate/Data Analyst should possess significant experience in R and Rstudio, with specific expertise in database management using PostgreSQL—critical requirements within the OHDSI network. Your responsibilities will include assisting the Principal Investigator (Dr. Yuan Lu from Yale University) and Co-Investigator (Drs. Marc Suchard from UCLA) in creating the analytic tool stack and performing related analyses.

Key Responsibilities:

- Collaborate with multidisciplinary teams to design and execute data analysis projects.
- Develop and implement statistical and machine learning models for healthcare data.
- Perform data extraction and preprocessing tasks to prepare datasets for analysis.
- Conduct exploratory data analysis and visualization to extract insights from healthcare data.
- Assist in the development and maintenance of OHDSI's open-source tools and resources.
- Communicate findings and insights through reports, presentations, and publications.
- Stay up-to-date with the latest advancements in data science and healthcare informatics.

Email: y.lu@yale.edu

Where Are We Going?

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

Three Stages of The Journey

Where Have We Been?

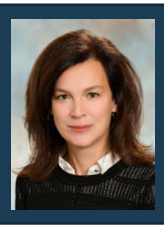
Where Are We Now?

Where Are We Going?

Sept 26: Recent OHDSI Publications

Enabling data sharing and utilization for African population health data using OHDSI tools with an OMOP-common data model (Frontiers in Public Health)

Sylvia Kiwuwa-Muyingo, Biostatistician, African Population and Health Research Center



Characteristics and treatment pathways in pediatric and adult hidradenitis suppurativa: An examination using real world data (JAAD International)

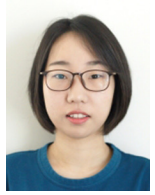
Jill Hardin, Director, Observational Health and Data Analytics, Janssen Research and Development

Ontologizing health systems data at scale: making translational discovery a reality (NPJ Digital Medicine)

Tiffany Callahan, Postdoctoral Researcher, IBM

Learning important common data elements from shared study data: The All of Us program analysis (PLoS One)

Craig Mayer, Interdisciplinary Data Scientist, National Library of Medicine



Padé approximant meets federated learning: A nearly lossless, one-shot algorithm for evidence synthesis in distributed research networks with rare outcomes (Journal of Biomedical Informatics)

Qiong Wu, Research Associate of Biostatistics and Epidemiology, University of Pennsylvania

Global Symposium

Oct. 20-22 • East Brunswick, NJ, USA

Hilton East Brunswick Hotel & Executive Meeting Center

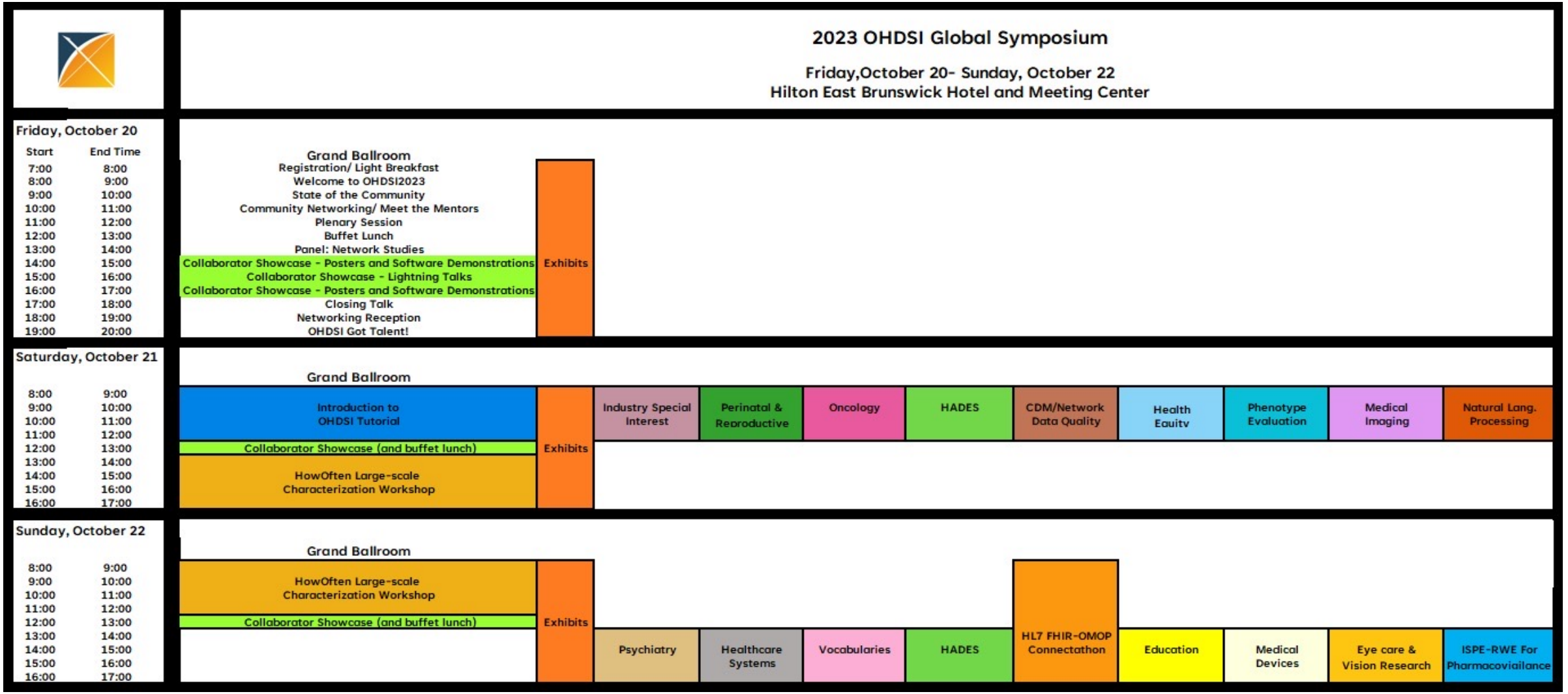
ohdsi.org/OHDSI2023

Global Symposium Weekend Agenda

	Friday, Oct. 20	Saturday, Oct. 21	Sunday, Oct. 22
7:30 am	Registration/Lite Breakfast	Lite Breakfast	Lite Breakfast
8:30 am	Welcome to OHDSI2023: State of the Community	Intro to OHDSI Tutorial & OHDSI Workgroup Activities	OHDSI collaborative workshop: HowOften (part 2)
9:30 am	Community Networking		
10:30 am	Plenary Session		
12:00 pm	Buffet Lunch	Buffet Lunch + Collaborator Showcase: Posters & Demos	Buffet Lunch + Collaborator Showcase: Posters & Demos
1:00 pm	Panel: Network Studies	OHDSI collaborative workshop: HowOften (part 1)	OHDSI workgroup activites
2:00 pm	Collaborator Showcase: Lightning Talks		
2:45 pm	Collaborator Showcase: Posters & Demos		
3:30 pm	Collaborator Showcase: Lightning Talks		
4:15 pm	Collaborator Showcase: Posters & Demos		
5:00 pm	Closing Talk & Titan Awards	Free time	We'll see you again in 2024!
6:00 pm	Networking Reception		
7:00 pm	OHDSI Got Talent!		

** this agenda is tentative and subject to change*

Global Symposium



Global Symposium Conference Agenda

8:30 - 9:30 am **Grand Ballroom**	**State of the Community** **OHDSI: Where have we been? Where are we going?** George Hripcsak, Columbia Univ. **Community Highlights:** • **OMOP CDM users and the OHDSI data network** Clair Blacketer, Johnson & Johnson • **OHDSI standardized vocabularies** Alexander Davydov, Odysseus Data Services • **OHDSI's open-source community** Katy Sadowski, Boehringer Ingelheim • **OHDSI Europe 2024** Peter Rijnbeek, Erasmus MC • **OHDSI Asia-Pacific 2024** Mengling Feng, National Univ. of Singapore
9:30 - 10:30 am **Grand Ballroom**	**OHDSI Community Networking** **Moderators:** • Faaizah Arshad, Univ. of California-Los Angeles • Cynthia Sung, Duke-NUS Medical School

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Global Symposium Conference Agenda

10:30 am - 12:00 pm Grand Ballroom	**Plenary: Improving the reliability and scale of case validation** **Moderators:** • Patrick Ryan, Johnson & Johnson, Columbia Univ. • Anna Ostropolets, Odysseus Data Services • Martijn Schuemie, Johnson & Johnson, Univ. of California-Los Angeles
1:00 pm - 2:00 pm Grand Ballroom	**Panel: Lessons learned from OHDSI network studies** **Presenters:** • Insights from LEGEND-T2DM Marc Suchard, Univ. of California-Los Angeles • Intravitreal anti-VEGF and risk of kidney failure: A Sisyphus Challenge Study Cindy X Cai, Johns Hopkins Univ. • Fluoroquinolones and the risk of aortic aneurysm: A Sisyphus Challenge study Seng Chan You, Yonsei Univ. • Lessons learned applying the Strategus framework across the OHDSI network Anthony Sena, Johnson & Johnson **Moderator:** Sarah Seager, IQVIA

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Global Symposium Conference Agenda

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Register

Global Symposium

Hotel Information and Sleeping Room Block

Hotel: Hilton East Brunswick Hotel & Executive Meeting Center
Address: 3 Tower Center Blvd. East Brunswick, New Jersey, 08816
Hotel Main Number: (732) 828-2000
Reservations Toll Free: 1-800-HILTONS (1-800-445-8667) **When calling, please refer to the OHDSI Symposium**

You may book your hotel sleeping room for the symposium by using the link below. Please note that the room rate may fluctuate after the room block fills up.

If you have booked a sleeping room in the OHDSI room block at the discounted rate, we ask that you do not cancel your reservation, If you must cancel it, please contact us first at symposium@ohdsi.org by September 15, so we can offer it to another OHDSI community member.

OHDSI GUEST ROOM BLOCK: Available Rooms – Hilton East Brunswick Hotel & Executive Meeting Center

Exhibitor Information

For a second consecutive year, the OHDSI Global Symposium will offer a limited number of opportunities for exhibitors. Organizations that provide professional products and services to members of the OHDSI community are encouraged to apply. When inquiring about exhibit space, please explain how your product/service connects to the OMOP CDM, OHDSI tools or OHDSI stakeholders. Exhibitors will be provided a dedicated space during the symposium weekend, with a 6-ft table, two chairs, and a sign. A listing of exhibitors will be provided as part of the final program to all attendees; to inquire about reserving an exhibitor space, please contact symposium@ohdsi.org.

Frequently Asked Questions (FAQs)

Please check out this document on FAQs about the 2023 Global Symposium. If you have other questions not addressed here, please contact symposium@ohdsi.org.

2023 Symposium FAQs

What modes of transportation can I take to the hotel?
Airports (please note that there are no airport shuttles to/from the hotel)

Newark Liberty International Airport (EWR) is approximately 25 minutes (22 Miles) to the hotel. Please see this link for additional airport information
EWR - Newark Liberty International Airport (newarkairport.com)

Please see this link below for driving directions from Newark Int'l Airport to the Hilton East Brunswick
Newark Liberty International Airport to Hilton East Brunswick Hotel & Executive Meeting Center - Google Maps

For other modes of transportation from Newark Int'l Airport to the hotel, you can check out this link Newark Airport (EWR) to Hilton East Brunswick (rome2rio.com)

La Guardia Airport (LGA) is approximately one hour (50 miles) to the hotel. Please note that in traffic this travel time can be significantly longer. Please see this link for additional airport information LGA - LaGuardia Airport

Please see this link below for driving directions from La Guardia Airport to the Hilton East Brunswick
LaGuardia Airport (LGA), Queens, NY to 3 Tower Center Blvd - Google Maps

For other modes of transportation from La Guardia Airport to the hotel, you can check out this link New York La Guardia Airport (LGA) to Hilton East Brunswick (rome2rio.com)

John. F. Kennedy International Airport (JFK) is approximately one hour (50 miles) to the hotel. Please note in traffic the travel time can be significantly longer. Please see this link for additional airport information JFK - John F. Kennedy International Airport (jfkairport.com)

Please see this link below for driving directions from JFK Int'l Airport to the Hilton East Brunswick
JFK Airport (JFK), Queens, NY to 3 Tower Center Blvd - Google Maps

For other modes of transportation from JFK to the hotel, you can check out this link New York JFK Airport (JFK) to Hilton East Brunswick (rome2rio.com)

Philadelphia International Airport (PHL) is approximately 1.5 hours (70 miles) to the hotel. Please note that in traffic this travel time can be significantly longer. Please see this link

What events are taking place in New York City in October?
New York City has many events year-round in all 5 boroughs, Long Island, update New York, and neighboring states (like Connecticut and New Jersey). Below are some links to find events, tours, parks, Broadway shows, best 2023 or oldest restaurants, and the many diverse neighborhoods in NYC.
NYC Events October 2023 | New York, NY
New York City: Tours and Tickets - Tripadvisor
The 16 Best Parks to Enjoy All Year Round in NYC | Best NYC Parks (timeout.com)
Broadway Tickets | Broadway Shows | Theater Tickets | Broadway.com
The 18 Best NYC Restaurants To Visit In 2023 (tastingtable.com)
11 Oldest Restaurants in NYC (Open Since the 19th Century!) (familydestinationsguide.com)
New York City Neighborhoods | The Official Guide to New York City (nycgo.com)

Please click the hotel link below to find out more about the amenities offered at the Hilton East Brunswick Hotel and Executive Meeting Center
Hilton East Brunswick Hotel & Meeting Center

Need more information regarding the 2023 OHDSI Symposium? Please email us at symposium@ohdsi.org. We will try to get back to you within 48 hours.
Observational Health Data Sciences & Informatics
Department of Biomedical Informatics
Columbia University Medical Center
622 West 168th Street, PH-20
New York, NY 10032

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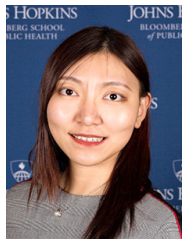
Register

Sept. 19 • OHDSI Journal Club: 11th Revision of the ENCePP Guide on Methodological Standards in Pharmacoepidemiology

Catherine Cohet

Pharmacoepidemiology Senior Specialist, RWE Workstream, Data Analytics & Methods Task Force, European Medicines Agency



Xintong Li

DPhil student in Medical Statistics and Clinical Epidemiology, University of Oxford

Kim López Güell

DPhil student in Medical Statistics and Clinical Epidemiology, University of Oxford

Daniel Morales

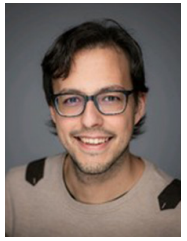
Senior Pharmacoepidemiologist, European Medicines Agency

Niklas Norén

Chief Science Officer, Uppsala Centre

Luis Pinheiro

Senior Epidemiology Expert, European Medicines Agency



Albert Prats-Uribe

Senior Clinical Researcher and Public Health Specialist, University of Oxford

Dani Prieto-Alhambra

Section Head - Health Data Sciences, Botnar Research Centre and Professor, University of Oxford and Erasmus MC