

## Main Conference Agenda · Oct. 14

7:30 am - 8:30 am Ballroom AE Foyer	Registration and Lite Breakfast			
9:00 am - 10:00 am <i>Ballroom DE</i>	State of the Community George Hripcsak, Columbia UniversitySafety Monitoring of COVID-19 Vaccines within the FDA BEST Initiative Patricia Lloyd, US Food and Drug AdministrationPresentation of 2020, 2021 Titan Awards George Hripcsak, Columbia University/ Patrick Ryan, Johnson & Johnson, Columbia University			
10:00 am - 10:45 am <i>Ballroom DE</i>	<ul> <li>Workgroup Connections         <ul> <li>WG leads will be distributed across the venue and available for networking to share activities &amp; progress, and connect for future collaborations</li> <li>OHDSI Meet The Mentors (Ballroom Side Foyer)</li> </ul> </li> </ul>			
10:45 am - 12:15 pm <i>Ballroom DE</i>	Plenary: Objective Diagnostics: A pathway to provably reliable evidence Martijn Schuemie, Johnson & Johnson			
12:15 pm - 1:00 pm Ballroom Foyer	Buffet Lunch <ul> <li>buffet in exhibitor space</li> </ul>			
1:00 pm - 2:00 pm <i>Ballroom DE</i>	<ul> <li>Presentations: OHDSI support for regulatory authorities moderator: Jody-Ann McLeggon, Columbia University <ul> <li>"US FDA/CBER: Performance of vaccine safety surveillance methods" Fan Bu, UCLA</li> <li>"Korean National Institute of Food and Drug Safety Evaluation; Evolution of Evidence-Based Medicine: Why We Replicate Trials?" Yeon-Hui Lee, National Institute of Food and Drug Safety Evaluation Seng Chan You, Yonsei University</li> <li>"European Medicines Agency: DARWIN-EU" Peter Rijnbeek, Erasmus MC</li> </ul> </li> </ul>			
2:00 pm - 3:00 pm Ballroom ABC	Collaborator Showcase, Round 1 <ul> <li>Poster presentations with poster walks</li> <li>Software demonstrations</li> <li>Exhibitors (Foyer)</li> </ul>			
3:00 pm - 4:00 pm <i>Ballroom DE</i>	<ul> <li>Collaborator Showcase Lightning Talks         <ul> <li>moderator: Kristin Kostka, Roux Institute at Northeastern University</li> <li>"Disambiguation of ICPC codes using free-text and active learning to             improve concept mappings" Tom Seinen, Erasmus MC</li> <li>"OHDSI Phenotype Phebruary: lessons learned" Azza Shoaibi,             Johnson &amp; Johnson</li> </ul> </li> </ul>			



## Main Conference Agenda · Oct. 14

3:00 pm - 4:00 pm Ballroom DE (continued)	<ul> <li>"Reduce, Reuse, &amp; Recycle: Going Green with Atlas Reusables" Ajit Londhe, Amgen</li> <li>"Best practices for prognostic model development using observational health data: a scoping review" Cynthia Yang, Erasmus MC</li> <li>"Machine Learning for Predicting Patients at Risk of Prolonged Opioid Use Following Surgery" Behzad Naderalvojoud, Stanford University</li> <li>"When does statistical equality meet health equity: developing analytical pipelines to compare associational and causal fairness in their application to EHR data" Linying Zhang, Columbia University</li> <li>"Analyzing the Effect of Hypertension on Retinal Thickness Using Radiology Common Data Model (R-CDM)" Chul Hyoung Park, Ajou University</li> <li>"Multinational Patterns of Second-line Anti-hyperglycemic Drug Initiation: A LEGEND-T2DM Study" Lovedeep Dhingra, Yale University</li> </ul>		
4:00 pm - 5:00 pm <i>Ballroom ABC</i>	Collaborator Showcase, Round 2 <ul> <li>Poster presentations with poster walks</li> <li>Software demonstrations</li> <li>Exhibitors (Foyer)</li> </ul>		
5:00 pm - 6:00 pm Ballroom DE			
6:00 pm - 7:00 pm <i>Ballroom ABC</i>	Networking Reception		



Register Here: <u>ohdsi.org/ohdsi2022symposium/</u>

### **#JoinTheJourney**



### **Full-Day Tutorial · Oct. 15** An Introductory Journey From Data To Evidence

In this tutorial, we will introduce participants to steps along the journey from data to evidence using the OMOP Common Data Model, OHDSI tools and scientific best practices. In each 50-minute segment, the class will learn the conceptual framing of the problem and approach to the solution. Then, the class will have the opportunity to have hands-on exposure to design and implementation of analyses and interpretation of results. The course will be motivated by a real use case: using observational data to generate evidence about the relationship between an exposure and outcome, and will highlight how the suite of OHDSI tools and practices can enable such learning.

This class is designed for newcomers to the OHDSI community who are looking for a high-level summary across a wide range of topics covered within the OHDSI community. It's also designed for those in the OHDSI community who may be focused in one particular area of the journey who want exposure to the other areas, so they can better understand how their work contributes to be 'big picture,' and advances the mission to improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care

The tutorial will be held in White Oak A.

Time	Title	Faculty
7:30 am - 8:30 am	Registration/Lite Breakfast (White Oak Foyer)	
8:30 am - 9:00 am	Overview of the OHDSI Journey: where are we going?	Patrick Ryan
9:00 am - 9:50 am	OMOP Common Data Model and vocabulary	Clair Blacketer
9:50 am - 10:00 am	Energy Break	
10:00 am - 10:50 am	ETL a source database into OMOP CDM	Melanie Philofsky
10:50 am - 11:00 am	Energy Break	
11:00 am - 11:50 am	Creating Cohort Definitions	Asieh Golozar
11:50 am - 12:30 pm	Buffet Lunch	
12:30 pm - 1:20 pm	Phenotype Evaluation	Gowtham Rao
1:20 pm - 1:30 pm	Energy Break	
1:30 pm - 2:20 pm	Characterization	Kristin Kostka
2:20 pm - 2:30 pm	Energy Break	
2:30 pm - 3:20 pm	Estimation	Martijn Schuemie
3:20 pm - 3:30 pm	Energy Break	
3:30 pm - 4:20 pm	Prediction	Jenna Reps
4:20 pm - 5:00 pm	Recap of the OHDSI Journey: Where do we go from here?	George Hripcsak



# Workgroup Activities • Oct. 15-16

A highlight of the OHDSI 2022 Symposium will be a full weekend of workgroup activities and meetings within the Bethesda North Marriott Hotel & Conference Center. You are now able to register for any workgroup 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.

Currently scheduled workgroup activities are shown on the graphic below. There will be a buffet lunch both days between 12:00 pm - 1:00 pm in the White Oak Foyer. Specific locations for workgroup meetings will be posted when available.

Learn more about the different workgroup activities and register at our symposium homepage.

Saturday, October 15 Start Time (ET)	Room Name End Time (ET)	White Oak A	White Oak B	Forest Glen	Glen Echo
800	900		HADES Hack-a-thon:		FHIR-OMOP: Terminologies
900	1000				Subgroup, Part 1
1000	1100		Part 1	Oncology WG	FHIR-OMOP: Increasing the Value
1100	1200	Tutorial: An			of Data Through a Rich Set of Attributes
1200	1300		Lunch	Lunch	Lunch
1300	1400	From Data to Evidence			FHIR-OMOP: Data Model
1400	1500		Methods Research	Oncology WG (continued)	Harmonization Subgroup
1500	1600		(PLE/PLP)	Natural Language	
1600	1700			Processing	FHIR-OMOP: Oncology Subgroup
1700	1800		FHIR-OMOP: Terminologies		
1800	1900				
Sunday, October 16		White Oa	ak AB		
800	900				
900	1000	All-Hands Work	group Mooting		
1000	1100		group weeting		
1100	1200				
1200	1300	Lunch		Lunch	Lunch
1300	1400			Education	Phenotype Evaluation
1400	1500	CDM and Data Quality	HADES Hack-a-thon: Part 2	Lucation	
1500	1600			Health Equity	
1600	1700			ricultin Equity	

Registration is now open for all events at the OHDSI Symposium. For more information and/or the registration links for #OHDSI2022, please visit our home page below! We hope to see you in Bethesda, Md., when we can celebrate being together in-person once again!

ohdsi.org/ohdsi2022symposium/



#### **Software Demos**

The 2022 OHDSI Symposium will host two sessions featuring 17 software demos that highlight the breadth of global research happening within our community.

Odd-numbered demos will be presented during the first showcase session (2-3 pm), while the even-numbered posters will be presented during the second showcase session (4-5 pm).

- 1 Simple and practical EMR to OMOP CDM ETL tool (Pieter-Jan Lammertyn, Stijn Dupulthys, Louise Berteloot, Pete De Jaeger, Kim Denturck, Nathalie Mertens)
- 2 Using dbt a free and open-source software to transform data into OMOP CDM in the ETL process (Thanapat Pitchayarat, Gun Pinyo, Watcharaporn Tanchotsrinon, Somkid Khamsrimuang, Chalita Issarasittiphap, Chaiyanun Bootnumpech, Noppon Siangchin, Kanphitcha Promma, Nattachai Bovornmongkolsak, Prapat Suriyaphol, Natthawut Adulyanukosol)
- 3 Vocabulary Versioning: Tracking Concepts over Time Software Demonstration (Tom Seinen, Peter Rijnbeek)
- 4 Data Quality Dashboard v2.0 (Clair Blacketer, Frank DeFalco, Anthony Molinaro, Dmitry Ilyn, Luis Alaniz, Maxim Moinat)
- 5 Data Network Feasibility Tool Software Demonstration (Frank DeFalco, Clair Blacketer)
- 6 PHOEBE 2.0: selecting the right concept sets for the right patients using lexical, semantic, and data-driven recommendations (Anna Ostropolets, George Hripcsak, Patrick Ryan)
- 7 Criteria2Query 2.0: Combining Human and Machine Intelligence for Cohort Identification (Yilu Fang, Betina Idnay, Yingcheng Sun, Hao Liu, Zhehuan Chen, Karen Marder, Hua Xu, Rebecca Schnall, Chunhua Weng)
- 8 Understanding circe-be logic through Capr for generating complex cohort definitions (Martin Lavallee, Adam Black and Asieh Golozar)
- 9 Standardizing Knowledge of Drug Effects: An Application of PheKnowLator for Drug Safety (Tiffany J. Callahan, Patrick B. Ryan, George Hripcsak)
- 10 CohortIncidence: A Software Demonstration (Christopher Knoll)
- 11 IncidencePrevalence: An R package to compute population-level incidence and prevalence using the OMOP common data model (Marta Catala, Berta Raventas, Mike Du, Yuchen Guo, Xintong Li, Ross Williams, Talita Duarte Salles, Daniel Prieto Alhambra, Edward Burn)
- 12 ohdsitargets An R package for building OHDSI study pipelines using targets (Adam Black, Martin Lavallee, Asieh Golozar, Gregory Klebanov)
- **13 Strategus: Marching towards transparent, reproducible research** (Anthony G. Sena, Christopher Knoll, James Gilbert, Jenna Reps, Frank DeFalco, Clair Blacketer, Anthony Molinaro, Joshua Ide, Patrick Ryan, Martijn Schuemie)
- 14 Einstein-ATLAS: Leveraging OHDSI/ATLAS and Open-Source Development to Support Translational Research, Data Science, and Regulatory Compliance (Parsa Mirhaji)
- 15 REal World Assessment and Research of Drugs (REWARD): presenting an open-source package for Population-level effect estimation at the scale of all outcomes by all exposures (James Gilbert)
- 16 A demonstration of the EnsemblePatientLevelPredition package (Jenna M. Reps, Jenna Wong, and Ross Williams)
- 17 The OHDSI Community Dashboard: Tracking the Health and Impact of the Open Science Observational Health Data Sciences and Informatics Community (Star Liu, Asieh Golozar, Jody-Ann McLeggon, Adam Black, Paul Nagy)



### **Poster Presentations**

The 2022 OHDSI Symposium will host two sessions featuring a total of over 90 posters that highlight the breadth of global research happening within our community.

Odd-numbered posters will be presented during the first showcase session (2-3 pm), while the even-numbered posters will be presented during the second showcase session (4-5 pm).

#### **Observational data standards and management**

- 18 Assessing Measurement Data Quality in the All of Us Research Program (Jason Patterson)
- 19 Data Quality Monitoring, Transparency and Governance: Enterprise process for data quality stewardship and governance for real-world data (Selvin Soby)
- 20 Assessing and Benchmarking Data Quality and Diversity in the All of Us (Lina Sulieman)
- 21 OMOPs problematic one ICD to more than one SNOMED mappings (Sigfried Gold)
- 22 An Evaluation of the Impact of Vocabulary Evolution on Established Phenotypes (Frank DeFalco)
- 23 Constructing vaccine vocabulary hierarchy using formal concept analysis (Adam Black)
- 24 Extending the OMOP Standard Vocabulary to Include Botanical Natural Products (Sanya Taneja)
- 25 Mapping variants of known significance to the OMOP Genomic Vocabulary (Michael Gurley)
- 26 Development of the Medical Imaging Extension for OMOP-CDM (Seng Chan You)
- 27 Oncology Extension of OMOP-CDM and Federated Learning for Multi-national Cancer Study (Seo Jeong Shin)
- 28 Protocol for finding supplemental oxygen data in electronic health record (EHR) flowsheets for inclusion in the OMOP ETL (Tanner Zhang)
- 29 Leveraging Location Data in OMOP to Incorporate Area Deprivation Index (Maura Beaton & Xinzhuo (Zoey) Jiang)
- 30 The manifold presentations of PROMS and questionnaires: patient-reported outcomes in OMOP use cases (Sebastiaan van Sandijk)
- 31 A scalable framework for transforming multiple data sources to the OHDSI Common Data Model (Janos Hajagos)
- 32 Accurate Oncology Regimen Annotation and analysis of real-world oncology treatment patterns across five academic institutions (Travis Zack)
- 33 FeederNet (Federated E-Health Big Data for Evidence Renovation Network) platform in Korea (Seongwon Lee)
- 34 OMOP's evolution in the data reuse strategy of Hospital Universitario 12 de Octubre (Noelia Garcia)
- 35 PHAROS, Platform for Harmonizing and Accessing Data in Real-time on Infectious Disease Surveillance Based on OMOP-CDM in Korea (Chungsoo Kim)
- 36 Real World Challenges to Using Real World Data: Creating a Multi-Institutional Database in OMOP (Michael Cantor)
- 37 Syntactic and Semantic Harmonization of the French National Healthcare Database (SNDS) (Nicolas Thurin)
- **38 A simplified ETL approach to transforming the MIMIC database into the OMOP Common Data Model in SQLite** (Juan Banda)
- 39 OMOP and FHIR Data Comparison (Andrey Soares)



#### **Poster Presentations**

#### **Open-source analytics development**

- 40 Lowering the OMOP ETL Barrier for Clinical Registries (Smith Heavner)
- 41 Jackalope: A software tool for meaningful post-coordination for ETL purposes (Eduard Korchmar)
- 42 Deployment of an OMOP CDM-compatible NLP system for Rapid Development and Dissemination of a Long-COVID Extraction NLP task (Andrew Wen)
- 43 Knowledge Graph to aid Cohort Diagnostics in concept sets developing (Thi Ngoc Mai Nguyen)
- 44 Cohort Definition Validation in Atlas (Charity Hilton)
- 45 Transitioning ANANKE to OMOP2OBO for more robust NLP extraction and knowledge graph data representation leveraging the OHDSI vocabulary (Juan Banda)
- **46 Development of cancer-related information extraction model from pathology reports using transfer learning** (Jimyung Park)
- 47 Moving OMOP to the cloud with DBT and Snowflake (Roger Carlson)
- 48 NACHC's open source implementation of FHIR to OMOP tool suite (John Gresh)
- 49 Serverless CDM in OHDSIonAWS (James Wiggins)
- 50 Odysseus ARACHNE Data Network Federated Study Execution (Gregory Klebanov)
- 51 DPM360: New Additions to Advanced Disease Progression Modeling (Akira Koseki)
- 52 A survey of OMOP CDM-compatible visualization tools & what the community may do to support tool development and adoption (Natthawut Adulyanukosol)
- 53 Developing objective metrics to diagnose PatientLevelPrediction model designs (Jenna Reps)
- 54 Introduction of a standardized framework to develop deep-learning models using the OMOP-CDM (Chungsoo Kim)
- 55 HERMES: A Health Resources Econometric Analysis Tool (Kyungseon Choi)
- 56 PDA-OTA: Privacy-preserving Distributed Algorithms Over the Air, an OHDSI journey (Yong Chen)

#### **Methodological research**

- 57 Representing and Utilizing Clinical Textual Data for Real World Studies: An OHDSI Approach (Hua Xu)
- 58 Topic Modeling of Clinical Notes for Patients with Infectious Disease using Latent Dirichlet Allocation after Deidentification of Protected Health Information (Junhyuk Chang)
- 59 The Seasonality Score: A Quantitative Complement to Qualitative Seasonality Assessment (Anthony Molinaro)
- 60 Towards Similarity Search in Phenotype Libraries (Ramya Tekumalla)
- 61 Examining Differences in Baseline Characteristics of Broad and Narrow Phenotype Algorithms (Jill Hardin)
- 62 Comparison of Biopsy and Diagnosis Code Based Breast Cancer Phenotypes (Matthew Spotnitz)
- 63 Comparing the impact of clean windows across cohorts and databases (Rupa Makadia)
- 64 Adaptation and Validation of the Charlson Comorbidity Index in Administrative Claims Data Using the SNOMED CT Standardized Vocabulary (Stephen Fortin)
- 65 Using data augmentation for NER-RE joint learning tasks for clinical history information extraction (Xiaodong Zhu)



#### **Poster Presentations**

- 66 Comparing broad and narrow phenotype algorithms: differences in performance characteristics and immortal time incurred. (Joel Swerdel)
- 67 Examining differential measurement error in phenotype algorithms due to age, sex, and disease prevalence differences using PheValuator. (Joel Swerdel)
- 68 Development of an automated comparator ranking algorithm for the REWARD initiative (Justin Bohn)
- 69 Evaluating causal inference methods for survival data in large-scale observational studies (Shiyao Xu)
- 70 ODAP-B: A One-shot Distributed Algorithm for Modified Poisson Regression for Prospective Studies with Binary Data (Lu Li)
- 71 Scalable Bayesian sparse regression for OHDSI studies: Prior-preconditioned conjugate gradient sampler and `bayesbridge(r)` package (Akihiko (Aki) Nishimura)
- 72 dGEM: Decentralized algorithm for Generalized mixed Effect Models with the Application in Hospital Profiling (Jiayi Tong)
- 73 Adjusting for Healthcare Utilization Improves the Performance of Self-Controlled Case Series Studies using Electronic Health Records (Undina Gisladottir)
- 74 Explaining patient-level prediction models using permutation feature importance and SHAP (Aniek Markus)
- 75 Federated Patient-Level Prediction (Byungjin Choi)
- 76 Impact of random oversampling and random undersampling on the performance of predictions models developed using observational health data (Cynthia Yang)
- 77 PULSNAR: Positive Unlabeled Learning Selected Not At Random -- towards imputing undocumented conditions in EHRs and estimating their incidence (Christophe Lambert)

#### **Clinical Applications**

- 78 How Health Systems Can Create Value by Adopting the OMOP CDM (John Methot)
- 79 Building organizational capacity for observational research within a health system (Mary Grace Bowring)
- 80 A Pilot Characterization Study Assessing Health Equity in Mental Healthcare Delivery within the State of Georgia (Jacob Zelko)
- 81 Federated learning for quantifying racial disparities in kidney graft failure rates using US registry data from 29,468 patients across 149 transplant centers (Jiayi Tong)
- 82 Cancer Phenotyping Pitfalls in EHR: The case of Non-Small Cell Lung Cancer (Asieh Golozar)
- 83 Development of Phenotype Algorithms and Characterizations of Primary Open-Angle Glaucoma Using Real-World Data (Nathan Hall)
- 84 It Takes a Village: Community-Driven Phenotyping to Address a Public Health Crisis (Kristin Kostka)
- 85 Phenotyping of a Large Primary Spinal Cord Tumor Cohort Identified through an Observational Healthcare Database (Hart Fogel)
- 86 Identification of patients with drug resistant epilepsy in electronic medical record data using the Observational Medical Outcomes Partnership Common Data Model (Matthew Spotnitz)



#### **Poster Presentations**

- 87 Characterization of first-line treatment for Breast Cancer and Multiple Myeloma using Electronic Health Record and Claims Databases (Matthew Spotnitz)
- 88 Developing a frailty concept in the OMOP CDM among sexual minority older adults (age 50+) in the All of Us database (Brianne Olivieri-Mui)
- 89 Analyzing the Use of Beers Criteria Guidelines through ATLAS Operationalization (Richard Boyce)
- 90 COVID-19 Vaccine Administration Pathways in US Administrative Claims (Kevin Haynes)
- 91 TREAD: Treatment with antidiabetics in patients with T2D and moderate to severe CKD (Martin Lavallee)
- 92 Real world prescribing patterns of dupilumab for atopic dermatitis (Lisa Schilling)
- 93 Incidence analysis and prediction of potentially harmful drugs among asthma patients (Victor Pera)
- 94 Profiling of Comprehensive Health Data and Development of Visualization Dashboard for Cancer (Soobeen Seol)
- 95 Characterization of Health by OHDSI Asia-Pacific chapter to identify Temporal Effect of the Pandemic for Cardiovascular Diseases (CHAPTER-CVDs) (Seng Chan You)
- 96 Building Korean NER models for a manually annotated corpus from clinical notes using cross-lingual transfer learning (Jianfu Li)
- 97 A Machine Learning based Enrollment Rate Forecasting System (Yiqiao Yin)
- 98 Analysis of Influencing Factors of Mortality in COVID-19 Patients: A Retrospective Cohort Stud (Khang Do)
- 99 Development of Lung Cancer Survival Prediction Models Based on Real-world Data and Machine Learning (Jason C. Hsu)
- 100 Development of Machine Learning models for Cancer Survival among Lung cancer patients with Tyrosine Kinase Inhibitors (TKIs) treatment (Alex PA. Nguyen)
- 101 Machine Learning to Predict the Ischemic Stroke among Type 2 Diabetes Mellitus Patients using Taipei Medical University Clinical Research Database (Thanh Phuc Phan)
- 102 Mortality prediction after PCI/CABG using ECG and comorbidities (Stijn Dupulthys)
- 103 One year Post-Stroke Prediction on Cognitive Impairment: A Machine Learning Approach (Jason C. Hsu)
- 104 Prediction of insulin resistance in depression is associated with long-term clinical outcomes (Dong Yun Lee)
- 105 Delirium prediction in patients with trauma and comparison of predictors across trauma center and nontrauma center (Su Jin Gan)
- 106 Comparison of mortality, morbidities & healthcare resources utilization between patients with and without a diagnosis of Covid-19: A study protocol (Ivan Lam)
- 107 Effects of the COVID-19 pandemic on mental health: A multinational network study (Yi Chai)
- **108 Healthcare utilization following SARS-CoV-2 infection in children and adolescents with chronic conditions** (Vitaly Lorman)
- 109 Preliminary Analysis of Self-Reported COVID-19 Vaccination Side Effects on Twitter (Nishanth Pavinkurve)
- 110 Epidemiology of vasomotor symptoms (VMS) in menopausal women (EpiVaSym): a multi-country, largescale OHDSI network analytic study (Ron Herrera)
- 111 Framework for Assessing the Reproducibility of Observational Comparative Effectiveness Researc: DOACs and Ischemic or Hemorrhagic Events Case Study (Asieh Golozar)