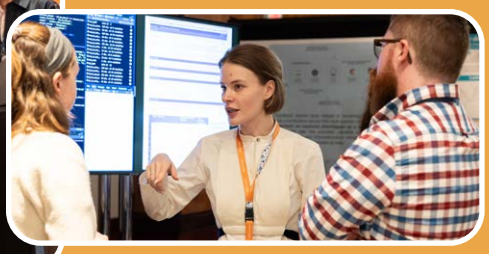
Our Journey

Where The OHDSI Community Has Been And Where We Are Going

2025 edition

OHDSI

OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS



Publication was written and designed by Craig Sachson. Editorial assistance by Patrick Ryan, Paul Nagy, George Hripcsak, Martijn Schuemie, Marc Suchard, Jenna Reps, Peter Rijnbeek, Clair Blacketer, Anna Ostropolets, Melanie Philofsky, Davera Gabriel, and other members of the OHDSI community. Photography shared by the OHDSI community unless specifically credited next to image. Thank you to all members of the OHDSI community for all you have done towards improving global healthcare.

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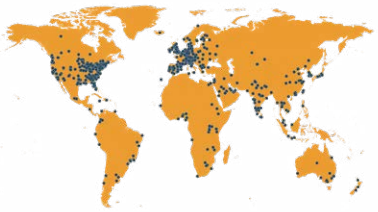
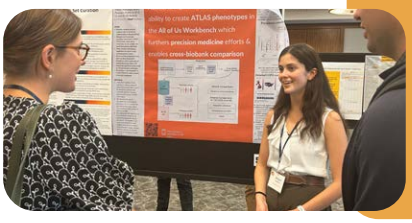
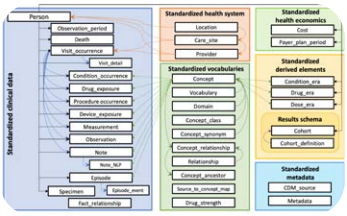
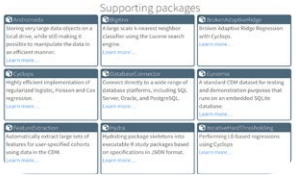
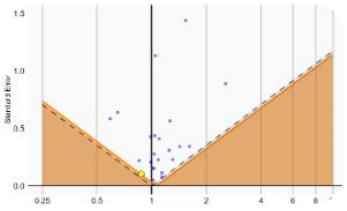
To improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care.

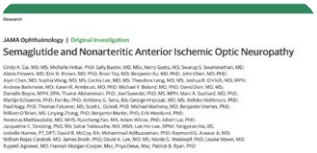










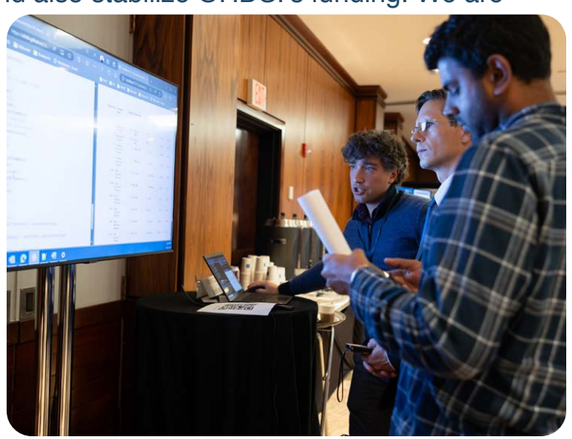


Welcome to the fifth edition of Our Journey.

George Hripcsak, who leads the OHDSI Coordinating Center at Columbia University, shares this welcome letter to all members of the OHDSI community.

OHDSI has had a strong and successful year. We continue to expand our evidence network, expand our vocabulary and mature its maintenance, plan the evolution of our common data model, advance and validate our methods, accelerate our clinical studies, expand our educational offerings, and grow around the world. We held successful symposia in Europe and Asia, and we work with all our regional members to expand their participation and engagement. We have been working hard on the next edition of the Book of OHDSI.

We have seen some shifts in focus in one of our funding sources, the US government. We have also been working—as promised last year—to diversify our central funding. One essential step has been the creation of the OHDSI Advisory Board to advise on OHDSI's future, work together on education initiatives, and also stabilize OHDSI's funding. We are



Welcome To The Community

grateful as we welcome Amgen as our inaugural member, and as we work with other strong OHDSI collaborators to join the board.

Truth in science has been a common topic in the news recently. OHDSI was founded to promote truth in science and trust in results. What are the ingredients that lead to truth? Here is what I came up with. Some are for science in general, and some are more specific to observational research.

Desire—You have to desire truth to obtain it. If you don't want the truth, then science will do nothing for you.

Doubt—Even if you desire truth, if you think you already have it, then you are done. Science cannot help you unless you doubt your own position and are open to other conclusions.

Temptation—Human nature and the unconscious mind being what they are, if you make cheating possible, you will do it. Only through pre-specification of the design of the experiment can you avoid the temptation of embarking on an iterative tour straight to your original suspicion or hope.

Judgment—Every step of an experiment should be judged for accuracy and reliability through diagnostics, replacing mere assertion of competence.

Generosity—You must share your data, your methods, and your software so that others can replicate the experiment.

Perspective—An important way to tell if this experiment is

Welcome To The Community

true is to try different data, approaches, context, methods, and related hypotheses to study the operating characteristics of your study and triangulate to a more stable result.

Reach—In medicine, you need to account for variation in the human population and reach around the world to uncover true differences.

Honesty—You can't just publish your positive results or they become valueless because others won't know how many experiments it took to get this one, undermining the logic of statistical inference. You must also disclose the results of your diagnostics.

This year's plenary addresses perspective and reach through OHDSI network studies. Employing many databases from many locales improves both our internal validity and our generalizability.

This may seem too high a bar for practical science. I think we need to take encouragement from leaders past and present. For whatever reason, the first four people who popped into my mind were: George Washington, who despite his involvement in slavery, stepped away from a third term as president and set the pace for a new nation that would become a world leader; Martin Luther King, Jr. for his pursuit of truth and fairness despite the sacrifice; Mahatma Gandhi and his satyagraha, or devotion to truth; and, more recently, Pope Francis for the direction he set. I guess the point that my unconscious mind made is that the toughest part of truth in science is not about the science. As long as OHDSI exists, it will stand for truth.

-George Hripcsak

II.

OHDSI Mission and Values

OHDSI Mission

To improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care.

OHDSI Vision

A world in which observational research produces a comprehensive understanding of health and disease.

OHDSI Values

Innovation: Observational research is a field which will benefit greatly from disruptive thinking. We actively seek and encourage fresh methodological approaches in our work.

Reproducibility: Accurate, reproducible, and well-calibrated evidence is necessary for health improvement.

Community: Everyone is welcome to actively participate in OHDSI, whether you are a patient, a health professional, a researcher, or someone who simply believes in our cause.

Collaboration: We work collectively to prioritize and address the real-world needs of our community's participants.

Openness: We strive to make all our community's proceeds open and publicly accessible, including the methods, tools and the evidence that we generate.

Beneficence: We seek to protect the rights of individuals and organizations within our community at all times.

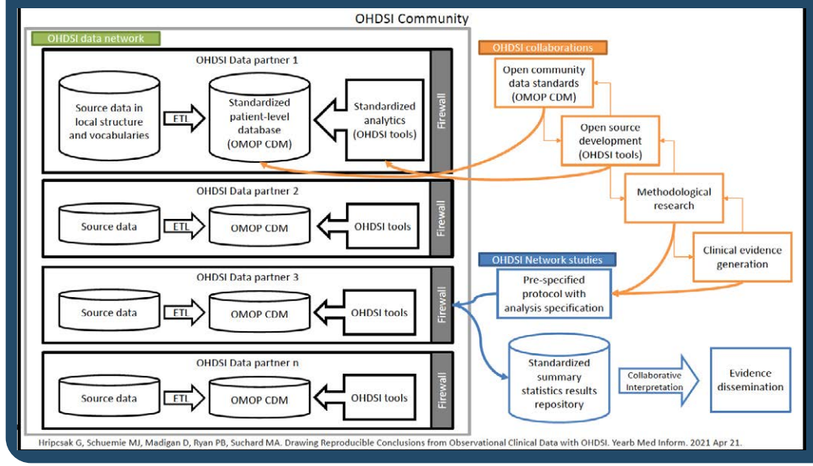
Observational Health Data Sciences and Informatics (OHDSI, pronounced "Odyssey") strives to promote better health decisions and care by generating reliable evidence from standardized health data worldwide. It focuses on large-scale analytics that adhere to empirically proven methodological best practices and promotes collaboration through open science.

Founded in 2013, OHDSI is a growing collaborative of more than 4,700 researchers from various fields (including biomedical informatics, epidemiology, statistics, computer science, health policy, clinical sciences), representing different stakeholders (including academia, industry, government and regulatory authorities, and health providers) across 88 countries from six continents. OHDSI has created a global distributed data network that applies one open community data standard, the OMOP Common Data Model, and collectively represents more than 974 million patient records around the world. It has also developed open-source standardized analytic tools to help turn these standardized data into reliable evidence.

OHDSI collaborates to establish and evolve shared community data standards, conduct methodological research to identify and evaluate scientific best practices, develop open-source software to codify those best practices into transparent and reproducible tools, and apply these tools and practices to generate clinical evidence.

Researchers across our community conduct network studies by identifying a research question and defining protocols and analysis specifications to answer their question. Data partners across the OHDSI distributed network can opt in to execute the study analysis package, sharing aggregated summary statistics (not individual patient data), which are then collaboratively interpreted before public dissemination. The OHDSI Evidence Network connects researchers and organizations with health data who are interested in collaborating and contributing to network studies that generate reliable real-world evidence.

How OHDSI Works



OHDSI Mission and Values

The Department of Biomedical Informatics at Columbia University (DBMI) serves as the coordinating center for the OHDSI community.

Located on the Columbia University Irving Medical Center (CUIMC) campus, DBMI is both an academic department and an information services partner to NewYork-Presbyterian Hospital, a major healthcare provider in greater New York.

One of the oldest informatics departments in the United States, faculty and students at DBMI have set the path for design of clinical information systems, methodologies in clinical natural language processing, and machine learning over electronic health record data. Faculty research includes the development and evaluation of innovative information technologies, which has led to enhancements in both health and healthcare.

Photo by Odelia Ghodsizadeh/CUIMC

Both faculty and students work in a highly collaborative environment, applying informatics from the atomic level to global populations.

DBMI is committed to carrying out rigorous and reproducible science, encouraging creativity and diversity in thought, promoting an inclusive and supportive environment, and making an impact in training, informatics research, biomedicine, and patient care.

Our global community always welcomes new collaborators. OHDSI has more than 40 workgroups and regional chapters that present opportunities for members to apply their skills and interests.

OHDSI's research has been presented across various scientific societies, such as American Medical Informatics Association (AMIA), American Statistics Association (ASA/JSM), and International Society of Pharmacoepidemiology (ISPE), and published in top medical journals, including The Lancet, JACC, JAMA, BMJ, PNAS and JAMIA. It has also informed regulatory agencies, such as the U.S. Food & Drug Administration (FDA) and the European Medicines Agency (EMA).

Please learn more about OHDSI through this publication and **Join The Journey!**

III. OHDSI Collaborators

Map of Collaborators

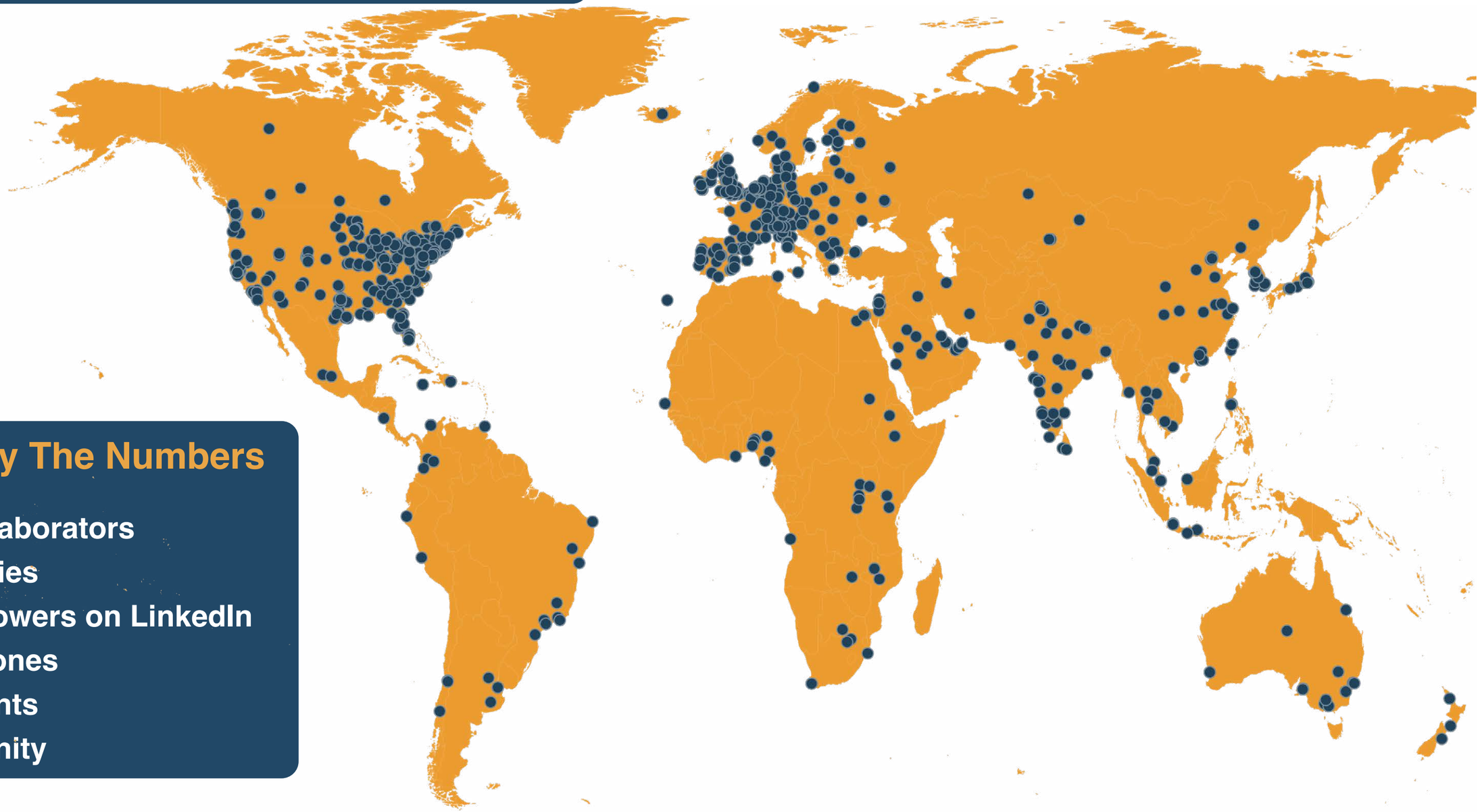
The OHDSI community brings together volunteers from around the world to establish open community data standards, develop open-source software, conduct methodological research, and apply scientific best practices to answer public health questions by generating reliable clinical evidence.

OHDSI By The Numbers

- 4,751 collaborators
- 88 countries
- 9,004 followers on LinkedIn
- 21 time zones
- 6 continents
- 1 community

OHDSI COLLABORATORS

Our community is ALWAYS seeking new collaborators. Do you want to focus on data standards or methodological research? Are you passionate about open-source development or clinical applications? Do you have data that you want to be part of global network studies? Do you want to join a global community that truly values the benefits of open science? Add a dot to the map below and JOIN THE JOURNEY!



OHDSI Workgroups

OHDSI has a central mission to improve health globally, but there are countless areas where our community can be of service. Work around data, methods, open-source tools, and clinical applications are all pieces of the puzzle. Within OHDSI, there are opportunities to work in any or many of these areas.

Our workgroups, led by the extraordinary leads shown here, present opportunities for all community members to find a home for their talents and passions. Newcomers and veterans can both make meaningful contributions to our community by collaborating in workgroups. See an area where you want to contribute? Please Join The Journey!

ATLAS/WebAPI

Christopher Knoll

Alexey Manoylenko

Clinical Trials

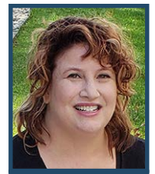
Mike Hamidi

Zhen Lin

Common Data Model

Clair Blacketer

CDM Survey



Nicole Gerlanc

CDM Vocabulary

Anna Ostropolets

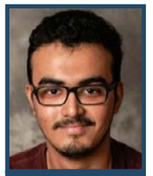
Databricks Users

John Gresh

Dentistry

Robert Koski

Early-Stage Researchers



Shounak Chattopadhyay

Ben Martin

Harry Reyes Nieva

Electronic Animal Health Records

Manlik Kwong

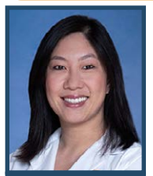
Wayde Shipman

Evidence Network Partners

Clair Blacketer

Paul Nagy

Eye Care and Vision Research



Sally Baxter

Cindy Cai

Kerry Goetz

Michelle Hribar

FHIR and OMOP

Davera Gabriel

FHIR and OMOP

Ben Hamlin

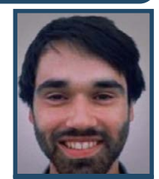
Guy Tsafnat

Generative AI & Analytics in Healthcare

Martijn Schuemie

GIS - Geographic Information Systems

Robert Miller



Kyle Zollo-Venecek

HADES

Anthony Sena

Martijn Schuemie

Health Economics and Value Assessment

Gaurav Dravida

Gowtham Rao

Health Equity

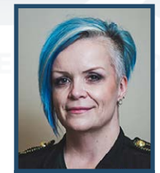
Atif Amin

Healthcare Systems

Melanie Philofsky

Industry

Paul Dougall



Sarah Seager

Medical Devices

Asiyah Lin

Medical Imaging

Paul Nagy

Seng Chan You

Methods Research

Martijn Schuemie

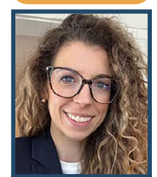
Marc Suchard

Natural Language Processing

Vipina Keloth

Hua Xu

Network Data Quality



Clair Blacketer

Oncology

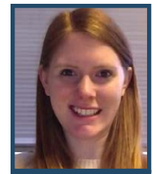
Asieh Golozar

Open-Source Community

Adam Black

Paul Nagy

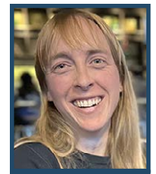
Patient-Level Prediction (PLP)



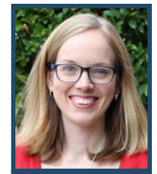
Jenna Reps

Ross Williams

Perinatal and Reproductive Health



Alison Callahan



Stephanie Leonard

Perinatal and Reproductive Health

Louisa Smith

Phenotype Development & Evaluation

Gowtham Rao

Azza Shoaibi

Psychiatry

Dmytry Dymshyts

Callum Harding

Rare Diseases

Xiaoyan Wang

Chunhua Weng

Rehabilitation

Esther Janssen

Ruud Salles

Steering

George Hripcsak

Patrick Ryan

Surgery and Perioperative Medicine

Jenny Lane

Evan Minty

Themis

Melanie Philofsky

Transplant

Michal Mankowski

Vaccine Vocabulary

Oliver He

Asiyah Lin

Women of OHDSI

Sarah Seager

Workgroups Homepage

In OHDSI, there is a home for you. Please visit our workgroups home page to learn more a-bout each group, find the meeting schdule and sign up to one or several workgroups!

www.ohdsi.org/workgroups

Regional Chapters

OHDSI spans 88 nations and six continents, and we collaborate with the intention of building one global community. However, we recognize that many geographic areas often face their own specific challenges. Several teams — both regional chapters and workgroups — have been formed to address these issues, as well as hold networking events and meetings, lead regional studies, and help their regions become valuable collaborators within our universal mission.

Several new regional chapters have been formed over the last three years, including Africa and India. We are excited to see OHDSI enthusiasm spread throughout the world. Thank you to the local leads who bring our community message into different regions of the world.

Africa

Agnes Kiragga

Cynthia Sung

Asia-Pacific (APAC)

Mui Van Zandt

Australia

Nicole Pratt

China

Hua Xu

Europe

Peter Rijnbeek

India

Swetha Kiranmayi Jakkuv

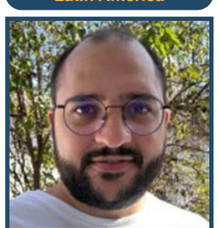
Vikram Patil

Parthiban Sulur

Japan

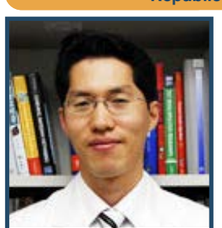
Tatsuo Hiramatsu

Latin America



Julio Oliveira

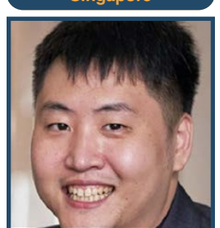
Republic of Korea



Rae Woong Park

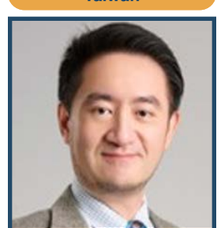
Seng Chan You

Singapore



Mengling 'Mornin' Feng

Taiwan



Jason Hsu

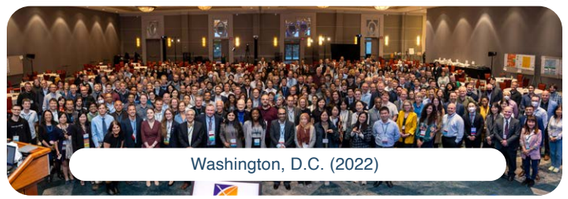
OHDSI Around The World

The OHDSI community is united by a vision, but its power comes from its global presence. Across continents and cultures, collaborators work together to advance health through open science. These images highlight the people around the world who make OHDSI's mission possible. These group photos celebrate the worldwide network that drives OHDSI forward.

Mumbia, India (2024)

Upcoming events:
Nov 10-12 • 1st Africa Symposium (Uganda)
Dec 6-7 • Asia-Pacific (APAC) Symposium (China)

Sydney, Australia (2023)



Washington, D.C. (2022)

Hasselt, Belgium (2025)

Taipei, Taiwan (2022)

Europe National Nodes

Over the last two years, OHDSI Europe developed National Nodes, which are collections of research institutions within a member country. The Nodes include a broad range of member groups, ranging from research institutes, pharmaceutical and IT companies, and SMEs. They are generally led by academic institutions and are inclusive and open to any organization that wants to share experiences with OHDSI-related work, such as mapping data to the OMOP Common Data Model or performing network studies.

As of September 2025, there are 17 National Nodes, and two more nations have shared their intent to form their own node.

National Nodes leads came together during the 2025 Europe Symposium

Europe National Nodes include:
- 17 nations
- 145 data holders
- more than 800 members
- ... and counting

Node	Lead(s)
Belgium	Liesbet Peeters, Annelies Verbiest, Ilse Vermeulen
Denmark	Ismail Gögenur, Martin Høyer Rose, Andreas Weinberger Rosen
Estonia	Raivo Kolde, Sulev Reisberg
Finland	Eric Fey, Gustav Klingstedt
Germany	Ines Reinecke, Michele Zoch
Greece	Anastasia Farmaki, Pantelis Natsiavas,Grigoris Papapostolou
Hungary	Zsolt Bagyura, Ágota Mészáros
Ireland	Aedin Culhane, Mark Lawler, Catherine Mahoney
Israel	Chen Yanover
Italy	Lucia Sacchi, Matteo Gabetta
Luxembourg	Claudine Backes, Andreas Kremer, Maria Quaranta
Netherlands	Renske Los, Aniek Markus
Norway	Espen Enerly, Siri Larønningen
Portugal	Patricia Couceiro, Carmen Nogueira
Spain	Miguel Angel Mayer, Talita Duarte Salles
Switzerland	Olga Endrich, Karen Triep
United Kingdom	Dani Prieto-Alhambra
coming soon	*Austria, Sweden*

If you are working with OMOP data in a country that does not yet have a national node, get your OHDSI friends together, find you common ground, define objectives and form a node! More information can be found here:

www.ohdsi-europe.org/index.php/national-nodes

DARWIN EU®

The European Medicines Agency (EMA) and the European Medicines Regulatory Network established a coordination centre at Erasmus University Medical Center Rotterdam to provide timely and reliable evidence on the use, safety and effectiveness of medicines for human use, including vaccines, from real world healthcare databases across the European Union (EU). This capability is called the Data Analysis and Real World Interrogation Network (DARWIN EU®).

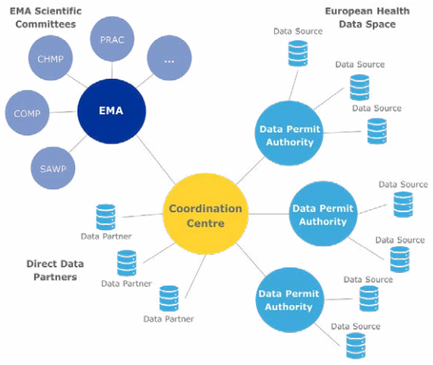
The DARWIN EU® data network currently includes 30 data partners across 16 nations — comprising more than 181 million patients — that have been mapped to the OMOP common data model. Multiple OHDSI Titan Award winners can be found leading the DARWIN EU® coordination centre, and many OHDSI tools, methods and practices are present in completed and ongoing studies.

DARWIN EU Objectives

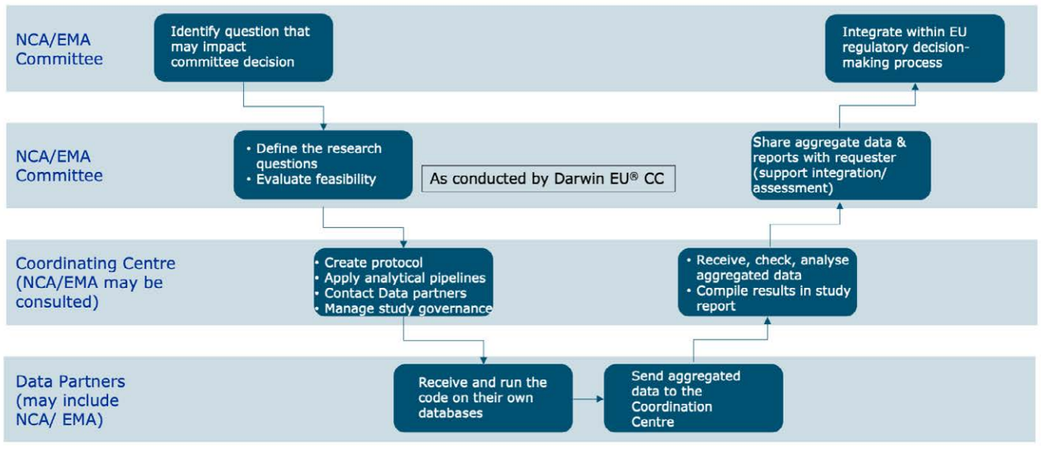
1) To establish and maintain a continually enlarging network of accessible observational data sources

2) To execute all steps of high quality non-inter-ventional studies with the network

3) To make the study results available to the EU Regulatory network to support decision-making



What is the DARWIN EU® process for conducting studies?



Types of Studies

Category	Description
Off-The-Shelf Studies	These are mainly characterisation questions that can be executed with a generic protocol. This includes studies on disease epidemiology, for example the estimation of the prevalence or incidence of health outcomes in defined time periods and population groups, or drug utilization studies at the population or patient level.
Complex Studies	These are studies requiring development or customisation of specific study designs, protocols, analytics and phenotypes. This includes studies on the safety and effectiveness of medicines and vaccines.
Routine Repeated Analyses	Routine analyses based on Off-The-Shelf or Complex Studies (see above), which are repeated with a pre-specified regularity (e.g. yearly)
Very Complex Studies	Studies which cannot rely only on electronic health care databases, or which require complex and/or novel methodological work

Number of studies

PHASE I Establishment – 1st year → PHASE II Establishment – 2nd year → PHASE III Operation – 1st year → Operation 2nd year → Operation 3rd year

	Year 1	Year 2	Year 3	Year 4	Year 5
Phases	Phase I	Phase II	Phase III	Option 1	Option 2
Routine Repeated analysis	-	-	4	35-50	35-50
Off the shelf studies	3	14	23	35-50	35-50
Complex Studies	1	4	10	15-20	15-20
Very Complex Studies	0	0	0	1	1

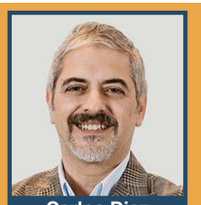
darwin-eu.org

DARWIN EU® Leadership

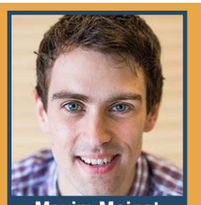
Peter Rijnbeek
Erasmus MC
Executive Director, Technology Pillar Lead

Dani Prieto-Alhambra
Erasmus MC, Oxford University
Deputy Director, Development Pillar Lead

Katia Verhamme
Erasmus MC
Deputy Director, Study Operations Pillar Lead



Carlos Diaz
Synapse Research Management Partners
Management Pillar Lead



Maxim Moinat
Erasmus MC
Network Operations Pillar Lead

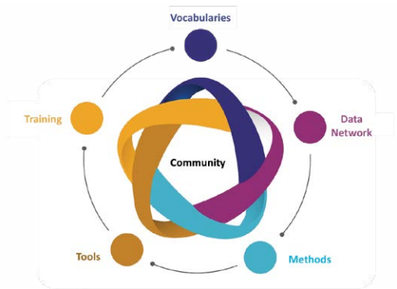
EHDEN Foundation

EHDEN — the European Health Data & Evidence Network — was launched in 2019 to address the challenges of generating insights and evidence from real-world clinical data at scale throughout Europe. Building on OHDSI tools and practices, EHDEN developed a public-private consortium consisting of 25 organizations that successfully implemented its mission: *to provide a new paradigm for the discovery and analysis of health data in Europe, by building a large scale, sustainable federated network of data sources standardised to the OMOP common data model.*

EHDEN leaders recognized the need to continue this work, so they created the EHDEN Foundation, which set a mission to operationalize a new paradigm for the discovery and analysis of health data, building on a large-scale federated network of data sources standardized to the OMOP CDM.

EHDEN Foundation Vision: The EHDEN Foundation aspires to be the trusted key actor in Europe to facilitate and accelerate the generation of high-quality real-world evidence to improve healthcare of patients.

To implement its vision, the EHDEN Foundation will maintain the EHDEN Catalogue and EHDEN Academy, create research opportunities for multiple stakeholders, execute federated studies and support methodological and technical developments to further expand and improve the Data Partner Network in strong collaboration with the OHDSI community.



Learn More: www.ehden.eu

Key Research Activites for the EHDEN Foundation

Advisory	Studies	Research Programmes	Training
Data Landscaping	Disease Epidemiology	Neuroscience	Study-a-thon
Feasibility	Drug Utilisation	Oncology	Online Training
Study Design	Drug Safety/Effectiveness	*Other*	On-site Training

Support The Journey

The OHDSI community comprises a global team of volunteers who collaborate together using open-source tools and share best practices to support our shared mission of generating real-world evidence that promotes better health decisions and better care.

In order to foster growth in our community, the OHDSI Coordinating Center at Columbia University has created a sponsorship program and an advisory board. These programs allow both corporations and individuals to make meaningful contributions in support of OHDSI's central coordinating activities. Any amount of support enhances both our community and our mission.

If you are interested, please reach out to sponsorship@ohdsi.org.

Coordinating Center Support

- Provides central shared infrastructure and coordinates community activities to enable collaborations that advance OHDSI's mission
- Leads Steering Workgroup to provide guidance and support to enable the community to collaboratively generate evidence and the scientific work products necessary to generate evidence
- Supports current OHDSI leaders (workgroups, regional chapters, network studies, etc.) to achieve their objectives by communicating ongoing activities and successful accomplishments, encouraging participation and collaboration throughout the community, and empowering future leaders
- Maintains infrastructure and provides support to connect collaborators with collaboration opportunities
- Encourages more visitors to become collaborators
- Provides open access to OHDSI evidence and work products, including:
  - Distributing standardized vocabularies
  - Supporting open-source software with permissive licenses
  - Encouraging open sharing of study design and implementation
  - Maintaining open access to study results

Advisory Board

Columbia University recently created the Advisory Board of Columbia OHDSI program.

The goal of the OHDSI Advisory Board is to ensure OHDSI operates according to the established values, vision, and mission. A seat on this board costs $100,000 per year. These funds are used to support costs associated with running OHDSI, including but not limited to programming and knowledge engineering support for the OHDSI vocabulary, cloud service management, data analytics, and the annual OHDSI conference. OHDSI Advisory Board members advise on OHDSI planned activities including vocabulary priorities, annual research initiatives, and tool development. **We thank Amgen for being the first member of our Advisory Board.**

If you are interested in learning more or in joining the board, please email George Hripcsak: hripscak@columbia.edu.

Coordinating Center Responsibilities

Steward open community data standards
- *vocabularies*
- *OMOP CDM*
- *support adoption in large multi-center intiatives*
- *foster external collaborations (HL7)*

Enable open-source development
- *host servers to enable development and continuous tool testing*
- *GitHub repo support*
- *support ATLAS demo*
- *create central infrastructure*

Facilitate methods research & clinical applications
- *host ATLAS collaboration environment*
- *support Evidence Network and ongoing network studies*
- *lead studies and develop tools*

Encourage open sharing & evidence dissemination
- *host OHDSI RShiny servers for open sharing of results (more than 230 RShiny applications, including LEGEND)*
- *built results.ohdsi.org*

Foster collaboration & empower community
- *host and fund annual Global Symposium*
- *maintain forums, MS Teams*
- *facilitate weekly community calls, website, all other communications*

Coordinating Center Costs: >$1M annually

Organizations Involved With OHDSI

OHDSI is a global community of collaborators. Many of the individuals represent organizations who contribute to and benefit from their participation in the OHDSI community. OHDSI is proud to collaborate with the more than 1100 organizations listed below, and looks forward to other organizations joining the journey as well.

2Ca-Braga • Aarhus University • Abbott • AbbVie • Academy of Nutrition and Dietetics • Accenture • ACEP • Actelion Pharmaceuticals Ltd, • Acumen Analytics, Inc. • Aditya Birla Health Services Pvt Ltd • Advantmed India LLP • Advocate Aurora Health • Aetion • Affinity Networks, Inc. • Africa Institute for Health Policy • African Population and Health Research Center • Aga Khan University Hospital • Agenzia Di Tutela Della Salute Della Provincia Di Bergamo • AHRI • Ainigma Technologies • Airlangga University • Ajou University Hospital • Akrivia Health • Albany College of Pharmacy and Health Sciences • Albert Einstein Hospital • Alberta Health Services • Alexion Pharmaceuticals • All Of Us Research Program • Allscripts • Altera Health • AMC Medical Research BV • American Academy of Neurology • American Academy of Ophthalmology • American College of Radiology • American Thrombosis and Hemostasis Network • Americas Medical Services / UHG Brazil • Amgen Canada Inc. • Amgen Inc • Amphora Health • Amsterdam UMC • Analysis Group • Ancora • Andalusian Health Service • Andrija Štampar School Of Public Health • Annexus Health • Answer Digital • Anthem • AOTMiT • AOU Meyer IRCCS • APDP Diabetes Portugal • Apervita • AP-HM • AP-HP, INSERM, Sorbonne University • APHRC • Aptive Resources • Arcadia Inc • Architectural Medicine LLC • ARDC • Aridhia Informatics Ltd • Arizona State University • arkhn • ARS Toscana • Artexe S.p.A. • Asan Medical Center • ASCO CancerLinQ • Asociación Instituto De Investigación Sanitaria Biocruces Bizkaia • Assistance Publique - Hopitaux De Paris / Aphp • Assistance Publique Hopitaux De Marseille • Association EISBM • ASTAR SICS • Astellas Pharma • AstraZeneca • ASU • Athenahealth • Atrium Wake Forest Baptist Health • AU-EPBRN • AUNA • Auria Tietopalvelu / Varsinais-Suomen sairaanhoitopiiri • AUS Dept of Veterans Affairs • Ausl parma • AUSL Reggio Emilia • AUSL-IRCCS di Reggio Emilia • Austin Health • Avenga • AWS • Axiomedix • Az Damiaan • AZ Delta • Az Klina • AZ Maria Middelares • Azienda Ospedaliera di Parma • Azienda Ospedaliera Nazionale Ss. Antonio E Biagio E Cesare Arrigo Alessandria • Azienda Ospedaliera Universitaria (Aou) Di Modena • Azienda Ospedaliera Universitaria Verona • Azienda Ospedaliero-Universitaria di Parma • Azienda Unità Sanitaria Locale-Irccs In Reggio Emilia • B2I Healthcare • Bahia Software • Bahir dar University • Balkh University Family of Medicine • Bambino Gesu Children's Hospital • Baroda Medical College, India • Barts Health NHS Trust • Baxter • Bayer AG • Baylor College of Medicine • Baylor Scott and White Health • BC Platforms • BCB Medical Oy • Beijing Safe House • Bendigo Health • Ben-Gurion University • Berlin Institute of Health • BI Pharma • Bill & Melinda Gates Foundation • Biogen • Bioinformatics Institute • BioSci Consulting • BioT • Boehringer Ingelheim Pharmaceuticals Inc. • Bonadt • Booz Allen Hamilton • Bordeaux Hospital • Boston Medical Center • Boston University • Bradford Teaching Hospitals NHS Foundation Trust • Brazilian MOH • Brigham and Women's Hospital • Bristol-Myers Squibb • Brown Center for Biomedical Infoamtics • Brown University • BSMU • Bucheon Hospital • Buddhimed Technologies • Caliber • Campbell University School of Osteopathic Medicine • Canadian Institute for Health Information • Cancer Registry of Norway • Cancer Treatment Centers of America • Cancerdatanet Gmbh • Canterbury Christ Church University • Capgemini • Cardiff University • CareDx • Careggi University Hospital • CareQuest Institute for Oral Health • Carilion Clinic • Carnegie Mellon University • Carnegie Melon in Qatar • Casa di Cura Privata del Policlinico • Case Western Reserve University • Catholic University of Korea Seoul St. Mary's Hospital • Catholic University of Korea Yeouido St. Mary's Hospital • CBWCHC • CCHO FZ LLC • CDPHP • Cedars-Sinai Medical Center • Cegedim Health Data • Center for Surgical Science Zealands University hospital Denmark • Centers for Disease Control and Prevention • Central South University • Centre for Big Data Research in Health, UNSW • Centre for Health Analytics, Melbourne Children's Campus • Centre for Health Informatics, University of Calgary • Centre for Prevention of Stroke and Dementia, Nuffield Department of Clinical Neurosciences, University of Oxford • Centre Hospitalier Universitaire De Lille • Centre Hospitalier Universitaire De Toulouse • Centro Clínico Champalimaud • Centro de Hemoterapia y Hemodonacion de Castilla y Leon • Centro Hospitalar e Universitário de Coimbra • cepobia • Cerner • Cerner Enviza • CGD HEALTH PTY LTD. • CH ACTL EPIDEMIOLOGY • Cha University Bundang Medical Center • Charité - Universitätsmedizin Berlin • CHCO (USA) • Cherokee Health Systems • Chevron Health and Medical • Children's National • Childrens Clinical University hospital • Children's Hospital Colorado • Children's Hospital of Philadelphia • CHLA (USA) • Chonnam National University Hospital • Christe • CHU Montpellier • CIDACS - Centre for Health Data Integration and Knowledge • Cidacs/Fiocruz • Cidacs-IGM-Fiocruz • CIHI • Cincinnati Children's Hospital Medical Center • CINTESIS • Cipherome, Inc. • City Credit Capital UK Ltd. • Cityblock Health • Claflin University • Claim Clarity • Clarivate Analytics • Clemson University • Clinica Alemana de Santiago • Clinical Architecture • Clinical Center of Serbia • Clinical Centre of Nis • Clinical Data Interchange Standards Consortium (CDISC) • Clinical Practice Research Datalink (CPRD) • Clinical Study Support, Inc. • Cloud Senang • Cobracom, LLC • Cochrane Singapore • CODATA • Cognizant • collaborate.eu • College of Science & Technology • Columbia University • Columbia University Irving Medical Center • Comac-Medical • CommonSpirit Health • Community Pharmacy • Comsentimento • ConcertAI • ConvergeHEALTH by Deloitte • Cooperative Health • Copperline Professional Solutions / Renaissance Computing Institute, UNC Chapel Hill • Cornell University • Covance • COVARIANCE P.C. • Covera Health • CPRD • CRHFEI • Critical Path Institute • CRO Aviano • Croatian Institute of Public Health • Cultural Agents • CuriMeta, Inc. • cwdata • D'Inves72tigacions Mèdiques • D4L data4life gGmbH • Daccude • Daegu Catholic University Hospital • Daiichi Sankyo Europe GmbH • Dana-Farber Cancer Institute • Danylo Halytsky LNMU • Dartmouth Health • DASA • Data Analytics Centre - Danish Medicines Agency • Data Integration Centre University Hospital Carl Gustav Carus Dresden • Data InterOps • data4life • Databricks • DataRiver S.r.l. • Datasus Ambulatory • David Griffin School of Medicine at University of California, Los Angeles • De La Salle University • Dedalus • Deepthinkhealth Inc • Defense Health Agency • Delft University of Technology • Dell Medical School • Deloitte Consulting LLP • Democritus University of Thrace and Athena Research CEnter • Department of Preventive Medicine, Yonsei University • DFCI • DHC • DHS Los Angeles • Digital China Health Technologies Company (China) • Digital Health China Technologies Co., LTD • Digital Scientists • Digulab Ltd. • DKW • DNAnexus • Doctors with Africa • Dongguk University Ilsan Hospital • Dresden University Of Technology • DRG • Drug Safety Research Unit • DS-I Africa: eLwazi (Open Data Source Platform) based at University of Cape Town • Duke Clinical Research Institute • Duke University • Duke-NUS Medical School • EAU • Eau Claire Cooperative Health Center • EBMT (EU) • edenceHealth NV • Edinburgh Cancer Centre • EGCUT • EHDEN • Einstein College of Medicine • EISBM • El Camino Health • Elevance Health • Eli Lilly & Company • Elmergib University • Elsevier • Emory University • Ephir, Inc • Epic Systems • Equipe Zorgbedrijven & Erasmus MC • Erasmus University Medical Center • Eric Cox Consulting LLC • Essex Management • European Health Management Association, Westminster University in Tashkent • European Medicines Agency • Evidentli Pty Ltd • Evidera • Evidnet • Ewha Womans University Mokdong Hospital • Exactis Innovation • Excelra • F. Hoffmann-La Roche AG • Fairview Health Services • Federal University of Santa Catarina • FeelBetter • FemTec Health Inc. • FIBH12O • FIIBAP • FinnGen • Finnish Cancer Registry • Finnish Institute of Health and Welfare • Fiocruz • Fisicaid • FITec • Flatiron Health • Fondazione IRCCS Ca' Granda Ospedale • Fondazione IRCCS Istituto Nazionale Dei Tumori • Fondazione IRCCS Istituto Neurologico Carlo Besta • Fondazione IRCCS Policlinico San Matteo • Fondazione Poliambulanza • Fondazione Toscana Gabriele Monasterio • Foundation for Advancing Science, Technology, Education and Research (FASTER) • Fourier Intelligence • Fraunhofer Institute for Digital Medicine MEVIS • Fred Hutch Cancer Center • Freenome • Freyr Ltd • Fudan University • Fujitsu • Funcional Health Tech • Fundacio Institut • Fundación Rioja Salud • FUS • G42 Healthcare • GA4GH • Gacheon Gil Hospital • Gangbuk Samsung Hospital • Gangdong Sacred Heart Hospital • Gangnam Severance Hospital • Gastro Health • Gates Medical Research Institute • Gates Ventures • GE Healthcare • Gedeon Richter Plc. • Geisinger • Genentech • General Hospital Of Kavala • Geneva Tumor Registry, University of Geneva • Genome BC • Genomics England • George Mason University • George Washington University • Georgetown • Georgia Institute of Technology • Georgia Tech • Georgia Tech Research Institute • Gerencia Asistencial Atención Primaria Madrid • German Center for Diabetes Research (DZD) • Germantown Academy • Getrude's Children Hospital • Gilead Sciences • GlaxoSmithKline • Global Value Web Technologies Pvt. Ltd. • Glsmed Learning Health • GMCK • Google • Gotthardt Healthgroup AG • Government of the Northwest Territories • Gray & Associates • Great Ormond Street Hospital NHS Foundation Trust • GRUPO AUNA • Gunma Kokusai Academy • GVW technologies • H2O.ai • Hackensack Meridian Health • Hainan Institute of Real World Data • Hallym University College of Medicine • Hamad Medical Corporation Ambulance Service • Hanover Medical School (Germany) • Hanyang University Hospital • Hartford HealthCare • Harvard Medical School • Harvard Pilgrim Health Care Institute • Harvey Walsh Ltd • Hasselt University • Haute Autorité de Santé • HCSC • HD Labs (Hilltop Digital Lab Ltd) • HDR UK • Health Compiler Inc • Health Data Research UK • Health Insurance Review and Assessment Service • Healthark Insights • Healthcare Innovation Catalysts • Healthcare Triangle Inc • Healthcore • HealthPartners • HealthVerity • Hebei Mental Health Center • Heliant ltd • Helix • Helix Biogen Institute • Helsinki University Hospital • Helwan University • Hengrui Pharmaceutical • Hennepin Healthcare Research Institute • Herbarium • Hierarchia D.O.O. On Behalf Of University Hospital Centre Zagreb • HIKE HEALTH • Hilltop Digital Lab Ltd • Himformatics • Hinge Health • HITLAB • HKU • HL7 • HM Hospitals • HMAI • HMAR • Holmusk • Holon Institute of Technology • Hopital Universitaire de Bruxelles - Institut Jules Bordet • Hopsital Universidad Del Norte • Horiana • Hospital Authority • Hospital District Of Southwest Finland (Varsinais-Suomen Sairaanhoitopiiri) • Hospital do Espírito Santo de Évora • Hospital Israelita Albert Einstein • Hospital U. Fundación Alcorcón • Hospital Universitario 12 de Octubre • Hulafe (Spain) • Humana • Humanitas Mirasole s.p.a. • Humanized Health Consulting, LLC • Hus Datalake Ecareforme Poc • Hwasun Chonnam National University Hospital • IBM T.J. Watson Research Center • Icahn School of Medicine at Mount Sinai • ICIPE • ICON • ICVS (Portugal) • IDIAP Jordi Gol • Idisba • Idival • iHealth Data Sciences LLC • IHHN • IIAS • IIHMR, Bangalore • IIIT Guwahati • IISER • IKNL • Imam Abdulrahman Bin Faisal University • IMASIS • IME • Imosphere Ltd • Imperial College London • Imperial College Of Science Technology And Medicine • INABICERTH • Incheon Sejong Hospital • InCRyptable Consulting Group • Independence Blue Cross • Indian Society for Clinical Research • Indiana University School Of Medicine • Indiana University, Indianapolis • Infinite Computer Solutions • Infosys Limited • Inha University Hospital • Inje University Seoul Paik Hospital • INKL • innovaccer • Innovative Medical Research SA • Inova Health • Insight Health • INSPIRE EAST

AFRICA • Institute for Evidence-Based Health (ISBE) • Institute for Implementation Science and Health • Institute for Medical Research/Durham VA • Institute of Applied Biosciences, Centre for Research and Technology Hellas • Institute of Medical Bioinfomatics and Systems Medicine • Instituto de Investigacion Hospital 12 de Octubre • Int'l Uni of Health And Welfare • Integra Connect • Integraal Kankercentrum Nederland • Intermountain Healthcare • International Society for Pharmacoepidemiology • International University of Health and Welfare • InterSystems • IOMED Medical Solutions • IPRO • IQVIA • IRCCS Azienda Ospedaliero-Universitaria di Bologna • IRCCS Istituto Romagnolo per lo Studio dei Tumori (IRST) • IRCCS Policlinico San Donato • IRCCS San Matteo Pavia • IRST (Italy) • ISBST & National School of Computer Sciences, Tunisia • Islamia University of Bahawalpur • Istanbul University Istanbul Faculty of Medicine • Istanbul University-Cerrahpasa • Istituto nazionale dei tumori • ISU • Italian College of General Practice and Primary Care (SIMG) • ITClinical • ITTM S.A. • J. Craig Venter Institute • Jackson Laboratory • Jacobi Medical Center • Janssen Pharmaceuticals • Janssen Research & Development LLC • Jayne Koskinas Ted Giovanis Foundation • Jiangxi Province • JIBB Enterprises LLC • Johns Hopkins School of Medicine • Johns Hopkins University • Johns Hopkins University School of Medicine • Johnson & Johnson • Joint Clinical Research Centre • JSS Academy of Higher Education & Research, Mysuru • Juntendo Uni SOM • Kabale University • Kainos • Kaiser • Kaiser & Preusse • Kaiser Permanente Riverside Medical Center • KAIST • Kangwon National University Hospital • Karolinska Institutet • KAUST • Keio University • Kent and Medway Medical School • Khoo Teck Puat Hospital • KI Research Institute • Kilimanjaro Christian Medical University College of Management and Development for Health • Kilimanjaro Clinical Research Institute • King Abdulaziz University • King Saud University Medical City • King's College London • Klinično-Bolnički Centar Zvezdara • Knight Cancer Institute • Koc University • Konkuk University Hospital • Konyang University Hospital • Kootenai Health • Korea Advanced Inst of Sci and Tech • Korea University Anam Hospital • Korea University Ansan Hospital • Korea University Guro Hospital • Korle Bu Teaching Hospital • Kyoto University • Kyunghee University Hospital • Kyungpook National University Hospital • Kyushu University Hospital, Japan • La Trobe University • Lancashire Teaching Hospitals NHS Foundation Trust • LBI Digital Health and Patient Safety • Lean Business Services • Leeds Teaching Hospitals NHS Trust • Leiden MC • Leukemia and Lymphoma Society • Lifebit • Lifeline • LIH (Luxembourg) • Limics • LinkDoc • LMU Munich University Clinic • LMU of Munich • Loma Linda University • Los Angeles County Department of Health Services: Women's Health Innovation • Loyola University (NOLA) • LSHTM • LTS Computing LLC • Lund University • Lundbeck • Lynxcare Clinical Informatics NV • M2GEN • Maastricht University Medical Centre • Maggiore Policlinico • Mahidol University • Maine Medical Center Research Institute • MaineHealth • Management Sciences for Health • Manipal college of Pharmaceutical Sciences, MAHE • Marina Salud S.A. • Mass General Brigham • Mathematica • Mayo Clinic • McGill University • MCRI • MD Partners, Inc. • MDV (Japan) • MEBM CARE • Medaman BV • Medcase • Mederrata Inc • Medexprim • Medibloc • Medical College of Wisconsin • Medical Device Innovation Consortium (MDIC) • Medical Engineering Institute, Inc. • Medical University of Graz • Medical University of South Carolina • Medical University of Vienna • Medicalscan Ltd • MedMana • medondo • MedStar Health Research Institute • Meharry Medical College • Melbourne University • Memorial Sloan Kettering Cancer Center • Merative • Mercer • Merck & Co. • MGH/MGB CHoRUS • Michigan Department of Health and Human Services • Michigan Medicine • Microsoft Corporation • Military University Of Technology • Minderoo Foundation • Ministry Of Health Singapore • Minneapolis VAMC • Misoinfo • MIT • MITRE Corporation • MITYUNG INFOTECH (P) LTD. • MLCommons • Moffitt Cancer Institute • Moh • Momentum AD • Monash University • Monash University Malaysia • Montefiore Health System • Mount Sinai School of Medicine • Mountains of the Moon University • Moxe Health • MS Forschungs- und Projektentwicklungs-gGmbH • MS Urban Research Center • MSD • MSFP-gGmbH • MTG Research and Development Lab • MTPPI • MU Vienna • Murdoch Children's Research Institute • Myongji Hospital • Myriad Genetics Inc • NACHC • Nanfang Hospital • Nanjing Audit University • Nanjing Medical University • Nanyang Technological University • NATGO DATA GROUP, INC • National and Kapodistrian University of Athens • National Cancer Center • National Cancer Center Hospital East • National Cancer Hospital East • National Cancer Institute • National Center for Advancing Translational Sciences (NCATS) • National Health Insurance Corporation Ilsan Hospital • National Institute Health Research UK • National Institute of Public Health (Japan) • National Marrow Donor Program • National Organization of Rare Disorders • National University of Hospital (SG_NUH) • National University of Singapore • Navigating Cancer • NCQA • NEC SWS • Nemours • NeoGenomics • NESTcc • Netherlands Comprehensive Cancer Organisation (IKNL) • Network Health • network.bio • New York Genome Center • New Zealand Ministry of Health • NextGen Healthcare • NHIRD • NHMRC Clinical Trials Centre, University of Sydney • NHS • NICE • Nicklaus Children's Health System • NIH All of Us Research Program • NIP • NJ Department of Health • Northeastern University • Northeastern University - Roux Institute • Northshore University Health System • Northside Hospital • Northumbria Healthcare NHS Foundation Trust • Northwell Health • Northwestern Medicine, Feinberg School of Medicine • Northwestern University • Norwegian Center For E-health Research • Novartis • Novartis India • Novo Nordisk Inc. • NSI • nttdata • Nuance Communications • Nuffield Health (UK) • NYU Langone Health • OAKS Consulting s.r.o. • Odysseus Data Services • OHSU • Okayama University • Oklahoma U • OMNY Health • Oncoclinicas • Open Evidence • OPEN Health • Oppo Guangdong Mobile Communication Co., Ltd. • Optima • Optimum Patient Care Limited • Optum • Oracle Corp • Oregon Health & Science University • Oregon State University • Oslo University Hospital • OSU Medical Center • Ottawa Hospital Research Institute • Outcomes Insights • P E P I Consultancy Limited • P.G.M.D. Consulting Srl • p95 • Palo Alto VA medical center • Parc de Salut Mar Barceclona • Pareto Intelligence • Parexel International • Paris Saclay Cancer Cluster (PSCC) • Paxata • PCCI • Pedianet • PEDSnet • Peking Union Medical College Hospital • Peking University • Penn Medicine • Penn State College of Medicine • Penn State University • Peter MacCallum Cancer Foundation • Pfizer • Pharmacovigilance Program of India • PHC-Medicom • PHI Digital Healthcare • Philips Research • PhysioNet • PicnicHealth • Pirkanmaa Hospital District • Plateforme De Données De Santé • Plinth Analytics • Policlinico di Milano • Policlinico San Donato S.P.A. • Pontificia Universidad Católica de Chile • Pontificia Universidad Javeriana - Bogota, Colombia • PortoPiccolo Group • Portuguese Institute of Oncology of Porto • Precision Data • Premier Healthcare • Principia Health Sciences, Inc • Prisma Health • Promptly Health Analytics • Providence Global Center • PSMAR (Barcelona) • PSSJD • PUCPR • Purdue University • Pusan National University Hospital • Qassim University • Quang Ninh Department of Health • Queen Mary University Of London • Queensland Health • Quinten • RAACAI • Rambam Health Care • Rambam Medical Center • RCGP (UK) • Reading University • REDCap Cloud • Regeneron • Regenstrief Institute • Reliant Medical Group • Rice University • Rigshospitalet • RIVM • Robot Bacon • Roche • Roivant • Rotterdam School of Management, Erasmus University • Royal Children's Hospital • Royal Surrey Hospital • RTI Health Solutions • RTI International • Ruijin Hospital, Shanghai Jiao Tong University School of Medicine • rumor.ml • Rush UMC • Rutgers University • RWJ Barnabas • SA Health • Saarland University Hospita • Sage Bionetworks • SAIL Databank • Saint Louis University School of Medicine • Samsung Seoul Hospital • Samvit Solutions • San Diego State University • Sanata Dharma University • Sanford Health • Sanofi • University of Rome • SAS • Saudi Food and Drug Authority • Save the Children International • SBSHSL • Scibite • SciForce Solutions • SEA Healthcare • Secretaria Municipal da Saúde da Cidade de São Paulo • sema4 • SemanticClarity • Semantix • Semmelweis Egyetem • Sensyne Health • Sentara Healthcare • Seoul National University Boramae Hospital • Seoul National University Bundang Hospital • SERMAS & FIIBAP • Servicio de Salud Araucania Sur • Servicio Navarro de Salud Osasunbidea • Seven Bridges • Severance Hospital • Shanghai Chest Hospital • Shenyang Pharmaceutical University • Shri Jagannath Medical College and Hospital • Shuanghe Hospital • SICS - A*STAR • SiData+ • Siemens Health Services • Sigma Ingenieria • Sigmadata Consulting Services • SIMG (Italy) • Singapore Health Services Pte Ltd • Siriraj Hospital • Six Aims LLC • SKM • SLUHN • Smartanalyst India Pvt Ltd • SMS-SP • SNOMED CT • Snowflake • SoftServe Inc • soft-tech • Soonchunhyang University Medical Center • Sorbonne University • South Western Sydney Local Health District • Spectrum Health • Spence • SpinSys • Spok • St Jude Children's Research Hospital • St. Luke's (Idaho) • Stanford Healthcare • Stanford School of Medicine • Stanford University • STATINMED • Stephens Family Clinical Research Institute • Stichting Integraal Kankercentrum Nederland • STIZON • Stony Brook Medicine • Stony Brook University • Sun Yat-sen University • Sunnybrook Research Institute • Swansea University • Swiss Re • Syapse • Sydney LHD • Sydney Local Health District • Symmetric Health Solutions • Sysmap • Taibah University • Taipei Medical University • Taipei Municipal Wanfang Hospital • Takeda • Talosix • Tampere University • Tan Tock Seng Hospital • Tarbiat Modares University • Tata Consultancy Services • Technical University Sofia • Technological University Dublin • Tehran University of Medical Sciences • Temote Systems • Tempus • Texas Childrens Hospital • Texas State University • Texas Zephyr Research • TFS HealthScience • The Christie NHS Foundation Trust • The Fifth Affiliated Hospital of Sun Yat-sen University • The Hospital District of Southwest Finland • The Hospital for Sick Children • The Hyve • The Royal Children's Hospital • Thomas Jefferson University • Tianjin Anding Hospital • Tianjin Medical University • TietoEVRY • Timformatie • Tokyo University • Touro College of Pharmacy • TrakPop Inc. • tranSMART • TrialSpark • Trio Health • Triomics • TU Dresden • Tufts Medical Center • Tulane • Tuva Health • TVHS VA/ VUMC • U Aberdeen • U Alabama at Birmingham • U Alcalá • U Arizona • U Arizona, College of Medicine-Phoenix • U Arkansas • U Basel • U British Columbia • U Calgary • U California Los Angeles • U California San Diego • U California San Francisco • U Cambridge • U Canterbury • U Cape Town • U Chicago • U chinese academy of social society • U Cincinnati • U Colorado Anschutz Medical Campus • U Colorado School of Medicine • U Copenhagen • U Debrecen • U Deusto • U Dundee • U Edinburgh • U Florida • U Florida College of Medicine • U Florida School of Dentistry • U Galway • U Georgia • U Gothenburg • U Hong Kong • U IL Chicago • U Ilorin • U Iowa • U Iowa College of Pharmacy • U Kansas • U Kansas Medical Center • U Kent • U Kentucky • U Limerick • U Liverpool • U Louisville • U Lübeck, Germany • U Macau • U Maine • U Manchester • U Maryland • U Maryland Baltimore • U Mass Memorial MC • U Melbourne • U Miami • U Michigan School of Dentistry • U Michigan, Ann Arbor • U Minho • U Minnesota • U Mississippi MC • U Missouri-Columbia • U Missouri-Kansas City • U Nebraska Medical Center • U New England • U New Hampshire • U New Mexico • U New South Wales • U North Carolina at Chapel Hill • U Nottingham • U Oslo • U Oxford • U Pavia • U Pécs • U Pennsylvania • U Pittsburgh • U Porto • U Rochester • U Rochester Medical Center • U Rwanda • U San Francisco • U São Paulo Medical School • U South Australia • U South Carolina • U South Carolina College of Pharmacy • U Southern California • U Southern California Keck School of Medicine • U Sydney • U Tartu • U Tennessee Health Science Center • U Texas at Austin • U Texas Health Science Center at Houston • U Texas Southwestern Medical Center • U the Philippines Manila • U Toronto • U Tsukuba • U Twente • U Utah • U Utah College of Nursing • U Vermont • U Victoria • U Virginia • U Washington • U Wisconsin-Madison • U Witwatersrand • U.S. Navy • UBS Vila Dalva • UBuffalo • UCB • UCI • UCL • UFRN • Uganda Cancer Institute • UH Geneva • UHasselt • UHG (USA) • UIO • UiT - The Arctic University • UK Biobank • UK-CRIS • UKER • Ulsan University Hospital • Ultragenic Research and Technologies • UMass Chan Medical School • UMC New Orleans • UMC Utrecht • UMessina • UMMC • UMMS • Unicamp • Unidade Local De Saúde De Matosinhos Epe • Unified Patient Network • UNIMED DO BRASIL • UNITED HEALTH GROUP - BRAZIL • United Health Group Brasil • United States Air Force • Universidad Autonoma del Caribe • Universidad del Desarrollo • universidad politecnica de madrid • Università degli studi di Brescia • Universitaria Integrata Verona • Universität Leipzig • Universitätsmedizin Greifswald • Université De Bordeaux • Université De Genève • University Blanquerna • University College London • University Health Network • University Hopital of Parma • University hospital Basel • University Hospital for Tumors, Sestre milosrdnice University Hospital Center • University hospital of Parma • University hospital of Rennes • University Hospital of the Saarland • University Hospital Southampton • University Hospitals Bristol and Weston NHS Trust • Universitätsmedizin Greifswald • UNM Comprehensive Cancer Center • UNSW Sydney • US Department of Defense • US Department of Veterans Affairs • US Food & Drug Administration • US National Cancer Institute • US National Institutes of Health • US National Library of Medicine • USAID • USC • UT Southwestern Medical Center • Utah Health Workforce Information Center • Utrecht University • UWC • UZ Brussel • Vall D'Hebrón Hospital Campus • Vanderbilt University • Vanderbilt University Medical Center • VCU • VDH • Vector Institute • Ventech Solutions, Inc • Veradigm • VeraTech for Health • Verily Life Sciences • Vertex Pharmaceuticals • Veterinary Terminology Services Lab at Va Md College of Veterinary Medicine - Virginia Tech • VHA • VHBHC Institute • Virginia Commonwealth University • Virginia Tech University • VIRTUSA • Vivante Health Software • Vivent Health • Vrije Universiteit Amsterdam • VUMC • Wake Forest • Wanfang Hospital • Washington University • Weill Cornell Medical Center • Wellstack • Wemedoo AG • WHO Uppsala Monitoring Centre • William Beaumont University Hospitals • Winship Cancer Institute of Emory University • WMichigan USOM • Wondersgroup • Wonju Severance Hospital • Wonkwang University Hospital • WVU • XuanWu Hospital • Yale School of Medicine • Yale University • Yongin Severance Hospital • Yonsei University • Yuimedi, Inc. • Zebra Health Net • ZEG Berlin GmbH • zhejianglab • Ziekenhuis Oost-Limburg • ZNA • Zoadigm • ZOL (Belgium) • ZS Associates

Testimonials From The OHDSI Community

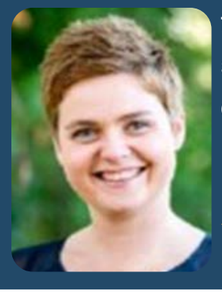
OHDSI Collaborators

The OHDSI Evidence Network is all about connecting people—those who need data with those who have it—to generate evidence at scale. It's not just a network; it's a community that enables secure, collaborative research across diverse data sources by breaking down barriers and creating opportunities to tackle big questions.

Evanette Burrows

Associate Director, Johnson & Johnson

The OHDSI community is something I return to often because I find it energising. Being a bridge-builder can be a lonely role—you often operate at the edge of multiple domains. But OHDSI has always felt like a welcoming place, where people think together, help each other, and genuinely care. It's a source of support and inspiration in a world that can be complex and demanding.



Liesbet Peeters

Associate Professor, UHasselt

What drew me to OHDSI was the community's pursuit of evidence in a manner that is rigorous, practical, scalable, and democratic. But the true power of OHDSI comes from its people. Throughout history, many disciplines have thrived due to the openness of the communities driving them. OHDSI embodies this spirit.

Yong Chen

Professor, University of Pennsylvania

I attended my first OHDSI symposium in 2018 and was struck by the warmth, camaraderie, and genuinely welcoming atmosphere. As someone new to biomedical informatics, I was acutely aware of how much I had yet to learn, but the community's openness and support made a lasting impression. That experience made me want to be part of the OHDSI community.

Priya Desai

Manager/Data Science Lead, Stannford University School of Medicine

What stands out most is OHDSI's open-science philosophy and its global community. This unique culture fosters interdisciplinary and international collaboration, allowing me to address complex healthcare questions at a scale that would have been unimaginable otherwise. Through OHDSI, I've experienced the joy of collaborative science and the power of shared knowledge to drive meaningful innovation.

Linying Zhang

Assistant Professor of Biostatistics, Washington University in St. Louis

Being part of OHDSI has transformed my research, giving me tools to develop robust, reproducible patient-level prediction models and collaborate on large-scale studies. Beyond the technical benefits, OHDSI's collaborative spirit has connected me with brilliant researchers worldwide, helping me refine my methods and broaden my perspective.

Phan Thanh Phuc

Healthcare management/Data science professional Taipei Medical University

Collaborator Spotlight Homepage

Many diseases and conditions that afflict less-represented populations contribute to severe illnesses, loss of productivity and death. Increasing the amount of FAIR data from these countries holds the promise of advancing our understanding of these neglected diseases.

Application of OHDSI tools has the potential to better characterize the diseases at those locales, identify sub-populations at greater risk, and suggest interventions for individual patients. This empowers clinicians to make more informed decisions that are contextually appropriate.

Cynthia Sung

Adjunct Associate Professor, Centre of Regulatory Excellence at Duke-National University of Singapore Medical School

The Titan Awards

The Titan Awards, first introduced in 2018, recognize OHDSI collaborators (or collaborating institutions) for their contributions towards OHDSI's mission.

Each year, community members nominate individuals or institutions they feel have made significant contributions towards advancing OHDSI's mission, vision and values. Once nominations are submitted, the OHDSI Titan Award Committee selects the recipients, and the honorees are announced at the annual Global Symposium.

The award categories, past recipients and 2025 Titan nominees can be found in this section.

Data Standards

This Titan Award recognizes extraordinary contributions by an individual, organization, or team in development or evaluation in community data standards, including OMOP common data model and standardized vocabularies

2024 – Vocabulary team (Alexander Davydov, Odysseus Data Services; Vlad Korsik, Odysseus Data Services; Anna Ostropolets, Janssen Research and Development; Oleg Zhuk, Odysseus Data Services)
2023 – Gowtham Rao and Azza Shoaibi, Janssen Research and Development
2022 – Melanie Philofsky, Odysseus Data Services
2021 – Maxim Moinat, The Hyve/Erasmus University Medical Center
2020 – Clair Blacketer, Janssen Research and Development
2019 – Oncology Workgroup (Michael Gurley, Northwestern University; Rimma Belenkaya, Memorial Sloan Kettering Cancer Center; Robert Miller, Tufts CTSI)
2018 – Vocabulary team (Christian Reich, IQVIA; Anna Ostropolets, Columbia University; Dmitry Dymshyts, Odysseus Data Services)

Methods Research

This Titan Award recognizes extraordinary contributions by an individual, organization, or team in development or evaluation in analytical methods for clinical characterization, population-level effect estimation, or patient-level prediction

2024 — Linying Zhang, Washington University in St. Louis
2023 — Jiayi (Jessie) Tong, University of Pennsylvania
2022 – Fan Bu, University of California, Los Angeles
2021 – Yong Chen, University of Pennsylvania
2020 – Nicolas Thurin, Université de Bordeaux
2019 – Jenna Reps, Janssen Research and Development
2018 – Martijn Schuemie, Janssen Research and Development; Marc Suchard, University of California, Los Angeles

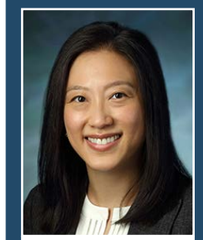

Linying Zhang
2024 honoree


Vocabulary team (not pictured: Alexander Davydov)
2024 honoree

Clinical Applications

This Titan Award recognizes extraordinary contributions by an individual, organization, or team in generating clinical evidence that improves health by informing better health decisions and better care

2024 – Cindy Cai, Johns Hopkins University; Jack Janetzki, University of South Australia; Jung Ho Kim, Yonsei University
2023 – Center for Surgical Science (led by Ismail Gögenur)
2022 – Xintong Li, University of Oxford
2021 – Asieh Golozar, Odysseus Data Services
2020 – Jenny Lane, University of Oxford
2019 – Oxford Study-A-Thon (Dani Prieto-Alhambra, University of Oxford; Edward Burn, University of Oxford; Jamie Weaver, Janssen Research and Development; Ross Williams, Erasmus University Medical Center)
2018 – Seng Chan You, Ajou University


Cindy Cai
2024 honoree


Jack Janetzki
2024 honoree


Jung Ho Kim
2024 honoree

In Memoriam

The OHDSI community lost two true Titans in 2025. Both **Jamie Weaver** and **Andrew Williams** were central to our growth and success, and their impact on our mission will endure. We mourn their loss and honor all they gave to our global community.


Jamie Weaver


Andrew Williams

Open-Source Development

This Titan Award recognizes extraordinary contributions by an individual in design, development, testing, and deployment of open-source software to enable observational analyses

2024 – Martin Lavallee, Boehringer Ingelheim
2023 – Katy Sadowski, Boehringer Ingelheim
2022 – Egill Fridgeirsson, Erasmus MC; James Gilbert, Janssen Research and Development
2021 – Adam Black, Odysseus Data Services
2020 – Anthony Sena, Janssen Research and Development
2019 – Pavel Grafkin, Odysseus Data Services
2018 – Christopher Knoll, Janssen Research and Development


Martin Lavalle
2024 honoree


2024 Titan Award honorees

Community Collaboration

This Titan Award recognizes an individual for their collaborative spirit in helping their fellow community members reach their goals.


Natthawut "Max" Adulyannukosol 2024 honoree

2024 – Natthawut "Max" Adulyannukosol, University of North Carolina
2023 – Cynthia Sung, Bill & Melinda Gates Medical Research Institute
2022 – Ajit Londhe, Boehringer Ingelheim
2021 – Erica Voss, Janssen Research and Development
2020 – Talita Duarte-Salles, IDIAPJGol
2019 – Andrew Williams, Tufts Medical Center
2018 – Kristin Kostka, Deloitte; Mui Van Zandt, IQVIA

Community Leadership

This Titan Award recognizes an individual for their leadership in advancing the OHDSI mission.


Clair Blacketer 2024 honoree

2024 – Clair Blacketer,
102023 – Nicole Pratt, University of South Australia
2022 – Paul Nagy, Johns Hopkins University
2021 – Mui Van Zandt, IQVIA
2020 – Dani Prieto-Alhambra, University of Oxford
2019 – Peter Rijnbeek, Erasmus University Medical Center
2018 – Rae Woong Park, Ajou University School of Medicine

Community Support

This Titan Award recognizes an individual, team, or organization for their contributions to ensuring the sustainability of the OHDSI community.


Montse Camprubi 2024 honoree


Elisse Katzman 2024 honoree

2024 – Montse Camprubi, Synapse Research Management Partners; Elisse Katzman, Columbia University
2023 – Gyeol Song, IQVIA
2022 – Craig Sachson, Columbia University
2021 – Faaizah Arshad, UCLA; Ross Williams, Erasmus University Medical Center
2020 – COVID-19 Support Team, Erasmus MC
2019 – James Wiggins, Amazon Web Services
2018 – Lee Evans, LTS Computing LLC

Congrats to our 2025 nominees!

Agnes Kiragga • Akihiko Nishimura • Alexey Manoylenko • ALS TDI's Real World Evidence Team • Andrew Kanter • Andrew Williams • Aniek Markus • Anna Ostropolets • Anthony Sena • Asieh Golozar • ATLAS Development Team • Ben Martin • Bill O'Brien • Bingyu Zhang • Carlos Diaz • Chungsoo Kim • Christopher Knoll • Clair Blacketer • Craig Sachson • Critical Path Institute's Data Science and Data Engineering team • Cynthia Sung • Daniel Prieto-Alhambra • DARWIN-EU Team • Data4Life Team • Dave Kern • Davera Gabriel • Department of Biomedical Systems Informatics, Yonsei University College of Medicine • Deran Mckeen • Diane Corey • Egill Fridgeirsson • Eric Fey • Evanette Burrows • Eye Care and Vision Research WG • FHIR to OMOP WG • Freija Descamps • German Soto • Greg Klebanov • Hannah Lee • Harry Reyes Nieva • HealthPartners Institute • Henrik John • Ian Braun • Ilse Vermeulen • IQVIA OMOP DARWIN Team • IQVIA OMOP Productized Analytics Team • James Gilbert • Jamie Weaver • Jared Houghtaling • Jason Hsu • Jenna Reps • Jiwon Um • Joel Swerdel • John Gresh • Justin Bohn • Katia Verhamme • Lars Halvorsen • Liesbet Peeters • Lotte Geys • Maarten van Kessel • Marc Suchard • Marti Catala Sabate • Martijn Schuemie • Marty Alvarez • Maxim Moinat • Michael Matheny • Michel Walravens • Mike Pauley • Milou Brand • Mitchell Conover • Mukkesh Kumar • OHDSI Belgium Team • Patricia Mabry • Patrick Ryan • Pavan Sudhakar • Peter Hoffmann • Peter Rijnbeek • Polina Talapova • Renske Los • REWARD Team • Richard Boyce • Roger Carlson • Sam Patnoe • SciForce Team • Treatment Patterns Team • Vaccine Vocabulary Team • Will Roddy

IV.

Collaborative Events & Activities

The OHDSI Symposium

There is nothing quite like an OHDSI symposium.

From events held in the U.S., Europe or Asia, our annual symposia are among the most anticipated events of the year. Plenary talks, tutorials, workshops and the collaborator showcase create opportunties to share research, learn from each other, and collaborate on future opportunities.

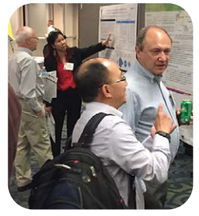
These events also allow our global community an opportunity to connect face-to-face. Whether it is to share scientific breakthroughs, build massive Lego sets or dance on stage together, each symposium brings our community together and sets new paths for collaboration.

Oct. 20, 2015 • Washington, D.C.




Sept. 23-24, 2016 • Washington, D.C.



Oct. 18-20, 2017 • Bethesda, Md.




Mar. 23-24, 2018 • Rotterdam, Neth.




Oct. 11-13, 2018 • Bethesda, Md.




Mar. 29-30, 2019 • Rotterdam, Neth.




June 27-29, 2019 • Guangzhou, China



Sept. 15-17, 2019 • Bethesda, Md.

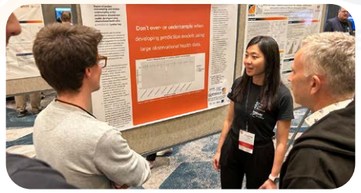


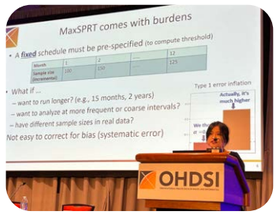

Dec. 12-14, 2019 • Gwangju, Korea

June 24-26, 2022 • Rotterdam, Neth.

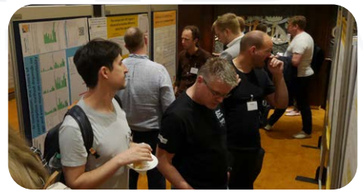


Oct. 14-16, 2022 • Bethesda, Md.






July 1-3, 2023 • Rotterdam, Neth.





July 13-14, 2023 • Sydney, Australia


Oct. 20-22, 2023 • East Brunswick, N.J.



Nov. 12-13, 2023 • Taipei, Taiwan



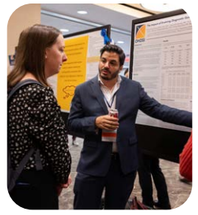

June 1-3, 2024 • Rotterdam, Neth.



Oct. 22-24, 2024 • New Brunswick, N.J.






Dec. 4-8, 2024 • Singapore





July 5-7, 2025 • Hasselt, Belgium








Welcome to #OHDSI2025

The 2025 OHDSI Global Symposium focused on the value of global collaboration in building trust in science. This three-day event will include plenary sessions on why network studies are necessary to improve trust in evidence, and a talk from Judy Racoosin sharing her reflections on the evolution of drug safety review in CDER over the past 3 decades. The Collaborator Showcase includes more than 140+ contributions in open community data standards, methodological research, open-source development, and clinical applications; all posters, demos and talks from the showcase are listed over the next three pages, and are all available on the event homepage linked below.

There will be six tutorials to start the event; more information on those is available in the education section. More than 25 workgroups will meet during the final day of the event to push forward their respective missions.

Time (ET)	Topic
7:00 am - 8:00 am	Lite Breakfast and Registration, Exhibits
7:15 am - 7:45 am	Newcomer Orientation Paul Nagy, Johns Hopkins University
8:00 am - 9:00 am	State of the Community: Welcome to OHDSI George Hripcsak, Columbia University
9:00 am - 9:30 am	Group Networking Activity
9:30 am - 10:15 am	Collaborator Showcase Poster/Software Demo Session #1
10:15 am - 12:00 pm	Plenary: Why network studies are necessary to improve trust in evidence Martijn Schuemie, Johnson & Johnson; Asieh Golozar, Nemesis Health; Cindy Cai, Johns Hopkins University; Patrick Ryan, Johnson & Johnson, Columbia University
12:00 pm - 1:00 pm	Buffet Lunch, Exhibits
1:00 pm - 2:00 pm	Plenary: Reflections on the evolution of pre- and postmarket safety review in CDER over 3 decades Judy Racoosin, US Food and Drug Administration (retired)
2:00 pm - 2:45 pm	Collaborator Showcase Lightning Talk Session #1 Moderator: Harry Reyes Nieva, Columbia University Bridging Standards: Creating OMOP data via Fast Healthcare Interoperability Resources (FHIR) and Health Information Networks Stephanie Hong, Johns Hopkins University OMOP Waveform Extension: A Schema for Integrating Physiological Signals and Derived Features into the OMOP CDM Jared Houghtaling, Tufts University Improving VSAC to OMOP Mapping Using LLM Assisted Curation Robert Barrett, Johns Hopkins University Evaluating the effectiveness of using Large Language Models for the development of concept sets Joel Swerdel, Johnson & Johnson Validating a Scalable Approach to Data Fitness-for-Use: Database Diagnostics Applied to LEGEND-T2DM Clair Blacketer, Johnson & Johnson
2:45 pm - 3:30 pm	Collaborator Showcase Poster/Software Demo Session #2
3:30 pm - 4:15 pm	Collaborator Showcase Poster/Software Demo Session #3
4:15 pm - 5:00 pm	Collaborator Showcase Lightning Talk Session #2 Moderator: Ben Martin, Johns Hopkins University Causal Inference with Multi-Modal Foundation Models: A Case Study of Anti-VEGF Injections in Diabetic Macular Edema Linying Zhang, Washington University in St. Louis LATTE: A One-shot Lossless Algorithm for Federated Target Trial Emulation with Application to Alzheimer's Disease and Related Dementia Drug Repurposing Using Decentralized Data Lu Li, University of Pennsylvania From Data Quality to Clinical Quality – Episodes as Enablers for Next Generation Dashboarding Georgina Kennedy, Ingham Institute for Applied Medical Research Heterogeneity of Treatment Effects Across Nine Glucose-Lowering Drug Classes in Type 2 Diabetes: Extension of the LEGEND-T2DM Network Study Hsin Yi "Cindy" Chen, Columbia University DARWIN EU® – A multi-national network cohort and self-controlled case series study of the effect of doxycycline versus active comparators on the risk of suicidality in individuals with acne Katia Verhamme, Erasmus MC
5:00 pm - 6:00 pm	Titan Awards, Wednesday Closing Activity Patrick Ryan, Johnson & Johnson, Columbia University; George Hripcsak, Columbia University; Marc Suchard, UCLA
6:00 pm - 6:15 pm	Group Photo
6:15 pm - onward	Free Time

Collaborator Showcase Posters, Demos & Talks

Community Building

Building the OHDSI Evidence Network – A Global, Open, Federated Collaboration (Clair Blacketer, Haeun Lee, Benjamin Martijn, Evanette Burrows, Patricia Mabry, Deran McKeen, Sam Patnoe, Ben Gerber, Pantelis Natsiavas, Aamirah Vadsariya, Hanieh Razzaghi, Paul Nagy)

Characterizing the OHDSI Evidence Network – A Global Snapshot of Real-World Data Partners (Clair Blacketer, Evanette Burrows, Ben Gerber, Vojtech Huser, Paul Nagy)

Australian Health Data Evidence Network (AHDEN): Building a National Data Infrastructure for Standardised, Federated Health Data Research (Roger Ward, Nicole Pratt, Graeme Hart, Ilan Meyers, Clair Sullivan, Blanca Gallego Luxan, Georgina Kennedy)

Progress and Challenges of the OHDSI Africa Chapter (Cynthia Sung, Agnes Kiragga, David Amadi, Samson Yohannes Amare, Onana Akoa Anciet, Pauline Andeso, Daniel Ankrah, Alex Asiimwe, Chidi Asuzu, Tathagata Bhattacharjee, Adam Bouras, Geert Byttebier, Pascal Coorevits, Kluivert B. Duah, Luc Baudoin Fankoua, Chris Fourie Yacob Gebretensae, Jay Greenfield, Lars Halvorsen, Jared Houghtaling , Katherine Johnston, Andrew S. Kanter, Johnblack Kabukye, Mack Kigada, Charlie Maere Maureen Ng'etich, Michael Ochola, Henry Ogoe, Bolu Oluwalade, James Orwa, Nahendra Singh Garbya, Amelia Taylor, Marleen Temmerman, Jim Todd Marc Twagirumukiza, Mirjam van Reisen, Ilse Vermullen Michel Walravens, Andrew Williams)

From Fragmentation to Federation: A Multi-Partner OMOP Implementation in Uganda Enabling Global Real-World Evidence Generation (Francis Kanyike, Annet Nanungi, Harriet Dickinson, Atif Adam, James Brash, Thu Do, Caroline Otike, Michael Bogart, Alex Asiimwe, Mui Van Zandt, Cissy Kityo Mutuluuza)

OHDSI India Digital Health CoE and National Registry Pilots (Swetha Kiranmayi Jakkuva, Parthiban Sulur, Louis Hendricks, Vikram Patil, Anurag Agrawal, Rintu Kutum)

Data Coordinating Center for the OHDSI Ophthalmic Network: A Proposal for the NEI OHDSI Challenge (Michelle R. Hribar, Mohammad Adibuzzaman, Mitchell Brinks, Aiyin Chen, David Huang, Hiroshi Ishikawa, Yali Jia, Elizabeth Silbermann, Xubo Song, Ou Tan)

A Collaborative Framework for Cross-Organizational Phenotyping: Lessons from the OHDSI Industry Work Group Study-a-thon on Inflammatory Conditions (Alex Asiimwe, Ram Varma, James Brash, Carrie Nielson, Atif Adam, Eva Okkar, Mui Van Zandt)

Observational Data Standards & Management

Leveraging Epic'S Native ETL Infrastructure for OMOP CDM Implementation: A Collaborative Experience (Lauren N. Cooper, Aamirah Vadsariya, Mereeja Varghese, Bhavini Nayee, Jessica Moon, Chaitanya Katterapalli, Clark Walker, Chris Gonzalez, Sonam Sohal, Christoph U. Lehmann, Ferdinand Velasco, Mujeeb Basit, DuWayne Willett)

Simplifying Research that Involves Multiple Care Sites: insights and implementation at the US VA (Richard D. Boyce, Patrick R. Alba, Katherine R. Simon, Benjamin Viernes, William J. Obrien, Marc Suchard, Michael E. Matheny)

Accelerating Analytics with Multi-source, OMOP-Conformed Data and Community Tools in a Cloud-Native Platform (Aleksandra Petkova, Glynn Dennis, Lance Dowling, Chris Baldwin)

Bridging Standards: Transforming Consolidated Clinical Document Architecture (C-CDA) Data via Health Information Networks to OMOP (Xiaohan Tanner Zhang, Chris Roeder, Stephanie Hong, Thanaphop Na Nakhonphanom, Adam Lee, Richard Moffitt, Josh Lemieux, James Cavallon, Monique Bangudi, Lakshmi Anandan, Rob Schuff, Bill Hogan, Chris Chute, Emily Pfaff, Melissa Haendel)

Preserving the DNA of Clinical Intent: Integrating IMO Health API services into OHDSI Extract-Transform-Load Process (Evan Sholle, David Haines, Chandan Ravishankar, Tejaswini Viswanath, Merlin Simoes, Daniel Timke, Sajjad Abedian, Frank Naeymi-Rad)

Patient 360: A Strategic Application for the OMOP Common Data Model (Rakesh Babu, Ilya Pyatin)

Powering a Personal Health Record Analytic Environment using the OHDSI CDM and Google Colab (Janos Hajagos)

Bridging FHIR and OMOP: Data Lineage for Observational Data Conversion (Benjamin Berk, Melissa Benzie, Bindu Bolisetty, Scott Favre, Jeremy Fortune, Jeremy Goslin, Vik Kheterpal, Kathleen Marinan, Anne Marsan, Ed Ramos, Sunanda Venumuddula, John Wyderko)

Identifying Oral Health Concepts from Previously "OMOP-ified" Data (Robert Koski, Danielle Boyce, Benjamin Martin, Julie Cha, Maria Sanchez)

Building a perfect special-purpose healthcare data model: learning from and assessing OMOP (Vojtech Huser)

Real-World Implementation of the Medical Imaging CDM: An Alzheimer's Disease Use Case (Woo Yeon Park, Teri Sippel Schmidt, Blake Dewey, Paul Nagy)

Standardized use of PNGs/JPEGs for AI-Based Detection of Thyroid Eye Disease via Federated Learning (Michael Lau, Vishwanath Prathikanti, Angela McCarthy, Ye Tian, Christopher Nielsen, Sina Gholami, Andrea Kossler, Eric Brown, Minhaj Alam, Lora Dagi Glass, Kaveri A. Thakoor)

Anatomical Location Auto-check and Standardization for Medical Images (Qingrui Wang, Teri Sippel Schmidt, Paul Nagy, Blake E. Dewey)

Enabling Scalable Multimodal AI Research in STARR: Integrating PHI-Scrubbed Imaging and Clinical Data (Hannah Morgan-Cooper, Joe Mesterhazy, Priya Desai)

Standardizing the Combat Trauma Registry Insights and Lessons Learned (Darshan Thota, Jonathan Stallings, Jennifer Gurney, Michael Shiels, Thorsten Mueller, Matthew Standlee, David Barraza, David Winfeld)

Know Before You Go: Lessons from the Creation of a registry-based Federated Network (Sarah Gasman, Clair Blacketer, Federico Zazzetti, Ashley Orillion, Erika Noss, Anna Sheahan)

Repurposing Drugs in the ICU through Real-world Data Analysis using OMOP CDM (OHDSI) (Daniella Garofalo, Xiaohan Tanner Zhang, Amy Chuang, Dario Kuzmanovic, Reham Khan , Nicholas Mohr, Smith Heavner)

Check out the posters & demos: *www.ohdsi.org/2025-global-collaborator-showcase*

Collaborator Showcase Posters, Demos & Talks

Mapping Survey Data to OMOP: The Current State and Available Resources (Nicole M. Gerlanc, Common Data Model Survey Sub-group)

Mapping Transplant Cohorts at University Health, San Antonio: Custom OMOP Concepts for Donors and Recipients (George "Holt" Oliver, Venkatraghavan Sundaram, Tuan-Minh Nguyen, Steve Gordon, Jacqueline Medellin, Margie Gutierez, Patricia Jones, Jennifer Milton, Francisco Cigarroa, Lance Rather)

Development of a multi-institutional kidney biopsy report registry via a natural language processing pipeline (Rodrigo Azuero-Dajud, Vitaly Lorman, Amy Goodwin Davies, Mohan Kashyap Pargi, Laura S. Finn, Rebecca Scobell, Adya Maddox, Qiwei Shen1, Aliyah Jones, Grace Park, Pete Camacho, Hanieh Razzaghi, Charles Bailey, Michelle Denburg)

Standardization of Irish Prostate Cancer Data Using OMOP CDM for ML-Based PIRADS3 Biopsy Decision Support (Akintomide Jeremiah, Katie Crowley, Amir Jalali)

Building an Oncology Data Lake to Enable Cancer Research: Lessons Learned from a Large Academic Health System (Shikha Kothari, Natasha Flowers, Hannah Cooper, Farnoosh Sheikhi, Jose Posada, Somalee Datta, Solomon Henry, Deepa Balraj, David Love, Mina Satyoshi, Joe Mesterhazy, Darren Guan, Smita Limaye, Alvaro Alvarez, Jay Chen, Priya Desai)

Building a Federated, FAIR-Compliant Clinico-Genomic Data Framework for Acute Myeloid Leukaemia in Ireland: Enabling Precision Oncology and Clonal Evolution Research (David Chibuike Ikechi Akwuru, Dibyaswarupa Mohanty, Aedin C. Culhane, Nina Orfali, Katie Crowley)

Creating a Standardized EHR Analytics Data Source for the National Cancer Institute's Connect for Cancer Prevention Study (Edward A. Frankenberger, Jacob M. Peters, Nicole M. Gerlanc)

Mapping of oncology regimen data through an LLM-enhanced pipeline (Tatsiana Skuhareuskaya, Mikita Salavei, Qi Yang, Maria Khitrun, Vlad Korsik)

Preliminary Evaluation of Common Data Elements Coverage of Oncology Clinical Trials' Eligibility Criteria within OMOP (Adit Anand, Karthik Natarajan)

Using the OMOP Cohort Table to Link PRoMPT BOLUS Clinical Trial Participants to the PEDSnet Research Network (Levon H. Utidjian, Aqsa Khan, Sahal Master, Atzael B. Campos, Ruchi Singh, Aliyah Jones, Grace Park, Sam Boss, Amy Goodwin Davies, Fran Balamuth, Scott Weiss, Michelle Denburg, Julie C. Fitzgerald)

Comparing Timeline and Challenges of OMOP CDM Implementation in Brazil (Juliana Araújo Prata de Faria, Danilo Luis Cerqueira Dias, Valentina Martufi, Julio Barbour Oliveira, Ricardo Felix Monteiro Neto, Karine Brito Beck da Silva Magalhães, Roberto Perez Carreiro, Maurício L. Barreto, Elzo Pereira Pinto Junior, Pablo Ivan Pereira Ramos)

Enhancing Interoperability of Hospital Data in Low-Resource Settings: A case study using OMOP-CDM in Douala General Hospital, Cameroon (Fankoua Tchaptchet Luc Baudoin, Brenda Mbouamba Yankam, Pauline Andeso, François Anicet Onana Akoa, Jean Blaise Ebimbe, Miranda Barasa, Samuel Iddi, Agnes Kiragga, Bertrand Hugo Mbatchou Ngahane)

Considerations for De-identification of the OMOP Common Data Model (Jose Posada, Natasha Flowers, Priya Desai)

Transforming Breast and Cervical Cancer Screening Data into the OMOP CDM: Early Implementation Insights from Senegal (Ousmane Diop, Rachel Odhiambo, Abdoulaye Samba Diallo, Ousmane Diouf, Bakary Dembo Diatta, Mamadou Lamine Cissé, Fatou Mbaye, Yacine Amet Dia, Mame Sokhna Gueye, Aminata Dia, Abdou Padane, Nafissatou Leye, Seyni Ndiaye, Abdoulaye Leye Sarr, Maryline Aza-Gnandji, Mamadou Ndao, Astou Guèye, Steve Bicko Cygu, Samuel Iddi, Miranda Barasa, Agnes Kiragga , Moussa Sarr, Souleymane Mboup, Aminata Mboup)

Adaptation of the OMOP Common Data Model for Secondary Use of Public Databases on the Japanese Healthcare Information Platform (Takanori Yamashita, Eizen Kimura, Yoshihiro Aoyagi, Hiroshi Okamura, Eri Matsuki, Tatsuo Hiramatsu)

A Technical Framework for Regional Healthcare Data Governance Enabled by Large Models: A Case Study of Shenzhen (Maoxin Lv, Bohan Zhang, Ge Wu, Yifan Xu, Chao Liu, Mengchun Gong)

NLP based Extraction and OMOP Standardization of Breast Cancer Clinical Data from Indian Discharge Summaries (Swetha Kiranmayi Jakkuva, Khansa Fathima, M R Sai Dileep, Shreema S Rao, Sanjay R, Sai Pattabhiram L)

Implementation of the OMOP Common Data Model in a Multi-Site Canadian Network (Lisa Lix, Georgina Archbold, David Yang, Lisa Flaten, Sandra Peterson, Alexandra Roine, Grace Wang, Yinshan Zhao, Alison Park)

Mapping PROMs to the OMOP-CDM: Insights and Lessons from the ICHOM Hand and Wrist Conditions Standard Set and the PROMOP H2O Project (Lisa Hoogendam, Laura Verbeij, Aniek Markus, Harm Slijper, Adnan Jouned, Florian Katsch, Marko Todorovic, Marta Ferri Peradalta, Romain Tching Chi Yen, Andreas Kremer, Sofia Bazakou,, Tanja Stamm, Georg Duftschmid, Renske Los, Ruud Selles)

Onto-OMOP: An Automatic Pipeline for Generating Classification Level Terms and Relationships for OHDSI Vaccine Concepts Using the Vaccine Ontology (Jie Zheng, Alexander Davydov, Anna Ostropolets, Qi Yang, Yongqun He)

Maximizing EHR Semantic Meaning for Rare Diseases Utilizing a Direct Mapping Strategy (Melanie Philofsky, Kathleen R Mullen, Bryan J Laraway, Michael G Kahn, Melissa A Haendel)

Fix What's Broke: A Use Case-Driven Framework for Vocabulary Update and Maintenance (Asieh Golozar, Dan Smith, Patrick Alba, Andrew Nute, John Methot, Vlad Korsik, Polina Talapova, Stelios Theophanous, Espen Enerly, Georgina Kennedy, Henry Morgan Stewart, Kimmo Porkka, Qi Yang, Annelies Verbiest, Christian Reich)

Improving Semantic Integrity of Oncology Terminology within OHDSI Standardized Vocabularies (Bohdan Khilchevskyi, Maksym Trofymenko, Polina Talapova, Denys Kaduk, Asieh Golozar, Christian Reich)

TAXIS: Enhancing OMOP CDM Capabilities (Stephen H Bandeian, J. Marc Overhage)

ARKE: An Ontology-Driven Framework for Standardizing Radiology Procedure Terminology Using LLMs and RAG (Sumin Lee, Kyulee Jeon, Yiju Park, Min Seong Kim, Juhyeon Jin, Changhoon Han, Soonho Yoon, Seng Chan You)

Methods for Managing Vocabulary Evolution in a Multi-Site Centralized Data Repository (William T. Roddy, German Soto, Ian Braun, Smith F. Heavner, Kanwaljit Singh)

How do changes in vocabulary mapping and database release versions affect cohort composition in real-world data? (Jill Hardin, Evanette Burrows, Azza Shaoibi, Clair Blacketer)

Evaluating the OHDSI Phenotype library concept sets using Large Language Models (Dmytro Dymshyts, Joel Swerdel, Anna Ostropolets, Azza Shoaibi, Patrick Ryan, Martijn Schuemie)

Using Mondo to assemble rare disease cohorts in OMOP (Bryan Laraway, Eric Hurwitz, Blake Byer, Daniel Korn, Megan Pearson, Evan Connelly, Sabrina Toro, Melissa Haendel)

Quantifying Condition Completeness using Medications in the All of Us Research Program (Lina Sulieman, Xinzhuo Jiang, Joshua Smith, Karthik Natarajan, Paul Harris)

Quantifying EHR Continuity in the All of Us Research Program (Lina Sulieman, Xinzhuo Jiang, Karthik Natarajan)

Assessing Temporal Data Quality of Rheumatoid and Psoriatic Arthritis Patients in the All of Us Research Program (Matthew Spotnitz, John Giannini, Emily Clark, Yechiam Ostchega, Tamara R Litwin, Lewis Berman)

Scalable Big Data Workflow for OMOP CDM: Performance Optimization and Automated Quality Evaluation of Real-World Data (Danilo Luis Cerqueira Dias, Ricardo Felix Monteiro Neto, Juliana Araújo Prata de Faria, Valentina Martufi, Julio Barbour Oliveira, Karine Brito Beck da Silva Magalhães, Roberto Perez Carreiro, Maurício L. Barreto, Elzo Pereira Pinto Junior, Pablo Ivan Pereira Ramos)

Methodological Research

Use of CohortDiagnostics for evaluating a phenotype of acute-on-chronic hepatic failure (Alexandra Buergler, Evanette Burrows, Serge Titaevski, Joel Swerdel)

Evaluating the Quality of Positive Unlabeled Learning Methods if Unlabeled Instances Cannot be Validated (Praveen Kumar, Kristan A Schneider, Fariha Moomtaheen, Rajesh Upadhayaya, Scott A. Malec, Jeremy J. Yang, Cristian G. Bologa, Yiliang Zhu, Mauricio Tohen, Gerardo Villarreal, Douglas J. Perkins, Elliot M. Fielstein, Sharon E. Davis, Michael E. Matheny, Christophe G. Lambert)

Accelerating Rare Disease Diagnosis: A Patient Finder Study for Alport Syndrome Using NLP and OMOP CDM (Mónica Arrúe, María Quijada, Gabriel de Maeztu)

Metalexis, A Scalable, Sustainable Platform for Collaborative Multilingual Scientific Translation of the OHDSI Book; potential evolution towards AI-enabled Living Knowledge Networks (Michel J.F. Walravens, Adam Bouras, Pierre Goffin, Jean-Michel Tysebaert, David Amadi, Cynthia Sung, Liesbet Peeters)

AgentDose: Toward Accurate and Scalable Steroid Dose Extraction in OMOP Using NLP Parsers and LLM Agents (Christelle Xiong, Benjamin Martin, Erik Westlund, Will Kelly, Christopher Mecoli)

Thematic Classification of Articles Using Graph Representations (Robert Barrett, Haeun Lee, Paul Nagy)

Compositional Public Health Approaches to Observational Health Research (Jacob S. Zelko, Nathaniel Osgood)

Prioritization of drug repurposing hypotheses through network classification and electronic health record analysis (Anjali Sivanandan, Jennifer L. Wilson)

Evaluating confounding adjustment when sample size is small (Fleur Vereijken, Jenna Reps, Marc A. Suchard, Akihiko Nishimura, Linying Zhang, George Hripcsak, Peter Rijnbeek, Ross D. Williams, Martijn Schuemie)

Bayesian Model Averaging-inspired Evidence Synthesis in Federated Healthcare Studies (Shounak Chattopadhyay, Martijn Schuemie, Marc Suchard)

Empowering Trial by Multi-source Multi-site Real-world Data: A Negative Control-Calibrated Digital Twin Approach (Dazheng Zhang, Huiyuan Wang, Yiwen Lu, Yong Chen)

A Framework for Understanding Bias and Real-World Clinical Electronic Health Record Data (Haeun Lee, Harold Lehmann, Benjamin Martin, Paul Nagy)

Integrative Causal Machine Learning with Digital Twins: Calibration of Treatment Effects via Negative Control Outcomes (Yuqing Lei, Huiyuan Wang, Dazheng Zhang, Yiwen Lu, Yong Chen)

The Fine Art of Tolerance: Robustify p-value Calibration in Observational Studies with Partially Valid Negative Control Outcomes (Bingyu Zhang, Dazheng Zhang, Huiyuan Wang, Wenjie Hu, Qiong Wu, Chongliang Luo, Lu Li, Tsai Hor Chan, Yudong Wang, Martijn Schuemie, Patrick Ryan, George Hripcsak, Marc Suchard, Yong Chen)

Feasibility of Fully Data-Driven Federated Learning on Large Observational Health Data (Egill Fridgeirsson, Jenna Reps)

PandemicPrediction: three-year temporal validation of SEEK-Cover models during the Covid pandemic (Egill Fridgeirsson, Jenna Reps)

Assessing sex-based fairness across patient-level prediction models (Aniek Markus)

Prognostic Risk Prediction using Large Language Models (Aniek Markus, Tom Seinen)

AutoSPICT – Identifying End of Life Care Needs using an electronic implementation of the SPICT™ Questionnaire (Joseph S. Boyle, Mike O'Neil, Maria Liakata, Alison Q. Smithard)

Open-Source Analytics Development

A Configuration-Only, Sharable Pipeline for Stable Zero-Shot CDM Grounding of NLP Targets (That You Can Run on a Pretty Good Laptop) (Georgina Kennedy, Jared Houghtaling, Robert Miller, Fahim Alam, Lois Holloway, Tim Churches, Winston Liauw)

Exploring Efficient and Scalable OMOP CDM Workflows by Leveraging dbt-synthea (Markian Hromiak, Aradhya Rajanala, Jacob S. Zelko, Katy Sadowski)

OMCP Python Sandbox: Secure Clinical Data Analysis through Model Context Protocol (Zhangshu Joshua Jiang, Shihao Shenzhang, Niko Möller-Grell, Richard Dobson, Vishnu V Chandrabalan)

Empowering Clinical Trial Design through AI: A Randomized Evaluation of PowerGPT (Yiwen Lu, Lu Li, Dazheng Zhang, Xinyao Jian, Tingyin Wang, Siqi Chen, Yuqing Lei, Jessie Tong, Zhaohan Xi, Haitao Chu, Chongliang Luo, Alexis R. Ogdie, Brian Athey, Alparslan Turan, Michael Abramoff, Joseph C Cappelleri, Hua Xu, Yun Lu, Jesse Berlin, Daniel I. Sessler, David A. Asch, Xiaoqian Jiang, Yong Chen)

OMCP: Model Context Protocol Servers for the OMOP Common Data Model (Shihao Shenzhang, Niko Möller-Grell, Zhangshu Joshua Jiang, Richard Dobson, Vishnu V Chandrabalan)

Athena-Client: A Community Python SDK for Programmatic Access to the OHDSI Athena Vocabulary Repository (Alvaro A. Alvarez, Farnoosh Sheikhi, Priya Desai)

Toward test-driven development of OHDSI cohort definitions (William A Baumgartner Jr, Lisa M Schilling)

Agentic conversation on OMOP CDM: the OMCP-A2A foundation library (Niko Möller-Grell, Shihao Shenzhang, Zhangshu Joshua Jiang, Vishnu V Chandrabalan, Richard Dobson)

Check out the posters & demos: *www.ohdsi.org/2025-global-collaborator-showcase*

Collaborator Showcase Posters, Demos & Talks

Understanding Community Needs for ATLAS: Results of the June 2025 OHDSI Feature Use and Prioritization Survey (Christopher Knoll)
Barista: Brewing A New Methodology for Governing Study Execution (Ajit Londhe, Martin Lavallee, Katy Sadowski, Carmen Ng, Casey Tilton)
Advancing Learning Health Systems Through Integrated Machine Learning Operations: A Novel Extension of the OHDSI Research Infrastructure (Boudewijn Aasman, Selvin Soby, Adil Ahmed, Chandra Nelapatla, Manuel Wahle, Parsa Mirhaji)
Demonstrating Applications of ClinicalCharacteristics 1.0.0: Improved Optionality for Enumerating Presence of Clinical Events (Casey Tilton, Ajit Londhe, Ron Herrera, Carmen Ng, Katy Sadowski and Martin Lavallee)
Standardizing Time Toxicity Metrics for Tracheostomy Patients Across Health Systems Using OMOP-CDM (Benjamin Martin, Abigail Martin, Jen Wooyeon Park, Jordan Kuiper, Renee Boss, Emily Johnson, Jim Fackler, Khyzer Aziz)

Clinical Applications

Standardized Imaging Phenotyping and AI Validation for Tuberculosis Using Medical Imaging Extension for OMOP CDM and ATLAS (Kyulee Jeon, Minseong Kim, Soon Ho Yoon, Seng Chan You)
Toward Accurate Identification of Fontan and TGA in OMOP CDM: A Multi-modal Strategy Anchored in Registry (Seohu Lee, Suhyun Kim, Haeun Lee, Jong M Ko, Woo Young Park, Kwangsoo Kim, Sang Yun Lee, Ari Cedars)
Replicating Alzheimer's Research using standardized phenotyping with the OMOP common data model imaging extension (Gabriel Lucca de Oliveira Salvador, Jen Park, Teri Sippel Schmidt, Blake Dewey, Paul Nagy)
The OMOPCAN Study: Preliminary Insights on Cancer Patient Characterization Across 34 Cancer Types from SIDIAP database with planned OHDSI Network Collaboration (Irene López Sánchez, Anna Palomar-Cros, Agustina Giulidori, Laura Granés, Elena Roel, Vlad Korsik, Anton Barchuk, Asieh Golozar, Talita Duarte-Salles)
Real-World Treatment Pathways of Lung Cancer Patients in Taiwan: A Common Data Model Analysis Using TMUCRD (Nguyen Thi Kim Hien, Thanh-Phuc Phan, Nam Hoai Vo, Muhammad Solihuddin Muhtar, Christianus Heru Setiawan, Septi Melisa, Jason C. Hsu)
Treatment patterns of adult Medicaid patients diagnosed with schizophrenia during 2015-2023 (David M. Kern, Melanie H. Jacobson, Carmela Benson)
DARWIN EU® – Assessing Frailty and Polypharmacy in Oncology within OMOP Common Data Model: A Real-World Data Approach (J. Politi, A. Black, C. Barboza, M. Mosseveld, L. Pérez Crespo, A. Palomar-Cros, L. Carrasco Ribelles, J. Brash, D. Vojinovic, A. Delmestri, R. Kolde, M. Oja, K. Verhamme, T. Duarte-Salles)
Risk of Neonatal Abstinence Syndrome Following Maternal Exposure to either Buprenorphine or Methadone Opioid Maintenance Therapy (Elizabeth Howard, Ben Martin, Xiao Xu, Brian Christman, Linying Zhang)
Characterizing Acute STEMI Patients Across Multi-Country Real-World Data Sources: A Comparative Analysis (Milou Brand, Atif Adam, Linying Zhang, Ruochong Fan, Jin Choi, Seng Chan You, Sumin Lee, Ana Danilovic Bastic, Filip Maljkovi, Mirza Khan)
Characterizing Patients with Type 2 Diabetes Mellitus Treated with Anti-Diabetic Medication: A Feasibility Study to Enable Future Multi-Database Application (Jiwon Um, Subin Kim, Seng Chan You)
Data-Driven Identification of Comorbidities and Pharmacological Patterns in Patients with Sleep Disorders (Praveen Kumar, Kristan A Schneider, Fariha Moomtaheen, Rajesh Upadhayaya, Scott A. Malec, Jeremy J. Yang, Cristian G. Bologa, Yiliang Zhu, Mauricio Tohen, Gerardo Villarreal, Douglas J. Perkins, Elliot M. Fielstein, Sharon E. Davis, Michael E. Matheny, Christophe G. Lambert)
Characterization of US Standard Certificate of Birth Data Using OHDSI Tools (Yacob Gebretensae, Benjamin Martin, Khyzer Aziz, Paul Nagy, Cynthia Sung)
Psychiatry Focused Landscape Analysis of OMOP Standardized Real World Data (Callum Harding, Piper Ranallo, Tatsiana Skuhareuskaya, Polina Talapova, Jan Ivar Ernø, Andrew Williams, Dmytro Dymshyts)
Use of GLP-1 Receptor Agonists and Risk of Acute Liver Injury: A Cohort Analysis in the OMOP CDM (GLP1-DILI) (Evelyn Goh, Seng Chan You, Jack L. Janetzki, Keiko Asao, Sreemanee Dorajoo, Nicole Pratt, Patrick B. Ryan, Martijn Schuemie, Marc A. Suchard, Mui Van Zandt, Feng Mengling)
Standardized Imaging Phenotyping and AI Validation for Tuberculosis Using Medical Imaging Extension for OMOP CDM and ATLAS (Huilin Tang, Yiwen Lu, Bingyu Zhang, Ting Zhou, Dazheng Zhang, Jiajie Chen, Yong Chen, David A Asch, Yong Chen)
Impact of Comorbid Depression on Insulin Initiation and Cardiovascular Events Among Patients with Type 2 Diabetes Mellitus: A Multinational Cohort Study (Christianus Heru Setiawan, Seonghwan Shin, Seonji Kim, Seng Chan You, Phan Thanh-Phuc, Septi Melisa, Muhammad Solihuddin Muhtar, Nguyen Phung-Anh, Jason C. Hsu)
Prediction of Hyperuricemia and Its Association with Renal failure, Cardiovascular Prognosis in Adults with Type 2 Diabetes mellitus (Sujin Gan, Dong Yun Lee, Rae Woong Park)
Causal Learning with Large-Scale Propensity Scores to Predict Treatment Outcomes: A Study of Bipolar disorder in Adults with Attention-deficit/hyperactivity disorder (Junhyuk Chang, Dong Yun Lee, Rae Woong Park)
Hormonal Contraceptive Use and Cardiometabolic Risk Among Reproductive-Age Women: A Retrospective Cohort Analysis Using NIH All of Us Data (Judith Dike, Uma Sader, Aize Cao)
Comparative Effectiveness of Ticagrelor vs. Prasugrel in Patients with Acute Coronary Syndrome Undergoing Percutaneous Coronary Intervention (Chang Hoon Han, Ben S. Gerber, Marc A. Suchard, Michael E. Matheny, Jitendra Jonnagaddala, Christophe G. Lambert, Justin M. Petucci, Anna Ostropolets, Clair Blacketer, Thamir M Alshammari, Behnood Bikdeli, Seng Chan You)
Cancer Treatment Guidelines Need a Reality Check — RWE Can Help (Asieh Golozar, Patrick Alba, Henry Morgan Stewart, Dan Smith, Salma Rachidi, Eric Fey, Valtteri Nieminen, Alexey Ryzhenkov, Tommi Kauko, Pia Tajanen-Doumbouya, Mikael Högerman, Sampo Kukkurainen, Harri Rantala, Åslaug Helland, Åsa Ôjlert, Wei Hai Deng, Zarah Van Schoor, Jonas Minne, Stelios Theophanous, Geoff Hall, John Methot, Thejas Bharadwaj, Roshanthi Weerasinghe, Andrew Nute, Martin Koch, Ines Reinecke, Katja Hoffmann, Jasmin Carus, Stefan Bartels, Michael Franz, Fabian Prasser, Jonathan Jeutner, Álvaro MartÌnez Pèrez, Carlos López Gómez, Ben Gerber, Jung Ae Lee, Thamir Alshammari, Jared Houghtaling, Paul Nagy, Ben Martin,

Raivo Kolde, Marek Oja, Sirli Tamm, Miguel-Angel Mayer, Juan Manuel Ramirez-Anguita, Angela Leis, Sam T Patnoe, Deran A Mckeen, Patricia L Mabry, Seng Chan You, Subin Kim, Chang Jun Koc, Jason C. Hsu, Phung Anh Nguyen, Nguyen Thi Kim Hien, Phan Thanh Phuc, Qi Yang, Kees Ebben, Maaike van Swieten, Jelle Evers, Agnes Moesgård Eschen, Andreas Bjerrum, Irina Veytsman, Dalia Mobarek, Espen Enerly, Joelle Thonnard, Emmanuel Seront, Cedric van Marcke, Dries Hens, Clara L. Oeste, Mikaela Bruhammar, Loretta Zsuzsa Kiss, Mészáros Ágota, Zsolt István Bagyura, Ruochong Fan, Linying Zhang , Alberto Moreno Conde, Jesus Moreno Conde, Tomoni Kimura, Justin Matthew Petucci, Matteo Pontuni, Pantelis Natsiavas, Chytas Achilleas, Rekkas Alexandros, Farmaki Anastasia, Elad Sharon, Kimmo Porkka, Annelies Verbiest, Otto Ettala, Christian Reich)

Software Demos

dqdbt: Continuous Data Quality Testing for OMOP ETL with dbt (Katy Sadowski, Lawrence Adams, Thomas Wylie)
Summarizing FHIR® to OMOP Transformation Exceptions using Generative AI (Ron Sweeney, Hannah Kimura, Qi Li)
Usagi-on-the-Web: A Cloud-Based Collaborative Platform for Vocabulary Mapping (Natthawut Adulyanukosol)
Advancing Electronic Clinical Quality Measure (eCQM) Interoperability: Model Context Protocol (MCP)-Orchestrated CQL-to-OMOP Translation (Star Liu, Robert B Barrett, Kyle Zollo-Venecek, Benjamin Riesser, Benjamin Martin)
OmniMapper: Hybrid Cloud-based Generative AI for OMOP Vocabulary Mapping of Cancer Registries (Maisie Ng, Cindy Ho, Estella Ye, Ismail Mohd, Erwin Tantoso, Leon Tjandra, Mengling Feng, Sebastian Maurer-Stroh, Johan G Eriksson, Mukkesh Kumar)
Enhancing OMOP Concept Mapping in Data2Evidence: A Comparative Study of Full-Text and Semantic Search (Zhi Min, Peter Hoffmann)
The OMOP Annotator: A Database Agnostic Tool for Reviewing and Augmenting the Patient Record (Amy Yates, Erik Benton, Izabelle Humes, Matthew Lawhead, Heath Harrelson, Imogen Bentley, Rumel Mahmood, William Hersh, Steven Bedrick)
Automated OMOP Concept Mapping Using Multi-Agent Large Language Models and Graph-Enhanced Semantic Retrieval (Adil Ahmed, Selvin Soby, Boudewijn Aasman, Parsa Mirhaji)
EHR Browser: A Web Tool to Explore OMOP-CDM Health Records by Concept Hierarchy, Mappings, and Temporal Trends (Veronica Lorenzini, Javier Gracia-Tabuenca, Nicola Cerioli, FinnGen, Mary Pat Reeve)
Advances in ARES: Evolving Observational Data Management and Systematic Review Capabilities (Frank DeFalco, Evanette Burrows, Clair Blacketer, Mikhail Iontsev)
DarwinBenchmark: Evaluating cohort generation and analytics in OMOP CDM databases (Ioanna Nika, Maxim Moniat, Guido van Leeuwen, Ross Williams)
Phenotype Scoring Tool (Javier Gracia-Tabuenca, Marika Kaakinen, Dawit A. Yohannes, FinnGen, Mary Pat Reeve)
Cohort-Pilot: Collaborative AI for Translating Natural Language into Actionable Cohort Analytics (Alvaro A. Alvarez, Farnoosh Sheikhi, Priya Desai)
Enhancing Empirical Comparator Recommendations with User Specified Weights: Approach and Assessment (Cameron R. Atkins, Jamie P. Gilbert, Christopher Knoll, David M. Kern, Patrick B. Ryan, Justin Bohn)
ExCITE: A Containerized Open-Source Platform Integrating EHR, FHIR, and OMOP for Biomedical Informatics Education (Robert Barrett, Hayden Spence, Benjamin Martin, Teri Sippel Schmidt, Saptarshi Purkayastha, Paul Nagy)
Admin for OHDSI community as LTS Computing LLC employee (Lee Evans)
CohortCharacteristics: an R package for patient-level characterisation (Martí Català, Mike Du, Yuchen Guo, Kim Lopez-Guell, Núria Mercadé-Besora, Marta Alcalde-Herraiz, Edward Burn)

Lightning Talks (with posters)

Bridging Standards: Creating OMOP data via Fast Healthcare Interoperability Resources (FHIR) and Health Information Networks (Stephanie Hong, Thanaphop Na Nakhonphanom, Andrew Laitman, Matthew Owens, Anne Bailey, Bryan Laraway, Tanner Zhang, Yvette Chen, Richard Moffitt, Rob Schuff, Tursynay Issabekova, Christopher Chute, Josh Lemieux, Melissa Haendel, William Hogan, Emily Pfaff, Shahim Essaid)
OMOP Waveform Extension: A Schema for Integrating Physiological Signals and Derived Features into the OMOP CDM (Jared Houghtaling, Polina Talapova, Brian Gow, Manlik Kwong, Andrew J King, Benjamin Moody, Mike Kriley, Tom Pollard, Andrew E Williams)
Improving VSAC to OMOP Mapping Using LLM Assisted Curation (Robert Barrett, Star Liu, Kyle Zollo-Venecek, Benjamin Riesser, Benjamin Martin)
Evaluating the effectiveness of using Large Language Models for the development of concept sets (Joel Swerdel, Dmytro Dymshyts, Anna Ostropolets, Azza Shoaibi, Patrick Ryan, Martijn Schuemie)
Validating a Scalable Approach to Data Fitness-for-Purpose: Database Diagnostics Applied to LEGEND-T2DM (Clair Blacketer, Patrick B. Ryan, George Hripcsak, Marc Suchard, Fan Bu, Can Yin, Martijn J. Schuemie, Peter R. Rijnbeek)
Causal Inference with Multi-Modal Foundation Models: A Case Study of Anti-VEGF Injections in Diabetic Macular Edema (Siqi Sun, Cindy X. Cai, Ruochong Fan, Saiyu You, Diep Tran, P. Kumar Rao, Marc A. Suchard, Yixin Wang, Linying Zhang)
LATTE: A One-shot Lossless Algorithm for Federated Target Trial Emulation with Application to Alzheimer's Disease and Related Dementia Drug Repurposing Using Decentralized Data (Lu Li, Qiong Wu, Yiwen Lu, Kyra S. O'Brien, Bingyu Zhang, Ting Zhou, Jiayi Tong, Dazheng Zhang, Yuqing Lei, Huilin Tang, Yun Lu, David Asch, Yong Chen)
From Data Quality to Clinical Quality – Episodes as Enablers for Next Generation Dashboarding (Georgina Kennedy, Shalini Vinod, Gui Mei Xiong, Nasreen Kaadan, Merran Findlay, April Matt, Marnie Harris, Arya Shinde, Shuang Liang, Carolyn Mazariego, Tim Churches, Louisa Jorm, Victoria Bray, Angela Berthelsen, Phan Sayaloune, Geoff Delaney)
Heterogeneity of Treatment Effects Across Nine Glucose-Lowering Drug Classes in Type 2 Diabetes: Extension of the LEGEND-T2DM Network Study (Hsin Yi "Cindy" Chen, Thomas Falconer, Anna Ostropolets, Tara V. Anand, Xinzhuo Jiang, David Dávila-García, Linying Zhang, Ruochong Fan, Hannah Morgan-Cooper, George Hripcsak)
DARWIN EU® - A multi-national network cohort and self-controlled case series study of the effect of doxycycline versus active comparators on the risk of suicidality in individuals with acne (Katia Verhamme, Nicholas B. Hunt, Guido J. van Leeuwen, Maarten van Kessel, Anna Palomar-Cros, Antonella Delmestri, Agustina Giuliodori, Talita Duarte Salles, Mandickel Kamtengeni, Ross D. Williams, Daniel Prieto Alhambra)

Check out the posters & demos: *www.ohdsi.org/2025-global-collaborator-showcase*

OHDSI Community Calls

The weekly OHDSI Community Call is where our global network comes together to learn, collaborate, and connect. Each Tuesday at 11am ET, the calls feature community updates, discussions on key issues in observational health, presentations of new research and open-source tools, and sharing of best practices across our network. These interactive gatherings also provide a space to meet potential collaborators and strengthen our collective mission of generating reliable evidence.

All calls are recorded and made available on both OHDSI.org and our YouTube channel, ensuring the discussions remain accessible to our worldwide community.

This section highlights many of the topics covered over the past year, and we encourage you to explore more about these dynamic conversations at ohdsi.org/community-calls.

Nov. 19: Evidence Network in Action

The Semaglutide Study

Cindy Cai
Assistant Professor of Ophthalmology
Wilmer Eye Institute at Johns Hopkins Hospital
Topic: Semaglutide and NAION: An OHDSI Network Study

Anthony Sena
Director, Observational Health Data Analytics
Johnson & Johnson
Topic: Strategus

Paul Nagy
Program Director for Graduate Training in Biomedical Informatics and Data Science
Johns Hopkins University
Topic: Evidence Network

Ben Martin
Postdoctoral Fellow
Johns Hopkins University
Topic: Using the Results Schema

Linying Zhang
Assistant Professor of Biostatistics
Washington University
Topic: Methods

Erik Westlund
Assistant Scientist
Johns Hopkins University
Topic: Using the Results Schema

Nov. 26: OHDSI2024 Showcase Honorees

Shahin Hallaj
Informatics and Data Science Postdoctoral Fellow
UC San Diego
Gap Analysis of Static Automated Perimetry Concept Representation in OMOP CDM

Samuel Patnoe
Research Informatics Programmer Analyst
HealthPartners Institute
Health Trends Across Communities in Minnesota: a Statewide Dashboard Leveraging the OMOP CDM to Monitor the Prevalence of Health Conditions

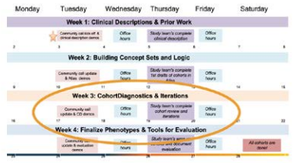
Ramya Tekumalla
Assistant Professor of Data Science
Mercer University
Towards automated phenotype definition extraction using large language models

Clair Blacketer
Director, Epidemiology Analytics
Janssen Research and Development
Improving Team Science Through "Thons" Reflections on the April Olympians Community Event

Alvaro Alvarez
Biomedical Informatics Data Scientist
Stanford Health Care
Bridging the Language Gap: Generative Models for Efficient Medical Concept Discovery

Feb. 18 Community Call

Phenotype Phebruary 2025 Calendar



Workgroup OKRs:
- Databricks
- Dentistry
- Eye Care and Vision Research
- GenAI
- HADES
- Latin America
- Medical Imaging
- OHDSI APAC
- Psychiatry
- Transplant

March 4: Vocabulary Refresh

Anna Ostropolets
Associate Director, Johnson & Johnson Innovative Medicine
Adjunct Assistant Professor, Columbia University

Oleg Zhuk
Manager, Data Analytics Consulting, EPAM Systems

Maria Khitrun
Senior Scientific Curation Specialist, EPAM Systems

This session will also include a Phenotype Phebruary review from the members of our leadership team:

Anna Ostropolets
Gowtham Rao
Azza Shoaibi

April 1: OHDSI/OMOP Research Spotlight

Cindy Cai • Johns Hopkins University
Semaglutide and Nonarteritic Anterior Ischemic Optic Neuropathy • *JAMA Ophthalmology*

Chen Yanover • KI Research Institute
Characteristics and Outcomes of Over a Million Patients with Inflammatory Bowel Disease in Seven Countries: Multinational Cohort Study and Open Data Resource • *Digestive Diseases and Sciences*

Mitchell Conover • Janssen Research and Development
Objective study validity diagnostics: a framework requiring pre-specified, empirical verification to increase trust in the reliability of real-world evidence • *JAMIA*

Jiayi Tong • Johns Hopkins University
DisC2o-HD: Distributed causal inference with covariates shift for analyzing real-world high-dimensional data • *Journal of Machine Learning Research*

Naimin Jing, Yiwen Lu • University of Pennsylvania
Evaluating the Bias, type I error and statistical power of the prior Knowledge-Guided integrated likelihood estimation (PIE) for bias reduction in EHR based association studies • *Journal of Biomedical Informatics*

April 8 – Get Study-Ready with Strategus & HADES

Introduction to Strategus

The `Strategus` package is a new approach for coordinating and executing analytics using HADES modules. The goal is to have OHDSI network sites install `Strategus` and exchange an analysis specification in JSON format to execute a network study. The analysis specification will capture all of the design choices that pertain to the methods used in a given study. The analysis specification format aims to allow for combining different HADES modules together as a pipeline to execute a study.

HADES
Health Analytics Data-to-Evidence Suite

Anthony Sena
- Director – Observational Health Data Analytics, Johnson & Johnson
- STRATEGUS Maintainer
- HADES Workgroup Lead

April 22: Estimation and Prediction

George Hripcsak
Vivian Beaumont Allen Professor of Biomedical Informatics, Columbia University

Marc Suchard
Professor of Biostatistics, Biomathematics, & Human Genetics, UCLA

Ross Williams
Assistant Professor, Erasmus University Medical Centre

Egill Fridgeirsson
Scientific Researcher/Postdoc, Erasmus University Medical Centre

Jenna Reps
Associate Director, Observational Health Data Analytics, Johnson & Johnson

May 6: Evidence Synthesis

Martijn Schuemie
Research Fellow, Global Epidemiology Organization
Johnson & Johnson

Yong Chen
Professor of Biostatistics
University of Pennsylvania

Evidence Synthesis
An R package for combining causal effect estimates without sharing individual person data

May 13: Maternal Health Fellowship Research Findings

Elizabeth Sherwin
Stanford University School of Medicine
Estimating the risk of severe maternal morbidity among pregnant people with congenital heart disease

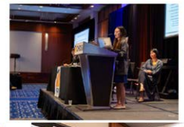
Elizabeth Howard
Ochsner Xavier Institute for Health Equity & Research
Risk of Neonatal Abstinence Syndrome Following Maternal Exposure to Buprenorphine vs Methadone Opioid Maintenance Therap

Sarah Murray
Centre for Reproductive Health, Institute for Regeneration and Repair, University of Edinburgh
Does antenatal corticosteroids (ACS) given to twins prior to planned birth (35-39 weeks gestation) reduce the risk of respiratory morbidity in the babies?

Shannon Stevenson
Nell Hodgson Woodruff School of Nursing, Emory University
Healthcare Utilization Within the First 12 Weeks Postpartum

May 27: #OHDSI2025 Collaborator Showcase

Brainstorm Breakouts



The collaborator showcase deadline is July 1

June 3: The Journey of ATLAS

Christopher Knoll
Manager, Epidemiology Analytics
Janssen Research and Development

Join us throughout June to help create the roadmap for ATLAS!

July 22: OHDSI/OMOP Research Spotlight

David Sarrat González
Barcelona Institute for Global Health
dsOMOP: bridging OMOP CDM and DataSHIELD for secure federated analysis of standardized clinical data

Elizabeth Howard
Johnson & Johnson
Large-scale Empirical Identification of Candidate Comparators for Pharmacoepidemiological Studies

Dachung Boo
Yonsei University College of Medicine
Comprehensive Evaluation of Treatment Patterns in Postmenopausal Patients with Osteoporosis without Fractures: Insights from Tertiary Care Institutions and Nationwide OMOP-CDM Data

Seonji Kim
Yonsei University College of Medicine
Impact of Regulatory Post-Market Safety Advisories on Prescribing Practices: An Interrupted Time Series Analysis

July 29: Asia-Pacific Mid-Year Updates

Evelyn Goh
PhD Student, National Univ. of Singapore
Singapore

Keiko Asao
President, Kappa Medical K.K.
Japan

Swetha Jakkuva
Real World Evidence Lead, Global Value Web
India

Max Natthawut Adulyanukosol
Deputy Director of Siriraj Informatics and Data Innovation, Mahidol Univ.
Thailand

Seng Chan You
Assistant Professor, National Univ. of Singapore
Korea

Phan Thanh-Phuc
Data Science Professional, Univ. Medical Center
Vietnam

Jason Hsu
Professor, Taipei Medical University
Tawian

Hui Lu
Distinguished Professor, Shanghai Jiao Tong Univ.
China

Sept 16: OHDSI/OMOP Research Spotlight

Jessie Tong
Assistant Professor, Johns Hopkins University
Unlocking efficiency in real-world collaborative studies: a multi-site international study with one-shot lossless GLMM algorithm • *NPJ Digital Medicine*

Kim López Güell
Dphil Candidate, University of Oxford
Clusters of post-acute COVID-19 symptoms: a latent class analysis across 9 databases and 7 countries • *Journal of Clinical Epidemiology*

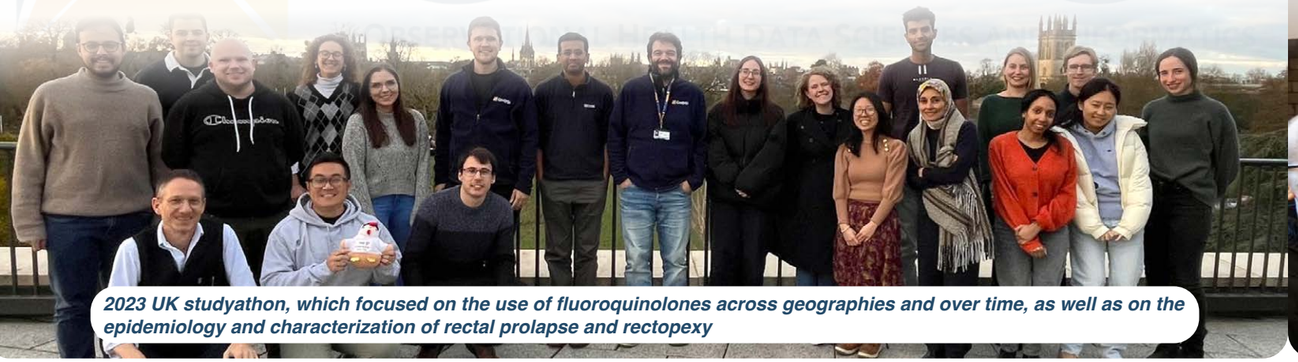
Jen Wooyeon Park
PhD Student, Johns Hopkins University
Breaking data silos: incorporating the DICOM imaging standard into the OMOP CDM to enable multimodal research • *JAMIA*

Abigail Newbury
PhD Student, Columbia University
Multi-domain rule-based phenotyping algorithms enable improved GWAS signal • *NPJ Digital Medicine*

Benjamin Martin
Postdoctoral Fellow, Johns Hopkins University
Identification of Adult Dermatomyositis Patients Using Real-World Data Sources • *Arthritis Care and Research*

How Can You Join Our Calls?

If you are a part of the OHDSI Teams environment, you will receive a weekly calendar invite that includes the upcoming agenda. If you don't have access, the link is on our Community Calls page, which features all recordings and updates from past calls. Weekly calls are currently held on Tuesdays at 11 am ET. Learn more at our website: **www.ohdsi.org/community-calls**



2023 UK studyathon, which focused on the use of fluoroquinolones across geographies and over time, as well as on the epidemiology and characterization of rectal prolapse and rectopexy

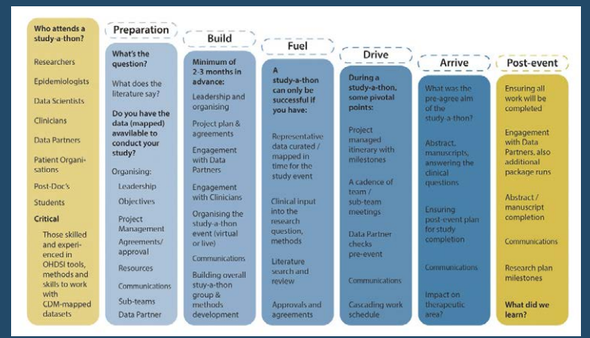
OHDSI Studyathons & Other Events

How does OHDSI go about *empowering a community to collaboratively generate the evidence that promotes better health decisions and better care*?

We do it by innovating on what it means to do collaborative research.

The premise of the studyathon is simple: bring together a diverse group of researchers aligned on a common question and focus together on collaboratively designing research protocols, executing analyses across databases, and interpreting results over an intense but fun-filled few days.

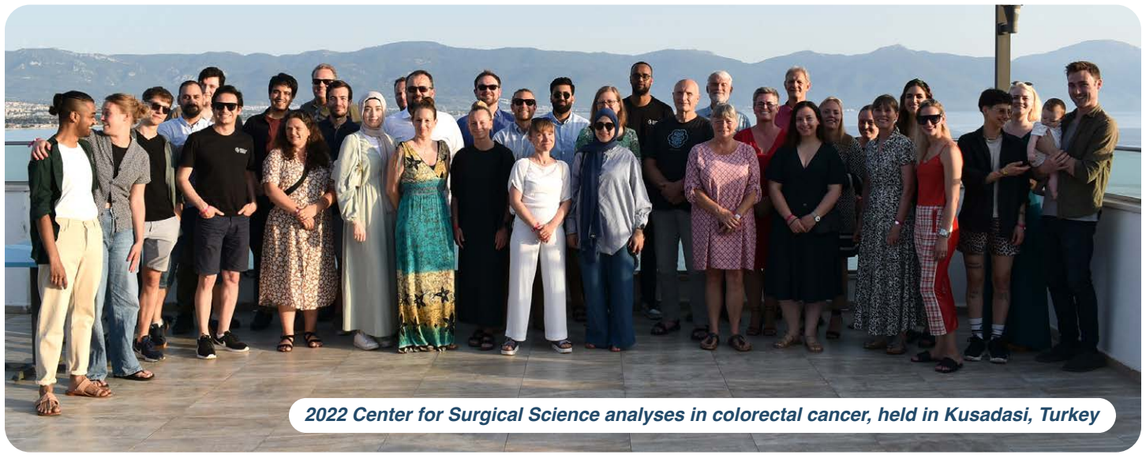
OHDSI collaborators have held multiple study-a-thons on a wide array of topics, including orthopedic surgery, rheumatoid arthritis, colorectal cancer, cardiovascular prediction, prostate cancer, and COVID-19. Each event has demonstrated our collective ability to accomplish in a short time what may be unimaginable alone, and it has provided further reinforcement of the power of community and the value of multi-disciplinary collaboration.



Outline flow of a study-a-thon. *Graphic was shared in "Evaluating a novel approach to stimulate open science collaborations: a case series of "study-a-thon" events within the OHDSI and European IMI communities" • Jamia Open, Volume 5, Issue 4, December 2022, ooac100, https://doi.org/10.1093/jamiaopen/ooac100.*

2022 Sweden EHDEN studyathon, which focused on pharmacovigilance

2025 Finland Studyathon: Exploring the Real-World Treatment Landscape of mNSCLC



2022 Center for Surgical Science analyses in colorectal cancer, held in Kusadasi, Turkey

2022 Korea Datathon

Guideline-Driven Evidence

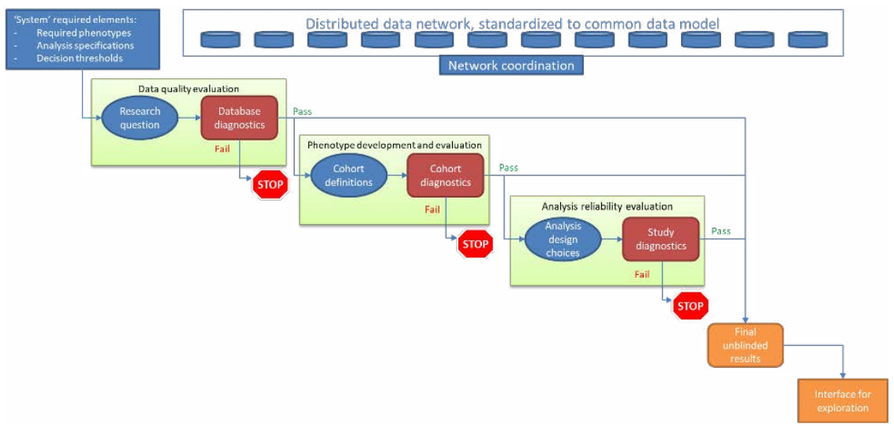
In 2025, we sought to foster large-scale collaboration by creating a community focus on 'Guideline-Driven Evidence Generation'. This call to action resulted in identifying 14 collaboration opportunities across a wide range of clinical therapeutic areas, showcasing the potential impact the OHDSI community can have if we work together.

Monthly focuses set by the community in 2025 to try to generate real-world evidence together.

Guideline-driven Evidence Generation | Evidence-driven Data standardization | Evidence-driven Open Source Development | Evidence-driven Collaborative Education

Dry January: Guideline review to determine evidence needs where RWE could potentially contribute	**Phenotype Phebruary:** Develop/evaluate cohorts needed to support filling the evidence gaps	**March to Data Fitness:** Evidence network to determine which partners are appropriate to generate which evidence
Analysis April: Prepare protocol and analysis specification to initiate network execution	**Meta-analysis May:** Collaborative interpretation of results from across network	**Journey to June:** Mid-year reflection on evidence generation process and progress
Spread-the-Word Second Half: Focus on Evidence Dissemination		
July: OHDSI Europe	August:	September: OHDSI UK
October: OHDSI Global	November: OHDSI Africa	December: OHDSI APAC

Together as a community, we aimed to navigate the journey from data to evidence, following our network study workflow: translating the evidence gap into a study protocol, developing and evaluating phenotypes, determining data fitness-for-use, implementing an analytic package, and executing the across the OHDSI Evidence Network, and disseminating the evidence. Results from some of these efforts were showcased at the 2025 OHDSI Global Symposium.



Guideline-driven evidence generation opportunities

General

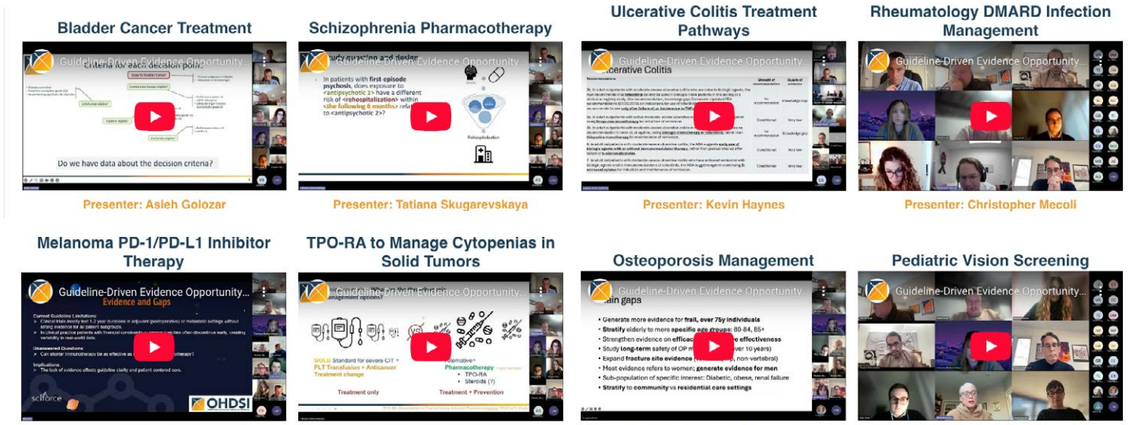
Patrick_Ryan Jan 7

Clinical guidelines are extremely helpful, not only for providing guidance not only for providers on how to best treat their patients, but also for highlighting to the research community where there are open questions and evidence gaps. Some of these evidence gaps can be filled reliably through proper analysis of real-world data, as we aim to conduct across the OHDSI Evidence Network.

To help stimulate discussion and prioritize our community's collaborative activities in 2025, I'm opening up this thread with a specific ask for anyone who is interested in leading or participating in an OHDSI network study, or simply are interested in seeing an OHDSI study conducted by the community on a topic that's of interest to you:

Post a link to a current clinical guideline about a disease/topic of interest.
Review the guideline and share what evidence gaps you see that could be potentially filled with real-world evidence.

We'll use the input and interest from the community on this thread to guide us toward collaborative evidence generation activities this year.



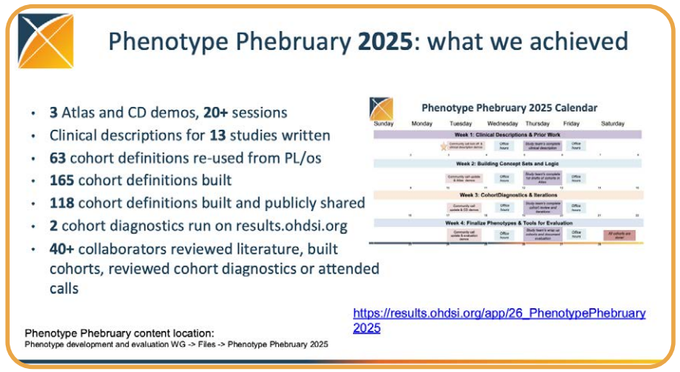
Each of these presentations, as well as further updates, are available at: *www.ohdsi.org/clinical-guideline-evidence-opportunities-2025*

Phenotype Phebruary

"Phenotype Phebruary" is a community-wide initiative to advance the field of phenotyping in observational studies. The OHDSI community focused the fourth edition of Phenotype Phebruary on help the 14 guideline-driven study leads and their teams create and evaluate all cohort definitions for their studies.

Thank you to the Phenotype Phebruary team and study lead for our most active PP event ever!

Gowtham Rao, Anna Ostropolets, Azza Shoaibi, Patrick Ryan, Lana Shubinsky, Chris Mecoli, Oleg Zhuk, Maria Khitrun, Vlad Korsik, Tetiana Skugarevskaya, Chen Yanover, Bohdan Khilchevskyi, Cindy Cai, Kevin Haynes, Chang Hoon Ha, Seng Chan You, Asieh Golozar, Michelle Hribar



DevCon

DevCon, also in its fourth year of existence, brings together developers and innovators to explore the latest tools, technologies, and strategies shaping the future of open-source software in healthcare and data science. The event is dedicated to advancing open-source development and collaboration.

2025 Agenda *(click link at end to watch talks)*

Introduction
Paul Nagy, Johns Hopkins University

OHDSI Projects
Stabilizing Gaia Core Robert Miller, Miller Data Solutions
CustomVocabularyBuilder Jared Houghtaling, Tufts University
CohortConstructor Núria Mercadé-Besora, University of Oxford
Strategus Anthony Sena, Johnson & Johnson
SQLMesh/CCID integration with Databricks Vishnu Chandrabalan, Lancashire Teaching Hospitals NHS Foundation Trust
Technical Advisory Board Frank DeFalco, Johnson & Johnson

Developer Dialogue Panel: Dev ops, DBT and, of course, LLMs
Moderator: Katy Sadowski, Boehringer Ingelheim
Panelists: Eduard Korchmar, EPAM Systems
Egill Fridgeirsson, Erasmus MC
Martin Lavallee, Boehringer Ingelheim
Lawrence Adams, Artificial Intelligence Center for Value Based Healthcare

Sustainable Open-Source Ecosystems Panel
Panel Moderators: Paul Nagy and Sean O'Reilly, Johns Hopkins University
Panelists: Peter Hoffman, Data4Life
Jan Blom and Walter Franke, The Hyve
James Green, Cognome

Watch Videos: www.ohdsi.org/devcon2025

V.

Educational Resources

Educational Resources

How do I learn more about OMOP, OHDSI tools, methods or best practices?

That is a very common question for those both starting their journey and those who have been traveling with OHDSI for years. There is always something new to learn, and there are always plenty who are willing to teach. OHDSI has a plethora of community-developed learning resources that we will share in this section.

On these pages, we will highlight the many tutorial options that have taken place around the world, including OHDSI tutorials, the EHDEN Academy, the Book of OHDSI, and the OHDSI Summer School held at Columbia University.

Tutorials

Education is at the heart of OHDSI's mission, and tutorials showcase the community's commitment to sharing knowledge. Developed and taught by OHDSI faculty, they highlight tools, standards, and best practices that empower collaborators at every level to engage in open science and generate reliable evidence.

The OHDSI community has hosted numerous tutorials at our annual symposia, as well as online during community calls and other sessions. These tutorials remain available on our **YouTube page** (*youtube.com/c/OHDSI*), they can also be found on our new **OHDSI Tutorials homepage** (*www.ohdsi.org/tutorials*).

This new page includes all tutorials from the Global/USA symposia dating back to 2016, but it also includes the 2023 SOS Challenge tutorials, which focused on the full process of leading a network study. Some of the recent tutorial options can be found below (in case of repeated titles, the most recent is listed).

2025 Global Symposium

- An Introduction to the Journey from Data to Evidence Using OHDSI
- Developing and Evaluating Your ETL Process to the OMOP Common Data Model
- Using the OHDSI Standardized Vocabularies for Research
- Clinical Characterization Applications to Generate Reliable Real-World Evidence

Population-Level Effect Estimation Applications to Generate Reliable Real-World Evidence

Patient-Level Prediction Applications to Generate Reliable Real-World Evidence

2024 Global Symposium

- So, You Think You Want To Run an OHDSI Network Study?
- Conducting 'Off-The-Shelf' Characterization Studies Using DARWIN EU® Tools and the OMOP CDM
- Phenotype Development: Outcome Design
- Phenotype Development: Exposure Design
- Phenotype Evaluation
- Analysis Design
- Network Execution
- Study Diagostics
- Evidence Synthesis
- Interpreting the Results

2023 SOS Challenge

- Initiating A Network Study
- Data Diagnostics

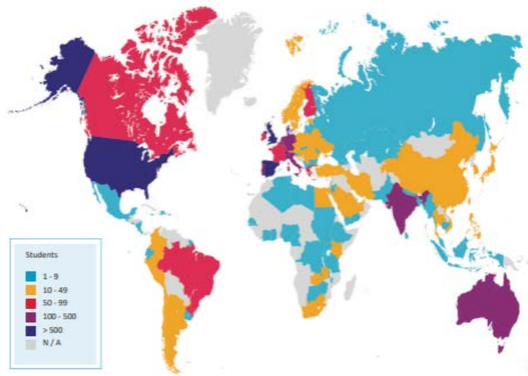
ohdsi.org/tutorials

EHDEN Academy

The EHDEN Academy is a free, online educational resource for professionals in the domains of real-world data and real-world evidence. The Academy operates on a global scale and has engaged more than 6,300 active learners from more than 108 countries.

Its primary mission is to enhance the application and understanding of tools and methods that improve patient care globally through open science educational resources. Consequently, the Academy serves as a crucial training node for the wider OHDSI community, aligning with and directly contributing to its educational strategy.

EHDEN Academy Student Map



Current EHDEN Academy Courses

- Getting Started
- EHDEN Foundation
- Patient Organisations: Introduction to Real World Data & Real World Research
- OMOP CDM and Standardised Vocabularies
- ATLAS
- Infrastructure
- Extract, Tranform, Load
- 10-Minute Tutorial: PheValuator
- 10-Minute Tutorial: ATHENA
- Introduction to Usagi & Code Mappings for an ETL
- OHDSI-in-a-Box
- ETL Learning Pathway: Data Partner & SME Real World Use Cases
- Open Science & FAIR Principles
- Introduction to Data Quality
- Phenotype Definition, Characterisation and Evaluation
- Population-level Effect Estimation
- Patient-level Prediction
- R for Patient-level Prediction
- Applied Cost-Effectiveness Modeling with R
- Assessing healthcare using outcomes that matter to patients
- Creating Cohort Definition (OHDSI 2022 Tutorial)
- OMOP Common Data Model/Vocabulary (OHDSI 2022 Tutorial)
- The Phenotyping Problem (1-hour session)
- Health Technology Assessment

visit the EHDEN Academy: *academy.ehden.eu*

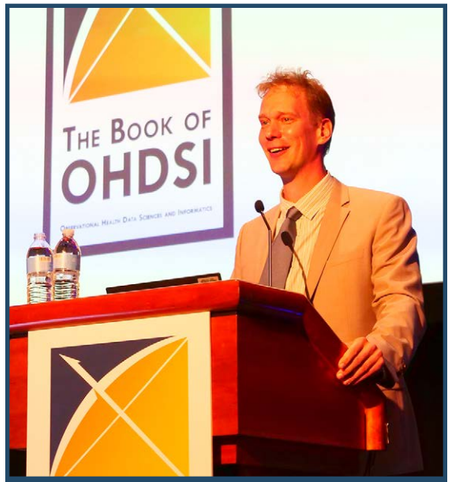
The Book of OHDSI

Published in 2019, the Book of OHDSI (book.ohdsi.org) aims to be a central knowledge repository for OHDSI, and it focuses on describing the OHDSI community, OHDSI data standards, and OHDSI tools.

It is intended for both OHDSI newcomers and veterans alike, and aims to be practical, providing the necessary theory and subsequent instructions on how to design and implement research yourself.

You will learn about the OMOP common data model and standard vocabularies, and how they can be used to standardize an observational healthcare database. You will learn about three analytic use cases for these data: characterization, population-level estimation, and patient-level prediction. You will read about OHDSI's open-source tools and how they can be applied to your data and how you can design and implement your own analyses following OHDSI's best practices.

Members of the OHDSI community collaborated on documentation efforts for the Book of OHDSI at Case Western Reserve Univ. in Cleveland.



Martijn Schuemie, who co-led the Book of OHDSI development with David Madigan, introduced the book at the 2019 U.S. Symposium.

Chapters on data quality, clinical validity, software validity, and method validity will explain how to establish the quality of the generated evidence. Lastly, you will learn how to use the OHDSI tools to execute these studies in a distributed research network.

The Book of OHDSI is available for free online in English, Korean and Chinese, and can also be purchased through Amazon (all links on OHDSI.org).

Thank You To Our Book of OHDSI Contributors

Hamed Abedtash	Mustafa Ascha	Mark Beno	Clair Blacketer	David Blatt
Brian Christian	Gino Cloft	Frank DeFalco	Sara Dempster	Jon Duke
Sergio Eslava	Clark Evans	Thomas Falconer	George Hripscak	Vojtech Huser
Mark Khayter	Greg Klebanov	Kristin Kostka	Bob Lanese	Wanda Lattimore
Chun Li	David Madigan	Sindhoosha Malay	Harry Menegay	Akihiko Nishimura
Ellen Palmer	Nirav Patil	Jose Posada	Nicole Pratt	Dani Prieto-Alhambra
Christian Reich	Jenna Reps	Peter Rijnbeek	Patrick Ryan	Craig Sachson
Izzy Saridakis	Paola Saroufim	Martijn Schuemie	Sarah Seager	Anthony Sena
Sunah Song	Matthew Spotnitz	Marc Suchard	Joel Swerdel	Devin Tian
Don Torok	Kees van Bochove	Mui Van Zandt	Erica Voss	Kristin Waite
Mike Warfe	Jamie Weaver	James Wiggins	Andrew Williams	Seng Chan You

What Will You Find in The Book of OHDSI?

Join Us at the 2026 OHDSI Summer School at Columbia University

The Columbia OHDSI Summer School (June 22-26, 2026) offers health professionals, researchers, and industry practitioners an immersive, hands-on introduction to working with real-world health data and generating real-world evidence (RWE). Participants will learn how to transform electronic health records and claims data into the OMOP Common Data Model to support collaborative, distributed research.

Program Highlights

- Explore three analytic use cases:
  - *Clinical characterization – describing disease natural history and treatment patterns*
  - *Population-level estimation – assessing drug safety and comparative effectiveness*
  - *Patient-level prediction – applying machine learning for early detection and precision medicine*
- Work through the full RWE study lifecycle: study design, use of OHDSI open-source tools (ATLAS, HADES), and execution across real-world datasets
- Blend of foundational lectures, interactive exercises, and faculty-led group work
- Dedicated time to develop your own study ideas with mentoring and feedback

Audience

Ideal for clinicians, data scientists, statisticians, epidemiologists, informaticians, health policy researchers, and professionals from academia, healthcare, industry, and government. No programming experience required.

Meet Our Faculty

George Hripcsak

Patrick Ryan

Anna Ostropolets

Karthik Natarajan

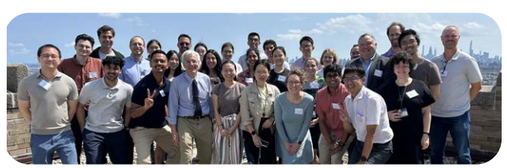
Testimonials

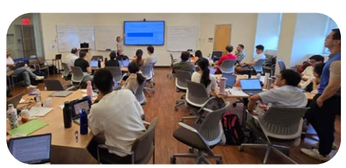
"The OHDSI Summer School exceeded all expectations. The course offered a deep, hands-on dive into real-world data methodology, led by world-class instructors and supported by an incredibly open, collaborative community. Working hands-on with a team to explore a real research question brought the full OHDSI workflow to life. I highly recommend this course to anyone working with health data, especially clinical scientists and data scientists eager to strengthen their skills in transparent, high-quality RWD research."

- David Bard, Professor of Pediatrics and Director, Biomedical & Behavioral Methodology Core, University of Oklahoma

"I particularly appreciated the OHDSI system in conducting the observational study to generate real-world evidence, as well as the methodology that handled hundreds of covariates, and the application of a negative control outcome to validate the research results. Through this summer school course, I gained a deeper understanding of OHDSI and its potential to generate real-world evidence."

- Long-Sheng Chen, Professor, National Taipei University of Technology, Taiwan

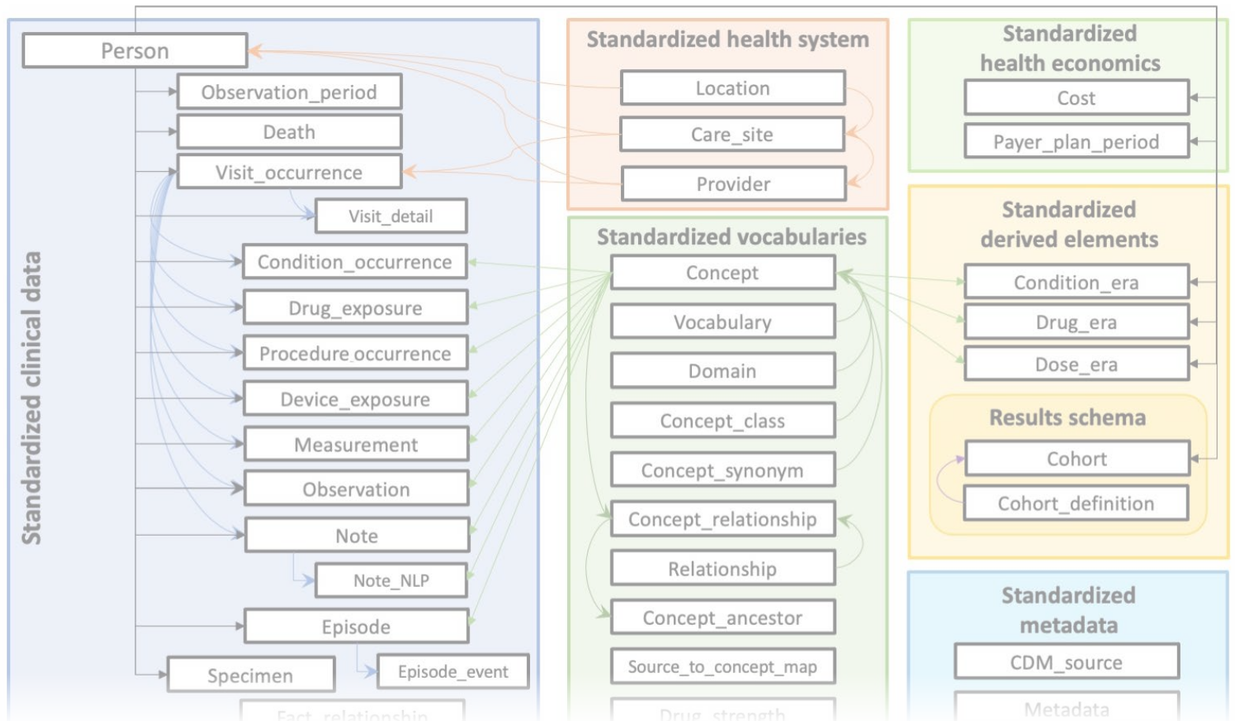




Register/Learn More: [OHDSI Summer School at Columbia University]

VI.

Data Standards



OMOP Common Data Model

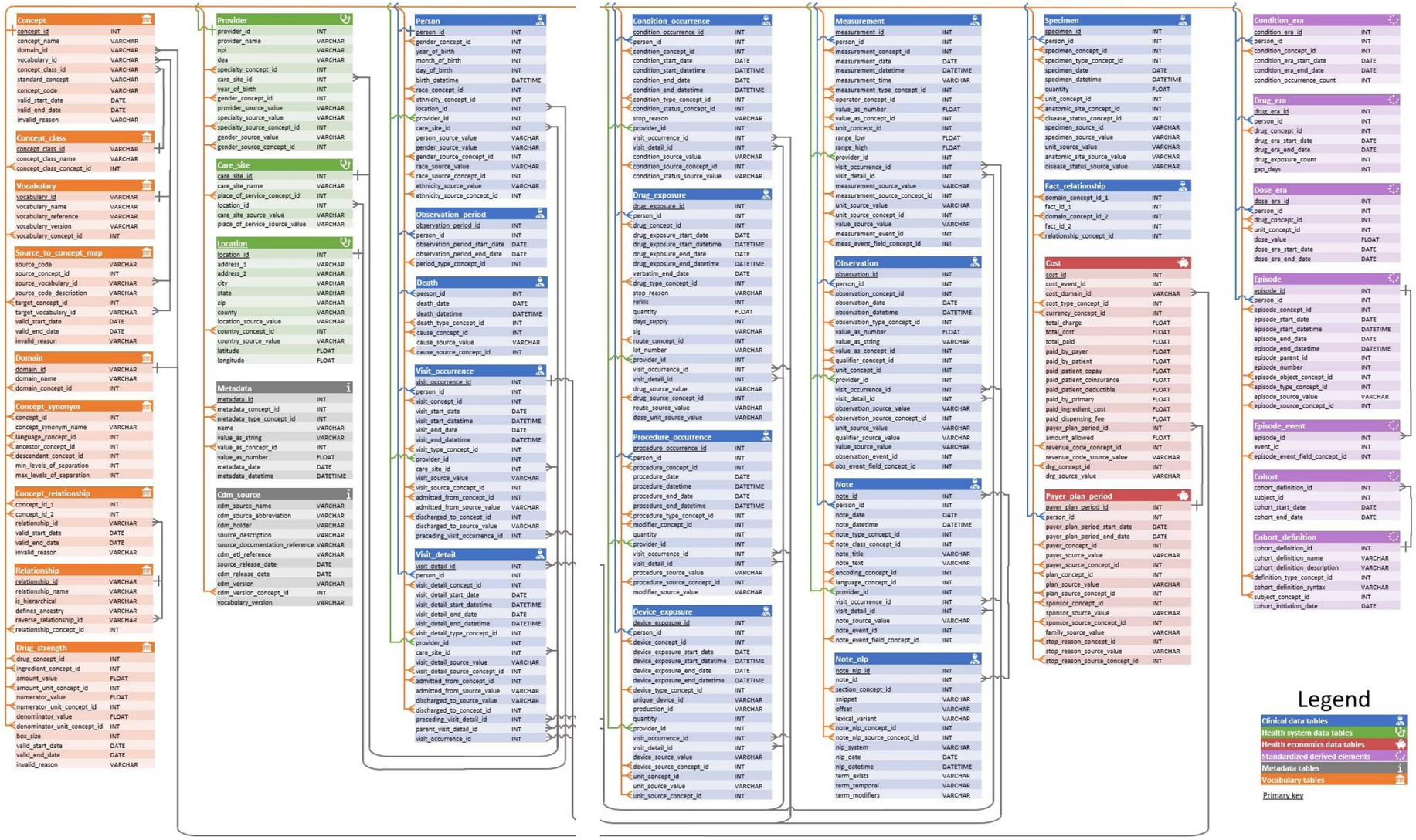
The Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM) is an open community data standard, designed to standardize the structure and content of observational data and to enable efficient analyses that can produce reliable evidence.

"The OMOP Common Data Model serves as the foundation of all our work in the OHDSI community, and I'm proud that our open community data standard has been so widely adopted and so extensively used to generate reliable evidence."

- Clair Blacketer
2020 Titan Award for Data Standards recipient

OMOP Common Data Model 5.4

figure courtesy of Renske Los and Martijn Schuemie



OMOP CDM By The Numbers

37 tables
- 17 to standardize clinical data
- 10 to standardize vocabularies

394 fields
- 193 with _id to standardize identification
- 101 with _concept_id to standardize content
- 43 with _source_value to preserve original data

1 Open Community Data Standard

OMOP CDM Data Sources

The OMOP Common Data Model is an open community data standard, freely available to anyone who would like to standardize their patient-level data into a format that makes it easier to perform analyses and generate reliable evidence. OHDSI prides itself on stewarding the OMOP Common Data Model as a community resource, and actively encourages its adoption through various workgroups, open-source tool development, and educational sessions, and collaborative support.

As of September 2024, there are 544 data sources from 54 different countries which have been standardized to the OMOP Common Data Model. These data sources contain a range of patient-level observations from various data capture processes within routine clinical care, including electronic health records, administrative claims, registries, hospital systems, genomics and biobanks. Together, these data sources conservatively cover more than 974 million unique patient records, representing approximately 12% of the world's population.

Australia (16)
AOA National Joint Replacement Registry
AU-ePBRN (Australian Electronic practice based research network)
AUS Department of Veterans Affairs
Austin Health
IQVIA Australia LPD
Melbourne Childrens Hospital
NPS MedicineWise
Pharmaceutical Benefits Scheme 10% extract
Primary Care GP data (Patron)
Royal Melbourne Hospital and Western Health Hospital Admissions
South Western Sydney LHD
Sydney Childrens Hospital
Sydney Local Health District (LHD)
University of New South Wales & SPHERE Maridulu Budyari Gumal
University of Queensland - Queensland Health
University of South Australia

Austria (1)
Medical University of Vienna

Belgium (17)
Az Damiaan Oostende
AZ Delta
AZ Klina
AZ Maria Middelares
Icometrix
IQVIA Belgium LPD
LynxCare
Medamon
Onze-Lieve-Vrouwziekenhuis Aalst-Asse-Ninove
THIN BE
Universitaire Ziekenhuizen KU Leuven
University Hospital Antwerp
University MS Center
UZ Brussel
UZ Leuven
VZW AZ Groeninge
Ziekenhuis Oost-Limburg

Bosnia and Herzegovina (2)
E-MEDIT D.O.O. & Hospital Travnik
Public institution Travnik Hospital EHR

Brazil (4)
Centre of Health Data and Knowledge Integration - Cidacs
DataSUS Ambulatory
Hospital Israelita Albert Einstein
IQVIA Brazil

Bulgaria (2)
National Scientific Programme "E-Health in Bulgaria"
SAT Health

Cameroon (1)
Data Science Without Borders (DSWB) Project, Douala General Hospital -Respiratory disease unit

Canada (3)
IQVIA Canada EMR
Provincial Health Services Authority (British Columbia)
The Hospital for Sick Children

China (9)
Beijing Anding Psychiatry Hospital
Beijing Smindu Medical Science & Technology CO., Ltd.
Beijing-Tianjin-Hebei (Jing-Jin-Ji) Psychiatric Database
Hebei Province Psychiatry Hospital
Jiangsu Province People's Hospital
Nanfang Hospital COVID-19 Research Database (NFHCRD)
Tianjin Anding Psychiatry Hospital
Wonders Information
Yinzhou Healthcare

Colombia (1)
Hospital Universidad del Norte

Croatia (8)
Bács-Kiskun Megyei Kórház a Szegedi Tudományegyetem Általános Orvostudományi Kar Oktató Kórháza
Clinical Hospital Dubrava
Croatian National Healthcare Information Sustem
Hierarchia & University Hospital Centre Zagreb
IGEA d.o.o. & University Hospital Center Sestre milosrdnice
IN2 d.o.o. & Clinical Hospital Center Osijek
MCS Grupa d.o.o. & Health Care Center of Primorje-Gorski Kotar County
Szabolcs-Szatmár-Bereg Megyei Kórházak és Egyetemi Oktatókórház

Czechia (3)
Czech Myeloma Group
Institute of Rheumatology
OAKS Consulting s.r.o.

Denmark (4)
Aarhus University Hospital Database
Center for Surgical Science (CSS)
Rigshospitalet, Copenhagen University DALY-CARE
University of Southern Denmark

Estonia (3)
Estonian Biobank
Estonian Genome Center at the University of Tartu (EGCUT)
University of Tartu

Ethiopia (2)
Northwest Ethiopia health facility linked community based study
Data Science Without Borders (DSWB) Project, AHRI & Harrarge Health Demographic Surveillance System

Finland (11)
Auria Clinical Informatics
BCB Medical Ltd.
Finnish Clinical Biobank Tampere
Finnish Hematology Registry/ HUS
Finnish Institute for Health and Welfare (THL)
Hospital District of Helsinki and Uusimaa
Hospital District of Southwest Finland
HUS Datalake eCareforMe POC
Pirkanmaa Hospital District
PSHP Oncology
University of Turku (Prostate Cancer Registry of South West Finland)

France (15)
APHP-EDS
Assistance Publique - Hopitaux de Marseille
Assistance Publique – Hôpitaux de Paris (AP-HP)
Bordeaux University Hospital
CEGEDIM HEALTH DATA
Centre Hospitalier Universitaire de Lille
Centre Hospitalier Universitaire de Montpellier
Centre Hospitalier Universitaire de Toulouse
Codoc
IQVIA France DA
IQVIA France LPD
Lille University Hospital
PHAST
SNDS
THIN FR

Georgia (1)
Telavi Regional Hospital

Germany (13)
CancerDataNet GmbH
Charité - Universitätsmedizin Berlin
European Rare Kidney Disease Registry (ERKReg)
German Cancer Society (DKG)
GermanOncology
Hanover Medical School, Germany
InGef - Institute for Applied Health Research Berlin GmbH
IQVIA Germany DA
Krebsregister Rheinland-Pfalz
MS Forschungs- und Projektentwick-lungs-gGmbH
UKER
University Medicine Dresden
University of Ulm, ZIBMT

Greece (6)
Diagnostic & Therapeutic Center Of Athens "Hygeia" Single Member Societe Anonnyme
Digital Health Solutions SA
General Hospital of Kavala
Greek National E-prescription Databank
Innovative Medical Research SA
Papageorgiou General Hospital

Hungary (5)
Bács-Kiskun Megyei Kórház a Szegedi Tudományegyetem Általános Orvostudományi Kar Oktató Kórháza
National Institute of Health Insurance Fund Management Hungary
Semmelweis University
Szabolcs-Szatmár-Bereg Megyei Kórházak és Egyetemi Oktatókórház
University of Pécs

India (1)
Buddhimed Technologies

Ireland (1)
Trinity St James's Cancer Institute, Dublin

Israel (12)
Assuta Medical Centers Ltd.
Barzilai Medical Center
Bnai Zion Medical Research Foundation and Infrastructure Development Health Services
Beni-Zion Medical Center
Galilee Medical Center
Hadassah OBGYN
Hillel Yaffe Medical Center
Kineret (Ministry of Health medical center network)
Lociwise
Shamir Medical Center
The Directorate of Government Medical Centers at the Israeli Ministry Of Health
Tzafon medical center

Italy (34)
Agenzia regionale di sanità della Toscana (ARS)
AO Card. G. Panico - Center for Neurodegenerative Diseases and Aging Brain
ASL Roma 1
ASST Papa Giovanni XXIII
ATS Bergamo
AUSL Reggio Emilia
Azienda Ospedaliera SS Antonio e Biagio e Cesare Arrigo
Azienda Ospedaliera Universitaria Integrata Verona
Azienda Ospedaliero Universitaria San Luigi Gonzaga
Azienda Ospedaliero-Universitaria di Modena
Azienda Unità Sanitaria Locale-IRCCS in Reggio Emilia
Bambino Gesù Children's Hospital
Basilicata Cancer Registry
Casa di Cura Privata del Policlinico (CCPP)
Fondazione Casa Sollievo della Sofferenza
Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico
Fondazione IRCCS Istituto Neurologico Carlo Besta
Fondazione IRCCS Policlinico San Matteo
Fondazione Istituto Nazionale dei Tumori
Fondazione Poliambulanza Istituto Ospedaliero
FONDAZIONE TOSCANA GABRIELE MONASTERIO PER LA RICERCA MEDICA E DI SANITA PUBBLICA (FTGM)
Grande Ospedale Metropolitano "Bianchi-Melacrino-Morelli"
Inspire-srl
IQVIA Italy LPD
IRCCS Azienda Ospedaliero-Universitaria di Bologna Policlinico di Sant'Orsola
IRCCS Policlinico San Donato
ISMETT
Modena Oncology Center - Azienda Ospedaliera Modena
Monastario Foundation (ARCA)
Pedianet
Società Italiana di Medicina Generale e delle cure Primarie (SIMG)
THIN IT
University Hospital of Parma

Japan (4)
IQVIA Japan Claims
IQVIA Japan HIS
Japan Medical Data Center (JMD-C)
MDV (Medical Data Vision)

Kenya (4)
APHRC COVID-19 SERO SURVEY
ALPHA Network DB
INDEPTH Core Microdataset
INSPIRE network COVID-19 PEACH database

Luxembourg (1)
Registre National du Cancer du Luxembourg

Malawi (1)
INSPIRE network COVID-19 PEACH database

Montenegro (1)
Clinical Center of Montenegro

New Zealand (1)
University of Canterbury

Netherlands (17)
Amsterdam UMC
EBMT: The European Society for Blood and Marrow Transplantation
European Clinical Research Alliance on Infectious Diseases (ECRAID) and University Medical Center Utrecht (UMCU)
Harm Slijper
IKNL
Integrated Primary Care Information (IPCI)
Lage Landen Foundation
National Intensive Care Evaluation foundation
Netherlands Cancer Registry
NICE
Pharmo
POS-VAP
Pulse
PulseHandWrist
Stichting Vumc
STIZON
VieCuri Medisch Centrum

Norway (2)
The Norwegian Cancer Registry
University Of Oslo

Philippines (1)
UP-PGH Integrated Surgical Information System

Portugal (12)
APDP
Centro Clínico Academico a Braga, Associaçiao (2CA-Braga)
Centro Hospitalar Universitário de Coimbra (CHUC)
CUF
EGAS MONIZ HEALTH ALLIANCE
Hospital da Luz Learning Health
Hospital Distrital de Santarém (HDS)
Hospital do Espírito Santo de Évora
Instituto de Medicina Molecular
Promptly Patient-reported Outcomes Database
Registo Portugues de Doentes Reumaticos
Unidade Local de Saúde de Matosinhos

Republic of Korea (64)
Ajou University Hospital
Asan Medical Center
Bucheon Sejong Hospital
Catholic Kwandong University International ST. Mary's Hospital
Cha University Bundang Medical Center
Chonnam National University Hwasun Hospital
Chonnan National University Hospital
Chungnam National University Hospital
Chungnam National University Sejong Hospital
Daegu Catholic University Medical Center
Dankook University Hospital
Dongguk University Medical Center
Ewha Womans University Medical Center (Mokdong)
Ewha Womans University Medical Center (Seoul)
Gachon University Gil Medical CenterGachon University Gil Medical Center
Gangnam Severance Hospital
Gangneung Asan Hospital
Gyeongsang National University Changwon Hospital
Gyeongsang National University Hospital
Hanyang University Seoul Hospital
Health Insurance Review & Assessment Service
Incheon Sejong Hospital
Inha University Hospital
Jeonbuk National University Hospital
Kangbuk Samsung Hospital
Kangdong Sacred Heart Hospital
Kangwon National University Hospital
Keimyung University Daegu Dongsan Hospital
Keimyung University Dongsan Medical Center
Konkuk University Medical Center
Konyang University Hospital
Korea Institute of Radiological & Medical Sciences
Korea University Anam Hospital
Korea University Ansan Hospital
Korea University Guro Hospital
Kyung Hee University Hospital At Gangdong
Kyung Hee University Medical Center
Kyungpook National University Chilgok Hospital
Kyungpook national university hospital
Myongji Hospital
Myongji Hospital (Jecheon)
National Cancer Center
National Health Insurance Service
National Health Insurance Service Ilsan Hospital
Presbyterian Medical Center
Pusan National University Hospital
Samsungmedical Center
Seoul National University Bundang Hospital
Seoul National University Hospital
Severance Hospital
SMG-SNU Boramae Medical Center
Soonchunghyang University Hospital (Bucheon)
Soonchunghyang University Hospital (Chonan)
Soonchunghyang University Hospital (Gumi)
Soonchunghyang University Hospital(Seoul)
The Catholic Univ. of Korea, Eunpyeong ST. Mary's Hospital
The Catholic University of Korea, Seoul ST. Mary's Hospital
The Catholic University of Korea, ST. Vincent's Hospital
The Catholic University of Korea, Uijeongbu ST. Mary's Hospital
The Catholic University of Korea, Yeouido ST. Mary's Hospital
Ulsan University Hospital
Wonju Severance Christian Hospital
Wonkwng University Hospital
Yongin Severance Hospital

Romania (1)
Thin Ro

Rwanda (1)
LAISDAR Network Rwanda

Saudi Arabia (1)
Saudi Food and Drug Authority

Scotland (3)
DataLoch
HIC Dundee
South East Scotland Database

Senegal (1)
Data Science Without Borders (DSWB) Project, IRESSEF-Advanced HIV Disease

Serbia (5)
Clinical-hospital center Zvezdara
Kliničko-bolnički centar Zvezdara (Clinical-hospital center Zvezdara)
Primary Healthcare Center Zemun
University Clinical Center of Niš
University Clinical Center of Serbia

Singapore (3)
Growing Up in Singapore Towards healthy Outcomes (GUSTO)
Khoo Teck Puat Hospital (SG_KTPH)
National University Hospital Singapore

South Africa (2)
National Income Dynamics Study (NIDS)
Health & Aging in Africa

Spain (40)
Agencia Española de Medicamentos y Productos Sanitarios, AEMPS
BIFAP (Base de datos para la Investigación Farmacoepidemiológica en el Ámbito Público)
BIOCRUCES BIZKAIA HEALTH RESEARCH INSTITUTE
Conselleria de Sanidade
Consorci Corporació Sanitària Parc Taulí
Consorci Mar Parc de Salut de Barcelona (PSMAR)
CORPORACIÓ SANITARIA PARC TAULI
FISABIO-HSRU
Fundació Institut d´Investigació Sanitària Illes Balears
Fundació Institut d'Investigacions Mèdiques (FIMIM)
Fundacion de Investigacion Biomedica del Hospital Universitario 12 de Octubre
Fundación para la Investigación Biomedica INCLIVA
Fundación para la Investigación del Hospital Universitario La Fe de la Comunidad Valenciana (HULAFE)
Fundación para la Investigación e Innovación Biosanitaria en Atención Primaria (FIIBAP)
Healthcare Service of the Principality of Asturias
Helios Healthcare Spain, S.L.U.
HM Hospitals
Hospital del Mar (HMAR)
Hospital de la Santa Creu I Sant Pau
Hospital Sant Joan de Déu
Hospital Universitario 12 de Octubre
INFOBANCO12
Information System of Parc de Salut Mar (IMASIS)
Institut Català d'Oncologia
Instituto Aragonés de Ciencias de la Salud (IACS)
IQVIA Spain LPD
Marina Salud (Hospital de Denia)
Parc Sanitari Sant Joan de Déu
Pedro Mallol
Research Institute - Hospital de la Santa Creu i Sant Pau
Rioja Salud
Servicio Cántabro de Salud and IDIVAL
Servei Català de la Salut
Servicio Madrileño de Salud
Servicio Navarro de Salud Osasunbidea (SNS-O)
The Information System for Research in Primary Care
The Information System for Research in Primary Care – Hospitalization Linked Data (SIDIAP-H)
Vall d'hebron Hospital Campus
Vall d'Hebrón Hospital Campus
Virgen Macarena University Hospital

Sweden (4)
Stockholm CREAtinine Measurements Project
Gothenburg University
MEB KI
Swibreg

Switzerland (6)
CancerDataNet
Data2time
Geneva Cancer Registry
HUG and SCQM
Institute of Social and Preventive Medicine, University of Bern
Vaud Cancer Registry

Taiwan (6)
NHIRD
Shuang Ho Hospital
Taichung Veterans General Hospital EHR
Taipei Medical University Clinical Research Database (TMUCRD)
Taipei Medical University Hospital
Wanfang Hospital

Thailand (1)
Siriraj Hospital EHR

Turkey (4)
Bayindir Healthcare Group
HIS
Istanbul University Istanbul Faculty of Medicine
IUC Cerrahpaşa TIP Fakületesi

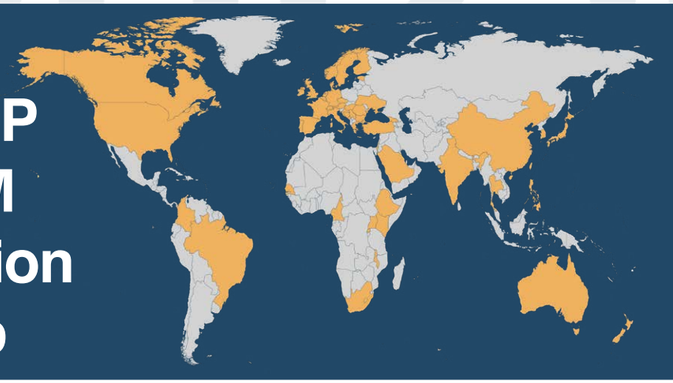
Uganda (2)
Iganga Mental Health primary data
Kagando Mental Health primary data

Ukraine (1)
National Cancer Institute

United Kingdom (26)
Akrivia Health
Barts Health NHS Trust
Clinical Practice Research Datalink (CPRD GOLD)
Clinical Practice Research Datalink Aurum (CPRD Aurum)
Connected Bradford
DataLoch
GOSH
Harvey Walsh Ltd
Health Informatics Centre
King's College London
Leeds Teaching Hospitals
OPEN Health
Optimum Patient Care Limited
Queen Mary University of London
Royal College of General Practitioners Research and Surveillance Centre
SAIL Databank
SciBite TERMite
THIN UK
UCL
UK Biobank
UK Integrated Medical Record Database (IMRD) THIN
UK National Neonatal Research Database
UKCRIS
University College London CALIBER
University College London Hospitals
University of Edinburgh

United States (154)
1up health
Advocate Aurora Health & University of Madison Health Non-Muscle Invasive Bladder Cancer
Advocate Aurora Health COVID Database
Aetna Medical and Pharmacy Data Warehouse
All of Us Research Program
ALTAMED (University of Southern California)
Atrium - Wake Forest Baptist Health
Axiom Health
Baylor Medicine EHR
Blue Health Intelligence
Boston Medical Center
Brown University - Rhode Island HIE
C-Path
Carilion Clinic
Case Western
Cerner HealthFacts
Cherokee Health Systems
Children's Hospital of Colorado
Children's Hospital of Los Angeles
Children's Hospital of Philadelphia
Children's National
Cincinnati Children's Hospital Medical Center
Columbia University Irving Medical Center
Covenant Physician Partners
CRHFEI
Dana-Farber Cancer Institute
DARTNet Institute: CER2 Study
Decision Resources Group (DRG)
Department of Health Services - Los Angeles
Duke University
Eau Claire Cooperative Health Center
Emory Enterprise Research Repository
Fairview Health System EHR
Flatiron - OSCER
Geisinger Health System
George Washington University
Georgetown University ARIA
Georgia Tech Research Institute
GeriOMOP
Harvard University Mass General Brigham
HealthPartners Institute
HealthVerity
Helix Clinico-Genomics Database
Helix Research Network
Merative MarketScan(R) Commercial Claims (CCAE)
Merative MarketScan(R) Medicare Supplemental Database (MDCR)
Merative MarketScan(R) Multi-State Medicaid Database (MDCD
Icahn School of Medicine at Mount Sinai
Indiana University School of Medicine / Regenstrief Institute
Inova Health System
IQVIA US Ambulatory EMR
IQVIA US Hospital Charge Data Master (CDM)
IQVIA US Oncology EMR
IQVIA US Open Claims
IQVIA US PharMetrics Plus
Johns Hopkins Unversity
Keck Medicine of University of Southern California
Loyola University New Orleans
Lurie
Maine Medical Center
Marietta Eye Clinic EHR
Mayo Clinic
Medical University of South Carolina
Medicare Research Identifiable Files
MedStar Health
Memorial Sloan Kettering Cancer Center
Momentum AD
Montefiore Medical Center (Albert Einstein College of Medicine)
N3C
Nemours Children's Health System
NeuroBlu Behavioral Health Database
NorthShore University HealthSystem
Northwestern Medicine Enterprise Data Warehouse (NMEDW)
NYC-CDRN
NYU Langone
OCHIN (Oregon Community Health Information Network)
Ochsner Medical Center
Oklahoma University
One Fact Foundation Payless Health
Optum© De-Identified Clinformatics(R) Data Mart Database - SES & DOD
Optum© de-identified Electronic Health Record Dataset (PANTHER)
Oregon Health & Science University
Pareto Intelligence
PEDSnet
Penn State
Premier Healthcare Database
QueensCare - Los Angeles
Reliant Medical Group
Rhode Island Quality Institute
Rush University Medical Center
Rutgers
Shriners Children's
Spectrum Health West Michigan
STAnford medicine Research data Repository (STARR)
Stony Brook
Surveillance, Epidemiology, and End Results Program (SEER): B-Cell
TCC - Los Angeles
The Healthcare Cost and Utilization Project (HCUP), Nationwide Inpatient Sample (NIS)
The National Health and Nutrition Examination Survey (NHANES)
The Ohio State University Medical Center
TrialSpark
Tufts MC Research Data Warehouse (TRDW)
Tulane
UMass Memorial Medical Center
UNC Chapel Hill
University Medical Center New Orleans
University of Alabama at Birmingham
University of Arkansas
University of Buffalo
University of California Health
University of California, Davis
University of California, Irvine
University of California, Los Angeles
University of California, Riverside
University of California, San Diego
University of California, San Francisco
University of Chicago
University of Cincinnati
University of Colorado
University of Colorado, Anschutz Medical Center
University of Illinois Chicago
University of Iowa
University of Kentucky
University of Miami
University of Michigan
University of Minnesota
University of Mississippi Medical Center
University of Nebraska Medical Center
University of New Mexico Health Sciences Center
University of North Carolina, Chapel Hill
University of Pennsylvania
University of Pittsburgh
University of Pittsburgh - Banner
University of Rochester
University of Texas Houston
University of Texas Medical Branch
University of Texas Southwestern Medical Center
University of Utah
University of Virginia
University of Washington
University of Wisconsin Madison
US Department of Defense
US Department of Veterans Affairs
UTPhysicians
Vanderbilt University
Veradigm Health Insights Data - Allscripts
Veradigm Health Insights Data - Practice Fusion
Virginia Commonwealth University
Wake Forest University
WashU St Louis
Weill Cornell Medicine/NewYork-Presbyterian Hospital (East Campus)
West Virginia University
Winship Cancer Institute of Emory University
Zus Health

OMOP CDM Adoption Map



OHDSI Evidence Network

In this section, you learned about the OMOP Common Data Model, our foundational tool which standardizes patient-level data. You saw the reach of OMOP, which connects nearly one billion patients across six different continents in a way no other community can match.

However, if we aren't using this data to make an impact, we are wasting an incredible resource. We are building the OHDSI Evidence Network to give researchers faster access to real-world data. This is an ongoing priority in OHDSI, and we are excited about the early progress. We share a responsibility to empower network studies so we can generate reliable real-world evidence.

Data partners from across 15 nations and six continents have already joined the Evidence Network, and we are always looking to add more. You can learn more at our website: *ohdsi.github.io/EvidenceNetwork*.

IQVIA

Contact us: iqvia@ohdsi.org

Country	Source Name	Patient Count
Australia	Australia EMR	2.7M
Belgium	IQVIA Belgium LPD	1.1M
France	France LPD	17.4M
France	IQVIA France DA	6.2M
Germany	IQVIA Germany DA	40.8M
Spain	LPD Spain	2.7M
United Kingdom	UK IMRD EMIS	5.1M
United States	US Hospital	113.1M
United States	US Open Claims	829.8M
United States	US PharMetrics Plus	170.2M

Johnson & Johnson

Contact us: jnj@ohdsi.org

Country	Source Name	Patient Count
Japan	JMDC	17.6M
United States	Merative MDCR	11.3M
United States	Merative CCAE	172.2M
United States	Merative MDCD	36.1M
United States	Premier	338.4M
United States	Optum ClinFormatics	99.3M
United States	Optum EHR	114.4M

Boehringer Ingelheim

Contact us: bi@ohdsi.org

Country	Source Name	Patient Count
Japan	JMDC	22.6M
United States	Optum ClinFormatics	85.1M
United States	Optum Market Clarity	90M

University of New Mexico

Contact us: unm@ohdsi.org

Country	Source Name	Patient Count
United States	Merative MDCR	11.2M
United States	Merative CCAE	170.7M

Ajou University

Contact us: ajou@ohdsi.org

Country	Source Name	Patient Count
Korea	Ajou University School of Medicine	2.7M

Clinical Hospital Center Zvezdara

Contact us: chcz@ohdsi.org

Country	Source Name	Patient Count
Serbia	CHCZ Zvezdara	618K

Columbia University

Contact us: cuimc@ohdsi.org

Country	Source Name	Patient Count
United States	Columbia University Irving Medical Center Data	7M

Emory University

Contact us: emory@ohdsi.org

Country	Source Name	Patient Count
United States	Emory University	6.5M

GUSTO Singapore Cohort

Contact us: gusto@ohdsi.org

Country	Source Name	Patient Count
Singapore	GUSTO Singapore Cohort	2.6K

HealthPartners Institute

Contact us: hpi@ohdsi.org

Country	Source Name	Patient Count
United States	HealthPartners Data	3.2M

Johns Hopkins University

Contact us: jhm@ohdsi.org

Country	Source Name	Patient Count
United States	Johns Hopkins Medicine	2.2M

Lancashire Teaching Hospitals NHS Foundation Trust

Contact us: lsc@ohdsi.org

Country	Source Name	Patient Count
United Kingdom	IDRIL	1.5M

Papageorgiou General Hospital

Contact us: cteph@ohdsi.org

Country	Source Name	Patient Count
Greece	Papageorgiou General Hospital	1.4M

Penn State Health

Contact us: PSU@ohdsi.org

Country	Source Name	Patient Count
United States	Penn State Health	8.7M

Precision Data

Contact us: precisiondata@ohdsi.org

Country	Source Name	Patient Count
Brazil	DATASUS	8.7M

Semmelweis University

Contact us: semmelweis@ohdsi.org

Country	Source Name	Patient Count
Hungary	Semmelweis University Clinical Database	1.9M

Seoul National University Bundang Hospital

Contact us: snubh@ohdsi.org

Country	Source Name	Patient Count
Korea	Seoul National University Bundang Hospital	2.1M

Seoul National University Hospital

Contact us: snuh@ohdsi.org

Country	Source Name	Patient Count
Korea	Seoul National University Hospital	2.1M

SMG-SNU Boramae Medical Center

Contact us: boramae@ohdsi.org

Country	Source Name	Patient Count
Korea	SMG-SNU Boramae Medical Center	1M

Join The Evidence Network!

We are proud of the data partners who have joined the Evidence Network, but we are excited to grow. If you want to join this group dedicated the improving healthcare globally, please reach out to **evidencenetwork@ohdsi.org**.

Stanford University

Contact us: stanford@ohdsi.org

Country	Source Name	Patient Count
United States	Stanford Research Repository	3.8M

Taipei Medical University

Contact us: tmu@ohdsi.org

Country	Source Name	Patient Count
Taiwan	TMU Clinical Research Database	3.6M

Tufts University

Contact us: tmu@ohdsi.org

Country	Source Name	Patient Count
United States	Tufts Research Data	3.9M

University of Colorado Anschutz Medical Campus

Contact us: cuanschutz@ohdsi.org

Country	Source Name	Patient Count
United States	UC Health	4.8M

University of Massachusetts Chan Medical Center

Contact us: umassmed@ohdsi.org

Country	Source Name	Patient Count
United States	UMass Medical	3.4M

University of Southern California

Contact us: usc@ohdsi.org

Country	Source Name	Patient Count
United States	USC Keck Medical	883K

University of Texas Southwestern

Contact us: utsw@ohdsi.org

Country	Source Name	Patient Count
United States	UT Southwestern	5.5M

Veteran's Affairs

Contact us: va@ohdsi.org

Country	Source Name	Patient Count
United States	VINCI	26.5M

Yonsei University Hospital

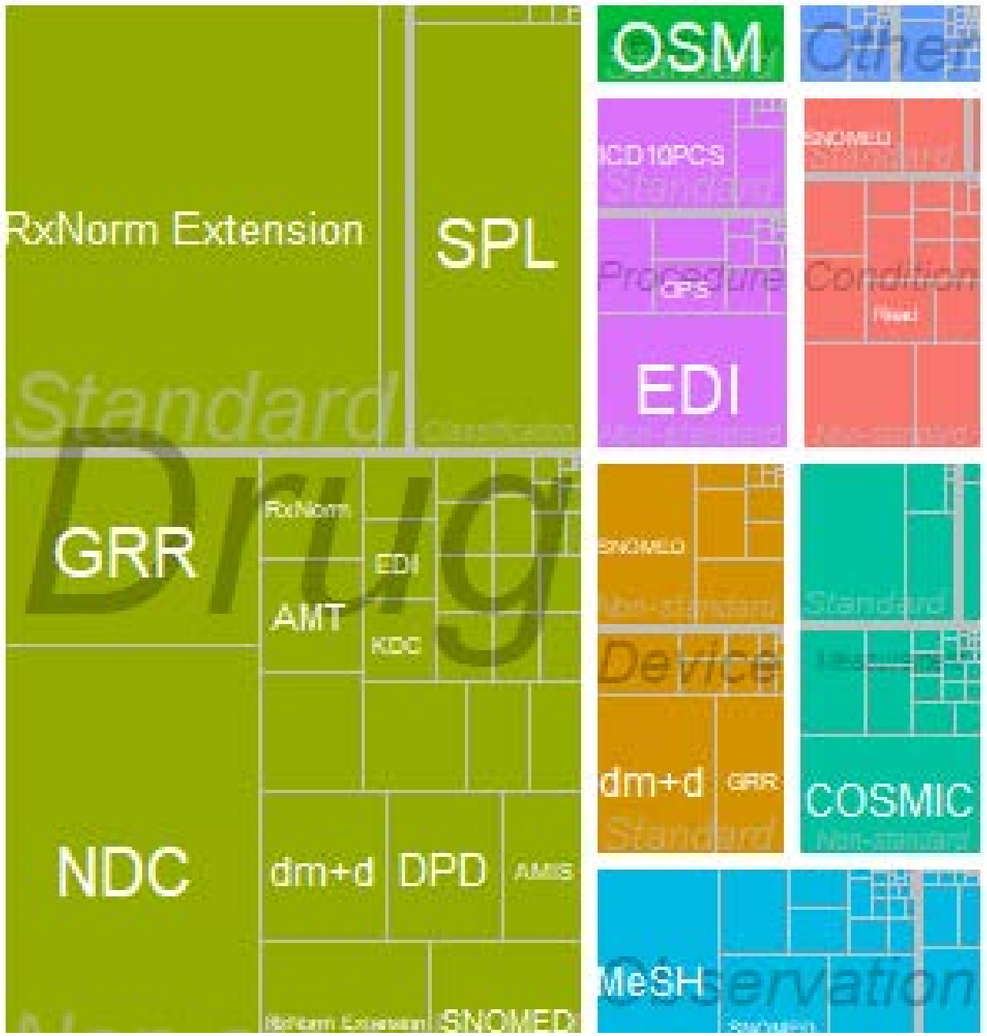
Contact us: yuhs@ohdsi.org

Country	Source Name	Patient Count
Korea	Yonsei University Hospital	6.4M

OHDSI Standardized Vocabularies

The OHDSI vocabularies allow organization and standardization of medical terms to be used across the various clinical domains of the OMOP common data model, and enables standardized analytics that leverage the knowledge base when constructing exposure and outcome phenotypes and other features within characterization, population-level effect estimation, and patient-level prediction studies.

You can download the OHDSI Standardized Vocabularies at athena.ohdsi.org.



This treemap shows all concepts in the OHDSI vocabularies, organized by domain (color) and vocabularies (boxes sized by the number of concepts).

OHDSI Vocabularies By The Numbers

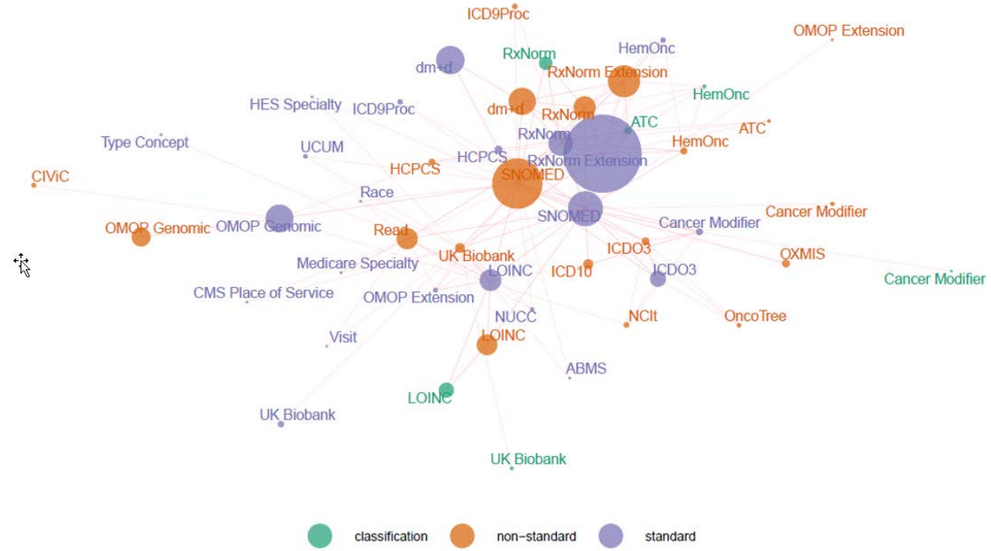
as of August 2025 release

- 11,804,307 concepts
  - 3,784,263 standard concepts
  - 971,914 classification concepts
- 145 vocabularies
- 43 domains
- 87,948,636 concept relationships
- 101,696,159 ancestral relationships
- 6,028,711 concept synonyms

1 Shared Resource to Enable Data Standards

This network diagram shows the relationships between vocabularies. Nodes are vocabularies, sized by the number of concepts. Edges show connections between concepts within vocabularies. Thank you to Andy South for this graphic.

Want to learn more about the OHDSI vocabularies?
Read: book.ohdsi.org
Download: athena.ohdsi.org
Learn: academy.ehden.edu



"If we really want to achieve global collaboration, we need more than just standardizing data format. We have to establish a shared understanding of data meaning and speak the same language when expressing clinical ideas. The OHDSI vocabularies is a community resource that makes it possible to work to reach this common goal."

- Christian Reich

2018 Titan Award recipient for Data Standards

OHDSI Standardized Vocabularies Improvement Initiative

Continuous improvement of our standardized vocabularies has been a community effort over the last year. Recent focuses have included contributions, versioning, and building a roadmap with emphasis on vocabularies most commonly used.

We thank our Vocabulary Team for its leadership in this journey. Learn more about recent developments on these pages.

Thank You, Vocabulary Team!


Vlad Korsik


Masha Khitrun


Anna Ostropolets


Oleg Zhuk


Aliaksei Katyshou


Anton Tatur


Maria Rogozhkina


Mikita Salavei


Polina Talapova


Alex Davydov


Dmytro Dymshyts


Varvara Savitskaya


Tetiana Orlova

Scholarship Meets Application

We published principles for standardized vocabularies and have developed quality compliance checks to monitor progress

Requirement	Definition
Standard concepts	Unique concepts of fully pre-coordinated medical entities, to be stated as fact, no negations of facts, no reference to the past, and no flavors of null (unknown, not reported, etc.)
Concept domains	Assignment of concepts to domain categories (condition, drug, visit, etc.)
Comprehensive coverage	In each domain, standard concepts must cover all possible entities and mappings from terms and codes used in databases around the world
Polyhierarchies	Precalculated hierarchies organizing concepts
Efficiency	Computationally efficient data model
Use case focus	Storing and analyzing patient-level data for evidence generation

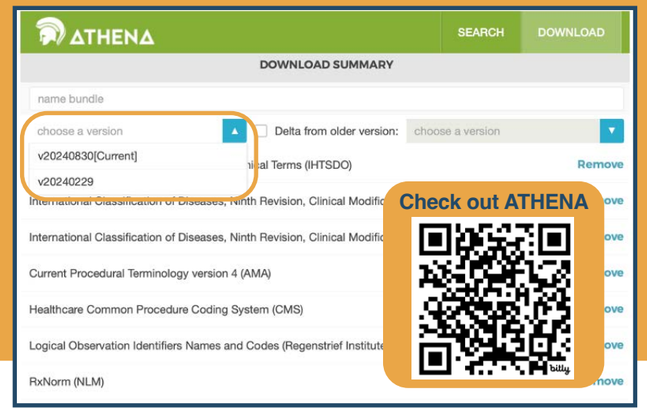
JAMIA Publication

Quality Management System

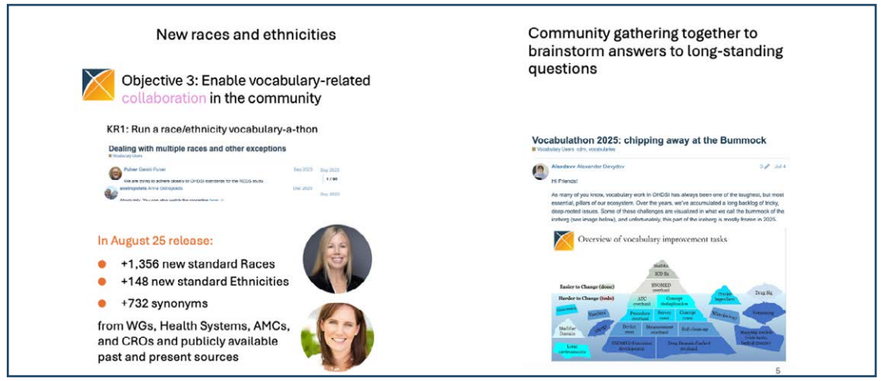
Community-Inspired Development

One of the most commonly requested features in the landscape assessment was enabling users to download different versions of the vocabularies.

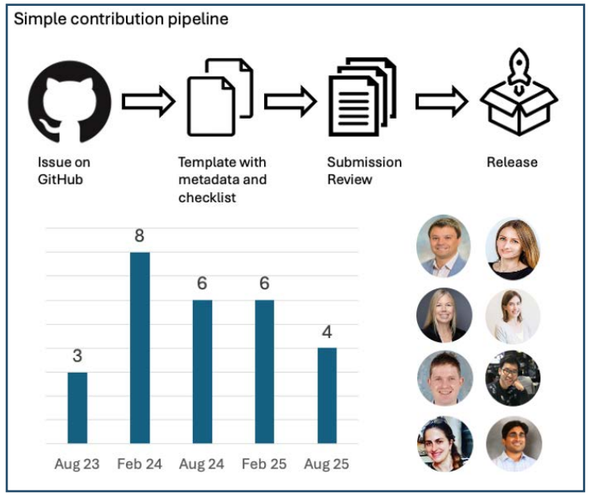
The feature now is available on athena.ohdsi.org.

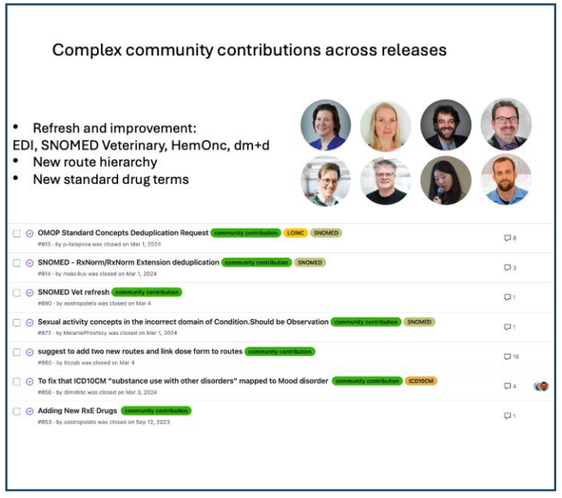


Community Contributions



Learn how you can contribute to the OHDSI standardized vocabularies!



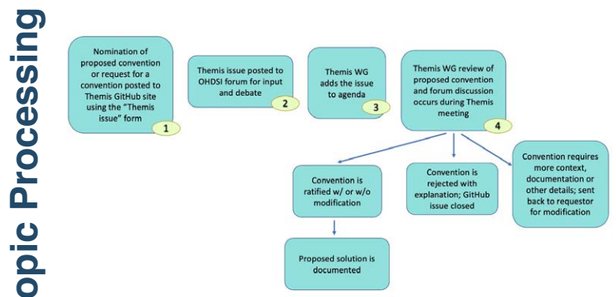


Themis Conventions

The Themis Repository contains all ratified conventions for the OHDSI community and was established during the April Olympians event of 2024, when the team successfully added 25 ratified Themis conventions to the newly launched website; you can see the various convention categories below.

Our work continues. The Themis workgroup remains actively engaged in reviewing issues, discussing proposals, and adjudicating conventions. Our goal is to guide the OHDSI community on how to accurately insert data into the OMOP CDM in cases of ambiguity. This ongoing effort supports the creation of a structurally standardized and semantically harmonized data model, ultimately contributing to the production of reliable real-world evidence to inform patient care.

All are welcome to join Themis!



General Conventions: Person Exclusion, Gender Identity, Providers with Multiple Addresses, Records with Values, Patient Reported Data, Events Outside of the Observation Period, Observation Periods for EHR data

CDM Tables: Care Site, Condition Occurrence, Death, Drug Exposure, Location, Measurement, Observation Period, Person, Provider, Visit Occurrence

Tag Browser: Address, Birthdate, Dates, Gender, Gender Identity, Labs, Lab Values, Location, Measurement, Negative, Observation Period, Patient Reported, Person, Place of Service, Provider Quantity, Sex, Themis, Value as Number, Year of Birth

"Themis makes decisions for the good of the whole community. We must compromise. Don't let perfect be the enemy of great. And interoperability between different OMOP CDMs is great!"

- Melanie Philofsky

2022 Titan Award recipient for Data Standards

2025 Updates

The Themis WG continues to meet to discuss use cases and conventions needed to enable reproducible and reliable real-world evidence. The meetings are held twice monthly on MS Teams and all are welcome.

Community contribution for race & ethnicity vocabulary

To enable more granular research and evidence production on race and ethnicity, the Health Systems group led an initiative to collect race and ethnicity value sets from publicly available vocabularies and OHDSI collaborators who have real-world datasets with these data.

In total, over 1400 unique race and 150 unique ethnicity values were compiled from ~20 data assets. Simple lexical matching was used to de-duplicate the value sets. In total, 1,356 race and 148 ethnicity standard concepts along with 732 synonyms were added to the August 2025 vocabulary release via community contribution. The Health Systems group appreciates **Piper Ranallo's** leadership in collecting, compiling, de-duplicating and submitting this important contribution!

Health Systems group launches .io website

A special thank you goes out to **Hayden Spence** for helping the Health Systems group get the .io website up and running. The site houses information and resources for all OHDSI collaborators on their journey to real-world data standardization. It is still a work in progress and your feedback is appreciated. What additional resources would be helpful?

Health Systems Website

OMOP and FHIR

When the OMOP CDM and FHIR (a healthcare data exchange standard) work together, they improve healthcare data sharing and research. OMOP organizes large amounts of patient data from different sources, while FHIR ensures secure and standardized data exchange between systems. Combining the two allows researchers and healthcare providers to access and use patient data more efficiently, improving precision medicine, personalized treatments, and overall patient care. It also enhances collaboration across hospitals, research institutions, and healthcare technologies, leading to better outcomes and innovations in medical care.

2025 Update

In September 2025, the OHDSI and HL7 communities reached a historic milestone with the successful ballot of the FHIR to OMOP Implementation Guide (IG) v1.0, marking a foundational, formally vetted standard for transforming healthcare data between these two critical frameworks.

Why This Matters

This IG bridges two dominant open-source standards, creating a force multiplier for global health research and real- world evidence generation. With 71% of countries actively using FHIR for national healthcare initiatives and over 950 million patient records stored in OMOP format, standardized transformations between the advances OHDSI's RW evidence generation goals. The IG provides standardization of core-canonical EHR data element transformations to OMOP, creating more uniform transformations from FHIR and reducing redundant ETL efforts.

What Was Accomplished

After 2+ years of collaboration involving 100+ participants from 80+ organizations, in partnership with and sponsored by the Vulcan FHIR accelerator, the working group delivered:

Pragmatic Guidance: Best practices distilled from proven implementations; Detailed concept mapping principles with decision logic; Three common mapping patterns for any transformation scenario

Technical Artifacts: OMOP CDM logical models expressed in FHIR; Machine-readable Structure Maps for automated transformations; Validation packages tested through Connectathons; Establishment of **Echidna FHIR Terminology Server for OHDSI vocabularies**

The IG has just completed its initial Informative Ballot round! Already the FHIR-to-OMOP IG is increasingly being cited as an authoritative resource across the healthcare data community. This recognition validates our team's efforts and the broader community working to bridge clinical care and research data standards.

As we move forward, we're actively incorporating feedback from HL7 members and community stakeholders to refine and strengthen the guide. If you're interested in shaping this important work, we'd love to hear from you — links to comment and resources can be found under the Support tab in the IG. Your insights help us improve the IG before it moves forward as a Standard for Trial Use (STU) in an upcoming HL7 ballot.

"The FHIR to OMOP IG proves that when communities collaborate, we accelerate the journey from data to evidence to better health outcomes."

- Davera Gabriel

FHIR to OMOP IG Co-Author

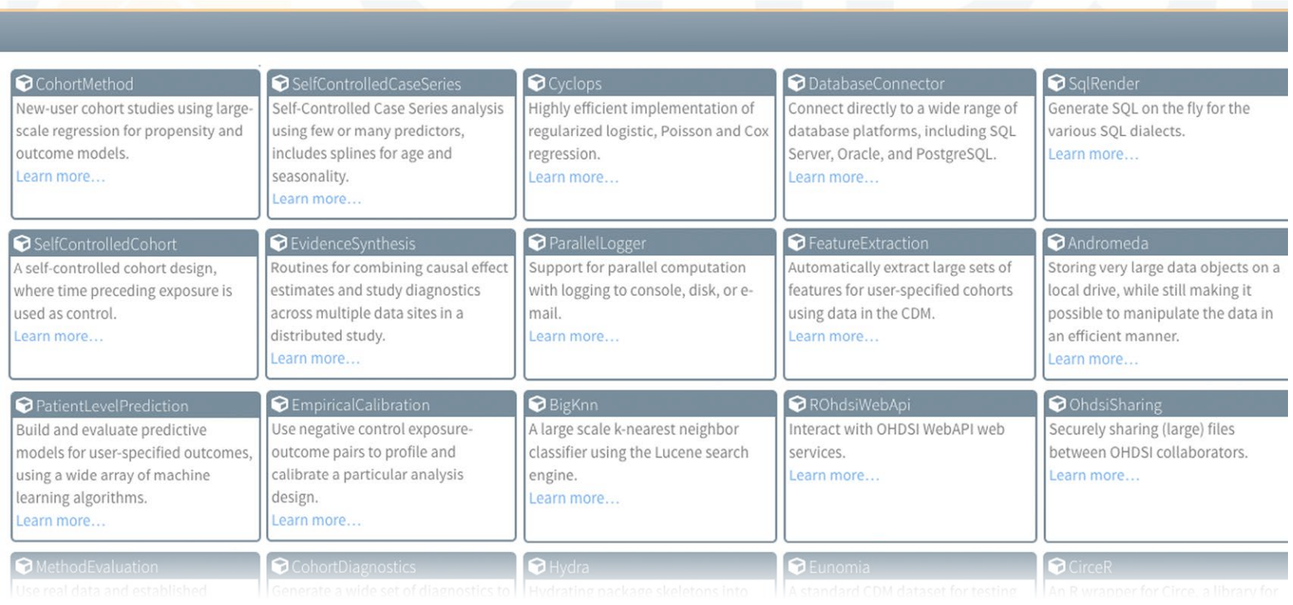
"Together, we're not just mapping data formats — we're building the infrastructure for tomorrow's medical breakthroughs."

- Jean Duteau

FHIR to OMOP IG Co-Author

VII.

Open-Source Software



HADES

HADES is a set of open source R packages for large scale analytics, including population characterization, population-level causal effect estimation, and patient- level prediction.

The packages offer R functions that together can be used to perform an observational study through the full journey from data to evidence, including data manipulation, statistical modeling, and results generation with supporting statistics, tables and figures.

Each package includes functions for specifying and subsequently executing multiple analyses efficiently. HADES supports best practices for use of observational data as learned from previous and ongoing research, such as transparency and reproducibility, as well as measuring of the operating characteristics of methods in a particular context and subsequent empirical calibration of estimates produced by the methods.

Population-Level Estimation

CohortMethod

CohortMethod is an R package for performing new-user cohort studies in an observational database in the OMOP Common Data Model.

SelfControlledCaseSeries

SelfControlledCaseSeries is an R package for performing Self-Controlled Case Series (SCCS) analyses in an observational database in the OMOP Common Data Model.

EvidenceSynthesis

This R package contains routines for combining causal effect estimates and study diagnostics across multiple data sites in a distributed study. This includes functions for performing meta-analysis and forest plots.

SelfControlledCohort

This package provides a method to estimate risk by comparing time exposed with time unexposed among the exposed cohort.

Characterization

Characterization

Characterization is an R package for performing characterization of a target and a comparator cohort.

CohortIncidence

CohortIncidence is an R package and Java library for calculating incidence rates o1n the OMOP CDM.

TreatmentPatterns

This R package contains the resources for performing a treatment pathway analysis of a study population of interest in observational databases. The package partially relies on the Observational Medical Outcomes Partnership Common Data Model (OMOP CDM), but the main parts of the package are also usable with different data formats.

Patient-Level Prediction

PatientLevelPrediction

PatientLevelPrediction is an R package for building and validating patient-level predictive models using data in the OMOP Common Data Model format.

DeepPatientLevelPrediction

DeepPatientLevelPrediction is an R package for building and validating deep learning patient-level predictive models using data in the OMOP Common Data Model format and OHDSI PatientLevelPrediction framework.

EnsemblePatientLevelPrediction

EnsemblePatientLevelPrediction is an R package for building and validating ensemble patient-level predictive models using data in the OMOP Common Data Model format. The package expands the OHDSI R PatientLevelPrediction package to enable ensemble learning.

Cohort Construction

Capr

The goal of Capr, pronounced 'kay-pr' like the edible flower, is to provide a language for expressing OHDSI Cohort definitions in R code. OHDSI defines a cohort as "a set of persons who satisfy one or more inclusion criteria for a duration of time" and provides a standardized approach for defining them (Circe-be). Capr exposes the standardized approach to cohort building through a programmatic interface in R which is particularly helpful when creating a large number of similar cohorts. Capr version 2 introduces a new user interface designed for readability with the goal that Capr code being a human readable description of a cohort while also being executable on an OMOP Common Data Model.

CirceR

A R-wrapper for Circe, a library for creating queries for the OMOP Common Data Model. These queries are used in cohort definitions (CohortExpression) as well as custom features (CriteriaFeature). This package provides convenient wrappers for Circe functions, and includes the necessary Java dependencies.

CohortDiagnostics

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 rates and proportions for age, gender and calendar year (based crude data set wide metrics). Through the identification of errors, CohortDiagnostics enables the comparison of multiple candidate cohort definitions across one or more data sources, facilitating reproducible research.

CohortExplorer

This software tool is designed to extract data from a randomized subset of individuals within a cohort and make it available for exploration in a 'Shiny' application environment. It retrieves date-stamped, event-level records from one or more data sources that represent patient data in the Observational Medical Outcomes Partnership (OMOP) data model format. This tool features a user-friendly interface that enables users to efficiently explore the extracted profiles, thereby facilitating applications, such as reviewing structured profiles. The output of this R-package is a self-contained R shiny that contains person-level data for review.

CohortGenerator

This R package contains functions for generating cohorts and cohort subsets using data in the CDM.

Knowledge-Enhanced Electronic Profile Review (KEEPER)

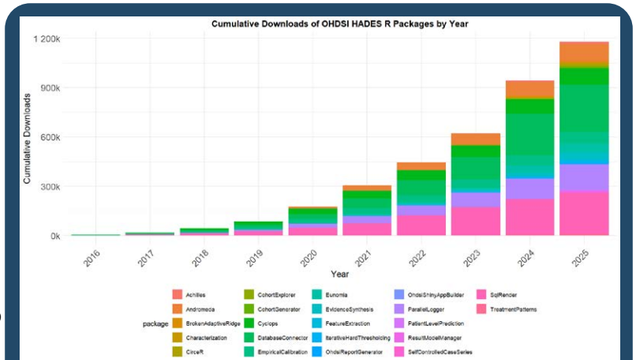
KEEPER is an R package for reviewing patient profiles for phenotype validation.

PheValuator

The goal of PheValuator is to produce a large cohort of subjects each with a predicted probability for a specified health outcome of interest (HOI). This is achieved by developing a diagnostic predictive model for the HOI using the PatientLevelPrediction (PLP) R package and applying the model to a large, randomly selected population. These subjects can be used to test one or more phenotype algorithms.

PhenotypeLibrary

The OHDSI community has developed a publicly accessible, version-controlled Phenotype Library to guide real-world evidence towards the FAIR principles: Findability, Accessibility, Reproducibility, and Interoperability. This library aims to foster the submission and retrieval of high-quality cohort definitions, cataloging of metadata, attribution and promotion of discovery and reuse in scientific research. Within the OHDSI Phenotype Library (OHDSI PL), each entry represents a unique cohort sdefinition identifiable by a stable, externally referenceable ID. Comprehensive metadata about each cohort definition is cataloged and made searchable for researchers. Content in the library is subject to version control, with each version is assigned a specific DOI.



Cumulative downloads of the 22 OHDSI R packages available on CRAN by year. There have been more than 1 million total downloads.

Evidence Quality

Achilles

Automated Characterization of Health Information at Large-Scale Longitudinal Evidence Systems (ACHILLES) Achilles provides descriptive statistics on an OMOP CDM database. ACHILLES currently supports CDM version 5.3 and 5.4.

Data Quality Dashboard

The goal of the Data Quality Dashboard (DQD) project is to design and develop an open-source tool to expose and evaluate observational data quality. This package will run a series of data quality checks against an OMOP CDM instance (currently supports v5.4, v5.3 and v5.2). It systematically runs the checks, evaluates the checks against some pre-specified threshold, and then communicates what was done in a transparent and easily understandable way.

EmpiricalCalibration

This R package contains routines for performing empirical calibration of observational study estimates. By using a set of negative control hypotheses we can estimate the empirical null distribution of a particular observational study setup. This empirical null distribution can be used to compute a calibrated p-value, which reflects the probability of observing an estimated effect size when the null hypothesis is true taking both random and systematic error into account, as described in the paper Interpreting observational studies: why empirical calibration is needed to correct p-values.

Also supported is empirical calibration of confidence intervals, based on the results for a set of negative and positive controls, as described in the paper Empirical confidence interval calibration for population-level effect estimation studies in observational healthcare data.

Method Evaluation

This R package contains resources for the evaluation of the performance of methods that aim to estimate the magnitude (relative risk) of the effect of a drug on an outcome. These resources include reference sets for evaluating methods on real data, as well as functions for inserting simulated effects in real data based on negative control drug-outcome pairs. Further included are functions for the computation of the minimum detectable relative risks and functions for computing performance statistics such as predictive accuracy, error and bias.

Supporting Packages

Andromeda

AsynchroNous Disk-based Representation of MassivE DAta (ANDROMEDA): An R package for storing large data objects. Andromeda allow storing data objects on a local drive, while still making it possible to manipulate the data in an efficient manner.

BigKNN

An R package implementing a large scale k-nearest neighbor (KNN) classifier using the Lucene search engine.

BrokenAdaptiveRidge

A R package for performing L_0-based regressions using Cyclops.

Cyclops

Cyclops (Cyclic coordinate descent for logistic, Poisson and survival analysis) is an R package for performing large scale regularized regressions.

DatabaseConnector

This R package provides function for connecting to various DBMSs. Together with the SqlRender package, the main goal of DatabaseConnector is to provide a uniform interface across database platforms: the same code should run and produce equivalent results, regardless of the database back end.

Eunomia

Eunomia is a standard dataset manager for sample OMOP (Observational Medical Outcomes Partnership) Common Data Model (CDM) datasets. Eunomia facilitates access to sample datasets from the EunomiaDatasets repository. Eunomia is used for testing and demonstration purposes, including many of the exercises in the Book of OHDSI. For functions that require schema name, use 'main'.

FeatureExtraction

An R package for generating features (covariates) for a cohort using data in the Common Data Model.

Supporting Packages

IterativeHardThresholding

A R package for performing L_0-based regressions using Cyclops.

OhdsiReportGenerator

This package contains functions for extracting characterization, estimation and prediction results from the OHDSI result database. It also contains codes to create useful plots, presentations templates and report templates.

OhdsiSharing

This is an R package for sharing data between OHDSI partners.

OHDSIShinyAppBuilder

Create shiny apps using modules from OhdsiShinyModules or custom modules.

OhdsiShinyModules

OhdsiShinyModules is an R package containing shiny modules that can be used within shiny result interfaces. The OHDSI tools often provide shiny interfaces for viewing and exploring results. Many of these shiny apps have overlapping features. To ensure consistency we have created a repository containing useful shiny modules that can be used in multiple result explorers.

ParallelLogger

Support for parallel computation with progress bar, and option to stop or proceed on errors. Also provides logging to console and disk, and the logging persists in the parallel threads. Additional functions support function call automation with delayed execution (e.g. for executing functions in parallel).

ResultModelManager

RMM is a database data model management utilities for R packages in OHDSI. RMM provides utility functions to allow package maintainers to migrate existing SQL database models, export and import results in consistent patterns.

ROhdsiWebApi

ROhdsiWebApi is a R based interface to 'WebApi' (OHDSI RESTful services), and performs GET/PULL/POST/DELETE calls via the WebApi. All objects starting from R or output to R - are analysis ready R-objects like list and data.frame. The package handles the intermediary steps by converting R-objects to JSON and vice versa. To ensure r-objects are analysis ready, the objects are type converted where possible, e.g. date/date time are converted from string to POSIXct.

This package makes reproducible research easier, by offering ability to retrieve detailed study specifications, transport study specifications from one instance to another, programmatically invoke the generation of a sequence of steps that are part of a study, manage running studies in batch mode.

SqlRender

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.

Strategus

Strategus is an R package for coordinating and executing analytics using OHDSI HADES modules. Please turn the page to learn more about Strategus.

HADES Hackathon at 2024 Global Symposium

Package Statuses (as of 11Sep2025)

Package	Version	Maintainer(s)	Availability
Achilles	v1.7.2	Frank DeFalco	CRAN
Andromeda	v1.1.1	Martijn Schuemie	CRAN
BigKnn	v1.0.2	Martijn Schuemie	GitHub
BrokenAdaptiveRidge	v1.0.1	Marc Suchard	CRAN
Capr	v2.1.0	Martin Lavallee	GitHub
Characterization	v2.2.0	Jenna Reps	CRAN
CirceR	v1.3.3	Chris Knoll	CRAN
CohortDiagnostics	v3.4.2	Jamie Gilbert	GitHub
CohortExplorer	v0.1.0	Gowtham Rao	CRAN
CohortGenerator	v0.12.2	Anthony Sena	CRAN
CohortIncidence	v4.1.0	Chris Knoll	GitHub
CohortMethod	v5.5.0	Martijn Schuemie	GitHub
Cyclops	v3.6.0	Marc Suchard	CRAN
DatabaseConnector	v6.4.0	Martijn Schuemie	CRAN
DataQualityDashboard	v2.7.0	Katy Sadowksi	GitHub
DeepPatientLevelPrediction	v2.2.0	Egill Fridgeirsson	GitHub
EmpiricalCalibration	v3.1.4	Martijn Schuemie	CRAN
EnsemblePatientLevelPrediction	v1.0.2	Jenna Reps	GitHub
Eunomia	v2.1.0	Frank DeFalco	CRAN
EvidenceSynthesis	v1.0.0	Martijn Schuemie	CRAN
FeatureExtraction	v3.11.0	Ger Inberg	CRAN
Hydra	v0.4.0	Anthony Sena	Deprecated
IterativeHardThresholding	v1.0.3	Marc Suchard	CRAN
Keeper	v0.2.1	Anna Ostropolets	GitHub
MethodEvaluation	v2.4.0	Martijn Schuemie	GitHub
OhdsiReportGenerator	v1.1.1	Jenna Reps	CRAN
OhdsiSharing	v0.2.2	Lee Evans	GitHub
OhdsiShinyAppBuilder	v1.0.0	Jenna Reps	CRAN
OhdsiShinyModules	v3.3.0	Jenna Reps	GitHub
ParallelLogger	v3.5.0	Martijn Schuemie	CRAN
PatientLevelPrediction	v6.5.0	Egill Friogeirsson & Jenna Reps	CRAN
PhenotypeLibrary	v3.36.0	Gowtham Rao	GitHub
PheValuator	v2.2.15	Joel Swerdel	GitHub
ResultModelManager	v0.5.11	Jamie Gilbert	CRAN
ROhdsiWebApi	v1.3.3	Gowtham Rao	GitHub
SelfControlledCaseSeries	v6.1.0	Martijn Schuemie	CRAN
SelfControlledCohort	v1.6.0	Jamie Gilbert	GitHub
ShinyAppBuilder	v3.2.0	Jenna Reps	Deprecated
SqlRender	v1.19.3	Martijn Schuemie	CRAN
Strategus	v1.4.1	Anthony Sena	GitHub
TreatmentPatterns	v3.1.1	Maarten van Kessel	CRAN

HADES Maintainers

The open-source tools that empower OHDSI research are not only available to the community, but they are DEVELOPED by the community. We thank the many developers and maintainers who empower our research initiatives around the world!

Adam Black

Frank DeFalco

Lee Evans

Egill Fridgeirsson

Jamie Gilbert

Ger Inberg

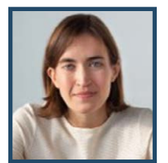
Christopher Knoll

Martin Lavallee

Anna Ostropolets

Gowtham Rao

Jenna Reps

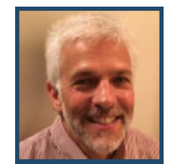


Katy Sadowski

Martijn Schuemie

Anthony Sena

Marc Suchard



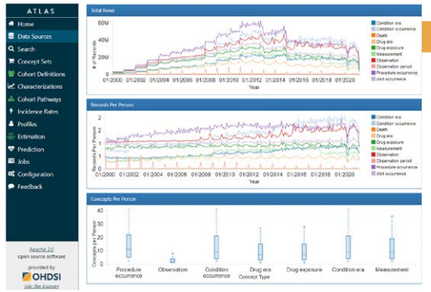
Joel Swerdel

Maarten van Kessel

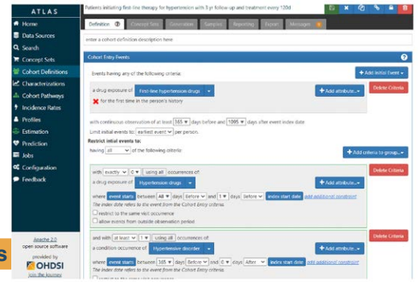
ATLAS

ATLAS is a free, publicly available, web-based tool developed by the OHDSI community that facilitates the design and execution of analyses on standardized, patient-level, observational data in the OMOP CDM format.

Enabling A Journey From Data To Evidence



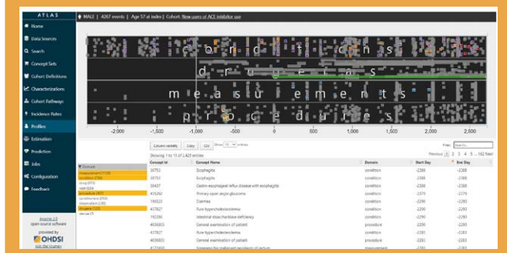
Explore Data

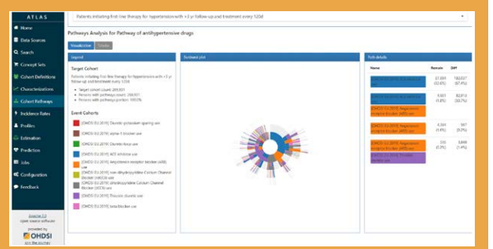


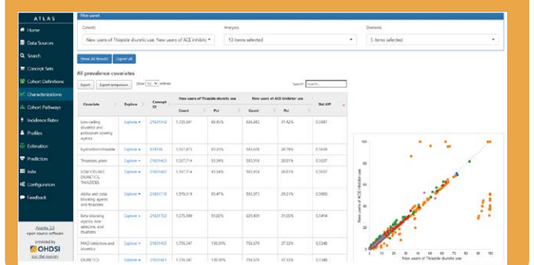
Design Analyses

Produce Code

Generate Evidence







"ATLAS makes it possible for everyone in the OHDSI community to collaboratively design high-quality observational studies and produce reproducible code that can be shared and executed on OMOP CDM databases around the world."

- Christopher Knoll

2018 Titan Award for Open-Source Development recipient

Want to learn more about ATLAS?

Experience: *atlas-demo.ohdsi.org*

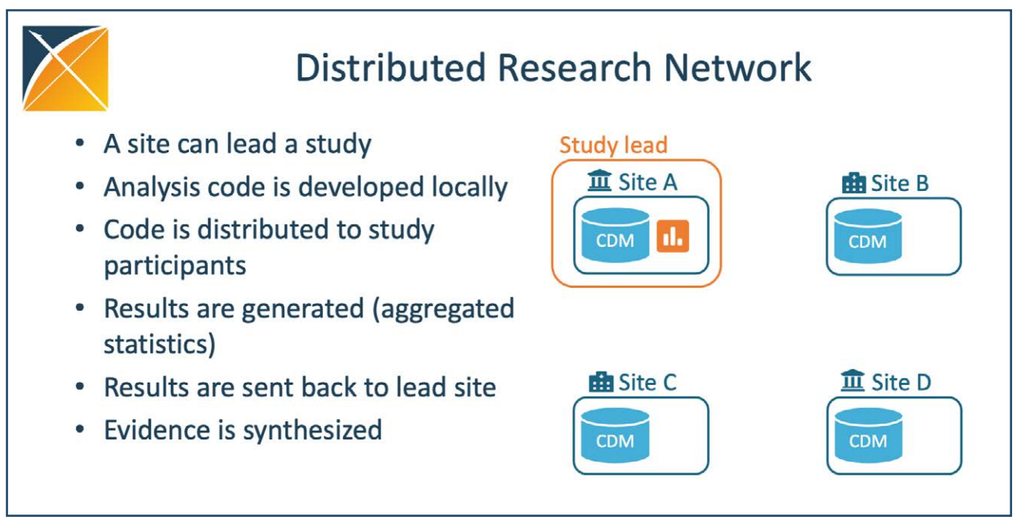
Download: *github.com/ohdsi/atlas*

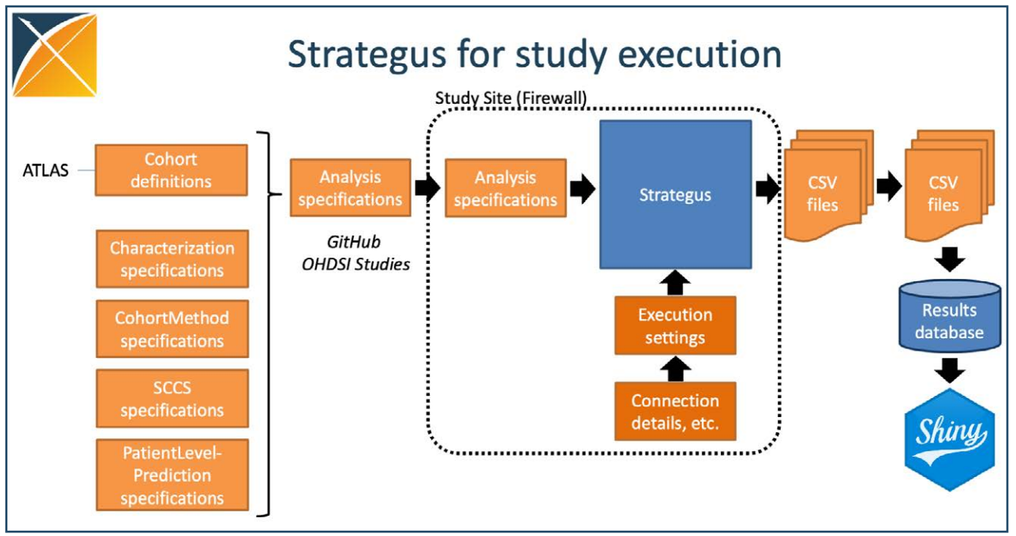
Read: *book.ohdsi.org*

Train: *academy.ehden.eu*

Strategus

The OHDSI Strategus package is a tool that helps researchers run large-scale health data studies more easily and consistently. Instead of needing to piece together different programs or workflows, Strategus provides a standardized way to design, execute, and share analyses across many healthcare databases. This makes it faster and more reliable to generate evidence about treatments, diseases, and outcomes.





Impact on Evidence

Open-source analytics development is a core pillar of the OHDSI community. Not only do open-source tools codify scientific best practices into reproducible processes that are freely available for everyone to use, but they make evidence generation across a network of disparate data sources feasible and efficient.

Across the OHDSI community, we have organizations from academia, industry and governments around the world, each with their own technical infrastructures and ways of working. Collaboration, however, requires common solutions that everyone can use and trust. HADES represents a fully-integrated set of tools to enable the end-to-end journey from standardized data to reliable evidence.

Below highlights a few of the recent demonstrations of OHDSI's open-source tools in action for important clinical applications

- CohortGenerator
- CohortIncidence
- Characterization
- CohortMethod
- SelfControlledCase Series
- Evidence Sythesis
- Strategus
- Cyclops
- PatientLevelPrediction
- PheValuator
- CohortDiagnostics
- DatabaseConnector
- SqlRender
- Andromeda
- FeatureExtraction

Research

JAMA Ophthalmology | Original Investigation

Semaglutide and Nonarteritic Anterior Ischemic Optic Neuropathy

Cindy X. Cai, MD, MS; Michelle Hribar, PhD; Sally Baxter, MD, MSc; Kerry Goetz, MS; Swarup S. Swaminathan, MD; Alexis Flowers, MD; Eric N. Brown, MD, PhD; Brian Toy, MD; Benjamin Xu, MD, PhD; John Chen, MD, PhD; Aiyin Chen, MD; Sophia Wang, MD, MS; Cecilia Lee, MD, MS; Theodore Leng, MD, MS; Joshua R. Ehrlich, MD, MPH; Andrew Barkmeier, MD; Karen R. Armbrust, MD, PhD; Michael V. Boland, MD, PhD; David Dorr, MD, MS; Danielle Boyce, MPH, DPA; Thamir Alshammari, PhD; Joel Swerdel, PhD, MS, MPH; Marc A. Suchard, MD, PhD; Martijn Schuemie, PhD; Fan Bu, PhD; Anthony G. Sena, BA; George Hripcsak, MD, MS; Akihiko Nishimura, PhD; Paul Nagy, PhD; Thomas Falconer, MS; Scott L. DuVall, PhD; Michael Matheny, MD; Benjamin Viernes, PhD; William O'Brien, MS; Linying Zhang, PhD; Benjamin Martin, PhD; Erik Westlund, PhD; Nestoras Mathioudakis, MD, MHS; Ruochong Fan, MA; Adam Wilcox, PhD; Albert Lai, PhD; Jacqueline C. Stocking, PhD, RN; Sahar Takkouche, MD, MBA; Lok Hin Lee, DPhil; Yangyiran Xie, BS; Izabelle Humes, PT, DPT; David B. McCoy, BA; Mohammad Adibuzzaman, PhD; Raymond G. Areaux Jr, MD; William Rojas-Carabali, MD; James Brash, PhD; David A. Lee, MD, MS; Nicole G. Weiskopf, PhD; Louise Mawn, MD; Rupesh Agrawal, MD; Hannah Morgan-Cooper, Msc; Priya Desai, Msc; Patrick B. Ryan, PhD

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Article | Open access | Published: 18 September 2025

Clinical implementation of an AI-based prediction model for decision support for patients undergoing colorectal cancer surgery

Andreas Weinberger Rosen, Ilze Ose, Mikail Gögenur, Lars Peter Kloster Andersen, Rasmus Dahlin Bojesen, Rasmus Peuliche Vogelsang, Martin Høyer Rose, Philip Wallentin Steenfos, Lasse Bremholm Hansen, Helle Skadborg Spuur, Ines Raben, Søren Thorgaard Skou, Ellen Astrid Holm, Karina Mortensen, Trine Kjær, Jens Ravn Eriksen, The AID-SURG study group & Ismail Gögenur

Arthritis Care & Research
AN OFFICIAL JOURNAL OF THE AMERICAN COLLEGE OF RHEUMATOLOGY

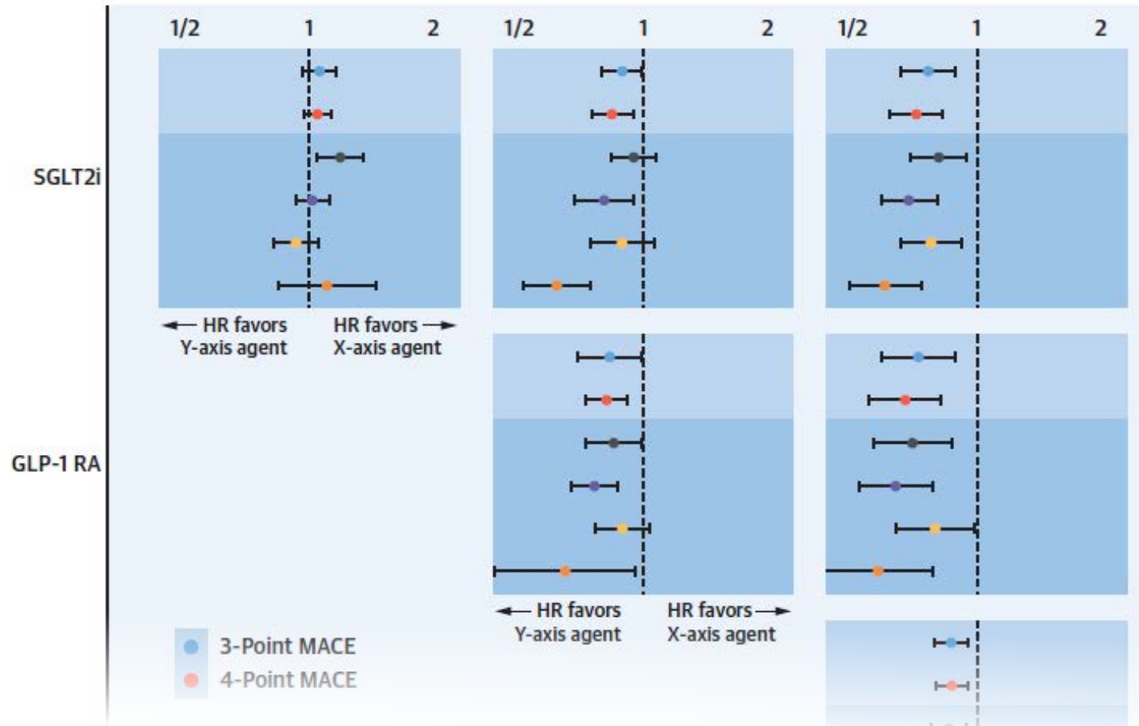
Original Article

Identification of Adult Dermatomyositis Patients Using Real-World Data Sources

Benjamin Martin, Will Kelly, Hannah Morgan-Cooper, Thomas Falconer, Elizabeth Park, Priya Desai, David Fiorentino, Lorinda Chung, Sean Yen, Zachary Wang, Didem Saygin ... See all authors

First published: 12 August 2025 | https://doi.org/10.1002/acr.25625

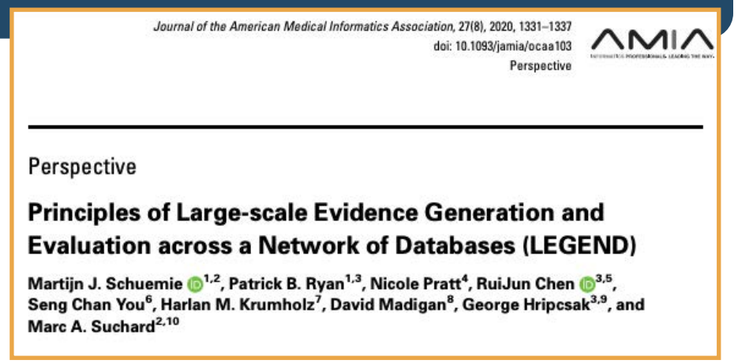
VIII. Methods Research



LEGEND in Principle

LEGEND (Large-scale Evidence Generation and Evaluation across a Network of Databases) applies high-level analytics to perform observational research on hundreds of millions of patient records within OHDSI's international database network.

LEGEND is based on 10 guiding principles that were published in JAMIA (August, 2020) and are listed below.



1. LEGEND will generate evidence at a large scale. Instead of answering a single question at a time (eg, the effect of 1 treatment on 1 outcome), LEGEND answers large sets of related questions at once (eg, the effects of many treatments for a disease on many outcomes). **Aim:** Avoids publication bias, achieves comprehensiveness of results, and allows for an evaluation of the overall coherence and consistency of the generated evidence.

2. Dissemination of the evidence will not depend on the estimated effects. All generated evidence is disseminated at once. **Aim:** Avoids publication bias and enhances transparency.

3. LEGEND will generate evidence using a prespecified analysis design. All analyses, including the research questions that will be answered, will be decided prior to analysis execution. **Aim:** Avoids P hacking.

4. LEGEND will generate evidence by consistently applying a systematic process across all research questions. This principle precludes modification of analyses to obtain a desired answer to any specific question. This does not imply a simple one-size-fits-all process, rather that the logic for modifying an analysis for specific research questions should be explicated and applied systematically. **Aim:** Avoids P hacking and allows for the evaluation of the operating characteristics of this process (Principle 6).

5. LEGEND will generate evidence using best practices. LEGEND answers each question using current best practices, including advanced methods to address confounding, such as propensity scores. Specifically, we will not employ suboptimal methods (in terms of bias) to achieve better computational efficiency. **Aim:** Minimizes bias.

6. LEGEND will include empirical evaluation through the use of control questions. Every LEGEND study includes control questions. Control questions are questions where the answer is known. These allow for measuring the operating characteristics of our systematic process, including residual bias. We subsequently account for this observed residual bias in our P values, effect estimates, and confidence intervals using empirical calibration. [7,8] **Aim:** Enhances transparency on the uncertainty due to residual bias.

7. LEGEND will generate evidence using open-source software that is freely available to all. The analysis software is open to review and evaluation, and is available for replicating analyses down to the smallest detail. **Aim:** Enhances transparency and allows replication.

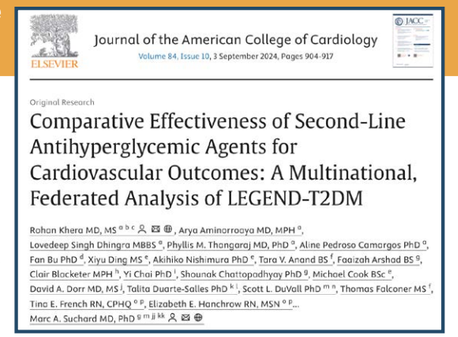
8. LEGEND will not be used to evaluate new methods. Even though the same infrastructure used in LEGEND may also be used to evaluate new causal inference methods, generating clinical evidence should not be performed at the same time as method evaluation. This is a corollary of Principle 5, since a new method that still requires evaluation cannot already be best practice. Also, generating evidence with unproven methods can hamper the interpretability of the clinical results. Note that LEGEND does evaluate how well the methods it uses perform in the specific context of the questions and data used in a LEGEND study (Principle 6). **Aim:** Avoids bias and improves interpretability.

9. LEGEND will generate evidence across a network of multiple databases. Multiple heterogeneous databases (different data capture processes, health-care systems, and populations) will be used to generate the evidence to allow an assessment of the replicability of findings across sites. **Aim:** Enhances generalizability and uncovers potential between-site heterogeneity.

10. LEGEND will maintain data confidentiality; patient-level data will not be shared between sites in the network. Not sharing data will ensure patient privacy, and comply with local data governance rules. **Aim:** Privacy.

LEGEND in Action

LEGEND principles have been applied to studying the effects of treatments for hypertension, depression, COVID-19 and Type 2 diabetes. The clinical impact of LEGEND can be found in high-impact journals like The Lancet, JAMA Internal Medicine, Hypertension, and the Journal of the American College of Cardiology (see story below).



Marc Suchard

A recent study published in the Journal of the American College of Cardiology has found that two newer classes of diabetes medications significantly reduce the risk of heart problems in patients with type 2 diabetes (T2DM) and cardiovascular disease. The research, which analyzed nearly 1.5 million patients, compared the effectiveness of different diabetes drugs and found that newer medications—GLP-1 receptor agonists and SGLT-2 inhibitors—were more effective at lowering heart risks than older drugs like sulfonylureas and DPP-4 inhibitors.

The study's corresponding author, Dr. Marc Suchard from UCLA, emphasized that these findings could change the way doctors treat diabetes patients with heart issues. The newer drugs not only help control blood sugar just as well as older ones but also decrease cardiovascular risks and come with fewer side effects.

This critical research, part of the LEGEND-T2DM study, highlights an important step forward in diabetes care and was published in September 2024.

The Evidence Gap

Although current clinical practice guidelines recommend using SGLT-2 inhibitors (SGLT2is) and GLP-1 receptor agonists (GLP1-RAs) for T2DM patients who are already on metformin, many patients are still being prescribed older drugs like DPP4 inhibitors (DPP4is) and sulfonylureas (SUs), likely due to their history and a lack of direct, head-to-head studies comparing all these medications.

The study found no statistical difference in cardiovascular effectiveness between SGLT2is and GLP1-RAs. However, both were shown to reduce heart risks more than the older drugs. SGLT2is lowered heart risks by 11% compared to DPP4is and 24% compared to SUs, while GLP1-RAs reduced heart risks by 17% and 28%, respectively.

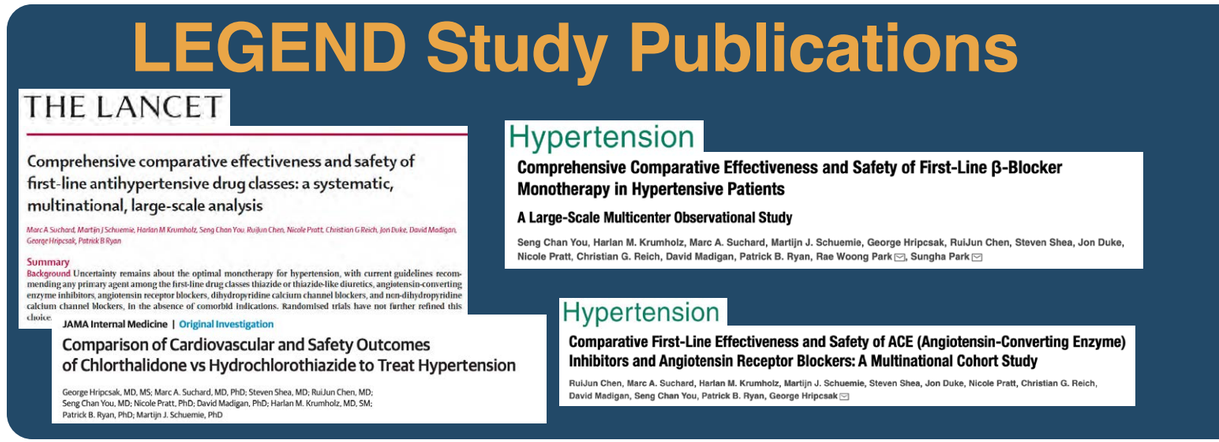
This research strongly supports current clinical guidelines recommending the use of SGLT2is and GLP1-RAs for people with both type 2 diabetes and heart disease, and it suggests these newer drugs should be the preferred second-line treatments for such patients.

The LEGEND Method

The LEGEND Initiative uses advanced analytics to perform observational research on hundreds of millions of patient records within OHDSI's international database network. These principles have been applied to research treatments for conditions like hypertension, depression, and COVID-19.

In this study, researchers looked at 10 international data sources covering 30 years and analyzed records of 1,492,855 patients with T2DM and heart disease who were on metformin and started one of these four second-line agents.

LEGEND Study Publications



The Journey To Reliable Evidence

OHDSI has created a framework for reliably estimating causal effects from real-world data. The two workhorses of this framework are the comparative cohort design and self-controlled case series (SCCS), two designs implemented as open-source R packages. Each design has standardized inputs and outputs, improving reproducibility.

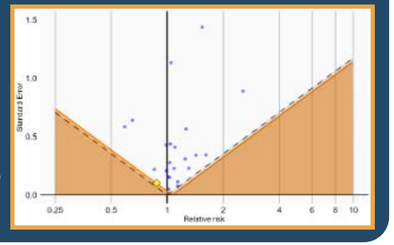
	Overall Design	Design Choices
Cohort Method	The **comparative cohort design** is akin to a randomized trial, comparing two cohorts of people	**Target cohort:** people having the exposure of interest **Comparator cohort:** people with some active comparator exposure **Outcome cohort:** outcome of interest **Time-at-risk:** Period for which to estimate the effect
SCCS	The **self-controlled case series (SCCS)** design compares exposed to non-exposed time in the same people	**Target cohort:** people having the exposure of interest **Indication cohort:** Time when people have the indication for the exposure **Outcome cohort:** outcome of interest **Time-at-risk:** Period for which to estimate the effect

Negative Controls & Empirical Calibration

Negative controls – exposure-outcome pairs with no causal relationship – offer a powerful diagnostic to evaluate the reliability of a population-level effect estimation study. By applying the same method on the same data to a large collection of negative controls, one can determine if there is systematic error in the analysis, whether due to selection bias, confounding, or measurement error.

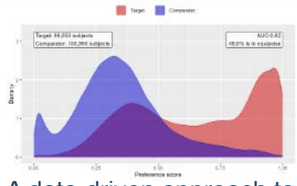
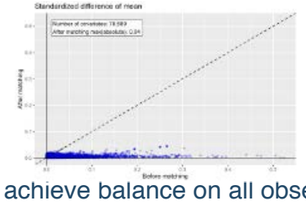
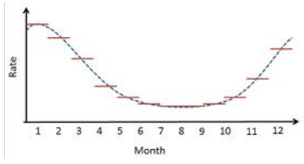
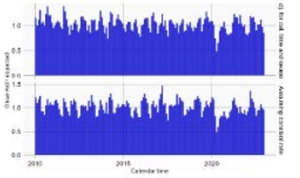
Negative controls therefore serve as an objective diagnostic applicable to multiple designs: if the expected systematic error exceeds some pre-defined threshold, we should not trust the results of our study.

Empirical calibration is a statistical procedure developed by OHDSI collaborators to use the error distribution estimated from negative controls and correct the original study statistics – point estimates, confidence intervals, and p-values – to restore their nominal operating characteristics and allow for a more honest interpretation of what really has been learned from observational data.



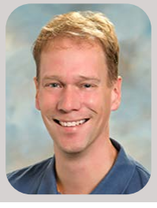
With Causal Effect Estimation

Causal estimates from real-world data are only valid if several assumptions have been met. OHDSI provides advanced methods to adjust for bias (for example due to confounding), and a framework of objective diagnostics verifying the assumptions have been met. A study that fails diagnostics should not have its results unblinded.

Advanced Bias Adjustment	Objective Diagnostics
Large-scale propensity scores  A data-driven approach to confounder adjustment	**Covariate balance**  Must achieve balance on all observed variables (often >10,000)
Splines for temporal trends  Flexible and powerful adjustment for time-varying confounding	**Temporal stability**  Rate of outcome after spline adjustment must be constant over time

Evidence Synthesis

One strength of OHDSI is in its numbers: data from across the OHDSI network can contribute to our understanding of the effects of treatments. A challenge is that only summary statistics, not patient-level data, can be shared. Previously, sites produced effect estimates and confidence intervals, combined via standard meta-analysis. However, this method can be biased when outcomes are rare. OHDSI developed a new approach where sites share likelihood curve shapes as points, which avoids this bias while preserving privacy. This method, now the default in HADES, is used in all OHDSI studies as it performs as well or better than standard meta-analysis.



"The existing observational studies in the literature suffer from biases such as confounding, publication bias, and p-hacking. OHDSI has tackled these challenges by standardizing analytic methods, offering advanced methods for bias correction, and implementing objective diagnostics. These measures enable the generation of reliable evidence for patients and clinical decision-makers."

- Martijn Schuemie, *2018 Titan Award recipient for Methodological Research*

METHODS RESEARCH

The Journey To Reliable Evidence With Patient-Level Prediction

Standardized Framework

requires OMOP CDM

Clear specification of the prediction task

- Target Population: patients at risk
- Outcome: medical event to predict
- Time-at-risk (TAR): interval to predict whether outcome will occur

Deep Learning

Large-scale study investigating model development and validation across the OHDSI network using benchmark tasks.

Open-source software

Best Practices

We are performing large-scale empirical studies that guide model design choices.

Clinical Applications

We are using our expertise to develop clinical models.

Benchmark Tasks

We are defining an expanded set of diverse benchmark tasks.

Open Source

We provide software to efficiently develop and validate models.

Join The PLP Journey

Join the monthly PatientLevelPrediction workgroup call: 2nd Wednesday of each month @ 9am ET/3pm CET

PLP GitHub: github.com/OHDSI/PatientLevelPrediction

"Patient-level prediction can make a huge impact on the way we deliver medicine, but a lot more work is needed to ensure quality models are developed. OHDSI is leading research to establish best practices, answering important questions that will ensure future predictive models generate reliable evidence."

- Jenna Reps

2019 Titan Award recipient for Methodological Research

"In order for Patient-Level Prediction modelling to truly have patient-level impact, we need to answer the questions that matter to clinicians. To do this we must provide clear guidance on how to develop safe and effective models. The PLP workgroup researches best practices and provides training to empower members to create impactful models."

- Ross Williams

2021 Titan Award recipient for Community Support

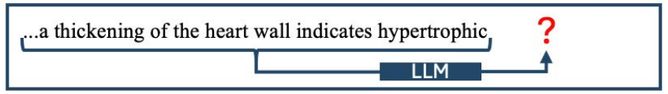
Generative AI & Foundational Models

Generative AI brings exciting new possibilities that we are still learning to leverage. The Generative AI & Foundational Models Workgroup brings together a diverse set of researchers working towards safe and responsible use of generative AI in observational research.

We're currently exploring two types of generative models:

- **Large Language Models (LLMs)**
- **Foundational Models for Electronic Records (FMEHR)**

Large Language Models (LLMs)




Anna Ostropolets

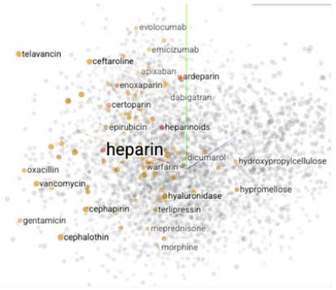

Rowan Perry

LLMs are neural networks trained on millions of text sources to either insert a masked word or predict the next word. To do this task well, an LLM must embed a deep model of syntax (spelling, grammar) and semantics (meaning, context). Well-known LLMS include BERT, DeepSeek, ChatGPT, Gemini, and Llama.

Combining the strength of LLMs and the OHDSI Vocabularies

OHDSI community uses LLM embeddings, retrieval-augmented generation and models for Vocabularies-related tasks:

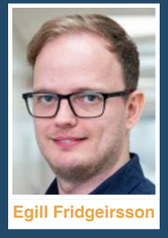
- Vocabulary maintenance (mapping and ontology construction)
- Concept set construction
- Converting free text notes to concepts



We are building infrastructure to support collaborative research:

1) A publicly available embedding vector store, semantic search API and MCP server for the OHDSI Vocabularies
2) Gold standard sets for evaluating LLM tools

Foundational Models for Electronic Records (FMEHR)

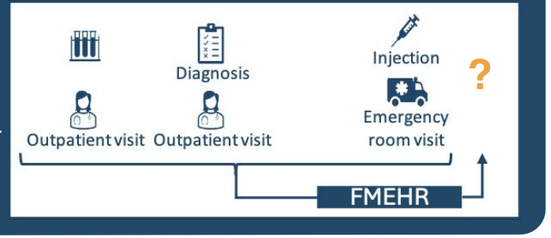

Egill Fridgeirsson


Chao Pang

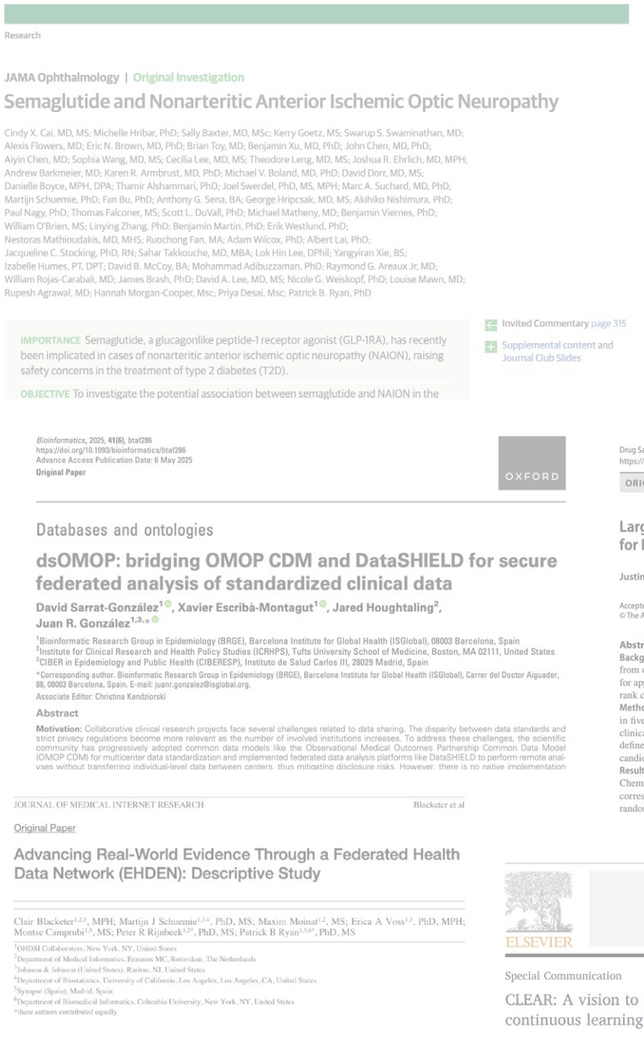
FMEHRs are large language models (LLMs) pretrained on patient trajectories represented by concept IDs, rather than traditional text documents. Like classic LLMs, they can be trained to predict a makes event or the next event.

In OHDSI we currently focus on two main use cases of FMEHRs:

- Pretrained FMEHRs can predict specific clinical outcomes via fine-tuning or linear probing, often requiring less training data.
- Using FMEHRs to generate simulated healthcare data. The simulated data will share many of the properties of the data use to train the FMEHR. The CEHR-GPT tool to achieve this is now available.



IX. OHDSI Publications


Research

JAMA Ophthalmology | Original Investigation

Semaglutide and Nonarteritic Anterior Ischemic Optic Neuropathy

Cindy X. Cai, MD, MS; Michelle Hribar, PhD; Sally Baxter, MD, MSc; Kerry Goetz, MS; Swarup S. Swaminathan, MD; Alexis Flowers, MD; Eric N. Brown, MD, PhD; Brian Toy, MD; Benjamin Xu, MD, PhD; John Chen, MD, PhD; Aiyin Chen, MD; Sophia Wang, MD, MS; Cecilia Lee, MD, MS; Theodore Leng, MD, MS; Joshua R. Ehrlich, MD, MPH; Andrew Barkmeier, MD; Karen R. Armbrust, MD, PhD; Michael V. Boland, MD, PhD; David Dorr, MD, MS; Danielle Boyce, MPH, DPA; Thamir Alshammari, PhD; Joel Swerdel, PhD, MS, MPH; Marc A. Suchard, MD, PhD; Martijn Schuemie, PhD; Fan Bu, PhD; Anthony G. Sena, BA; George Hripcsak, MD, MS; Akihiko Nishimura, PhD; Paul Nagy, PhD; Thomas Falconer, MS; Scott L. DuVall, PhD; Michael Matheny, MD; Benjamin Viernes, PhD; William O'Brien, MS; Linying Zhang, PhD; Benjamin Martin, PhD; Erik Westlund, PhD; Nestoras Mathioudakis, MD, MHS; Ruochong Fan, MA; Adam Wilcox, PhD; Albert Lai, PhD; Jacqueline C. Stocking, PhD, RN; Sahar Takkouche, MD, MBA; Lok Hin Lee, DPhil; Yangyiran Xie, BS; Izabelle Humes, PT, DPT; David B. McCoy, BA; Mohammad Adibuzzaman, PhD; Raymond G. Areaux Jr, MD; William Rojas-Carabali, MD; James Brash, PhD; David A. Lee, MD, MS; Nicole G. Weiskopf, PhD; Louise Mawn, MD; Rupesh Agrawal, MD; Hannah Morgan-Cooper, Msc; Priya Desai, Msc; Patrick B. Ryan, PhD

IMPORTANCE Semaglutide, a glucagonlike peptide-1 receptor agonist (GLP-1RA), has recently been implicated in cases of nonarteritic anterior ischemic optic neuropathy (NAION), raising safety concerns in the treatment of type 2 diabetes (T2D).

OBJECTIVE To investigate the potential association between semaglutide and NAION in the

Invited Commentary page 315

Supplemental content and Journal Club Slides


npj | digital medicine Article

Published in partnership with Seoul National University Bundang Hospital

https://doi.org/10.1038/s41746-025-01433-4

Standardized patient profile review using large language models for case adjudication in observational research

Check for updates

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Using administrative claims and electronic health records for observational studies is common but challenging due to data limitations. Researchers rely on phenotype algorithms, requiring labor-intensive chart reviews for validation. This study investigates whether case adjudication using the previously introduced Knowledge-Enhanced Electronic Profile Review (KEEPER) system with large language models (LLMs) is feasible and could serve as a viable alternative to manual chart review. The

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Original Paper

OXFORD

Databases and ontologies

dsOMOP: bridging OMOP CDM and DataSHIELD for secure federated analysis of standardized clinical data

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Abstract

Motivation: Collaborative clinical research projects face several challenges related to data sharing. The disparity between data standards and strict privacy regulations become more relevant as the number of involved institutions increases. To address these challenges, the scientific community has progressively adopted common data models like the Observational Medical Outcomes Partnership Common Data Model (OMOP CDM) for multicenter data standardization and implemented federated data analysis platforms like DataSHIELD to perform remote analyses without transferring individual-level data between centers, thus mitigating disclosure risks. However, there is no native implementation

JOURNAL OF MEDICAL INTERNET RESEARCH Blacketer et al

Original Paper

Advancing Real-World Evidence Through a Federated Health Data Network (EHDEN): Descriptive Study

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ORIGINAL RESEARCH ARTICLE

Check for updates

Large-scale Empirical Identification of Candidate Comparators for Pharmacoepidemiological Studies

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Abstract

Background and Objective The new user cohort design has emerged as a best practice for the estimation of drug effects from observational data. However, despite its advantages, this design requires the selection and evaluation of comparators for appropriateness, a process that can be challenging. The objective of this work was to introduce an empirical approach to rank candidate comparators in terms of their similarity to a target drug in high-dimensional covariate space.

Methods We generated new user cohorts for each RxNorm ingredient and Anatomic Therapeutic Chemical level 4 class in five administrative claims databases then extracted aggregated pre-treatment covariate data for each cohort across five clinically oriented domains. We formed all pairs of cohorts with ≥ 1000 patients and computed a scalar similarity score, defined as the average of cosine similarities computed within each domain, for each pair. We then generated ranked lists of candidate comparators for each cohort.

Results Across up to 1350 cohorts forming 922,761 comparisons, drugs that were more similar in the Anatomic Therapeutic Chemical hierarchy had higher cohort similarity scores. The most similar candidate comparators for each of six example drugs corresponded to alternative treatments used in the target drug's indication(s), and choosing the top-ranked comparator for randomly selected drugs tended to produce balance on most covariates. This approach also ranked highly those comparators


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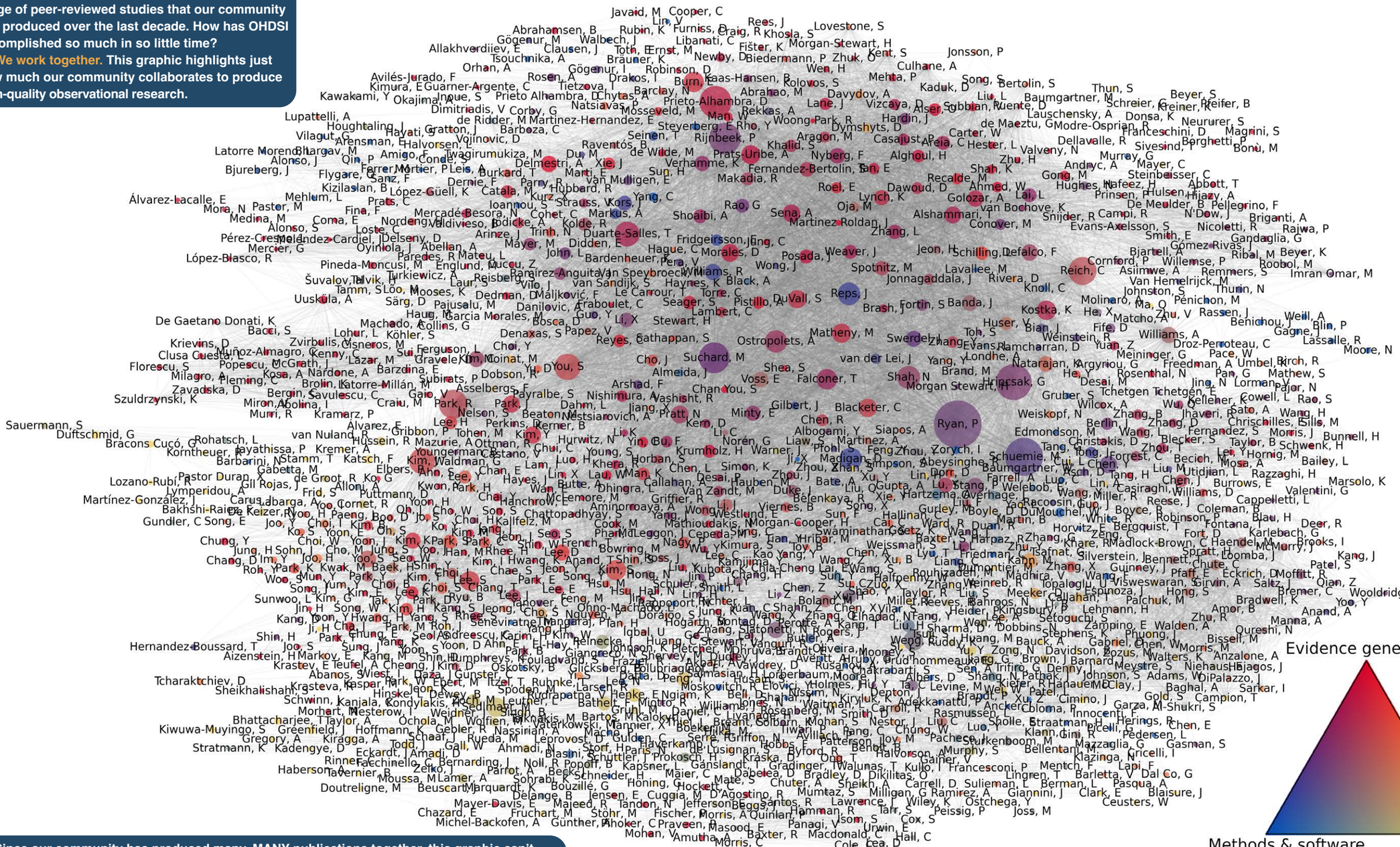
CLEAR: A vision to support clinical evidence lifecycle with continuous learning

Collaborations Within Our OHDSI Community

In this section, you will see the depth and wide range of peer-reviewed studies that our community has produced over the last decade. How has OHDSI accomplished so much in so little time?

We work together. This graphic highlights just how much our community collaborates to produce high-quality observational research.



- Each dot is an OHDSI collaborator with at least 2 OHDSI papers, which include studies involving OMOP
- Size of the dot indicates the number of OHDSI/ OMOP papers
- The color indicates the mix of topics that an author has published on (see legend below)
- A line means two authors were on the same paper. The darker the color of the line, the more papers they co-authored
- The layout is based on co-authorships, so people who collaborated more end up close together in the graph

Since our community has produced many, MANY publications together, this graphic can't have all collaborators in the perfect spot. But it shows how the culture of 'we' over 'me' has powered OHDSI to incredible heights.

#JoinTheJourney

OHDSI Publications

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38	14	16	24	29	38	46	79	112	124	108	138	130

OHDSI Publications

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38	14	16	24	29	38	46	79	112	124	108	138	130

X. Join The Journey

OHDSI, In A Word

What makes OHDSI special isn't just one defining trait—it's the countless qualities that inspire collaborators around the world to dedicate their time and energy. During the 2024 Global Symposium, we asked attendees to capture OHDSI in a single word. The results, shown across this spread, reflect a community united by shared values: working together, supporting one another, and advancing reliable, reproducible, and robust real-world evidence to improve healthcare.

By Far, One Word Was Most Popular

Patrick Ryan provides the closing talk at the annual OHDSI Global Symposiums, so it is appropriate for him to share his final thoughts for this fifth edition of the Our Journey book.

Thank you for Joining The Journey with OHDSI!

As I reflect on another year together, I find myself returning to a simple yet profound truth: collaboration is not a luxury, it is a necessity. The world is changing rapidly, with science and technology accelerating at a pace that can feel both exhilarating and overwhelming. But amidst this whirlwind of innovation, it is clear to me—now more than ever—that if we aspire to generate reliable evidence for health decisions that the whole world can trust, we must embrace global collaboration as our guiding principle.

Why Global Collaboration Is Not Optional

When we first set out on the OHDSI journey, we dreamed of a world where observational research would produce a comprehensive understanding of health and disease, accessible to all. Eleven years later, our community spans over 4,700 collaborators in more than 80 countries, with data standardized across 550+ sources. This scale is not just impressive—it is essential.

Why? Because health is universal, but healthcare is local. Diseases do not respect borders, and treatments must be evaluated in diverse populations to ensure that evidence is not just relevant, but reliable for everyone. In an era where the replicability crisis has cast a shadow over scientific research, and where trust in science is under constant scrutiny, the answer is not to retreat into our silos. The answer is to reach outward—across disciplines, across sectors, across continents—and build a network of collaboration that is as robust as the challenges we face.

The Replicability Crisis and the Challenge of Trust

This year has exposed cracks in the foundation of scientific trust. High-profile retractions, studies yielding conflicting results, and the spread of misinformation have made it harder for patients, providers, and policymakers to confidently rely on published evidence. The replicability crisis is not just a theoretical concern—it strikes at the heart of our mission. If evidence cannot be replicated across settings, populations, and data sources, can we truly call it evidence?

OHDSI's answer is clear: network studies. By leveraging the world's largest observational data network, we systematically test hypotheses across diverse datasets, geographies, and

healthcare systems. This approach does more than increase sample size—it exposes heterogeneity, uncovers context-specific effects, and ensures that our findings are robust, reproducible, and generalizable. The OHDSI Evidence Network is not just a technological achievement—it is our primary means of overcoming the crisis of trust in science.

The Hype and Promise of Large Language Models: Innovation Without Collaboration?

This year, the excitement around large language models and AI has reached a fever pitch. The possibilities seem endless—instant literature reviews, automated cohort selection, predictive analytics that promise to revolutionize care. But with hype comes risk. The pace of innovation has been so rapid that many are racing ahead, building proprietary solutions in isolation. Too often, development leaps ahead of methodological validation, leaving us with tools that look impressive but lack the empirical foundation needed to ensure reliability. I've been simultaneously inspired and distressed to see the OHDSI collaboration showcase submissions that have shown innovations using LLMs- inspired because they've demonstrated new, potentially transformative opportunities that are almost unimaginable only a couple years before; distressed because we've seen multiple groups independently aim to solve the same program all by themselves.

In this climate, it is tempting to look inward, to focus on our own projects, our own organizations, our own data. But the very challenges that make collaboration difficult—competition, complexity, uncertainty—are the ones that make it indispensable. Imagine how much more could accomplish – more efficiently, more creatively, and more reliably- if we could take our collective resource and expertise and apply it to common problems. The future of reliable evidence will not be built by lone innovators; it will be built by communities who work together, share openly, and hold each other accountable to the highest scientific standards.

Reaching Outward in a Turbulent World

The sociopolitical climate around the globe is fraught with tension. National interests, resource constraints, and cultural differences can make collaboration seem daunting. Yet it is precisely in these moments that we must double down on our commitment to global partnership. Whether you are in industry, academia, government, or another part of the health system, the challenges we face—whether you are focused on routine health operations or pandemics, characterizing acute or chronic diseases, the causal effects of medical interventions, be it pharmaceuticals or medical technologies or other digital health solutions, predicting outcomes for all or aiming to improve health equity for vulnerable populations—cannot be solved alone.

Collaboration is not just about sharing data or tools. It is about building relationships founded on respect, support, collegiality, and shared enthusiasm for solving public health challenges that transcend borders.

OHDSI Progress Around the World: A Year of Firsts and Foundations

In the last year, OHDSI has made remarkable strides in advancing global collaboration. While it has been an eventful year in the US and at the OHDSI Coordinating Center at Columbia University, I am encouraged by the grit that our partners have shown and the desire to push forward in the face of uncertainty. We held our first OHDSI Summer School at Columbia. I was energized to see professionals and trainees from across US and abroad join us in New York City, designing and executing their own studies across a distributed data network in only one week, demonstrating what's possible by following OHDSI's blueprint across the journey from data to evidence.

But I'm even more excited by the progress we've seen elsewhere around the world:

• **OHDSI India:** For the first time, researchers from across India, with colleagues from the rest of the world, came together in Mumbai to share best practices, build partnerships, and lay the groundwork for what could easily become the world's largest national data network. The energy, curiosity, and commitment on display were a testament to the potential of open science in the world's most populous democracy.

• **OHDSI Africa:** In another first, collaborators from across Africa will come together in Uganda discuss the unique challenges and opportunities for evidence generation on the continent. From data quality to disease surveillance, the symposium will highlight the importance of tailoring solutions to local contexts while building bridges to the global community.

• **OHDSI Latin America:** we continue to build momentum, particularly in Brazil and Colombia, where there's a shared understanding that satisfying the regional needs will go beyond data standardization to the OMOP and will likely require collaborations with other parts of the world.

• **OHDSI Europe:** Building on the foundation laid by European Health Data and Evidence Network (EHDEN), the European community has taken major steps forward in realizing the value of regulatory science through DARWIN-EU. Cross-country studies, harmonization of standards, and partnerships with regulatory agencies are setting new benchmarks for evidence generation and impact, and are being promoted both through 20 national nodes in the region as well as the newly established OHDSI Europe community calls. This year's OHDSI Europe Symposium, held in Hasselt Belgium, was a personal highlight for me because of the palpable sense of community and collaborative spirit.

• **OHDSI Asia-Pacific:** The collaborative spirit was on full display in Singapore last year, just as I expect it will be again in Shanghai for our OHDSI APAC symposium. The leadership of South Korea remains exemplary, with national network studies generates evidence that follows

global best practices, produces strong academic scholarship, and can meaningfully inform clinical guidelines and policy. The integration of more than 60 medical centers into a unified data network demonstrates what is possible when collaboration is prioritized at every level. This year's establishment of the Australian Health Data Evidence Network (AHDEN), extending our community's efforts in Europe to Down Under, is a tremendous demonstration of global community that I hope will serve as a role model that we can all build from.

Collaborative Efforts: Standards, Methods, Tools, and Applications

Global collaboration is not just a slogan—it is embedded in every aspect of OHDSI's work:

Open Community Data Standards: The continued growth of the OHDSI Evidence Network is a testament to our commitment to open standards. With more than 550 data sources standardized to the OMOP CDM, and new organizations seemingly adopting the standard every month, we are building an infrastructure that enables truly global research. But it isn't enough for an organization to adopt the OMOP CDM; standardized data without standardized analytics run across a standardized network is a lost opportunity. The OHDSI Evidence Network aims to provide the connection point between data fit-for-research and researchers in need of data, but it will only succeed if folks buy in to spirit of open collaboration. To that end, the OHDSI Standardized Vocabularies provide a common language for clinical concepts, ensuring interoperability and scalability, but its success will only be determined by the extent to which organizations share their local source codes, share their mappings to international standards, share in the collective research, development and evaluation of the Vocabularies as a common global good.

Methodological Research: This year, a key focus of OHDSI methodological research has demonstrated the critical role of heterogeneity in network studies. By systematically evaluating the generalizability of findings across populations, we are moving beyond single-databases studies and ensuring that our evidence reflects the diversity of real-world patients. Our methodological innovations in causal inference and patient-level prediction continue to set the standard for observational research, but will only have impact if we collectively commit to adhering to our scientific best practices in all of our studies around the world.

Open-Source Development: The maturation of the Strategus workflow within the HADES suite of tools is a highlight of the year. Maintainers from around the world have contributed to making the process of designing, executing, and sharing network studies more efficient and reproducible than ever before. With over 800,000 downloads of HADES packages, our open-source ecosystem is empowering researchers everywhere to participate in the journey from data to evidence.

Clinical Applications: Multiple network studies have generated evidence to characterize populations, estimate the risk of medical interventions, and predict outcomes for patients. From

cardiovascular disease and oncology to infectious diseases and rare conditions, OHDSI's collaborative efforts are producing actionable insights that inform clinical practice, regulatory decisions, and public health policy.

Building a Culture of Trust and Shared Purpose

None of this would be possible without the culture we have built together. OHDSI is more than a network—it is a community. Ours is a place where acquaintances become collaborators, collaborators become friends, and friends become family. The connections we forge—across countries, disciplines, and backgrounds—are deeper than any technical standard or analytic tool. It is the shared sense of purpose, mutual respect, and collective ambition that makes our work both humbling and inspiring.

Looking Forward: Our Obligation to the World

As we look ahead, it is clear the journey we are on will not be completed overnight. The challenges we face are daunting, and the pace of progress can sometimes feel frustratingly slow. But if we stay true to our values—openness, collaboration, rigor, and respect—there is no limit to what we can achieve together.

Global collaboration is not just an opportunity—it is an obligation. We have a responsibility to all patients around the world, to use our collective talent, skills, and resources to advance health for everyone: our friends, our family, our neighbors, our communities, our world.

Let us continue to reach outward, to build bridges, to innovate together, and to hold ourselves accountable to the highest standards of science and collegiality. The future of reliable evidence is global, and it is ours to build—together.

With gratitude and excitement for the journey ahead,

-Patrick Ryan

How Can You Join The Journey?

Our community has set both the foundation and the highest of standards for global collaboration around observational research. We continue to make real differences in healthcare, and we are doing it through transparent and reproducible science. We also recognize that there is so much more to be done, and so much more that we can do.

If you are inspired by what you read in this book, if you want to learn more about methods research or open-source development, if you have a clinical question you believe needs answering, or if you want to join a community of people dedicated to the team sport of observational health data sciences and informatics, we have a place for you.

How can you get started?

Join The OHDSI Forums (*forums.ohdsi.org*)

Connect with other OHDSI collaborators on our community forums and start discussing how you can help us inform medical decision-making, or simply follow discussions that are interesting to you and learn about the work happening within our global community.

Join Our Workgroups & MS Teams Environment (*ohdsi.org/ohdsi-workgroups*)

Our workgroups present opportunities for all community members to find a home for their talents and passions, and a place to make meaningful contributions. We are always looking for new collaborators. Learn more by checking out the workgroups homepage Our workgroups collaborate inside the OHDSI MS Teams environment; a form to join our Teams environment is available here: *bit.ly/Join-OHDSI-Teams*.

Join Our Community Calls (*ohdsi.org/community-calls*)

Join collaborators around the world each week during our OHDSI Community Call, held Tuesdays at 11 am ET within our Teams environment. Following weekly updates, we have a variety of call formats, including research presentations, workgroup updates, discussions, tutorials, debates and more. These calls are recorded, and you can access them (as well as the meeting link) at our Community Calls page.

Continue To Learn About OHDSI

Learn about OHDSI tools and research processes in a variety of ways.

- The OHDSI website keeps you informed of recent news, publications, upcoming studies and more, while providing all critical links needed to help with your journey: *ohdsi.org*

- The Book of OHDSI (which is also translated into both Korean and Chinese) is a community-developed resource with information for every step of your journey: *ohdsi.github.io/TheBookOfOhdsi*

- Check out the EHDEN Academy, a set of free, on-demand training and development courses. These are open to anybody, but we always encourage new OHDSI collaborators to use this resource to learn about best practices towards our mission of improving health by empowering a community to collaboratively generate evidence that promotes better health decisions and better care: *academy.ehden.eu*

- Check out the OHDSI YouTube page (*youtube.com/c/OHDSI*) for many community-developed learning resources, including tutorials, research presentations and more. Follow OHDSI on *LinkedIn*, *Twitter/X*, *Instagram* and *Bluesky* to keep updated on community research and follow the #OHDSISocialShowcase to see the research shared at our annual symposia.

Join The Journey

Your journey with OHDSI has started. Your interest in our global community is the first step in making a difference in global health. There is no limit to the impact you can make, and you can do so in a supportive, positive and fun environment. We invite you to search our website, post to the forum, join us in Teams, check out our *GitHub*, or reach out to us over email (contact@ohdsi.org).

Thank you for Joining The Journey with OHDSI!

OHDSI

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