OHDSI

State of the OHDSI Community: Where have we been? Where are we going?

George Hripcsak MD MS

Director, Columbia University OHDSI Coordinating Center
Professor of Biomedical Informatics
Columbia University Irving Medical Center

OHDSI
Observational Health Data Sciences and Informatics

Welcome to OHDSI 2024!

We thank the FDA for their generous support of the 2024 OHDSI symposium through the FDA SCIENTIFIC CONFERENCE GRANT PROGRAM (R13FD006972)

Thank you OHDSI 2024 Symposium Sponsors!

Johnson&Johnson

Boehringer Ingelheim

<epam> | ODYSSEUS DATA SERVICES

NEMESIS HEALTH

Thank you for OHDSI 2024 Scientific Review Committee

- Atif Adam
- Nsikak Akpakpan
- Thamir Alshammari
- Donna Armaignac
- Juan Banda
- Bill Baumgartner
- Clair Blacketer
- Sandeep Chandra Bollepalli
- Fan Bu
- Ed Burn
- Cindy Cai
- Marti Catala Sabate
- Adrien Coulet
- Deborah Duran
- Yudha Saputra
- Mengling Feng
- Davera Gabriel
- Narendra Garbyal
- Asieh Golozar
- Ben Hamlin
- Jill Hardin
- Kevin Haynes
- Jason Hsu
- Elisse Katzman
- Chungsoo Kim
- Kristin Kostka
- Christophe Lambert
- Christine Lu
- Rupa Makadia
- Benjamin Martin
- Evan Minty
- Paul Nagy
- Daniel Nugroho
- Edwin Ocasio
- Anna Ostropolets
- Melanie Philofsky
- Nicole Pratt
- Daniel Prieto Alhambra
- Hanieh Razzaghi
- Patrick Ryan
- Amir Sarayani
- Sarah Seager
- Azza Shoaibi
- Cynthia Sung
- Joel Swerdel
- Kim Van Naarden Braun
- Mui Van Zandt
- Rohit Vashisht
- Kiran Vupparaboina
- Andrew Williams
- Anna Yang
- Seng Chan You
- Linying Zhang
- Summera Zhou

Please stand!

Thank you to those who made today happen

- Elisse Katzman
- Craig Sachson
- Ann Marshak
- Anita Barrett
- Sofia Ellis-Chin
- Charika Johnson
- Patrick Ryan
- OHDSI Steering Workgroup

- Adit Anand
- Tara Anand
- James Baker
- Cindy Chen
- Fangyi Chen
- Young Choi
- Pooja Desai
- Yilu Fang
- Florent Pollett
- Harry Reyes

- Robert Barrett
- Brooke Lawler
- Hannah Lee
- Star Liu
- Ben Martin
- Jen Park

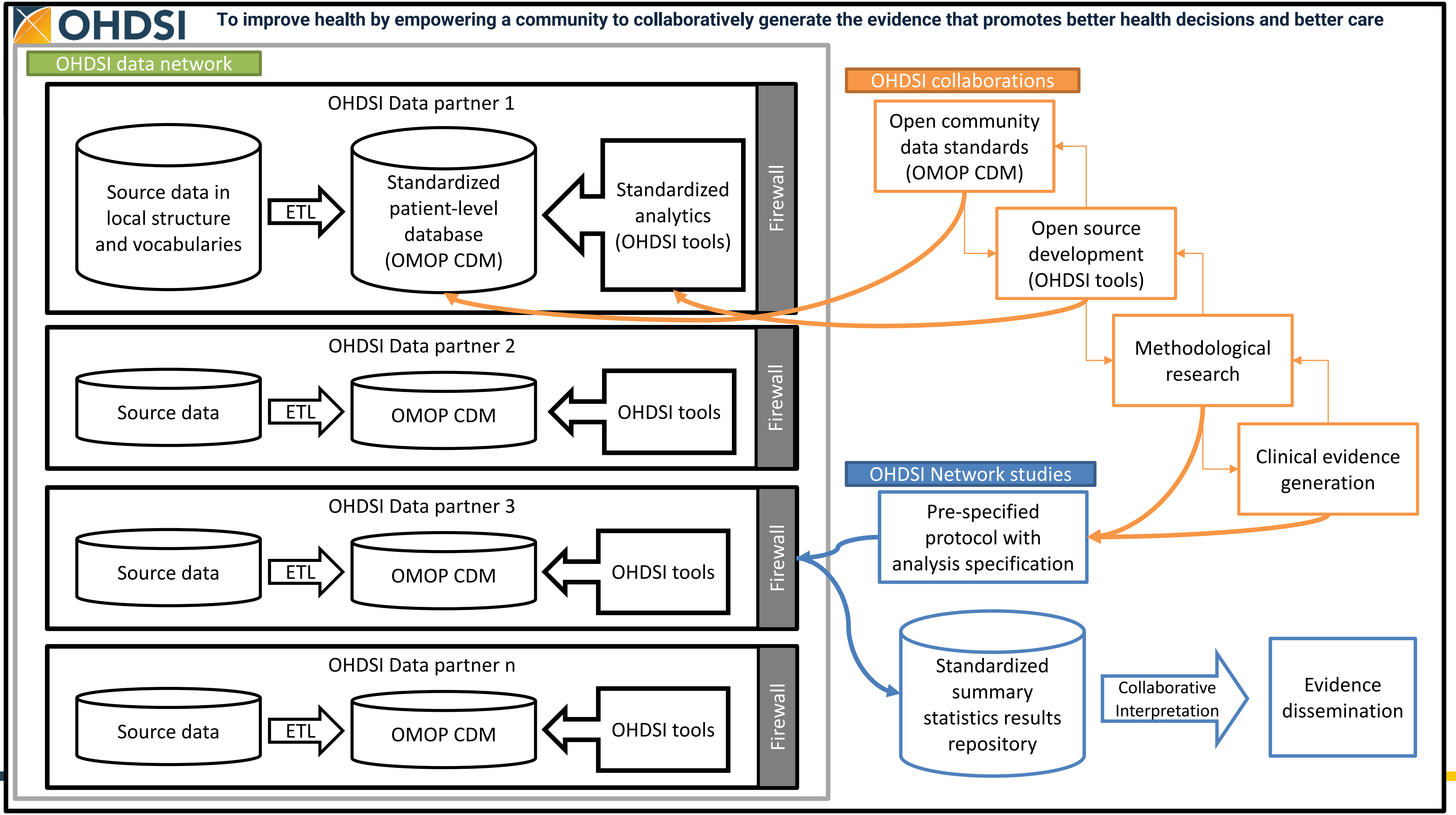
Please stand!

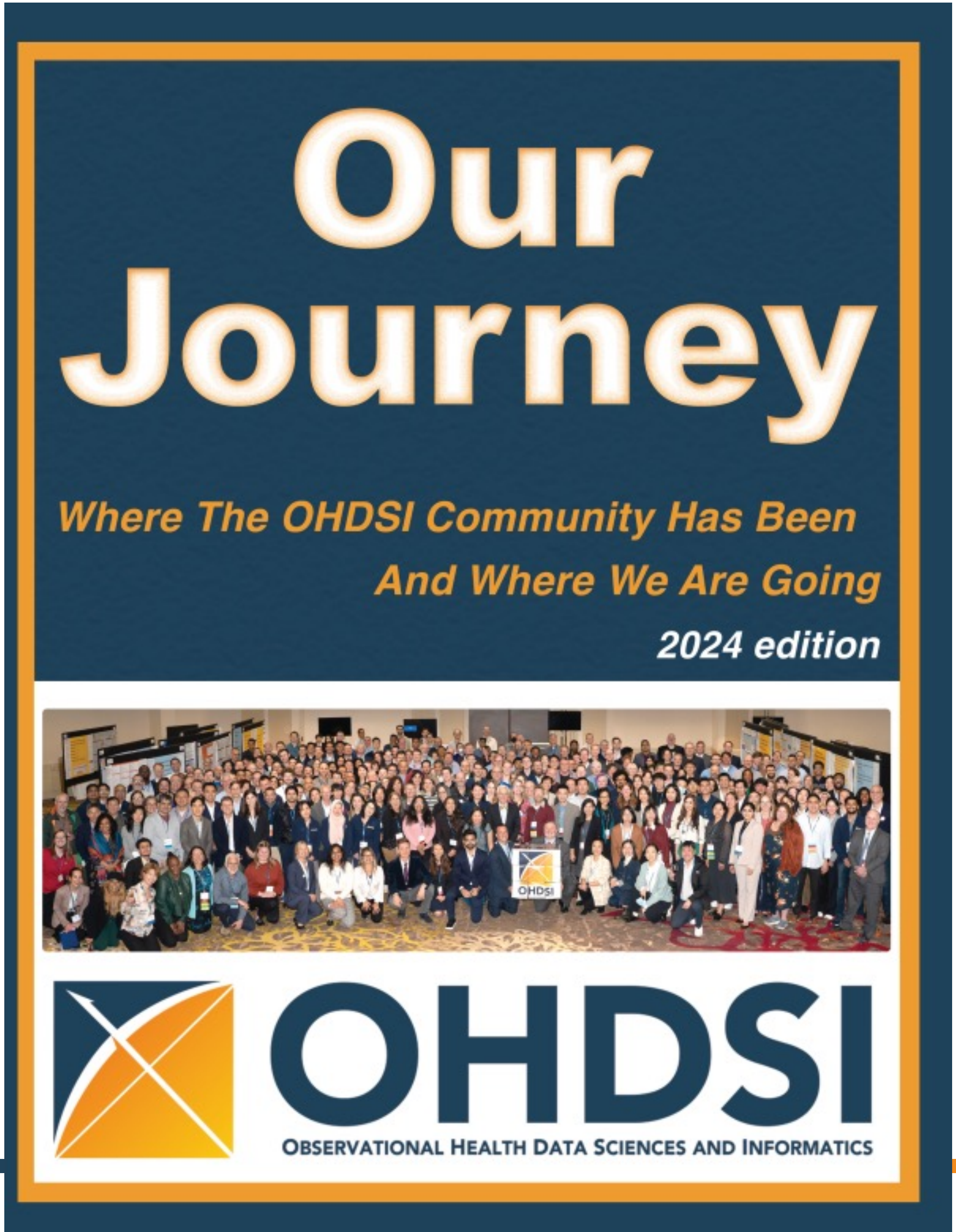
OHDSI's mission

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

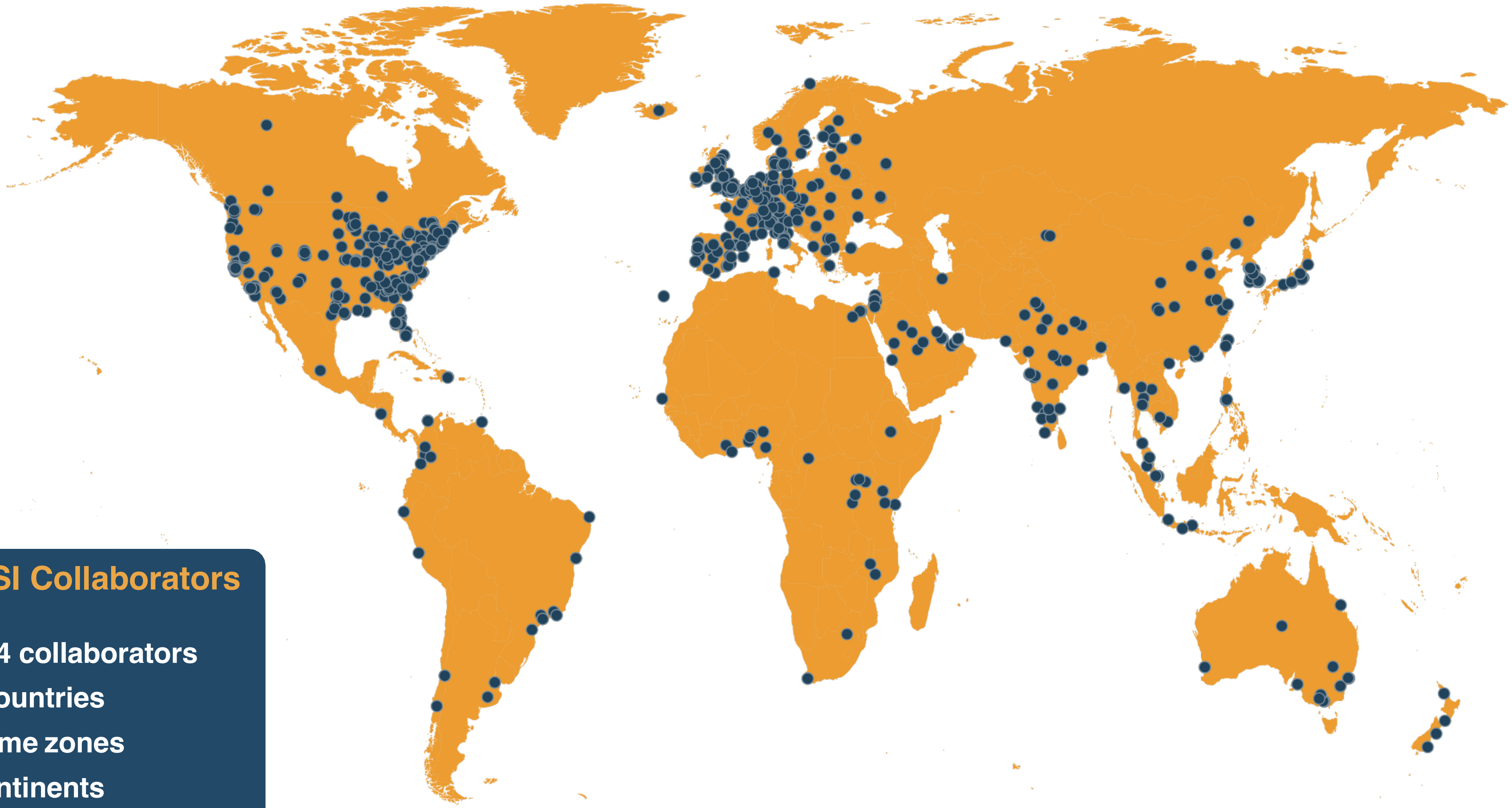
OHDSI’s values

- **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.


OHDSI
To improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care
OHDSI data network
OHDSI Data partner 1
Source data in local structure and vocabularies
ETL
Standardized patient-level database (OMOP CDM)
Standardized analytics (OHDSI tools)
Firewall
OHDSI Data partner 2
Source data
ETL
OMOP CDM
OHDSI tools
Firewall
OHDSI Data partner 3
Source data
ETL
OMOP CDM
OHDSI tools
Firewall
OHDSI Data partner n
Source data
ETL
OMOP CDM
OHDSI tools
Firewall
OHDSI collaborations
Open community data standards (OMOP CDM)
Open source development (OHDSI tools)
Methodological research
Clinical evidence generation
OHDSI Network studies
Pre-specified protocol with analysis specification
Standardized summary statistics results repository
Collaborative Interpretation
Evidence dissemination


Our
Journey
Where The OHDSI Community Has Been
And Where We Are Going
2024 edition
OHDSI
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

OHDSI collaborators

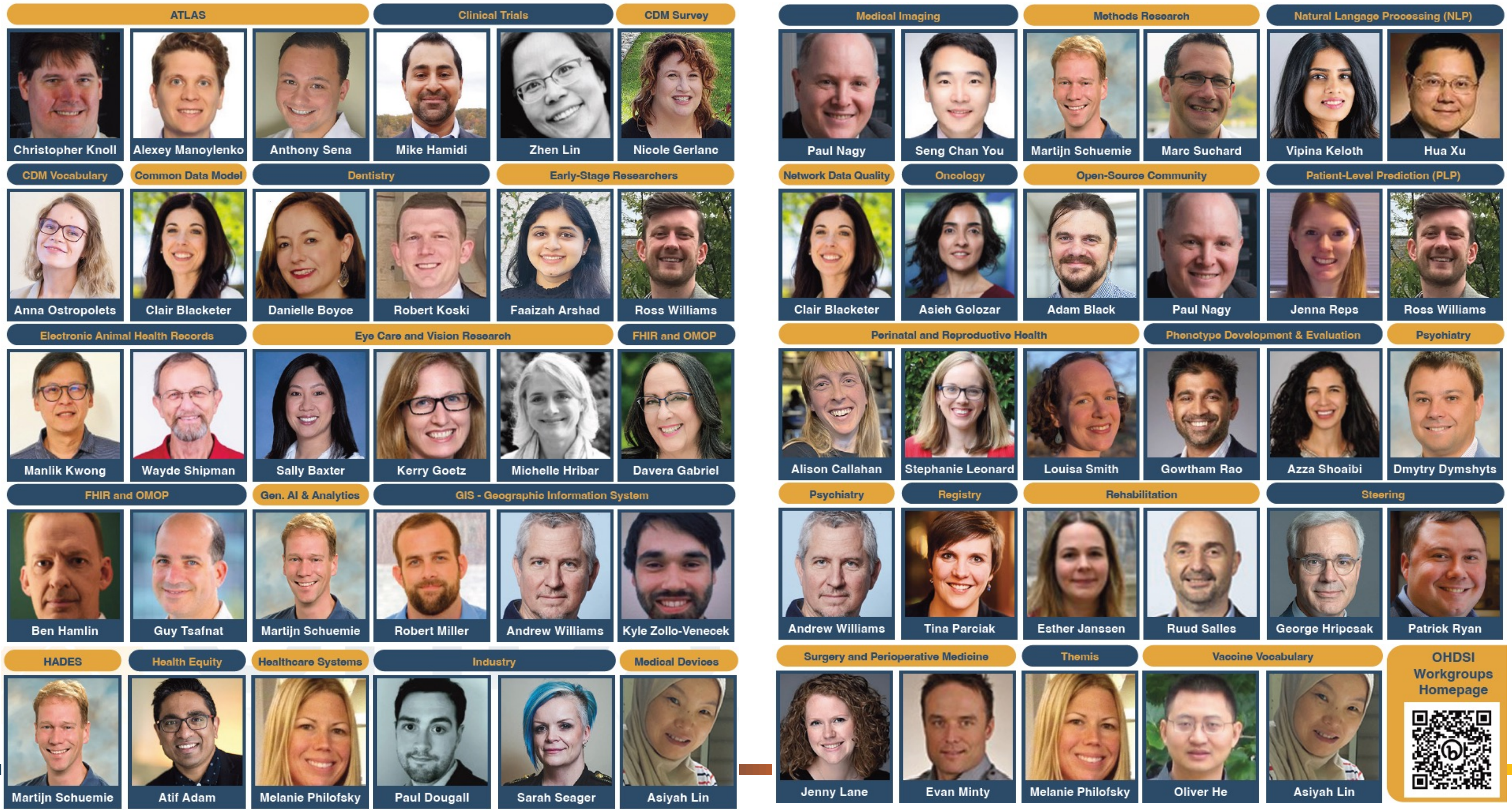


OHDSI Collaborators

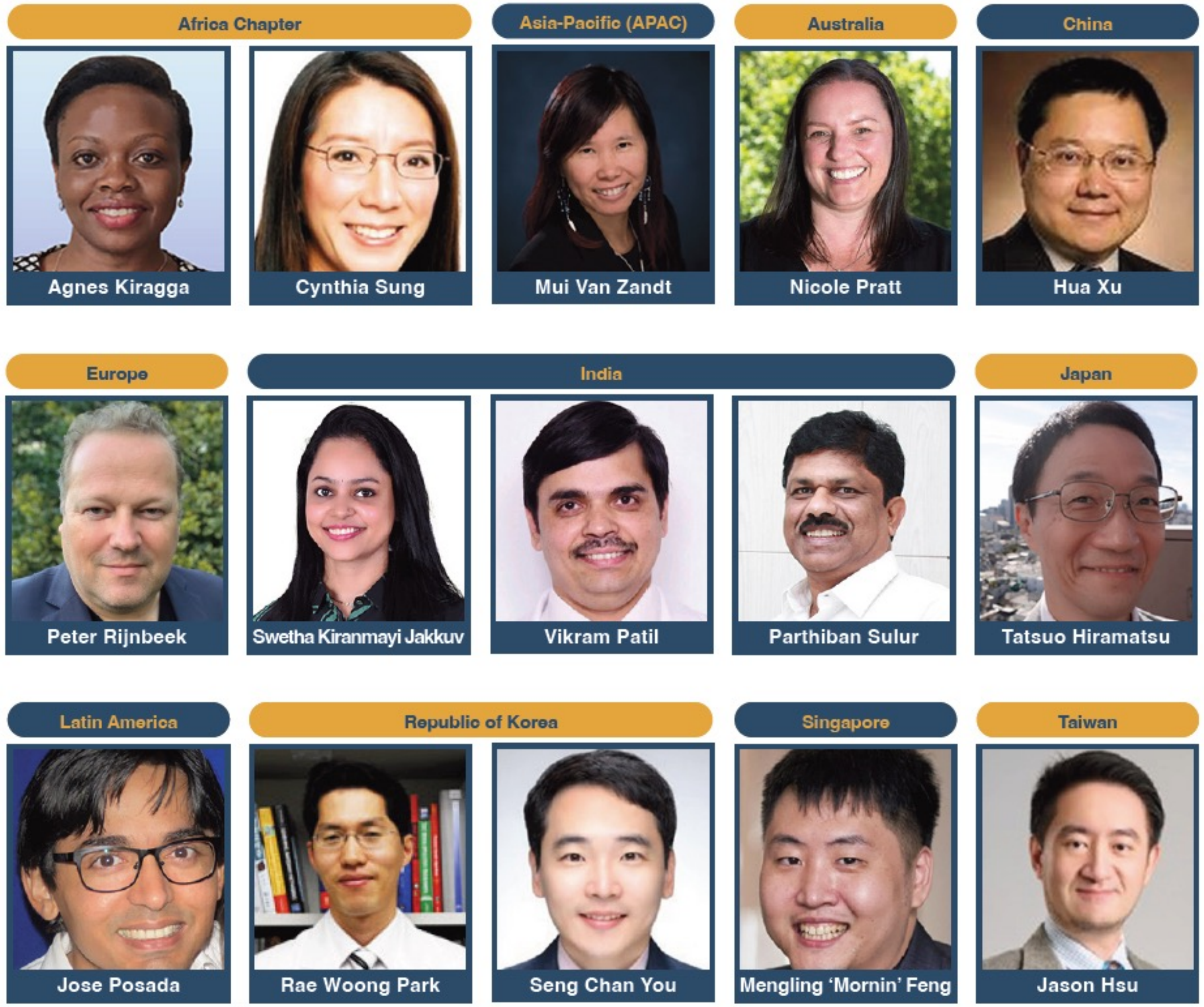
- 4,294 collaborators
- 83 countries
- 21 time zones
- 6 continents

Join the Journey at https://ohdsi.org/

Workgroups led by community

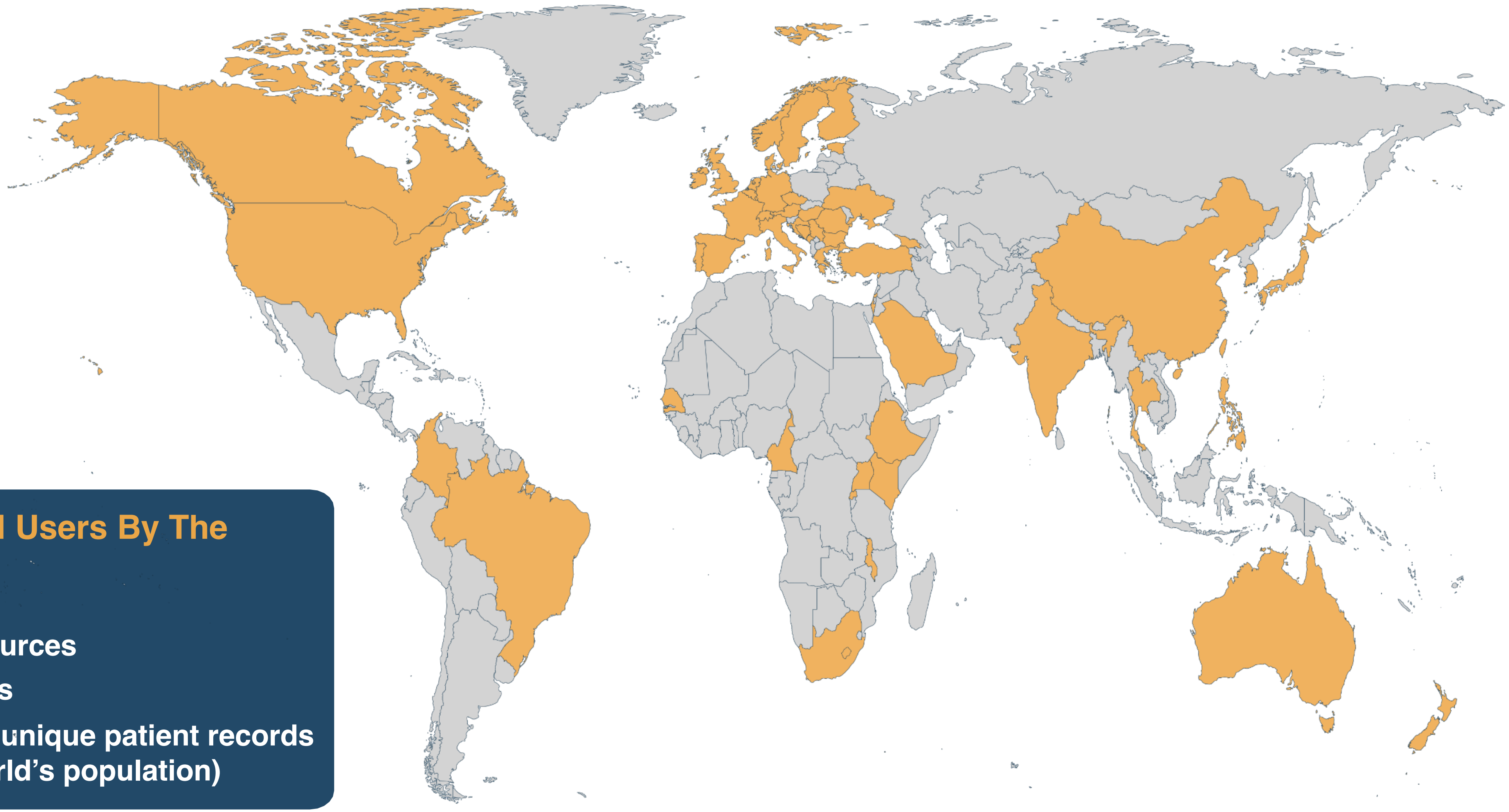


Regional chapters and national nodes



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
Germany	Ines Reinecke, Michele Zoch
Greece	Anastasia Farmaki, Pantelis Natsiavas, Grigoris Papapostolou
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
United Kingdom	Daniel Prieto-Alhambra

OMOP Common Data Model adoption

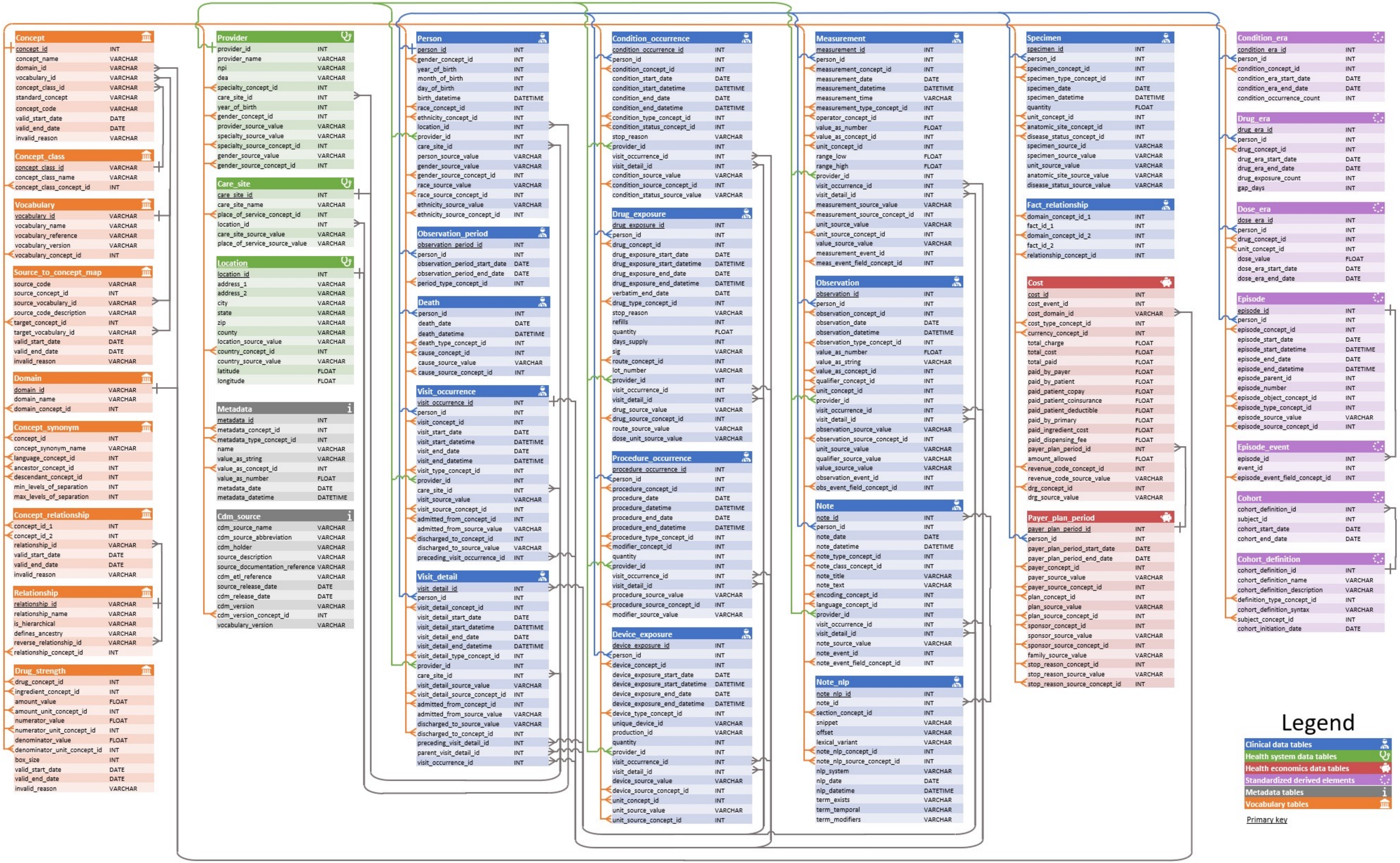


OMOP CDM Users By The Numbers

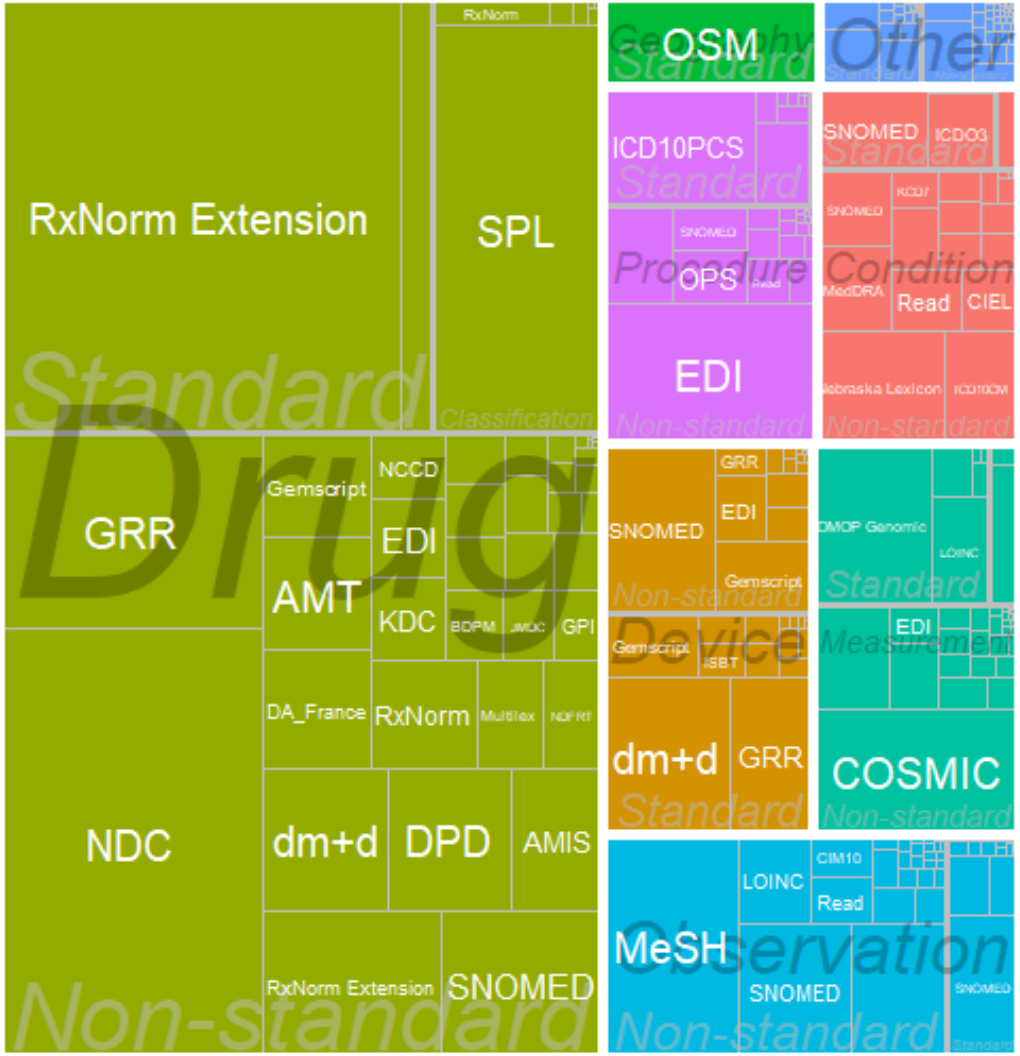
- 544 data sources
- 54 countries
- 974 million unique patient records (12% of world's population)

Our Journey Page 48-49

OMOP Common Data Model 5.4



OHDSI standardized vocabularies

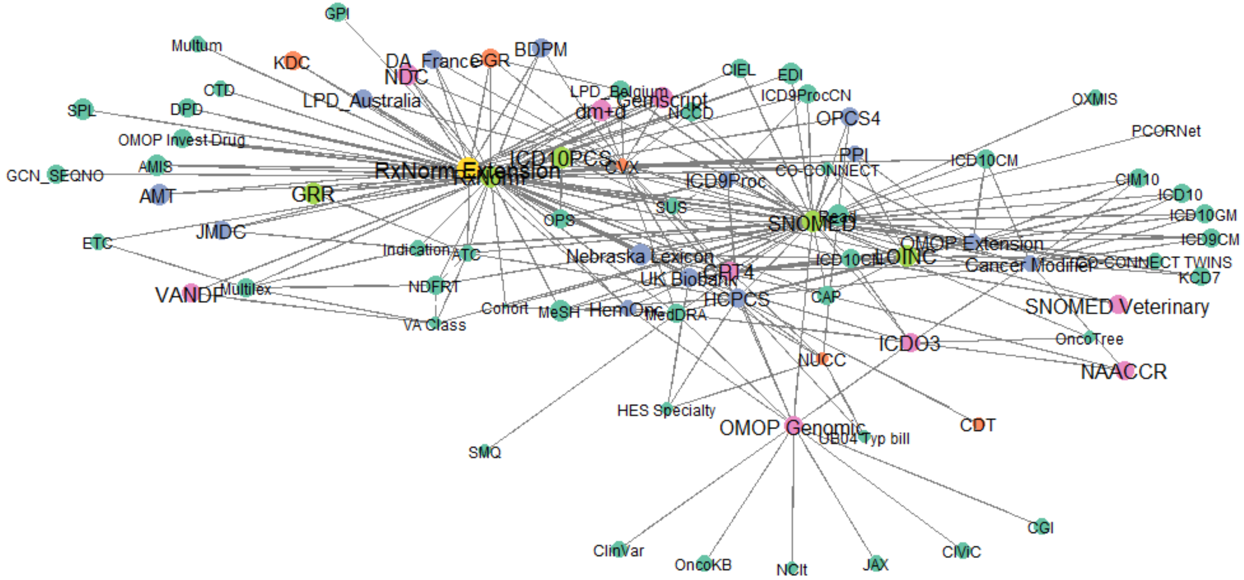


OHDSI Vocabularies By The Numbers

as of August 2024 release

- 11,561,982 concepts
  - 3,720,296 standard concepts
  - 883,766 classification concepts
- 143 vocabularies
- 43 domains
- 86,668,674 concept relationships
- 99,192,928 ancestral relationships
- 5,009,796 concept synonyms

1 Shared Resource to Enable Data Standards



Our Journey Page 52-53

OHDSI Standardized Vocabularies Improvement Initiative

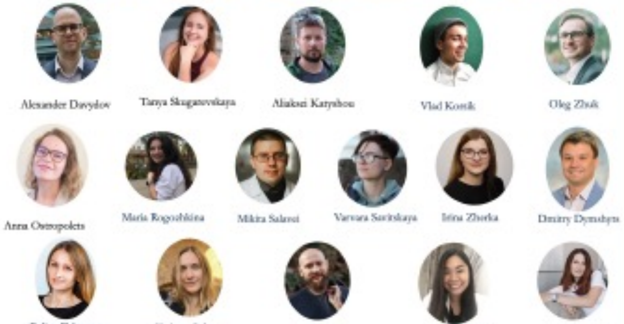
Continuous improvement of our standardized vocabularies has been a community effort over the last year. Recent focuses have included contributions, versioning, and building a roadmap with emphasis on vocabularies most commonly used.

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

2024-25 Vocabulary Roadmap

Check Out The Roadmap

Thank You, Vocabulary Team!



Alexander Davydov, Tanya Skugarevskaya, Aliaksei Katyshou, Vlad Korsik, Oleg Zhuk

Anna Ostropolets, Maria Rogozhkina, Mikita Salavei, Varvara Savitskaya, Irina Zherko, Dmitry Dymshyts

Polina Talapova, Tetiana Orlova, Anton Tatur, Janice Cruz, Masha Khitrun

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 references 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

US FDA CBER BEST Initiative

Researchers within the OHDSI community currently provide support to the U.S. Food and Drug Administration (FDA) Biologics Effectiveness and Safety (BEST) Initiative in its mission to conduct safety and effectiveness surveillance of biologic products (vaccines, blood and blood products, tissues and advanced therapeutics).

Specific means of FDA support through this grant include serving in a convening role to 1) develop methods related to using observational data from electronic health records and administrative claims to study the effectiveness and safety of biologics, 2) work collaboratively with FDA staff to plan, develop, coordinate, host and convene meetings and workshops, and 3) educate FDA staff and external stakeholders on the BEST infrastructure, capabilities, and applications that serve FDA and stakeholder needs.

Vaccine Surveillance Methods Research


Bayesian safety surveillance with adaptive bias correction

Factors Influencing Background Incidence Rate Calculation: Systematic Empirical Evaluation Across an International Network of Observational Databases

CBER Seminar Series Homepage

CBER Best Seminar Series

The CBER BEST Initiative Seminar Series is designed to share and discuss recent research of relevance to ongoing and future surveillance activities of CBER regulated products. The series focuses on safety and effectiveness of biologics including vaccines, blood components, blood-derived products, tissues and advanced therapies.

The seminars provide information on characteristics of biologics, required infrastructure, study designs, and analytic methods utilized for pharmacovigilance and pharmacoepidemiologic studies of biologics. They also cover information regarding potential data sources, informatics challenges and requirements, utilization of real-world data and evidence, and risk-benefit analysis for biologic products.

Seminars from 2024 are listed below. Use the QR code to visit the seminar homepage and learn about upcoming talks or watch previous sessions.

Title: Observational methods for COVID-19 vaccine effectiveness research: an empirical evaluation and target trial emulation
Presenter: **Martí Català Sabaté**, Medical Statistician and Data Scientist, University of Oxford

Title: A modified self-controlled case series method for event-dependent exposures and high event-related mortality, with application to COVID-19 vaccine safety
Presenter: **Yonas Ghebremichael-Weldeselassie**, Lecturer of Statistics at School of Mathematics and Statistics, The Open University, UK

Title: Applying Machine Learning in Distributed Networks to Support Activities for Post-Market Surveillance of Medical Products: Opportunities, Challenges, and Considerations
Presenter: **Jenna Wong**, Assistant Professor in the Department of Population Medicine at Harvard Medical School and Harvard Pilgrim Health Care Institute

Title: Reliability in Observational Research: Assessing Covariate Imbalance in Small Studies
Presenter: **George Hripcsak**, Vivian Beaumont Allen Professor of Biomedical Informatics, Columbia University

Title: Real-World Effectiveness of BNT162b2 Against Infection and Severe Diseases in Children and Adolescents: causal inference under misclassification in treatment status
Presenter: **Yong Chen**, Professor & Director of the Center for Health AI and Synthesis of Evidence (CHASE) at the University of Pennsylvania

Title: KEEPER: Standardized structured data from electronic health records as an alternative to chart review for case adjudication and phenotype evaluation
Lab, Odysseus Data

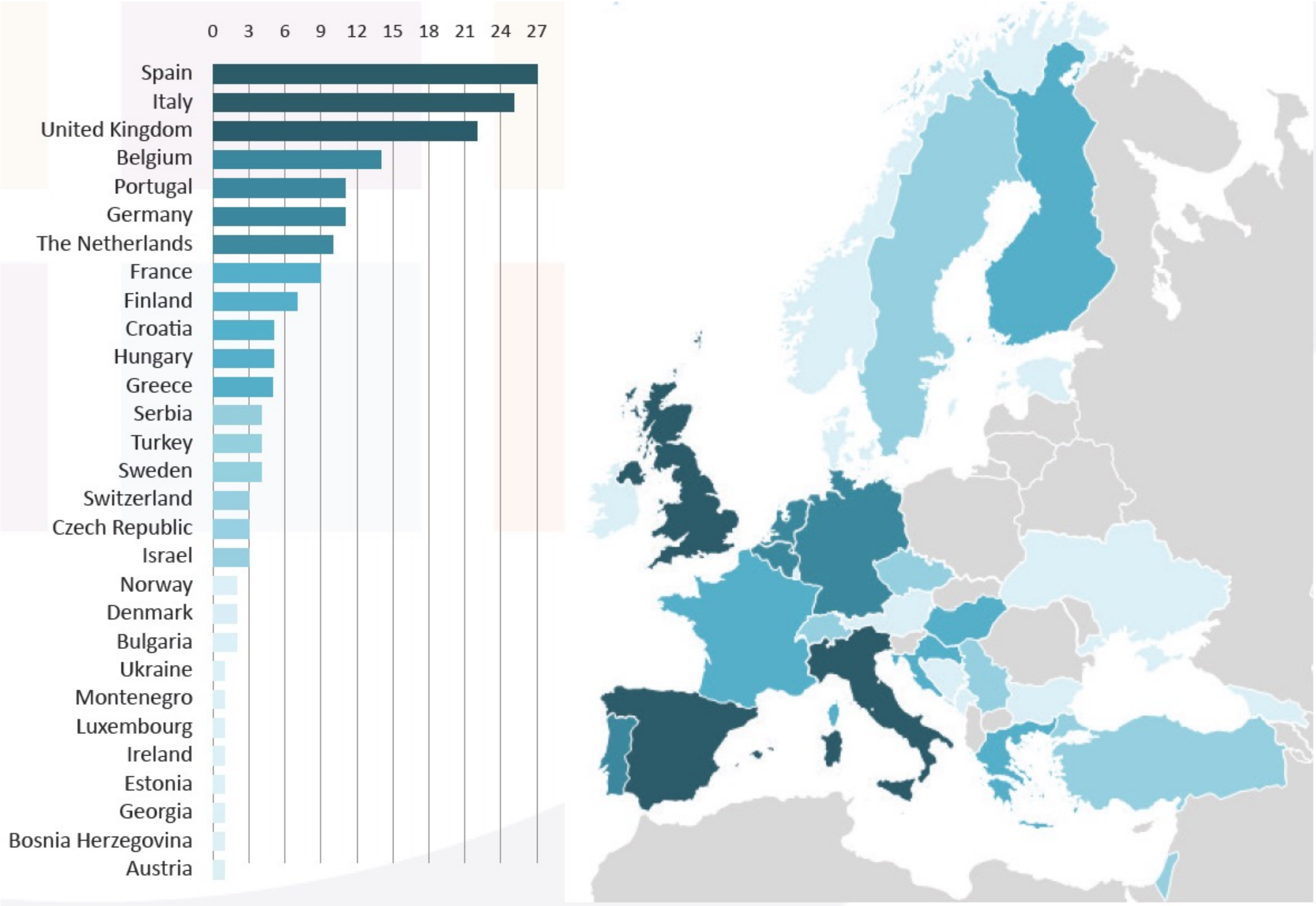
JOURNEY THROUGH OUR EHDEN TIME TOGETHER

EHDEN
EUROPEAN HEALTH DATA & EVIDENCE NETWORK

… Nov 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Oct 2024 …

EHDEN's Journey to Build Europe's Largest Data Network

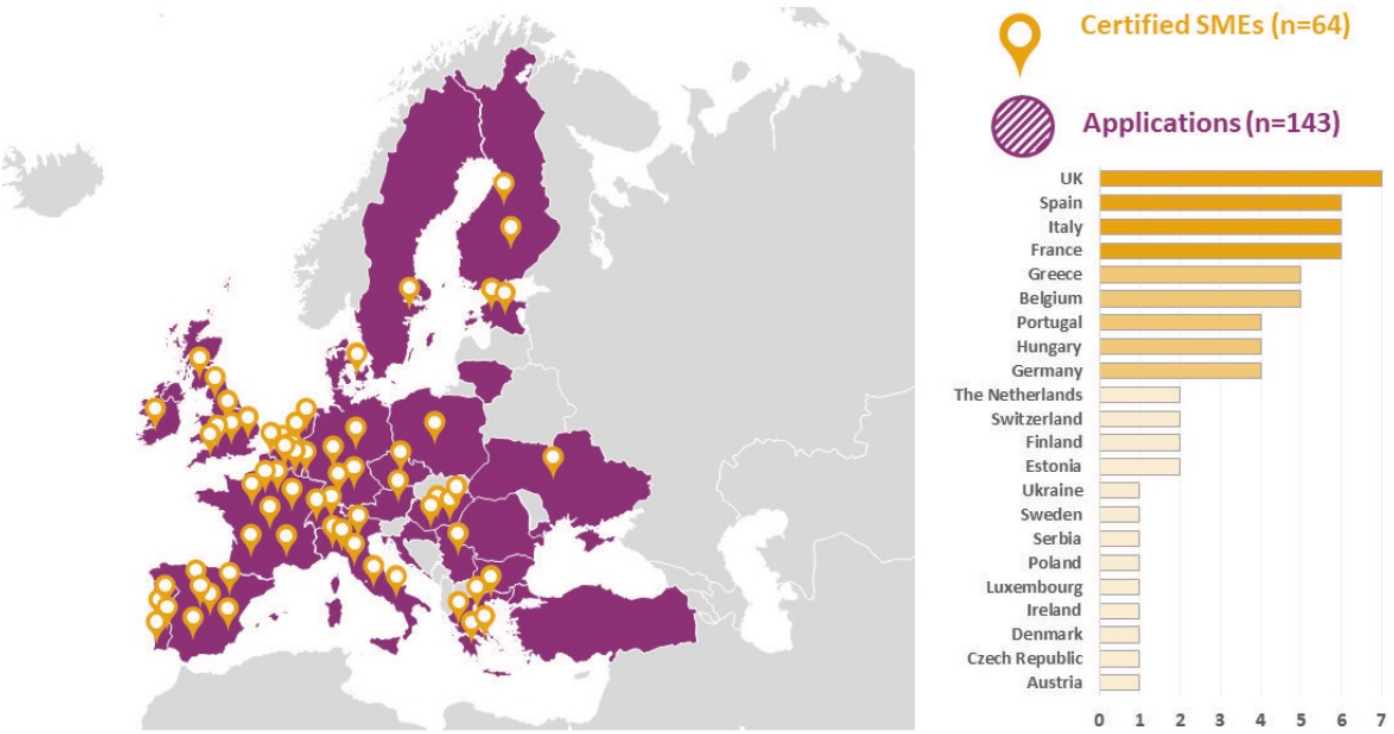
187 data partners selected among 563 applications
29 countries
>366m person records
1 Common Data Model



… Nov 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Oct 2024 …

EHDEN's Journey to Build a Robust Ecosystem of SMEs

A total of **64 SMEs** from **22 countries** completed Certification and received the seal to help Data Partners map their data to the OMOP CDM and install the necessary tools.



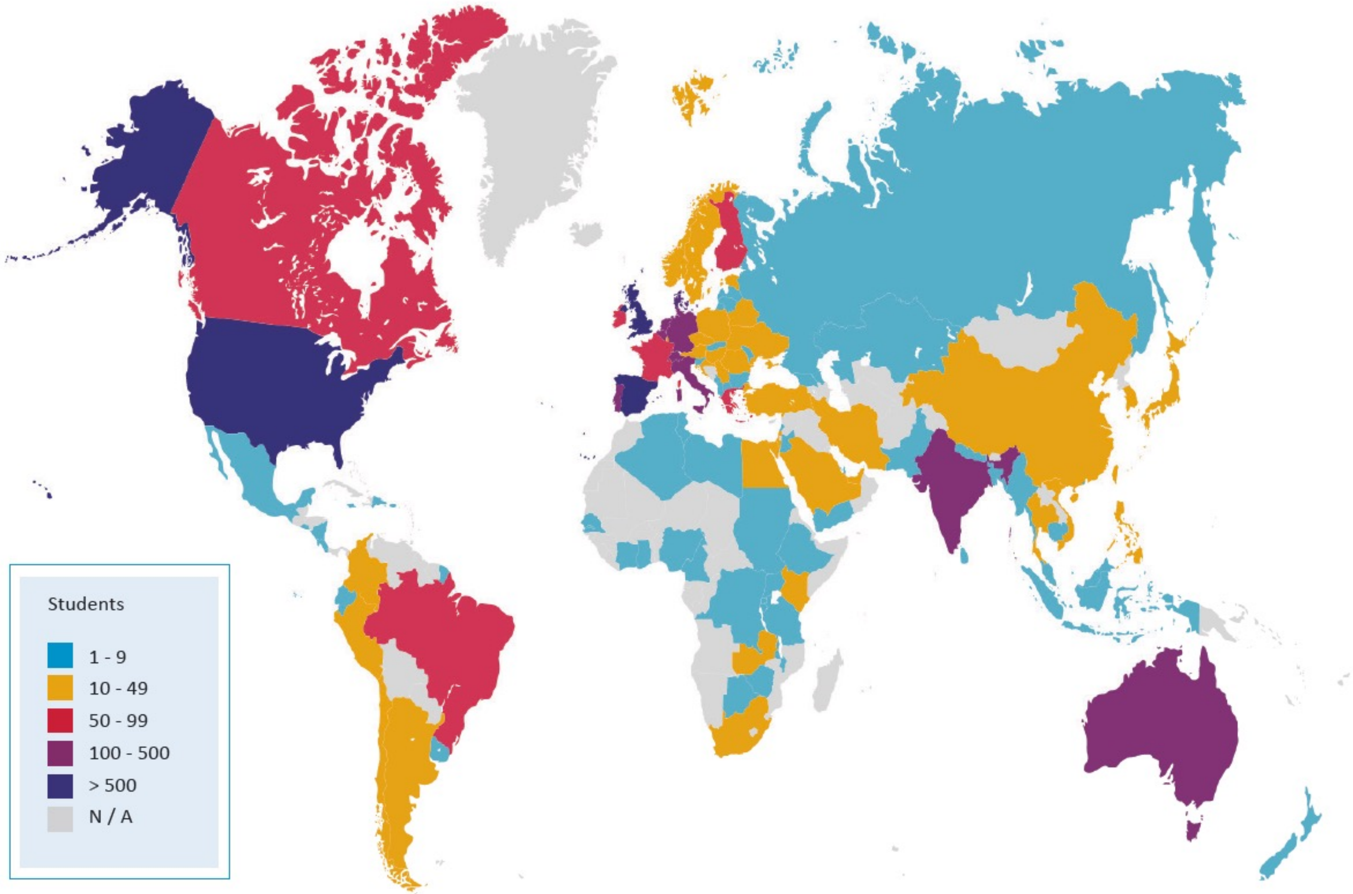
Europe map representing the countries with EHDEN-Certified SMEs.

... Nov 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Oct 2024 ...

EHDEN's Journey to Build a Global Educational Resource

EHDEN Academy
https://academy.ehden.eu/

Publicly launched in **2020**
24 courses
>5,200 active learners
108 countries



... Nov 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | Oct 2024 ...

EHDEN's Impact is Unprecedented

Mario Draghi

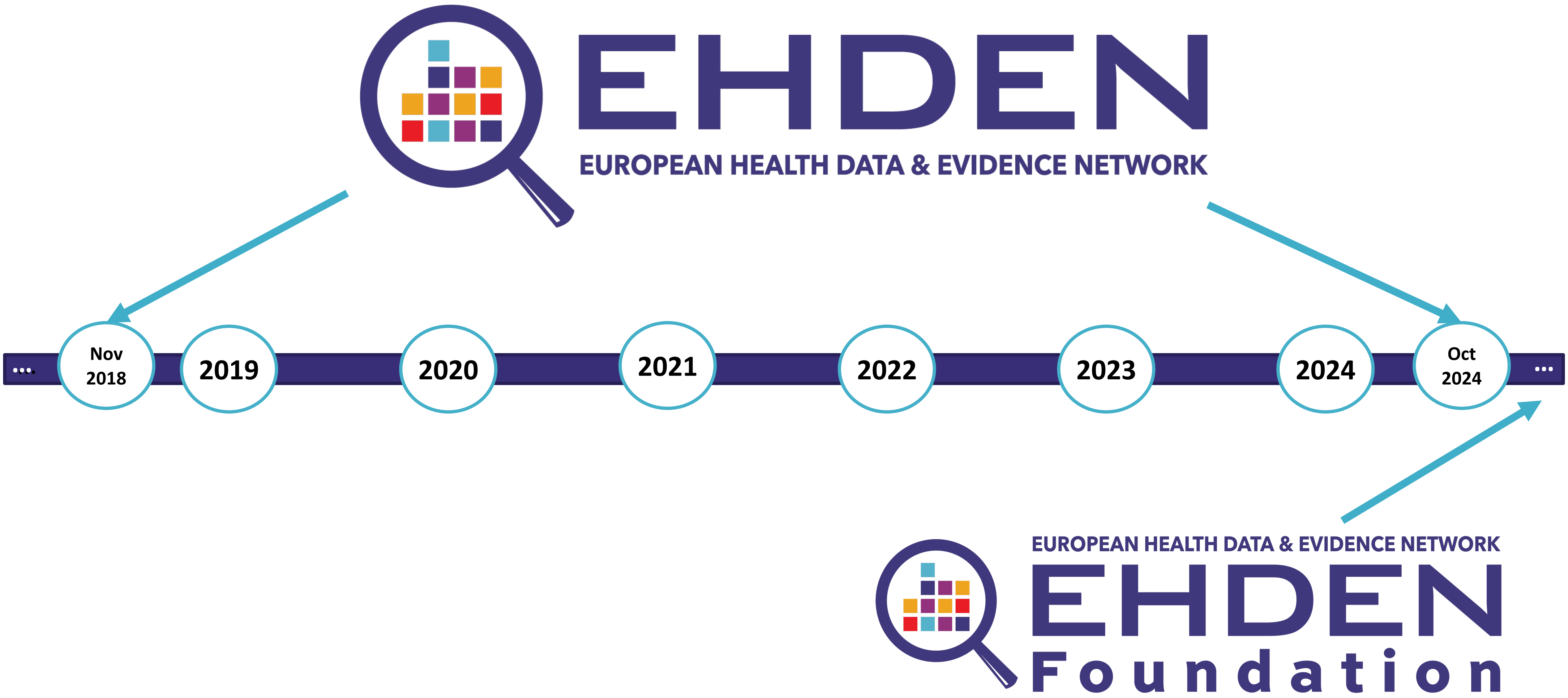
1. Maximise the impact of the European Health Data Space (EHDS).

Leverage existing health data for regulatory, policy and clinical decision-making by stepping up the standardisation of pre-existing 'legacy' health data. In the run-up to the full application of the EHDS Regulation, it will be necessary to continue and increase efforts to standardise existing data sources to a common data model building on the work initiated by the European Health Data Evidence Network (EHDEN), set to end by October 2024. The initiative can be set up as a new public-private partnership, aiming to work in full alignment (forward compatibility) with the EHDS. Through this work, standardised health data will be leveraged to generate evidence for regulatory, policy and clinical decision-making

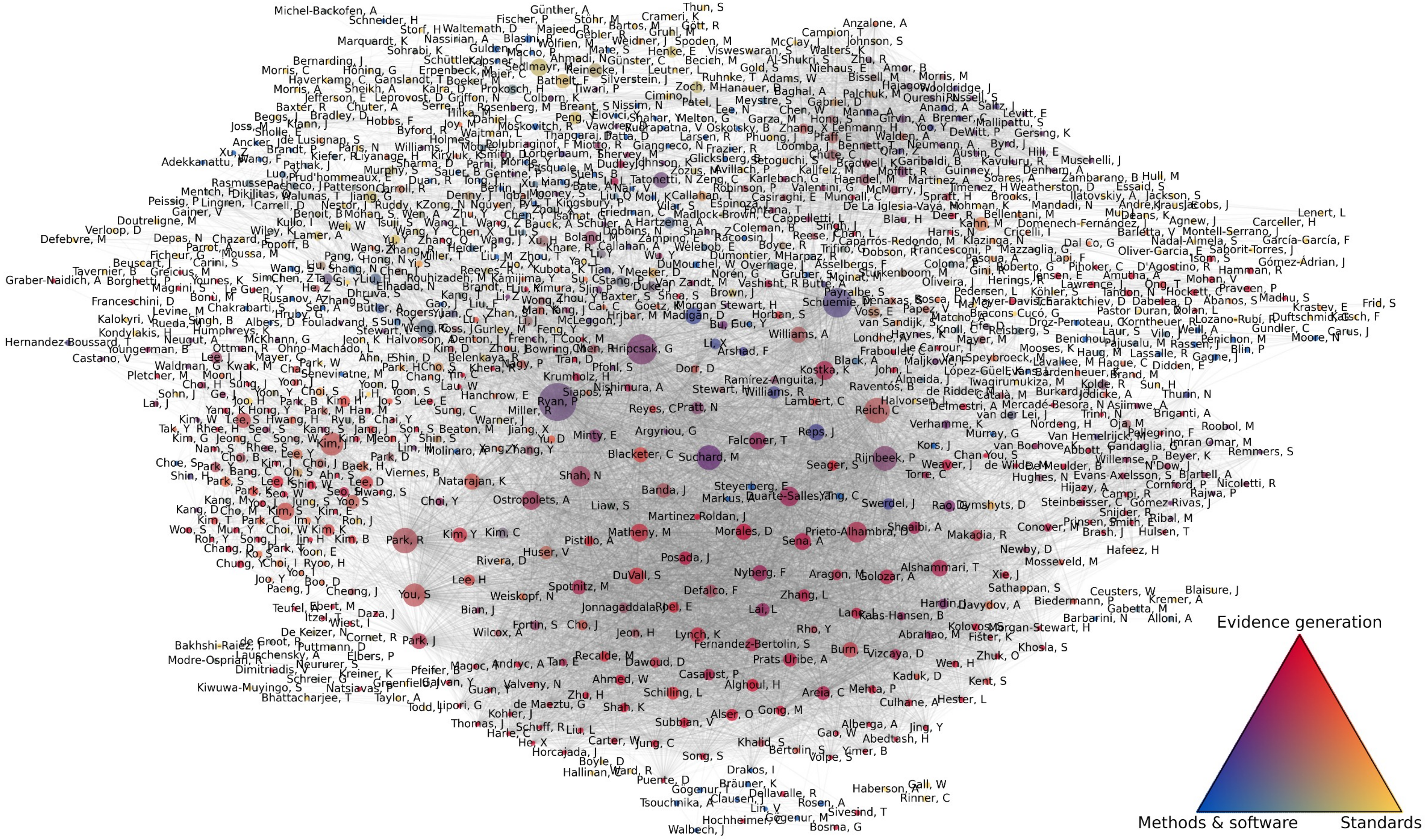
.

Leverage the DARWIN EU® network to generate evidence for innovation in medicine development and for policy and clinical decision-making supported by the use of AI. Existing expertise and experience need to be geared towards generating 'real-world' evidence by running non-interventional studies drawing on the existing data source catalogue to expand activities building on additional data sources in Member States made available by the EHDS. AI has huge potential to accelerate the management and analysis of health data for this purpose.

JOURNEY THROUGH OUR EHDEN TIME TOGETHER

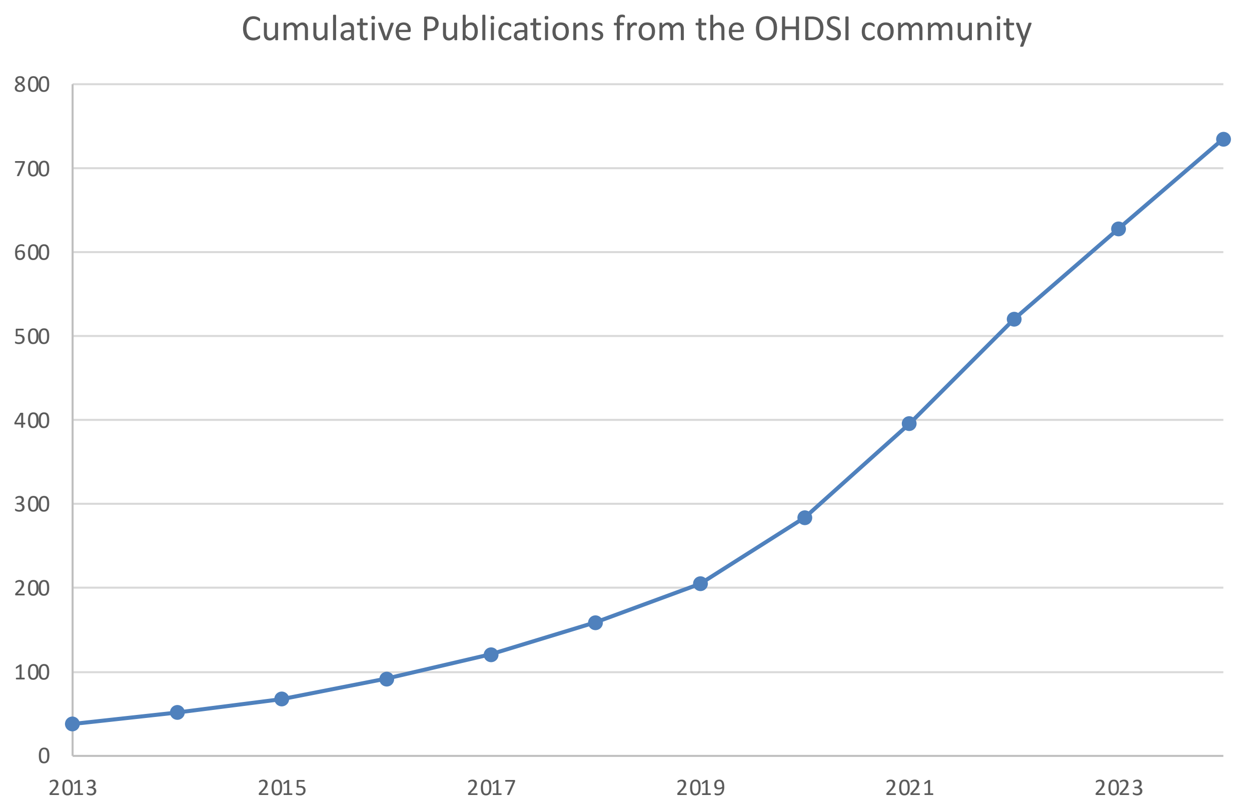


OHDSI collaborations in scholarship



Academic scholarship and clinical evidence generation

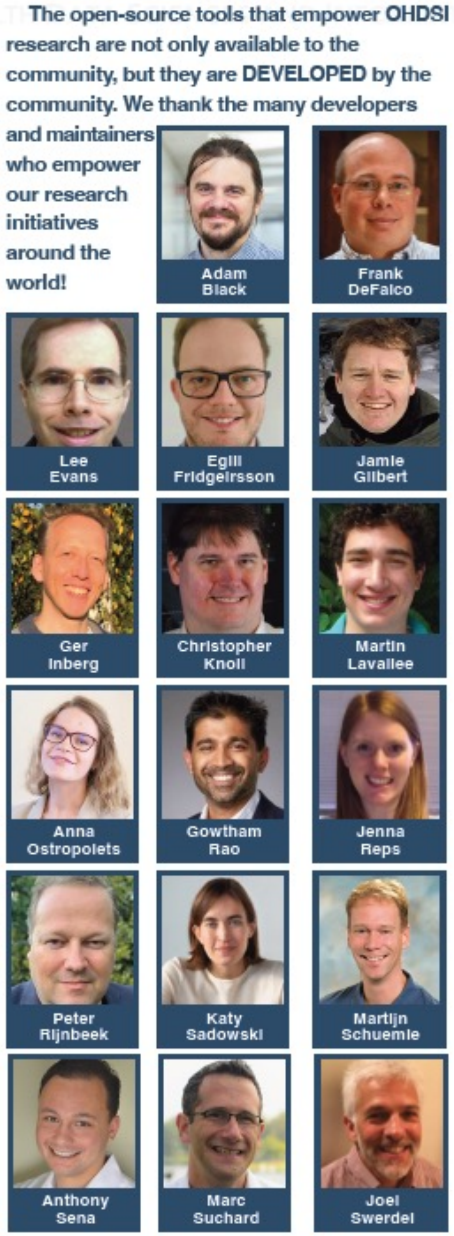
- >730 publications, including in top clinical journals (JAMA, BMJ, Lancet, JAMA Internal Medicine, JACC) and leading methodological journals (JAMIA, JBI, Nature Digital Medicine)
- Clinical evidence generated to inform range of therapeutic areas, including hypertension, diabetes, COVID-19, vision care, depression, oncology

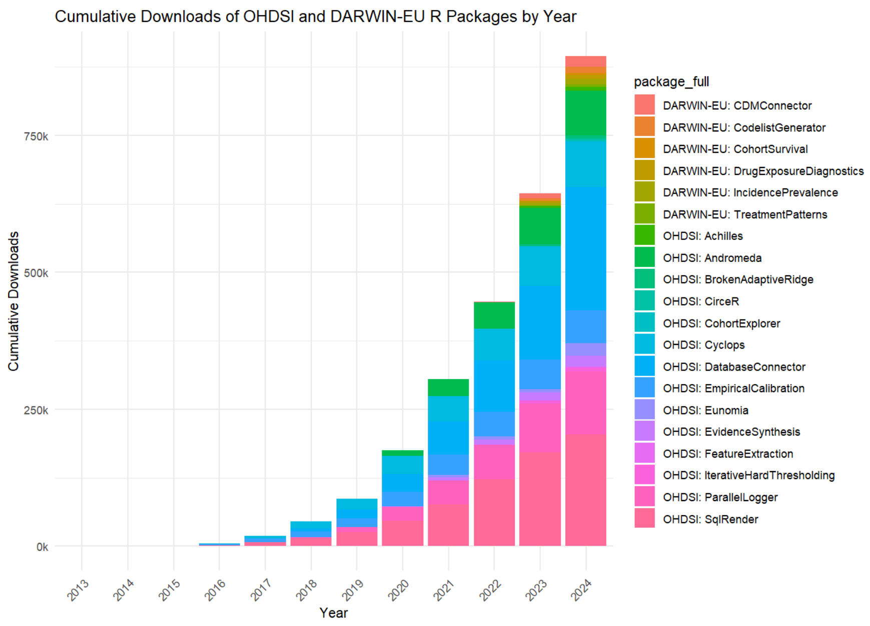


Open-source software development

- HADES is an ecosystem of 37 R packages to support standardized analytics for the OMOP CDM and across OHDSI network
- OHDSI CRAN packages have been downloaded >800,000 times

Package	Version	Maintainer(s)	Availability
Achilles	v1.7.2	Frank DeFalco	CRAN
Andromeda	v0.6.7	Martijn Schuemie	CRAN
BigKnn	v1.0.2	Martijn Schuemie	GitHub
BrokenAdaptiveRidge	v1.0.0	Marc Suchard	CRAN
Capr	v2.0.8	Martin Lavallee	GitHub
Characterization	v2.0.1	Jenna Reps	GitHub
CirceR	v1.3.3	Chris Knoll	CRAN
CohortDiagnostics	v3.3.0	Jamie Gilbert	GitHub
CohortExplorer	v0.1.0	Gowtham Rao	CRAN
CohortGenerator	v0.11.2	Anthony Sena	GitHub
CohortIncidence	v4.0.0	Chris Knoll	GitHub
CohortMethod	v5.4.0	Martijn Schuemie	GitHub
Cyclops	v3.4.1	Marc Suchard	CRAN
DatabaseConnector	v6.3.2	Martijn Schuemie	CRAN
DataQualityDashboard	v2.6.1	Katy Sadowksi	GitHub
DeepPatientLevelPrediction	v2.1.0	Egill Fridgeirsson	GitHub
EmpiricalCalibration	v3.1.3	Martijn Schuemie	CRAN
EnsemblePatientLevelPrediction	v1.0.2	Jenna Reps	GitHub
Eunomia	v2.0.0	Frank DeFalco	CRAN
EvidenceSynthesis	v0.5.0	Martijn Schuemie	CRAN
FeatureExtraction	v3.7.1	Ger Inberg	CRAN
Hydra	v0.4.0	Anthony Sena	GitHub
IterativeHardThresholding	v1.0.2	Marc Suchard	CRAN
Keeper	v0.2.0	Anna Ostropolets	GitHub
MethodEvaluation	v2.3.0	Martijn Schuemie	GitHub
OhdsiSharing	v0.2.2	Lee Evans	GitHub
OhdsiShinyModules	v3.0.2	Jenna Reps	GitHub
ParallelLogger	v3.3.1	Martijn Schuemie	CRAN
PatientLevelPrediction	v6.3.9	Egill Fridgeirsson & Jenna Reps	GitHub
PhenotypeLibrary	v3.34.0	Gowtham Rao	GitHub
PheValuator	v2.2.11	Joel Swerdel	GitHub
ResultModelManager	v0.5.11	Jamie Gilbert	GitHub
ROhdsiWebApi	v1.3.3	Gowtham Rao	GitHub
SelfControlledCaseSeries	v5.3.0	Martijn Schuemie	GitHub
SelfControlledCohort	v1.6.0	Jamie Gilbert	GitHub
ShinyAppBuilder	v3.1.0	Jenna Reps	GitHub
SqlRender	v1.18.1	Martijn Schuemie	CRAN





Last year's OHDSI Global Symposium

OHDSI Europe Symposium 2024

Stand by for more news from Liesbet Peeters about OHDSI EU 2025 in Belgium!

Our first OHDSI India Symposium!

EHDEN Symposium

OHDSI UK

2024 APAC Symposium

Dec. 4-8 • Marina Bay Sands & National University of Singapore (NUS)

Registration is OPEN!

Symposium Agenda

Dec. 4: Tutorial at NUS

Dec. 5-6: Main Conference at Marina Bay Sands

Dec. 7-8: Datathon at NUS

ohdsi.org/APAC2024

Support The Journey

The OHDSI community comprises a global team of volunteers who collaborates together using open-source tools and shares 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. This program allows 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.

How does the Coordinating Center support OHDSI?

- Provides central shared infrastructure and coordinates community activities to enable community 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

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 Shine 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

OHDSI2024 Tutorial Offerings

The 2024 OHDSI Global Symposium featured five tutorials that will remain part of our commnity's educational resources.

Those early in the journey will want to check out the introductory tutorial (right), a four-hour session that provides a high-level overview of our community research.

We also held four advanced tutorials (below) on different focuses, ranging from vocablaries to open-source tools and ETL. Thank you to all our volunteer faculty for leading these sessions!

An Introduction to the Journey from Data to Evidence Using OHDSI

The journey from data to evidence can be challenging alone but is greatly enabled through community collaboration. In this half-day tutorial, we will introduce newcomers to OHDSI. Specifically, about the tools, practices, and open-science approach to evidence generation that the OHDSI community has developed and evolved over the past decade.

Daniel Prieto-Alhambra | Jenna Reps, *Janssen Research & Development* | Mui Van Zandt | Erica Voss, *Janssen Research & Development* | Linying Zhang, *Washington University in St. Louis*

Conducting 'Off-The-Shelf' Characterization Studies Using DARWIN EU® Tools and the OMOP CDM

In this tutorial, students will learn from leaders in the DARWIN EU team about how to execute characterization analyses against their OMOP CDM instance using DARWIN EU packages, including how to define inputs to the standardized analytics and how to interpret standardized results. Students will also learn how DARWIN EU tools relate to and connect with OHDSI's broader open-source analytics ecosystem.

Developing and Evaluating Your Extract, Transform, Load (ETL) Process to the OMOP Common Data Model

In this tutorial, students will learn about the tools and practices developed by the OHDSI community to support the journey to establish and maintain an ETL to standardize your data to OMOP CDM and enable standardized evidence generation across a data network.

So, You Think You Want To Run an OHDSI Network Study?

In this tutorial, students will learn about the steps along the journey to turn your research question into reliable evidence and how to lead an OHDSI network study. The OHDSI community has developed open-source standardized analytics tools that can be executed across a network of OMOP CDM databases and processes to facilitate collaborations between researchers throughout the evidence generation process from design through implementation and dissemination.

Using the OHDSI Standardized Vocabularies for Research

In this tutorial, students will learn how to take advantage of the OHDSI standardized vocabularies as an analytic tool to support your research, including searching for relevant clinical concepts, navigating concept relationships, creating Conceptsets and understanding source codes that map within these expressions. Students will also learn where the OHDSI standardized vocabularies is used throughout OHDSI's standardized analytic tools.

OHDSI 2024 Symposium Agenda today

Time (ET)	Topic (Presenters)
7:30 - 8:15 am	**Registration and Lite Breakfast (Atrium)** **Newcomer Orientation (Garden State)**
8:30 - 9:15 am	**State of the OHDSI Community (Regency Ballroom)** Where Have We Gone and Where Are We Going? (George Hripcsak, Columbia University) Expand OHDSI Initiative for Eye Care and Ocular Imaging Challenge (Amberlynn Reed, Natiional Eye Institute) Titan Awards (George Hripcsak, Columbia University & Marc Suchard, UCLA)
9:15 - 10:15 am	**Plenary: Clinical Insights from LEGEND-T2DM (Regency Ballroom)** Introduction to LEGEND-T2DM (Moderator: Aline Pedroso, Yale University) Comparative Effectiveness of Second-line Antihyperglycemic Agents (Arya Aminorroaya, Yale University) Effectiveness of First-line Antihyperglycemia Agents (Phyllis Thangaraj, Yale University) Comparative Safety of SGLT2 for Risk of Diabetic Ketoacidosis (Hannah Yang/Evan Minty, University of Calgary) Comparative Safety of GLP1-RA and the Risk of Thyroid Tumors (Daniel Morales, University of Dundee)
10:15 - 10:35 am	**Networking Break (Atrium)**
10:35 - 11:20 am	**Plenary: Value Proposition for Participating in OHDSI Network Studies like LEGEND-T2DM (Regency Ballroom)** Introduction to OHDSI Evidence Network / Marketplace (Moderator: Clair Blacketer, Johnson & Johnson) Reflections from US Department of Veterans Affairs (Scott Duvall, VA) Reflections from SIDIAP (Spain) (Talita Duarte-Salles, IDIAP) Reflections from Taipei Medical University (Thanh-Phuc Phan, Taipei Medical University) Reflections from a Global Commercial Data Provider (Atif Adam, IQVIA)
11:20 am - 12:00 pm	**Plenary Q&A: Lessons Learned on LEGEND-T2DM Journey (Regency Ballroom)** (Moderator: Fan Bu, University of Michigan; Panelists: LEGEND-T2DM co-authors)
12:00 - 12:45 pm	**Buffet Lunch (Atrium)**

Time (ET)	Topic (Presenters)
12:45 - 1:30 pm	**Plenary Panel: JACC-OHDSI Partnership (Regency Ballroom)** (Moderators: Nicole Pratt, University of South Australia / Marc Suchard, UCLA; Panelists: Harlan Krumholz, Yale University Seng Chan You, Yonsei University Yuan Lu, Yale University
1:30 pm - 2:00 pm	**Plenary Activity: OHDSI Scavenger Hunt - Form Your Network Study Dream Team (Regency Ballroom)**
2:00 pm - 3:00 pm	**Collaborator Showcase: Lightning Talks (Regency Ballroom)** (Moderator: Linying Zhang, Washington University School of Medicine in St. Louis) 1) The missing link: Cross-species EHR data linkage offers new opportunities for improving One Health (Kathleen Mullen, University of North Carolina) 2) Comparing probabilistic and rule-based phenotype algorithms for hypotension and angioedema to the experience observed in randomized clinical trials (Joel Swerdel, Johnson & Johnson) 3) Exploring the interplay between metabolic syndrome and brain volume in depression: Basis for Phenotype-Based Classification (Sujin Gan, Ajou University) 4) Software demonstration: CohortConstructor – an R package to support cohort building pipelines (Edward Burn, University of Oxford) 5) A Oneshot and Lossless Federated Generalized Linear Mixed Effect Model (Jiayi Tong, Johns Hopkins University) 6) NCO-Calibrated DID Analysis: Addressing Unmeasured Confounding in Difference-in-Differences Analyses Using Negative Control Outcomes Experiments (Dazheng Zhang, University of Pennsylvania) 7) Health Trends Across Communities in Minnesota: a Statewide Dashboard Leveraging the OMOP CDM to Monitor the Prevalence of Health Conditions (Samuel Patnoe, HealthPartners Institute) 8) How Often: Large Scale Incidence Rate Calculation of Health Outcomes for Drugs Nested by Indication (Hsin Yi Chen, Columbia University)
3:00 pm - 5:00 pm	**Collaborator Showcase: Posters and Software Demos** • Data, Methods & Clinical Posters, #1-105 (Brunswick Ballroom, Lower Level) • Demos, Open-Source, Community, Lightning Talk Posters, #106-136 (Garden State Ballroom, Main Level)
5:00 pm - 6:00 pm	**Closing: Collaborating on Evidence at Scale** (Patrick Ryan, Johnson & Johnson/Columbia University) **(Regency Ballroom)**
6:00 pm - 8:00 pm	**Game Night and Network Reception (Regency Ballroom)**

Agenda for tomorrow, Oct 24

Start	End	Garden State A Main Level	Garden State B Main Level	Garden State C Main Level	Regency Ballroom A Main Level	Regency Ballroom B Main Level	Regency Ballroom C Main Level	Conference Room A Second Floor	Conference Room B/C Second Floor	Conference Room I Second Floor	Salon AB Second Floor
7:00	8:00	Lite Breakfast and Exhibits- Atrium, Main Level									
8:00	9:00	Africa Chapter	APAC Chapter	Perinatal & Reproductive Health	Patient-Level	HADES	Latin	Geographic	OMOP + FHIR	Oncology	Phenotype
9:00	10:00										
10:00	11:00	Collaborator Showcase Posters (Clinical, Methods, Data) - Brunswick Ballroom, Lower Level									
		Collaborator Showcase Demos, Open-Source, Community & Lightning Talk Posters - Garden State Foyer, Main Level									
11:00	12:00	Natural Language Processing	Evidence Network Data Partners	Medical Devices	Prediction	Hackathon	America	Information System	Health Equity Conbination	Workgroup	Evaluation
12:00	13:00										
13:00	14:00	Buffet Lunch and Exhibits - Atrium, Main Level									
14:00	15:00	Psychiatry Workgroup	Surgery & Perioperative Medicine	Vaccine Vocabulary	Medical Imaging	HADES Hackathon	Dentistry Workgroup	Eyecare & Vision Research	Vocabularies	Industry Workgroup	Atlas WebAPI
15:00	16:00										

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 (OHDSI), Twitter/X (@OHDSI) and Instagram (@OHDSI) and 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 (github.com/OHDSI), or reach out to us over email (contact@ohdsi.org).

Thank you for Joining The Journey with OHDSI!

National Eye Institute
Research Today...Vision Tomorrow

Advancing Vision Science Through a New Initiative: NEI Expand OHDSI Initiative for Eye Care & Ocular Imaging Challenge

Amber Reed, MPH
Assistant Director, Office of Data Science and Health Informatics
ICO Challenge Manager
National Eye Institute, National Institutes of Health

OHDSI Symposium
October 23, 2024
No Financial Disclosures

Challenges: A Tool in NIH's Biomedical Innovation Toolbox

National Eye Institute

NEI Expand Observational Health Data Sciences and Informatics (OHDSI) Initiative for Eye Care and Ocular Imaging Challenge

https://www.challenge.gov/?challenge=nei-expand-ohdsi-initiative-for-eye-care-and-ocular-imaging-challenge

Background: The OHDSI community is a global collaborative network of researchers, healthcare professionals, data scientists, and informaticians dedicated to improving health outcomes through the analysis of observational health data. Leveraging large-scale, standardized healthcare databases, OHDSI enables researchers to generate real-world evidence and uncover insights into disease patterns, treatment effectiveness, and safety profiles.

Goal: Aims to expand the OHDSI network for vision research by incentivizing researchers to submit innovating ideas for leveraging the network.

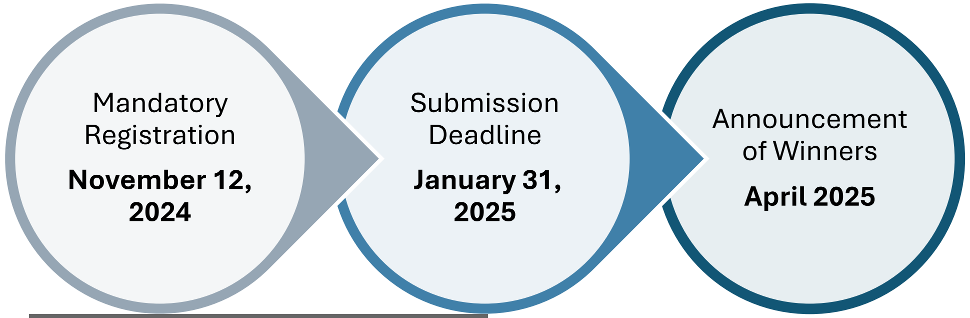
Prize Purse: $1M total -- Four winners will each receive $250,000 which could support their integration into the network.

This Challenge is open to the public and seeks to **foster innovation and collaboration** among a diverse group of participants.

Call to Action -- We invite the community to submit their innovative ideas related to eye care and vision research for leveraging the OHDSI network.

Whether you're interested in studying disease prevalence, treatment effectiveness, safety profiles, common vs. rare diseases, clinical data vs. image data vs. both, or some other topic – your contributions can make a difference. Join us in expanding the OHDSI network and advancing vision research!

Key Upcoming Dates:



NIH National Eye Institute

OHDSI
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

How Can I Participate?

This Challenge is open to the public, including researchers, healthcare professions, data scientists, informaticians, and anyone interested in expanding data sharing in research. The competition aims to **stimulate innovation** and **advance open science principles**.

Registration Category		
Entity	Registering as a group of individuals competing together on behalf of a legally established organization, institution, or corporation.	Prize is awarded to entity.

To be eligible for a prize award, entities must be incorporated and have their primary place of business in the U.S.

Key Dates

- Mandatory Registration (intent to participate): **November 12, 2024**
- Submission Period Open: **December 1, 2024**
- Submission Deadline: **January 31, 2025**
- Technical Evaluation & Federal Judging: **February 10-March 24**
- Winners Announced: **April 2025**

*Tentative dates subject to change

How to Enter?

Registration and Submission Process:

1. **Mandatory Registration: Entities must register their intent to participate by 11:59 PM Eastern Time on November 12, 2024 by submitting the Challenge Registration Form to neiodshi@nei.nih.gov.** Entities who do not complete their registration by the deadline will not have their submissions considered for this Challenge. Each Participant Entity must designate a Point of Contact responsible for registering and submitting on behalf of the Entity and for all communications with the Challenge sponsors. Participants will also need to provide the name, affiliation, and contact information of all other individuals competing in this Challenge on behalf of an Entity. All such individuals must certify they have read and understand and agree to abide by the official eligibility criteria, participation rules, and requirements for the Challenge as stated in this announcement.

2. **Challenge.gov Submission Portal Instructions:**
The official announcement for the NEI Expand OHDSI Initiative for Eye Care and Ocular Imaging Challenge can be found on Challenge.gov at https://www.challenge.gov/?challenge=nei-expand-ohdsi-initiative-for-eye-care-and-ocular-imaging-challenge.

This portal will open to allow submissions on December 1, 2024.

Create a Challenge.Gov Account.
- Log in to Challenge.Gov.
- Click the orange *Apply for this Challenge* button in the overview section at the top of the Challenge page.
- Enter the Title for your Submission.
- Enter a Brief Description for your Submission (500 Characters or less)
- Enter your submission details in the Long Description field.

To load a file to the submission:
- Step 1: Drag your file or click the "Choose from folder" link to load a file from your computer (Allowed file types: .pdf, .txt, .csv, .jpg, .png or .tiff)
- Step 2: Rename your file (required)
- Step 3: Click the blue "Attach File" button to attach your file to the submission.
- Step 4: Complete this step for all files.

This form will take some time to complete because –
- **Every participant must complete certification by signing**
- **A point of contact from the entity must be identified and sign that the entity agrees to comply with official rules and requirements**

This form is requesting Personally Identifiable Information (PII).

NEI Expand Observational Health Data Sciences and Informatics (OHDSI) Initiative for Eye Care and Ocular Imaging Challenge Participant Registration Form

Mandatory Registration Deadline: March 3, 2025

Section 1:

I am registering for this Challenge as a(n):

☐ **ENTITY** (*i.e.* on behalf of a legally established organization, institution, or corporation).[a] If you checked this box, you must complete Section 4.

If permitted by the Challenge rules[b] and consistent with the purpose and the terms and conditions of the award, do you intend to use Federal funds from a grant award or cooperative agreement to develop your Challenge submission or to fund efforts in support of your Challenge submission?

☐ Yes
☐ No

Section 2 (ENTITY):

If you (alone or with multiple individuals) are registering for this Challenge on behalf of an ENTITY (*i.e.*, you and others, as applicable, are NOT registering on your own behalf, but you are registering on behalf of an ENTITY), provide the contact information for that ENTITY:

- ENTITY Name:
- City, State, Zip Code, Country:

[a] For a legally established organization, institution, or corporation (*i.e.* an ENTITY) to be eligible to win a monetary prize under this Challenge, the ENTITY must be incorporated in and maintain a primary place of business in the

National Eye Institute

Frequently Asked Questions

- Must not be a federal entity acting within the scope of their employment.

- Federal funds from a grant, award, cooperative agreement, etc., may be used to develop the submission if the funding is consistent with the award's purpose.

- Teams are not limited to individuals from a single institution.
  - The team must be registered under one legal entity.
  - If the team wins, the cash prize will be awarded to the registered entity, not to individual team members.

- Potential solvers may participate in up to two submissions from different entities (you can only be the POC for one submission).

- It is up to the entity to decide whether to apply overhead costs to the award.

NEI Expand Observational Health Data Sciences and Informatics (OHDSI) Initiative for Eye Care and Ocular Imaging Challenge

NIH National Institutes of Health
Turning Discovery Into Health

Scan to go to Challenge page

Questions?

neiodshi@nei.nih.gov

Titan Awards

2023 Titan Awards

Nicole Pratt

Community Leadership

Congratulations, 2024 Titan Award nominees!

Please stand!

Alexander Davydov • Andrew Kanter • Anna Ostropolets • Anthony Sena • April Olympians Team • Asieh Golozar • Ben Martin • Benjamin Viernes • Christopher Mecoli • Cindy Cai • Clair Blacketer • Cynthia Sung • Daniel Morales • Danielle Boyce • DARWIN EU Development Team • Elisse Katzman • Evanette Burrows • Eye Care and Vision Research Workgroup • Frank DeFalco • George Hripcsak • Greg Klebanov • Henrik John • Hsin Yi Chen • J Swetha Kiranmayi • Jack Janetzki • James Weaver • Jared Houghtaling • Jen Park • Joel Swerdel • John Gresh • Jung Ho Kim • Justin Manjourides • Kyle Zollo-Venecek • Liesbet Peeters • Linying Zhang • Louis Hendricks • Maarten van Kessel • Manlik Kwong • Marc Suchard • Marta Pineda-Moncusi • Marti Catala Sabate • Martijn Schuemie • Martin Lavallee • Maxim Moinat • Michael Gurley • Michael Matheny • Michel Walravens • Michelle Hribar • Minnesota EHR Consortium Health Trends Across Communities Project Team • Montse Camprubi • Mengling 'Mornin' Feng • Natthawut 'Max' Adulyanukosol • OHDSI APAC ETL Team • OHDSI Standardized Vocabularies Team • Oleg Zhuk • Parthiban Sulur • Polina Talapova • Qi Yang • Renske Los • Rich Boyce • Robert Koski • Robert Miller • Roger Carlson • Scott DuVall • Thamir Alshammary • Theresa Burkard • Thomas Falconer • Tom Seinen • Vishnu Chandrabalan • Vlad Korsik • Will Kelly • Zhen Lin

Titan Awards

Data Standards

This 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 Titan Awards

Alexander Davydov

Vlad Korsik

Anna Ostropolets

Oleg Zhuk

Data Standards

www.ohdsi.org

#JoinTheJourney

Titan Awards

Methodological Research

This 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 Titan Awards

Linying Zhang

Methodological Research

www.ohdsi.org

#JoinTheJourney

Titan Awards

Open-Source Development

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

2024 Titan Awards

Martin Lavallee

Open-Source Development

Titan Awards

Clinical Applications

This 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 Titan Awards

Cindy Cai

Jung Ho Kim

Jack Janetzki

Clinical Applications

www.ohdsi.org

#JoinTheJourney

Titan Awards

Community Collaboration

This award recognizes an individual for their collaborative spirit in helping their fellow community members reach their goals

2024 Titan Awards

Natthawut 'Max' Adulyanukosol

Community Collaboration

Titan Awards

Community Support

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

2024 Titan Awards

Montse Camprubi

Elisse Katzman

Community Support

Titan Awards

Community Leadership

This award recognizes an individual for their leadership in advancing the OHDSI mission

2024 Titan Awards

Clair Blacketer

Community Leadership

2024 Titan Awards

Congratulations to our 2024 Titan Award winners and nominees!