Welcome to OHDSI 2022: Where should we go and how should we get there
OHDSI’s mission

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

**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)

- **OHDSI Data partner 2**
  - Source data
  - ETL
  - OMOP CDM
  - OHDSI tools

- **OHDSI Data partner 3**
  - Source data
  - ETL
  - OMOP CDM
  - OHDSI tools

- **OHDSI Data partner n**
  - Source data
  - ETL
  - OMOP CDM
  - OHDSI tools

**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

**OHDSI collaborations**

- Evidence dissemination

**OHDSI data network**

- Collaborative Interpretation

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**Terms explained:**

- **OMOP CDM**: Common Data Model for Observational Medical Outcomes Partnership
- **ETL**: Extract, Transform, Load process for data migration
- **OHDSI tools**: Open-source software for data analysis and research collaboration
OHDSI community
We’re all in this journey together...

OHDSI Collaborators
• 2,367 collaborators
• 74 countries
• 21 time zones
• 6 continents

OHDSI Data Network
• 331 data sources
  • 284 EHRs
  • 28 administrative claims
• 34 countries
• 810 million unique patient records
12 OHDSI Highlights In 2021

- #OHDSI2021 Global Symposium
- Vaccine Surveillance Methods Research
- Reproducibility Challenge
- HADES/Community Unit-Test-A-Thon
- CDM v5.4 Release
- EHDEN Progress (143 Data Partners, 47 SMEs)
- “Our Journey” Publication
- Pioneer Prostate Cancer Study-A-Thon
- The LEGEND Initiative
- The Asia-Pacific (APAC) Symposium
- Work on Adverse Events of Special Interest Around Vaccines
- Titan Awards
What should we accomplish together in 2022?
What should we accomplish together in 2022?

Top

1. Develop a system to generate evidence that characterizes disease and treatment utilization, estimates the effects of medical interventions, and predicts outcomes.
The journey to real-world evidence

Patient-level data in source system/schema

Reliable evidence
Current status quo in observational research makes it challenging to build trust in evidence.

Does the study provide an unbiased effect estimate?
Are the findings generalizable to the population of interest?

Can the study be fully reproduced?
Does the analysis actually do what the protocol said it would do?
Engineering open science systems that build trust into the real-world evidence generation and dissemination process

‘System’ required elements:
- Required phenotypes
- Analysis specifications
- Decision thresholds

Data quality evaluation
- Research question
- Database diagnostics

Phenotype development and evaluation
- Cohort definitions
- Cohort diagnostics

Analysis reliability evaluation
- Analysis design choices
- Study diagnostics

Final unblinded results

Interface for exploration

System characteristics:
- Standardized procedures with defined inputs and outputs
- Analysis packages implementing scientific best practices consistently applied across all data partners, generating consistent output for network synthesis
- Reproducible outputs generated by open-source analysis libraries developed and validated with verifiable unit-test coverage
- Pre-specified and objective decision thresholds for go/no go criteria
- Measurable operating characteristics of system performance
Epidemiology is going to need to get closer to actual real time. This just-published JAMA piece measuring the false positive rates of SARS-CoV-2 rapid antigen tests, presents compelling recent data and results, but about ... the delta variant.

[jamanetwork.com](https://jamanetwork.com)
False-Positive Results In Rapid Antigen Tests for SARS-CoV...
This study examines the incidence of false-positive results in a sample of rapid antigen tests used to serially screen ...
How should we accomplish together in 2022?
OHDSI Working Groups

OHDSI's central mission is to improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care. We work towards that goal in the areas of data standards, methodological research, open-source analytics development, and clinical applications.

Our 27 Working Groups present opportunities for all community members to find a home for their talents and passions, and make meaningful contributions. We are always looking for new collaborators.

See an area where you want to contribute? Please Join The Journey!

OHDSI Regional Chapters

An OHDSI regional chapter represents a group of OHDSI collaborators located in a geographic area who wish to hold local networking events and meetings to address problems specific to their geographic location.

Africa
- Current Participants: 17
- Lead: Nige Gelbreyes

Australia
- Current Participants: 36
- Lead: Nicole Pratt

China
- Current Participants: 163
- Lead: Hua Xu

Europe
- Current Participants: 135
- Lead: Peter Rijntjes

Japan
- Current Participants: 19
- Lead: Tatsuhiro Hiratsuka

Korea
- Current Participants: 26
- Lead: Seng Hwan You

Singapore
- Current Participants: 30
- Lead: Mengling Feng

Taiwan
- Current Participants: 45
- Lead: Jason Hsu
Workgroup ground rules

In order to continue progress towards our global mission, we recommend each OHDSI workgroup be responsible for adhering to the following set of community policies.

• Workgroups are teams created to collaborate on addressing scientific problems necessary to advance OHDSI’s mission. OHDSI creates a virtual workspace to facilitate workgroup activities, including synchronous meetings and asynchronous chats and fileshares through OHDSI’s MSTeams environment.

• Workgroups must create an approved Objectives and Key Results document that states each workgroup’s goals and markers of progress. This document should be kept within the “Files” tab of each WG’s MS Teams tenant, and it should be referred to in a workgroup meeting at least once per quarter. Approval would be handled by a member of the OHDSI Steering Group.

• Workgroups must maintain updated folders within the MS Teams tenant that contain both meeting agendas and meeting recordings.

• Workgroups should be represented in at least two of the four quarterly workgroup summit that will be scheduled for 2022. Workgroup leads would be ideal representatives, but an active participant can take their place if necessary. All workgroups should do their best to have representation at the initial workgroup summit.

• Workgroups are required to provide one update on an OHDSI community call. This presentation will be recorded, shared on social media, and placed on the new workgroups reference page on OHDSI.org.

• Workgroups should create (or refine if it already exists on the Wiki) one slide that highlights the workgroup objective/mission that will be used on the OHDSI workgroup page. This slide can incorporate text, graphics, references, etc. But it should be a single slide and available by the first workgroup retreat. This slide should be reviewed annually.

https://ohdsi.org/ohdsi-workgroups/
An organizing framework

• Objective: Ambitious goal of what is to be achieved

• Key Result: Specific measurable to benchmark and monitor how we get to the objective
Writing effective OKRs

• Objectives are the ‘Whats’. They:
  – Express goals and intents
  – Are aggressive yet realistic
  – Must be tangible, objective, and unambiguous; should be obvious to a rational observer whether an objective as been achieved
  – The successful achievement of an objective must provide clear value to the organization

• Key results are the ‘Hows’. They:
  – Express measureable milestones which, if achieved, will advance objective(s) in a useful manner to their constituents
  – Must describe outcomes, not activities
  – Must include evidence of completion. This evidence must be available, credible and easily discoverable.
Proposed OKR for OHDSI Steering Workgroup

- Objective: enable the community to collaboratively generate evidence and the scientific work products necessary to generate evidence
- Q1 Key results:
  1. 100% of active workgroups have defined OKRs to transparently communicate activities and encourage contributions
  2. Convene one OHDSI Workgroup Leader Summit to ensure appropriate communicate across collaborative activities
  3. Release a OHDSI community dashboard to allow for regular monitoring the health and progress of our community
OHDSI Authorship requirements

• OHDSI follows the ICMJE guidelines for authorship requirements:
  – Substantial contributions to:
    • the conception or design of the work, OR
    • the acquisition of, or access to the data, OR
    • analysis of the data, OR
    • interpretation of results
  – AND
    • Drafting the work or reviewing it critically for important intellectual content
  – AND
    • Final approval of the version to be published
  – AND
    • Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

• Lead / senior author
  – The contributor who did most of the work is the lead / senior author and can choose to be either the first or the last author
OHDSI publication ground rules

• Before initiating the paper
  – Make sure authors are aware of OHDSI’s authorship requirements

• While writing the paper
  – Authors can self-identify as authors when they believe they meet the criteria by
    • adding their name to the manuscript, and
    • writing a short text (one or two sentences) how they meet the 1st criterium (Substantial
      contribution to the conception or design of the study, the acquisition of or access to the data,
      analysis of the data, and interpretation of results).
  – For this purpose, a table can be added to the start of the manuscript.

• When submitting
  – The lead / senior author has final authority to decide on whether authors meet the
    criteria, and may remove authors after communicating with them. The lead / senior
    author also decides the author order.
  – We encourage publication that are open access. Lead / senior author is responsible for
    expenses associated with publication decision.

OHDSI 2022 Schedule of events

- **January**
  - 10-12: OHDSI WG LEADS - ETHON
  - 17-19: ISPOR - MD

- **February**
  - 6-7: ACM - AZ
  - 13-14: HLTH VIVE - FL

- **March**
  - 20-21: HIMS - FL
  - 27-28: AMIA CIC - TX

- **April**
  - 13-15: ISPE - FL

- **May**
  - 2-3: MIE - Nice
  - 9-12: DIA - Chicago

- **June**
  - 7-8: OHDSI EU - NL

- **July**
  - 4-5: ACC - DC
  - 11-12: MLAHC - NC

- **August**
  - 8-9: ISPE - Copenharen, DK
  - 15-16: ESC - Spain

- **September**
  - 1-2: AHA - IL

- **October**
  - 6-7: AMIA - DC

- **November**
  - 14-15: OHDSI Community calls – 11amEST

- **December**
  - 12-13: OHDSI APAC Community calls – 10pmEST the day before
Conference deadlines

- 31Jan2022 - userR call for tutorials
- 1Feb2022 - JSM abstract
- 13Feb2022 - ISPE abstracts
- 15Feb2022 - userR call for abstracts
- 14Apr2022 - ML4HC abstracts
**Phenotype Phebruary**

February 2022: Every day, a new phenotype will be developed and evaluated following OHDSI best practices

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**Daily Task:** Given a phenotype target, create a clinical description, review prior work, develop a cohort definition(s) using OHDSI tools (like PHOEBE, ATLAS, APHRODITE), evaluate using OHDSI tools (like CohortDiagnostics, PheValuator), write a summary of findings
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