Where have we been?
Where should we go in 2021?

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OHDSI’s mission

To improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care
The journey to real-world evidence

Patient-level data in source system/schema

Reliable evidence
OHDSI community

We’re all in this journey together...
Why are you on the journey with OHDSI?

https://PollEv.com/patrickryan800
Easy Water Rafting
Data across the OHDSI community

- 205 self-reported entries on [2020 OHDSI Data Network inventory](#)
- **166** different databases with patient-level data from various perspectives:
  - Electronic health records, administrative claims, hospital systems, clinical registries, health surveys, biobanks
- **23** different countries with at least one database in the community
- **>578 million** distinct patients (as determined by max per country)
  - >250m in US, >100m in Europe, >100m in South America, >50m in Asia
- **>2.7 billion** patient records across all databases who reported to be part of the network

All using one open community data standard:
OMOP Common Data Model
Common data model to enable standardized analytics

- Source 1 raw data
  - Electronic health records

- Source 2 raw data
  - Administrative claims

- Source 3 raw data
  - Clinical data

Transformation to OMOP common data model

Source 1 CDM

Source 2 CDM

Source 3 CDM

Open-source analysis code

Open evidence
OHDSI strategic priorities in 2020

1. Finish publications from completed research before initiating new research
2. Execute the world’s largest network study – characterizing concept prevalence
   – simple yet impactful research
   – allow us to know who is (currently) interested and able to participate in network research moving forward
   – target: get >67 of 133 databases participating
3. Collaboration on shared goals
   – Phenotype library
   – CDM documentation - ETL conventions, use guide
   – Open-source development – expand community design, implementation and testing
4. Community Education through EHDEN Academy
   – more materials provided in public forum in structured curriculum
   – less requirement of in-person tutorial sessions
   – coordination of materials with EHDEN and Book of OHDSI
5. Cultivate other network studies which follow OHDSI best practices
SPECIAL REPORT

Inflection Point
Ideas for Accelerating Breakthroughs and Improving Cardiovascular Health

Harlan M. Krumholz, MD, SM

We need to set audacious goals for the future as to how we will subjugate these threats. We have a lot of the knowledge we need to make considerable progress. What should be evident to us, however, is that our progress has been too slow and the results also disappointing. What should also be obvious is that change is possible.

For younger faculty and students, the baton is yours. It is time to reject assumptions about what is possible or how things should be done. Our community can be the spark. Help us change the approach: promote open science, expand preprints, innovate and improve research designs and methods, propel and strengthen implementation science, attack disparities as if they were a global pandemic, ride the digital transformation, and engage in health policy.

https://www.ahajournals.org/doi/epub/10.1161/CIRCOUTCOMES.120.007615
Team members will be automatically added and removed to reflect your active directory. This team has guests.

Search for members

- Owners (10)
- Members and guests (2046)
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 measurable 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.
Objective:
Generate and disseminate real-world evidence about the 3 substantial public health issues: COVID-19, type 2 diabetes, and health inequalities.

Key Results:
- 3 fully-reproducible study packages executed across at least 20 OHDSI data partners
- 10 publications accepted in journals with impact factor > 10
- 10 uses of OHDSI results by external stakeholders that demonstrate influence in policy or clinical decision-making
OHDSI in 2021?

Objective:
Enable a community to generate real-world evidence using OHDSI tools and scientific best practices

Key Results:
– 100 organizations have a fully-operational technical infrastructure (CDM + ATLAS + HADES) sufficient to perform local analyses
– 1000 researchers complete RWE curriculum through EHDEN Academy
– 100 publications generated using and citing OHDSI tools
Objective:
Build an international medical product safety surveillance system that provides all stakeholders access to evidence about the incidence and risk of outcomes associated with drug exposure

Key Results:
– Population-level effect estimation and characterization results generated for 500 drugs and 500 outcomes across 20 databases
– 100 organizations with at least 1 active user
– 10 regulatory actions taken as a result of OHDSI system
Generate and disseminate reliable real-world evidence from observational health data that is useful in medical decision-making.

- Increase the scale and efficiency of generating evidence
- Increase reproducibility of evidence generation process
- Improve the network of observational health data available for evidence generation
- Identify and prioritize decisions where real-world evidence would be most useful
- Improve dissemination to get evidence to decision-makers prior to decisions being made

- Develop and apply large-scale solutions to analytic use cases
- Increase people capable of generating reliable evidence
- Develop tools that codify best practices for generating reliable evidence
- Demonstrate best practices are reliable and yield evidence that can be used for decision-making
- Improve adherence to consistent standards within existing partners
- Increase adoption of data standards
- Increase number of data partners

- Educate people on tools and best practices for generating reliable evidence
- Develop tools that codify best practices for generating reliable evidence
- Establish best practices for generating evidence
- Solve open methodological problems
- Increase transparency and improve semantic interoperability in vocabulary and CDM

- Expand data standards to accommodate additional data domains / analytic use cases
OHDSI Workgroups

• Common Data Model
• Data quality
• EHR

• Population-level Effect estimation / Patient-level Prediction
• Natural Language Processing
• Phenotype development and evaluation
• Pharmacovilance Evidence Investigation

• ATLAS
• HADES

• Medical Device
• Oncology
• Psychiatry
• GIS
• Clinical trials
• Patient-generated health

• COVID
• Study - SCYLLA
• Vaccine safety

• Women of OHDSI
• OHDSI steering group
• OHDSI APAC
What should be OHDSI’s 2021 Objectives?

https://PollEv.com/patrickryan800
OHDSI in 2021

• As a community, let’s deliberately choose our areas of focus together
• Each Workgroup should define 1-3 OKRs, which may or may not align to the overall OHDSI OKRs
• We’ll keep our OKR dashboard front and center to keep us paddling in the same direction
• Key results will be evaluated each quarter, overall and for each workgroup, to see if we are on track or need to pivot our direction
• OHDSI OKR-a-thon to be held as 1-day virtual event in the next month!
Additional resources about OKRs

• Google page: https://rework.withgoogle.com/guides/set-goals-with-okrs/steps/set-objectives-and-develop-key-results/

• Measure What Matters, John Doerr: https://www.whatmatters.com/