



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

Patrick Ryan, PhD
Janssen Research & Development
Columbia University

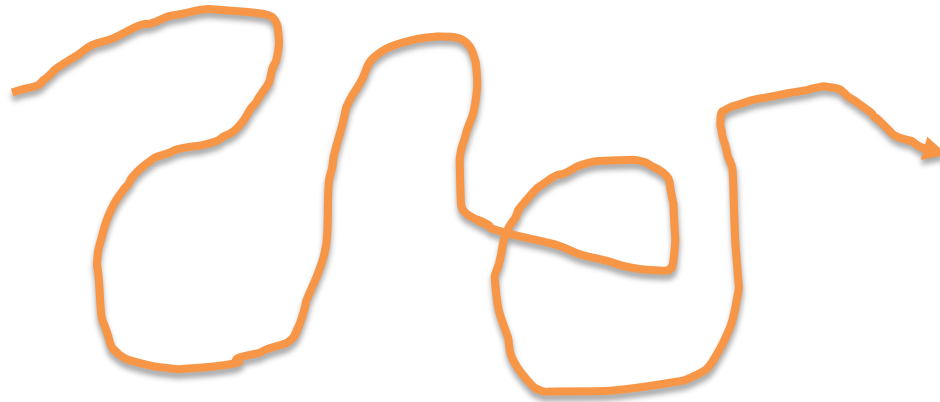
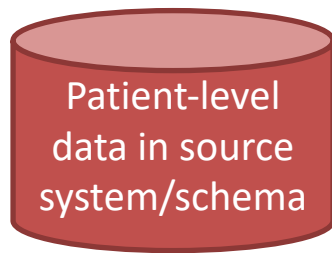


OHDSI's mission

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





OHDSI community

We're all in this journey together...



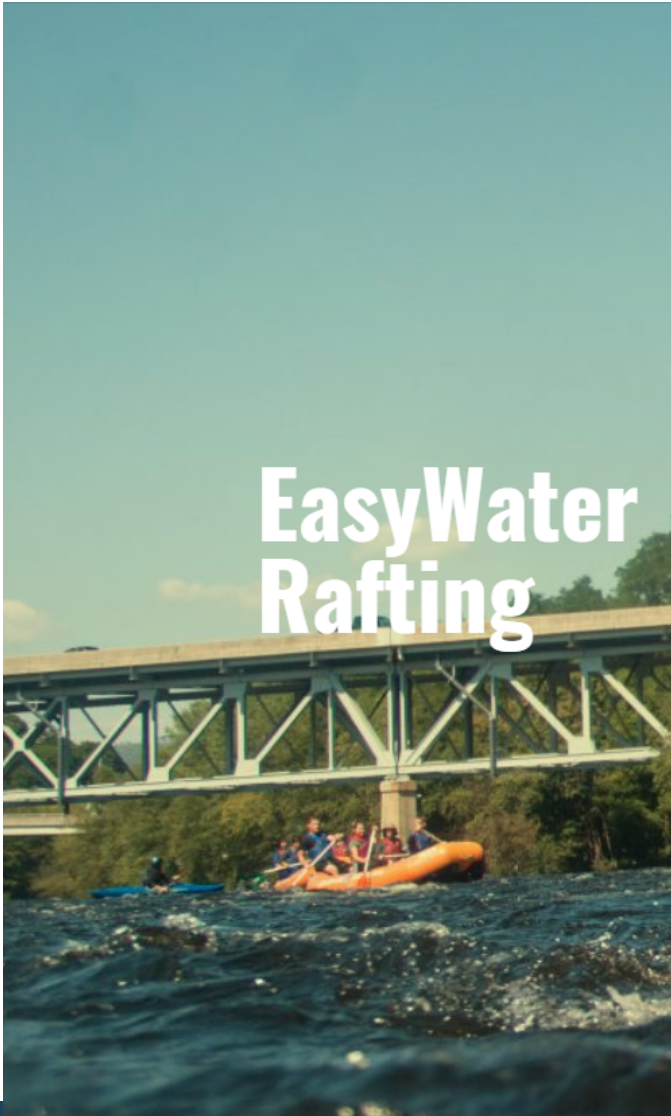


Why are you on the journey with OHDSI?

<https://PollEv.com/patrickryan800>



EasyWater Rafting





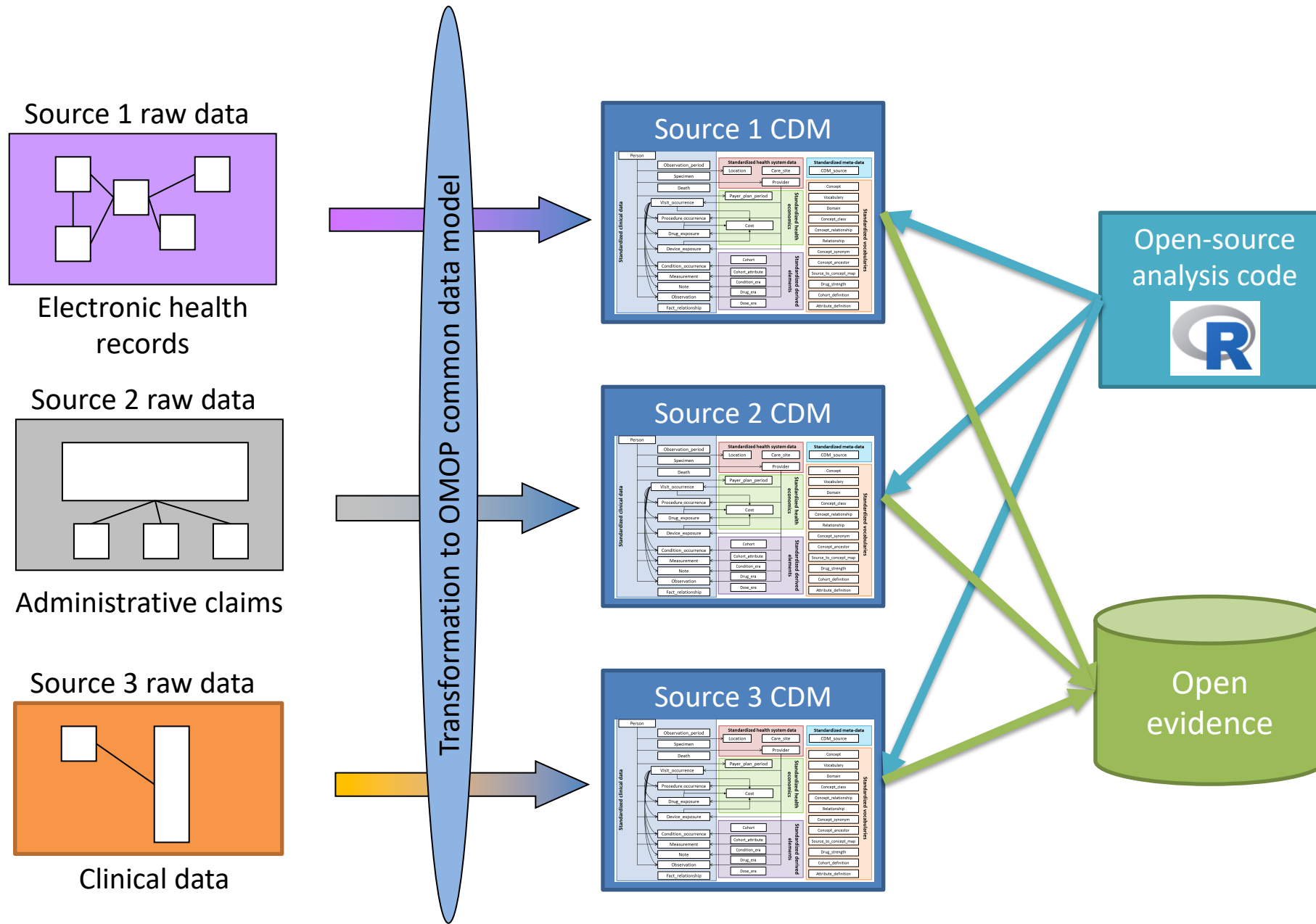
Data across the OHDSI community

- 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





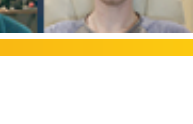
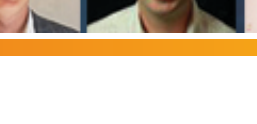
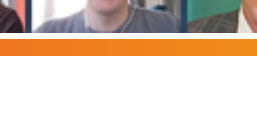
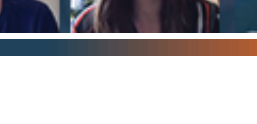
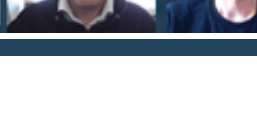
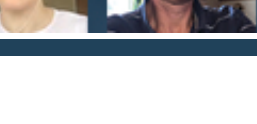
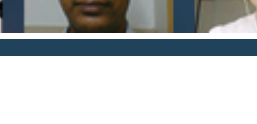
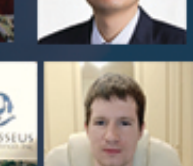
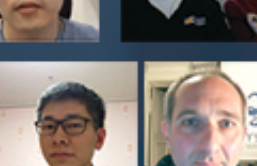
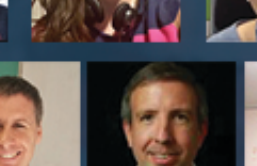
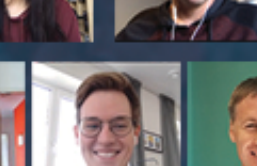
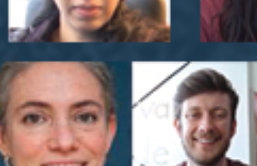
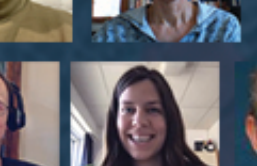
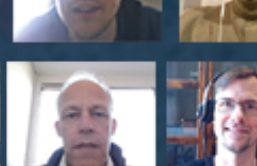
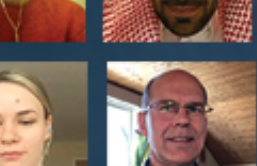
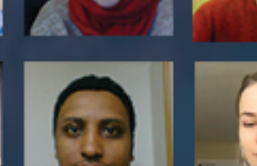
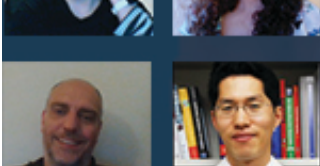
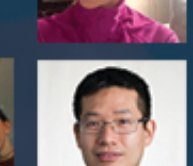
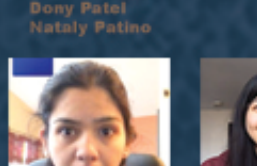
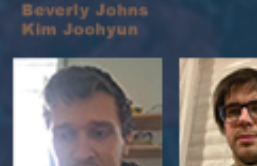
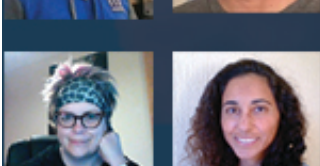
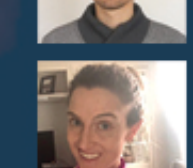
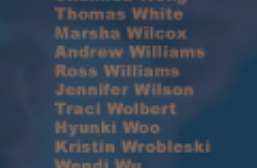
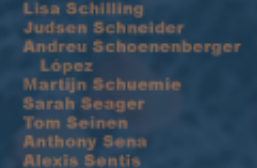
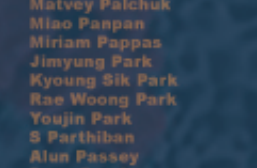
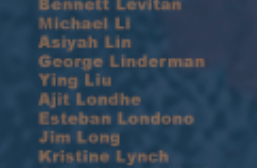
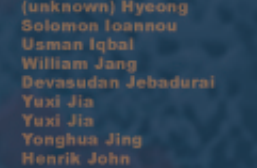
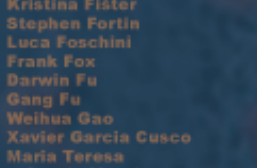
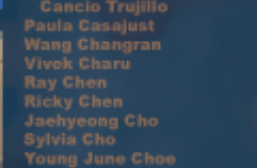
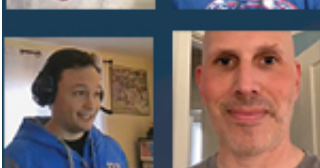
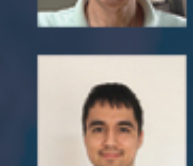
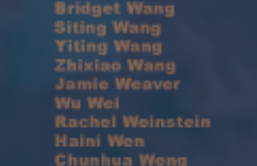
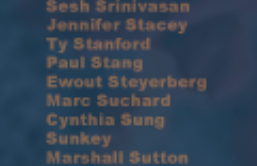
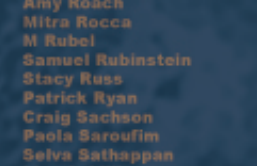
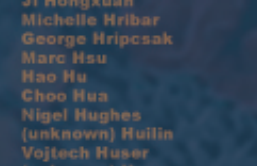
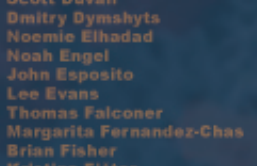
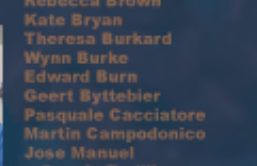
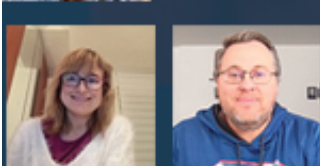
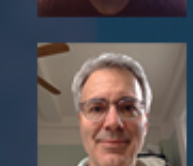
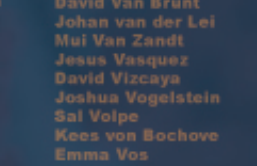
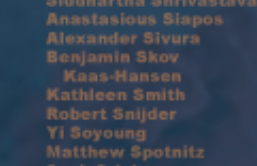
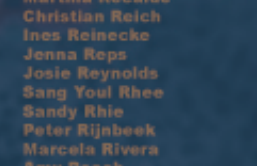
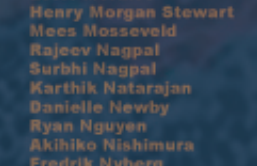
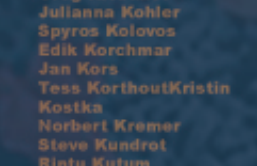
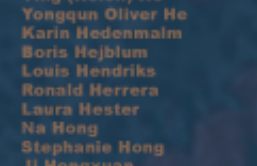
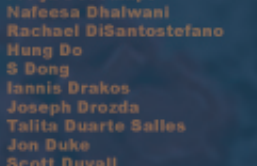
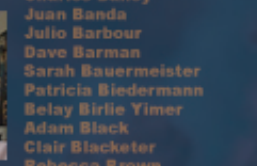
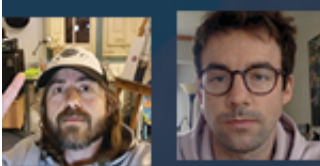
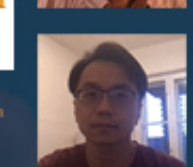
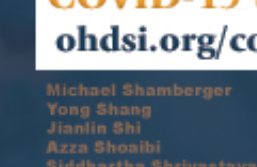
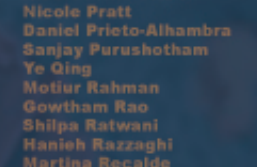
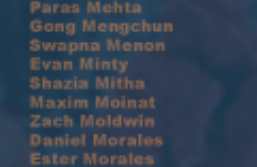
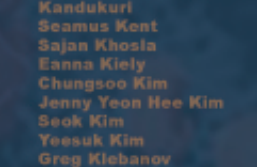
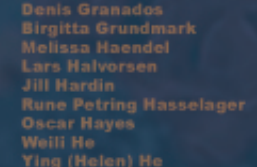
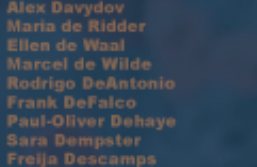
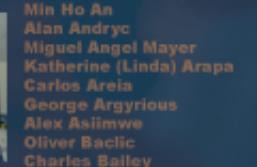
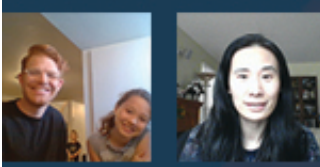
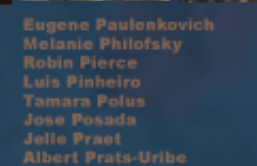
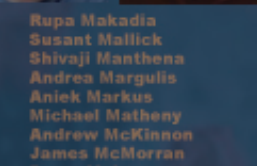
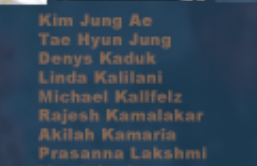
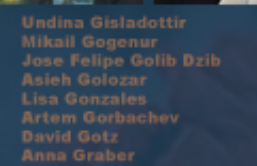
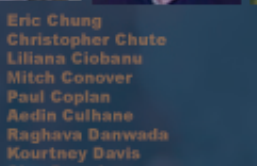
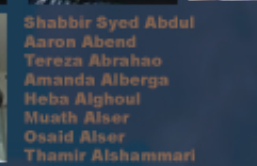
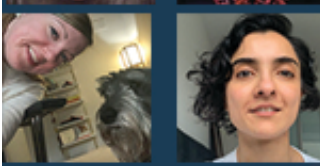
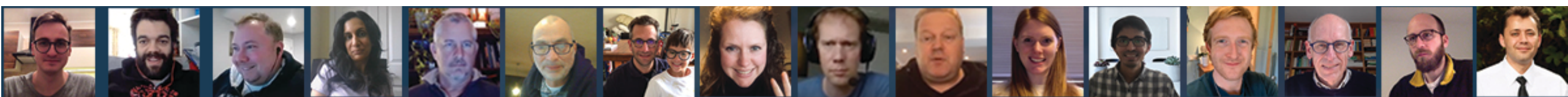
OHDSI strategic priorities in 2020

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



OHDSI Community in Action:
Where have we been in 2019?
Where should we go in 2020?

Patrick Ryan, PhD
Vice President, Observational Health Data Analytics, Janssen
Research and Development
Assistant Professor, Adjunct, Department of Biomedical
Informatics, Columbia University Medical Center



Shabbir Syed Abdul

Aaron Abond

Tereza Abrahao

Amanda Alberga

Heba Alghoul

Muath Alser

Osama Alser

Thami Alshammari

Min Ho An

Alan Andryc

Miguel Angel Mayer

Katherine (Linda) Arapa

Carlos Areia

George Argyriou

Alex Asimwre

Oliver Baclic

Charles Bailey

Juan Banda

Julio Barbour

Dave Barman

Sarah Bauermeister

Patricia Biedermann

Belay Birie Yimer

Adam Black

Clair Blacketer

Rebecca Brown

Kate Bryan

Theresa Burkard

Wynn Burke

Edward Burn

Geert Byttebier

Pasquale Cacciatore

Martin Campodonico

Jose Manuel

Cancio Trujillo

Paula Casajust

Wang Changran

Vivek Charu

Ray Chen

Ricky Chen

Jaehyeong Cho

Sylvia Cho

Young June Choe

Youn Choi

YunChang Choi

Eric Chung

Christopher Chute

Liliana Ciobanu

Mitch Conover

Paul Coplan

Aedin Culhane

Raghava Danwada

Kourtney Davis

Alex Davydov

Maria de Ridder

Ellen de Waal

Marcel de Wilde

Jose Felipe Golib Dzib

Asieh Golozar

Lisa Gonzales

Artem Gorbachev

David Gotz

Anna Graber

Denis Granados

Birgitta Grundmark

Melissa Haendel

Lars Halvorsen

Jill Hardin

Rune Petring Hasselager

Oscar Hayes

Willi He

Ying (Helen) He

Yongqun Oliver He

Karin Hedenmalm

Boris Hejblum

Louis Hendriks

Ronald Herrera

Laura Hester

Na Hong

Stephanie Hong

Ji Hongxuan

Michelle Hribar

George Hripcsak

Marc Hsu

Hao Hu

Choo Hua

Jennifer Lane

Geunhae Lee

Seongwon Lee

Alan Burton Lenarcic

Bennett Levitan

Michael Li

Asiyah Lin

George Linderman

Ying Liu

Ajit Londhe

Esteban Londono

Jim Long

Kristine Lynch

Gerardo Machnicki

R Maheswari

Kim Jung Ae

Tao Hyun Jung

Denys Kaduk

Undina Gisladdottir

Mikail Gogenu

Jose Felipe Golib Dzib

Asieh Golozar

Lisa Gonzales

Artem Gorbachev

David Gotz

Anna Graber

Denis Granados

Birgitta Grundmark

Melissa Haendel

Lars Halvorsen

Jill Hardin

Rune Petring Hasselager

Oscar Hayes

Willi He

Ying (Helen) He

Yongqun Oliver He

Karin Hedenmalm

Boris Hejblum

Louis Hendriks

Ronald Herrera

Laura Hester

Na Hong

Stephanie Hong

Ji Hongxuan

Michelle Hribar

George Hripcsak

Marc Hsu

Hao Hu

Choo Hua

Jennifer Lane

Geunhae Lee

Seongwon Lee

Alan Burton Lenarcic

Bennett Levitan

Michael Li

Asiyah Lin

George Linderman

Ying Liu

Ajit Londhe

Esteban Londono

Jim Long

Kristine Lynch

Gerardo Machnicki

R Maheswari

Kim Jung Ae

Tao Hyun Jung

Denys Kaduk

Linda Kalliani

Michael Kallfelz

Rajesh Kamalakar

Akila Kamaria

Prasanna Lakshmi

Kandukuri

Seamus Kent

Sajan Khosla

Eanna Kiely

Chungsoo Kim

Jenny Yeon Hee Kim

Seok Kim

Yeesuk Kim

Greg Klebanov

Juliana Kohler

Spyros Kolovos

Edik Korchmar

Jan Kors

Tess KorthoutKristin

Kostka

Norbert Kremer

Steve Kundrot

Rintu Kutum

Sanggyu Kwak

K Lakshmi

Christophe Lambert

Chris Lane

Jennifer Lane

Geunhae Lee

Seongwon Lee

Alan Burton Lenarcic

Bennett Levitan

Michael Li

Asiyah Lin

George Linderman

Ying Liu

Ajit Londhe

Esteban Londono

Jim Long

Kristine Lynch

Gerardo Machnicki

R Maheswari

Rupa Makadia

Susant Mallick

Shivaji Manthana

Andrea Margulis

Aniek Markus

Michael Matheny

Andrew McKinnon

James McMorran

Paras Mehta

Gong Mengchun

Swapna Menon

Evan Minty

Shazia Mitha

Maxim Moinat

Zach Moldwin

Daniel Morales

Ester Morales

Henry Morgan Stewart

Mees Mosseveld

Rajeev Nagpal

Surbhi Nagpal

Karthik Natarajan

Danielle Newby

Ryan Nguyen

Akihiko Nishimura

Fredrik Nyberg

Keith O'Rourke

Richard Ofort-Asenso

Iredia Olaye

Carmen Olga-Torres

Dr. Olwi

Anna Ostropelets

Sassan Ostvar

Helen Pai

Matvey Palchuk

Miao Panpan

Miriam Pappas

Jimyung Park

Kyoung Sik Park

Rae Woong Park

Youjin Park

S Parthiban

Alan Passey

Dony Patel

Nataly Patino

Eugene Paulenkovich

Melanie Philofsky

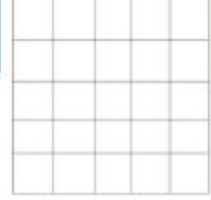
Robin Pierce

Luis Pinheiro

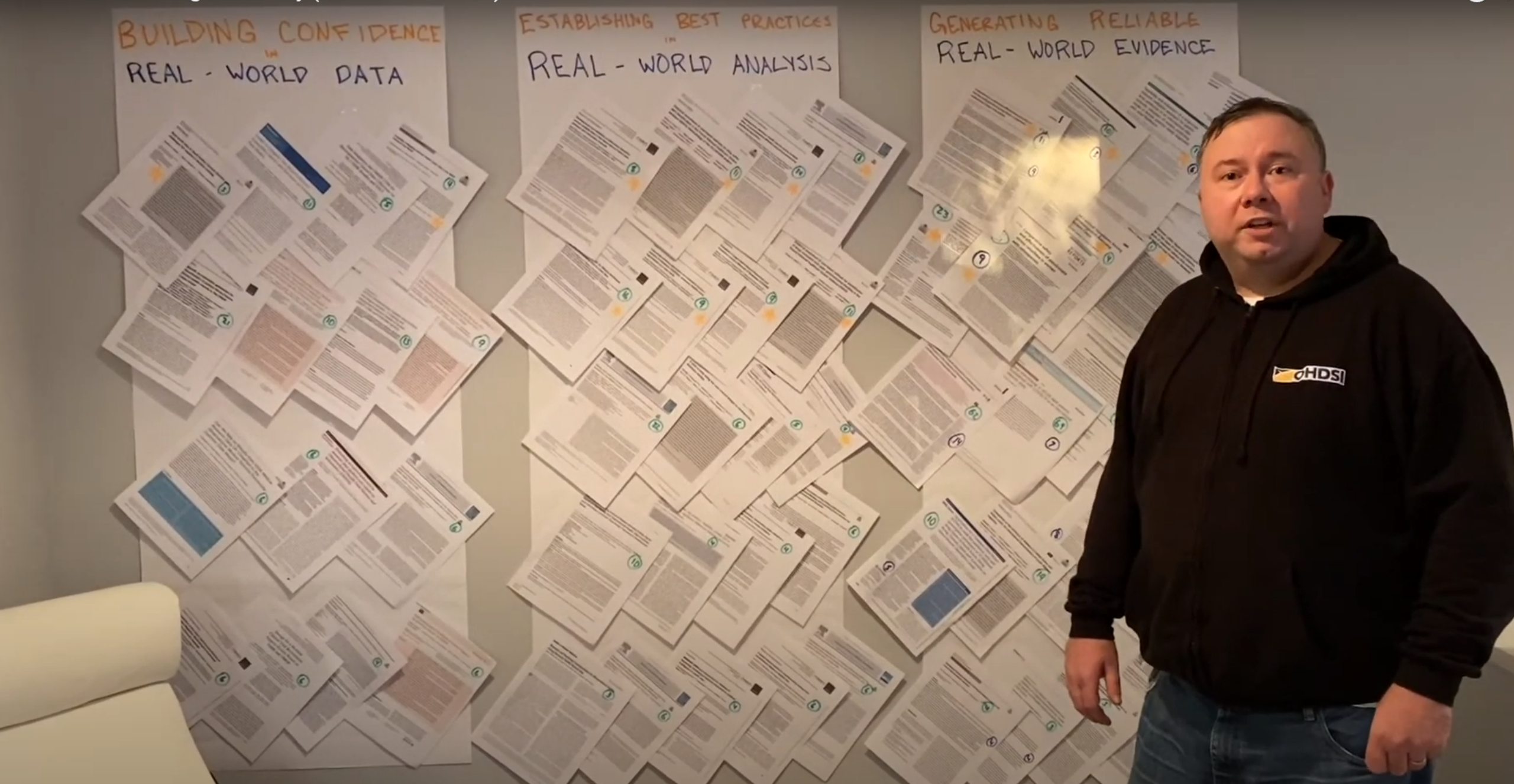


OHDSI2020 Bingo Board

BINGO!



	Seng Chan 			(W... Texas)
M... (Wh... it A... e is ?)			(...) 	O... (Co...)
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Andrew W... (...) 	R... (N...) 	(S...) 	(O... ld 	P... nan al of me...





SPECIAL REPORT

Inflection Point

Ideas for Accelerating Breakthroughs and Improving Cardiovascular Health

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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.

Activity

6

Chat

Teams

Assignments

Calendar

Calls

Files

Apps

Help

Teams

Your teams

OHDSI

Symposium 2020

OHDSI

Tutorial

Phenotype Development

OHDSI

OHDSI2020 Study-a-tho...

Workgroup - Common D...

Workgroup - PLE/PLP Po...

Workgroup - Medical De...

WO

Workgroup - OHDSI Stee...

Workgroup - Oncology

Workgroup - NLP Natura...

Join or create a team

OHDSI ...

OHDSI Community

Org-wide

Members

Channels

Settings

Analytics

Apps

Team members will be automatically added and removed to reflect your active directory. This team has guests.

Search for members

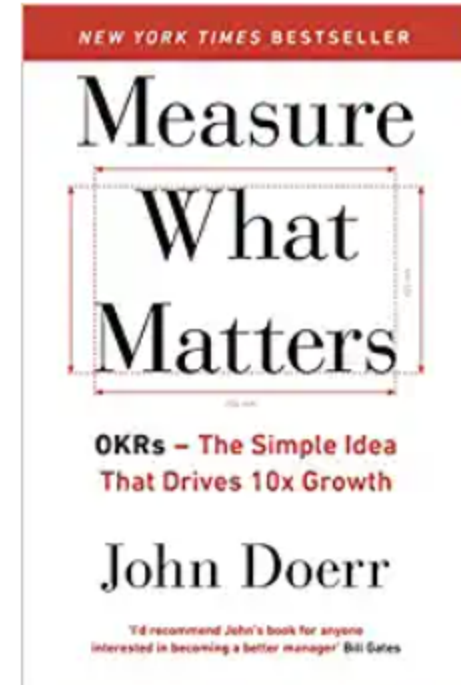
Owners (10)

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 has 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.



OHDSI in 2021?

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
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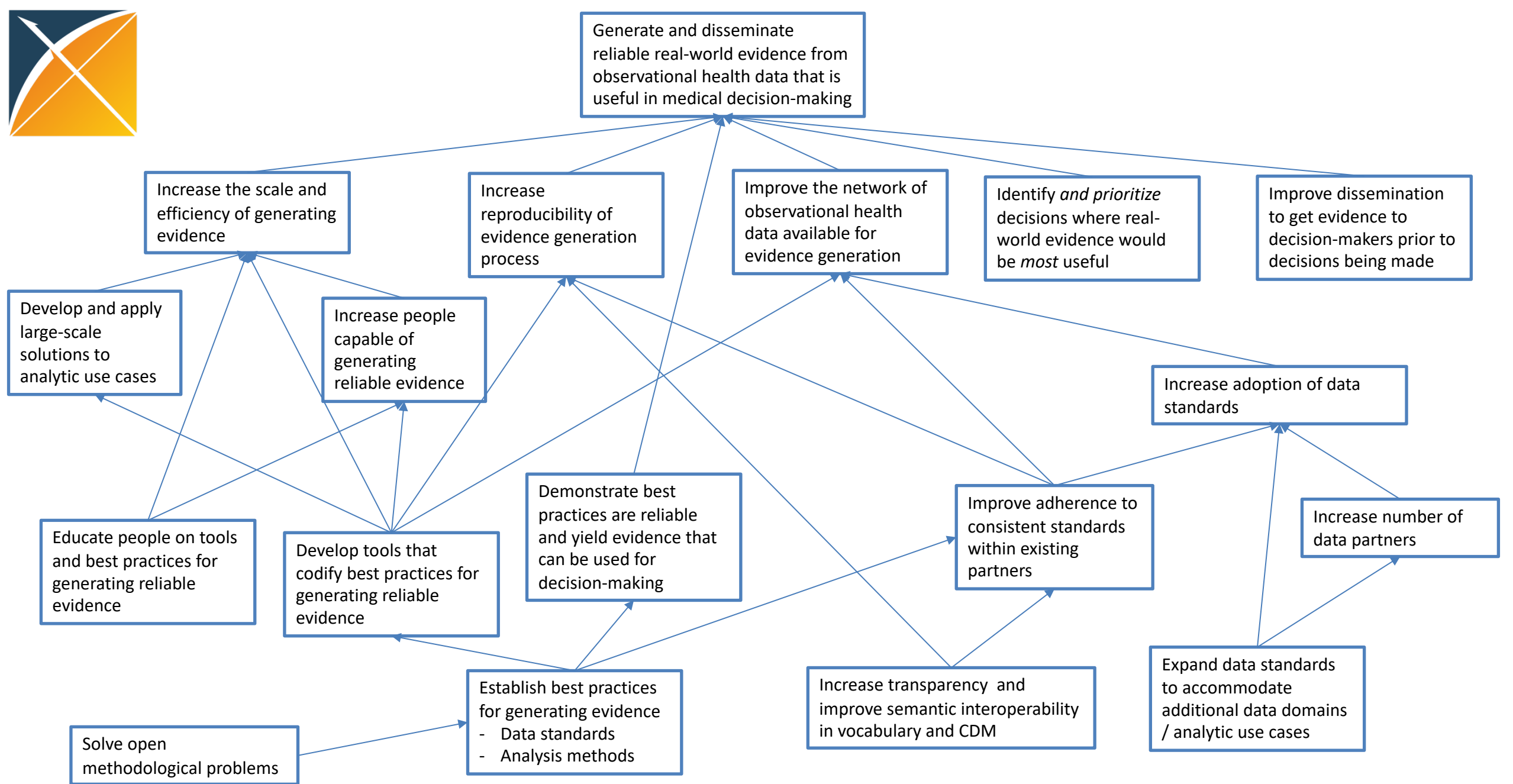
OHDSI in 2021?

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





OHDSI Workgroups

- Common Data Model
- Data quality
- EHR
- Population-level Effect estimation / Patient-level Prediction
- Natural Language Processing
- Phenotype development and evaluation
- Pharmacovigilance 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!
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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/>