



OHDSI in 2024:  
Where can we go together?



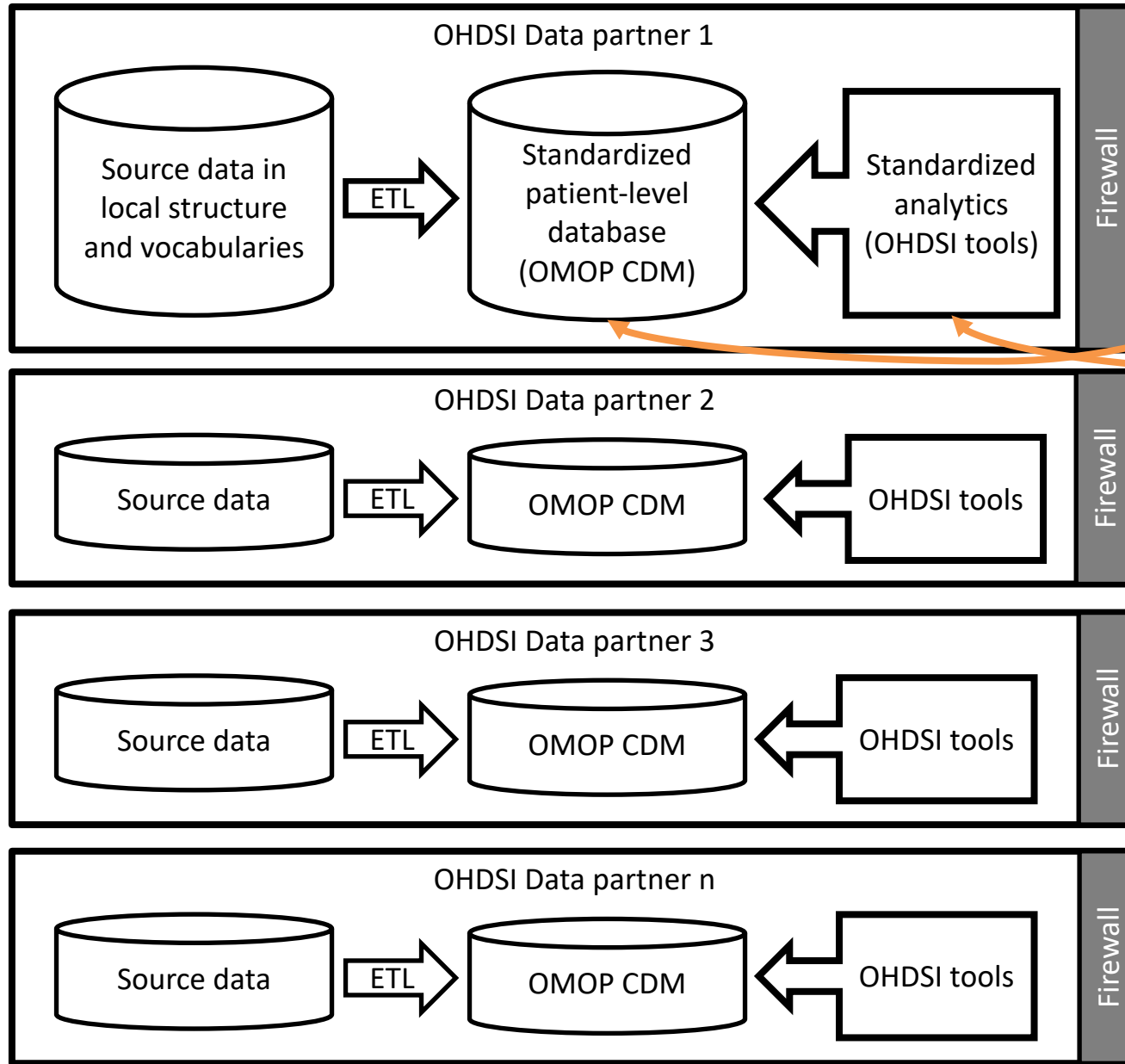
## OHDSI's mission

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

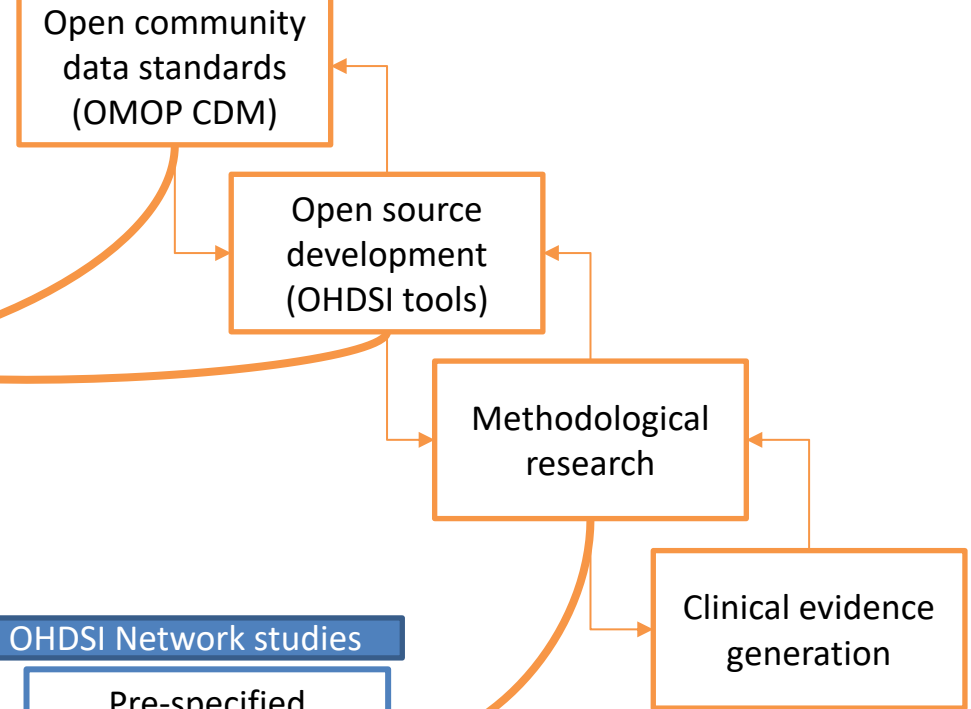
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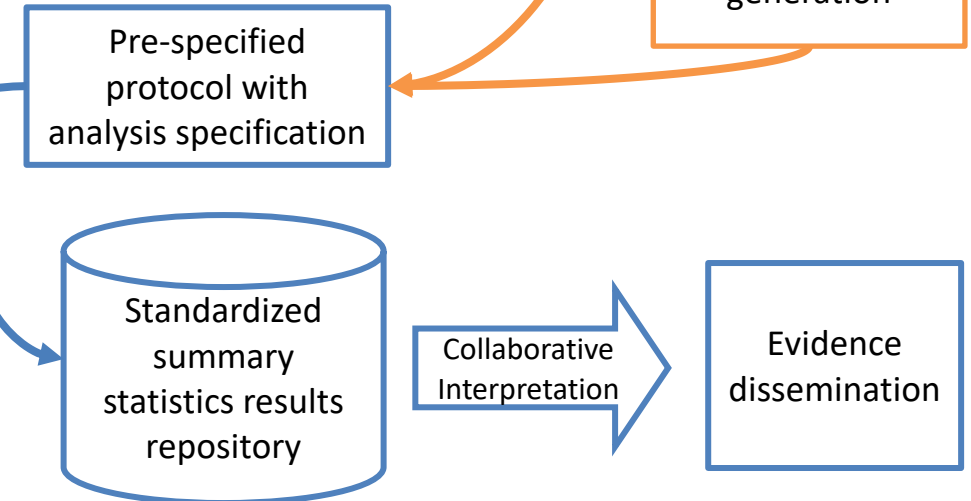
## OHDSI data network

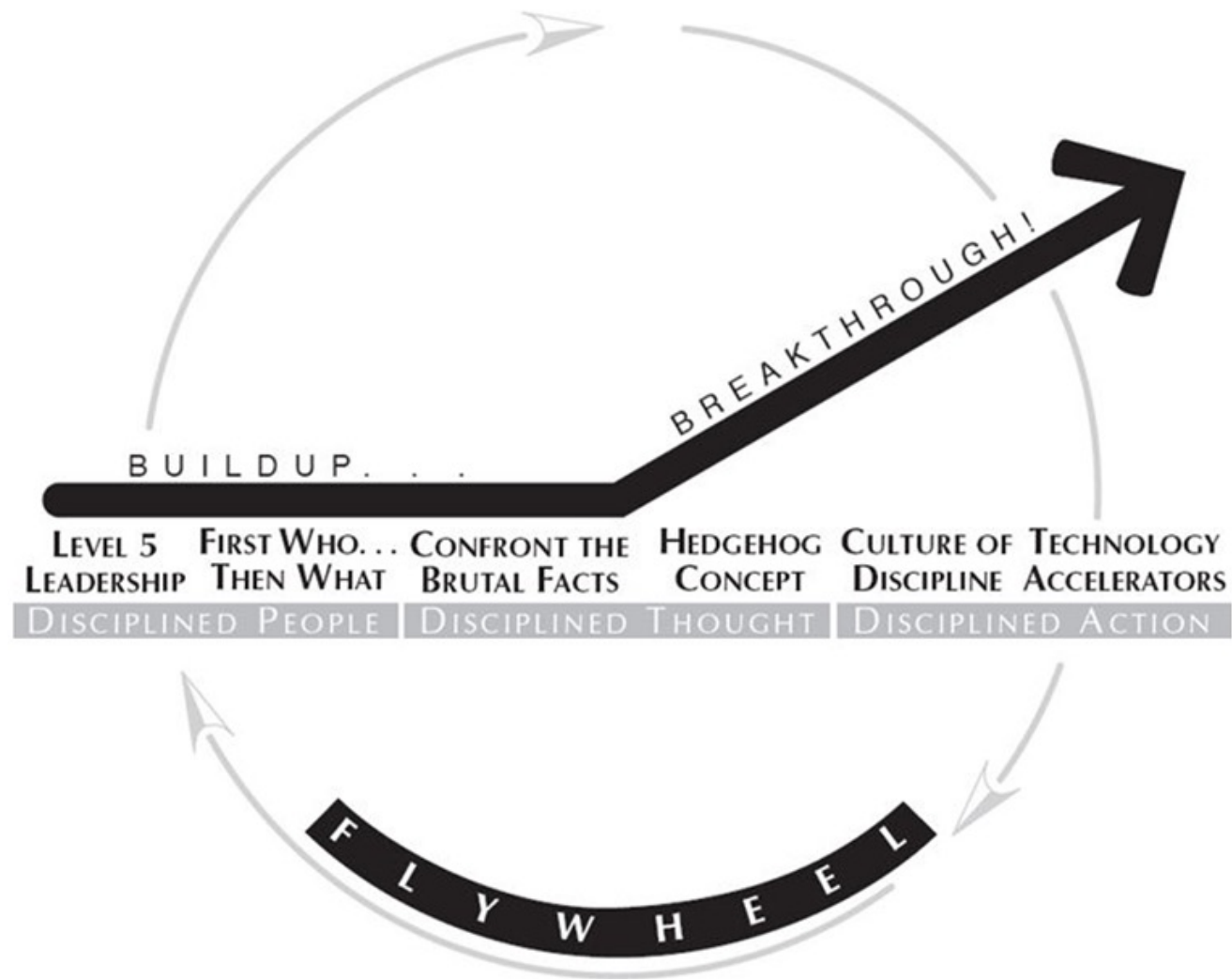
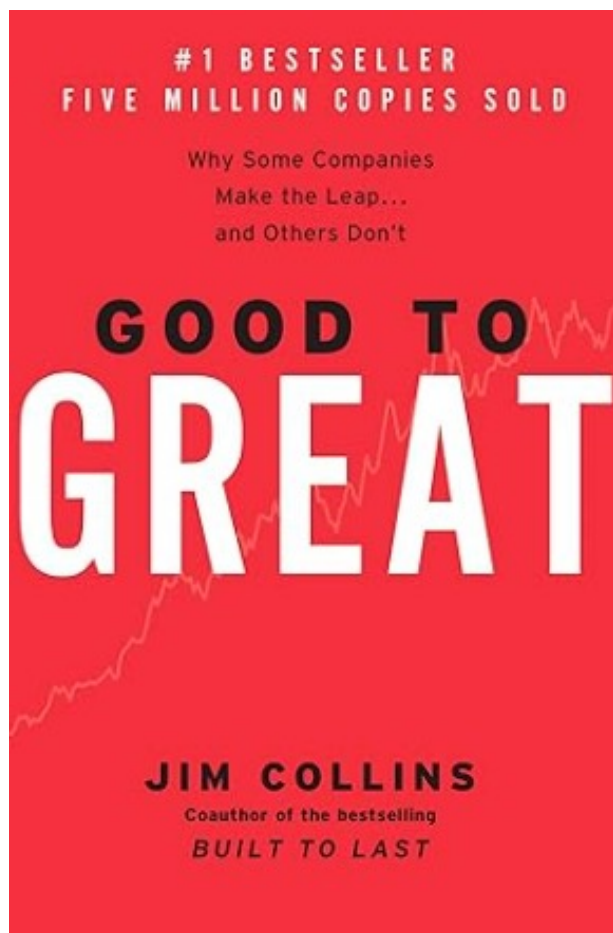


## OHDSI collaborations



## OHDSI Network studies







## Large-Scale Evidence Generation and Evaluation in a Network of Databases (LEGEND)

Patrick Ryan, Martijn Schuemie, Marc Suchard  
on behalf of the LEGEND team  
OHDSI Symposium  
12 October 2018

<https://www.youtube.com/watch?v=so5gsCI7CU4>



Not all comparisons are valid



## LEGEND results



## Dissemination

Evidence generation

Research questions

Methods

Databases



Evidence base



Web app

Papers



3<sup>rd</sup> parties



## Objective Diagnostics: A pathway to provably reliable evidence

Martijn Schuemie  
Observational Health Data Analytics, Johnson & Johnson  
Biostatistics, UCLA

OHDSI Symposium 2022



<https://www.youtube.com/watch?v=DJZP5z6r-QE>

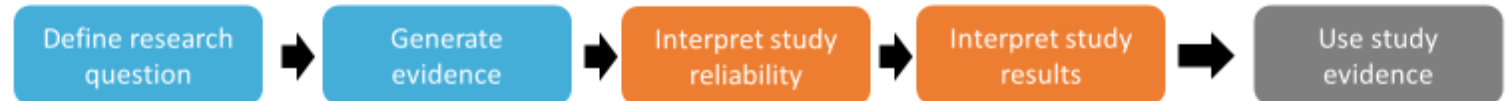


## Pre-specification of a systematic approach

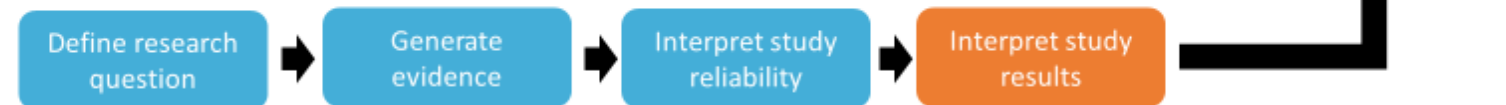
Traditional observational study:



LEGEND Hypertension:



New recommendation:



Ad-hoc, expert-driven  
Pre-specified systematic approach

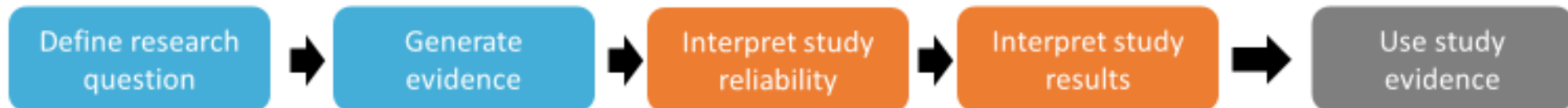


## Pre-specification of a systematic approach

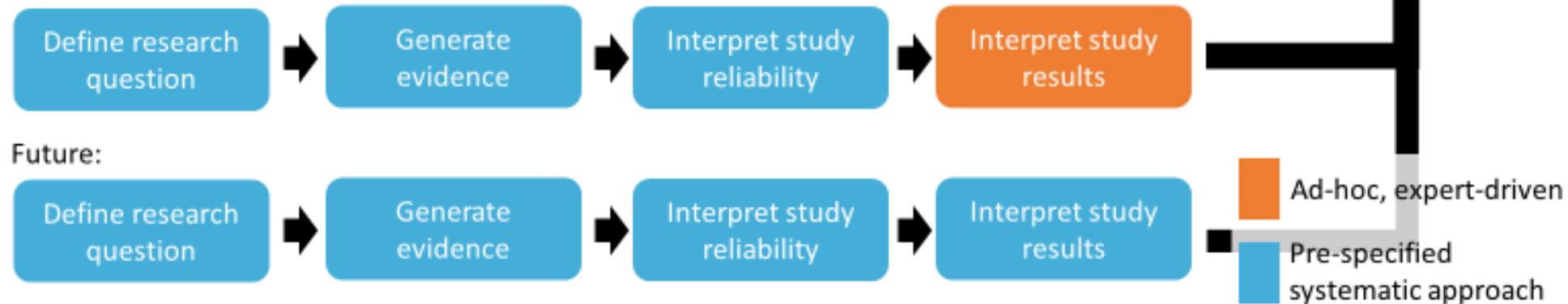
Traditional observational study:



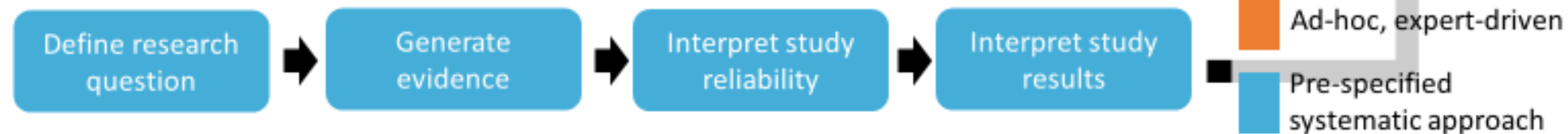
LEGEND Hypertension:



New recommendation:



Future:







OHDSI Symposium 2023

<https://www.youtube.com/watch?v=jNrCMYXkg9c>

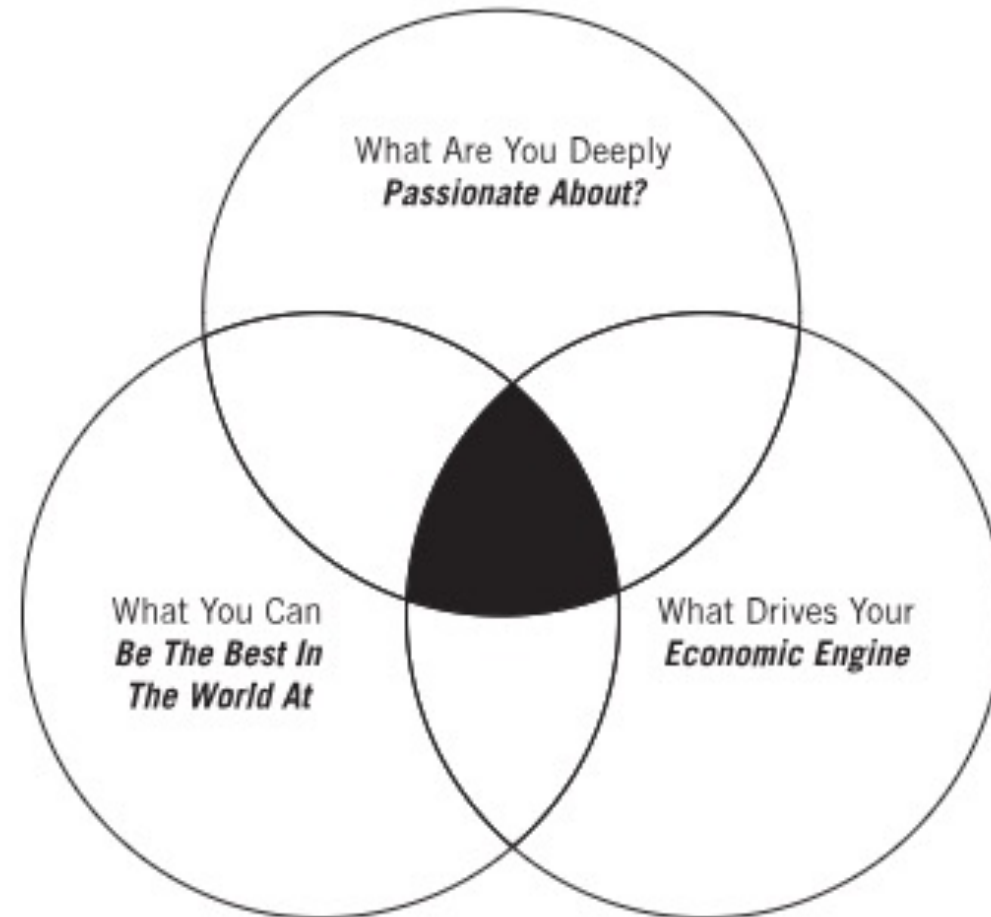
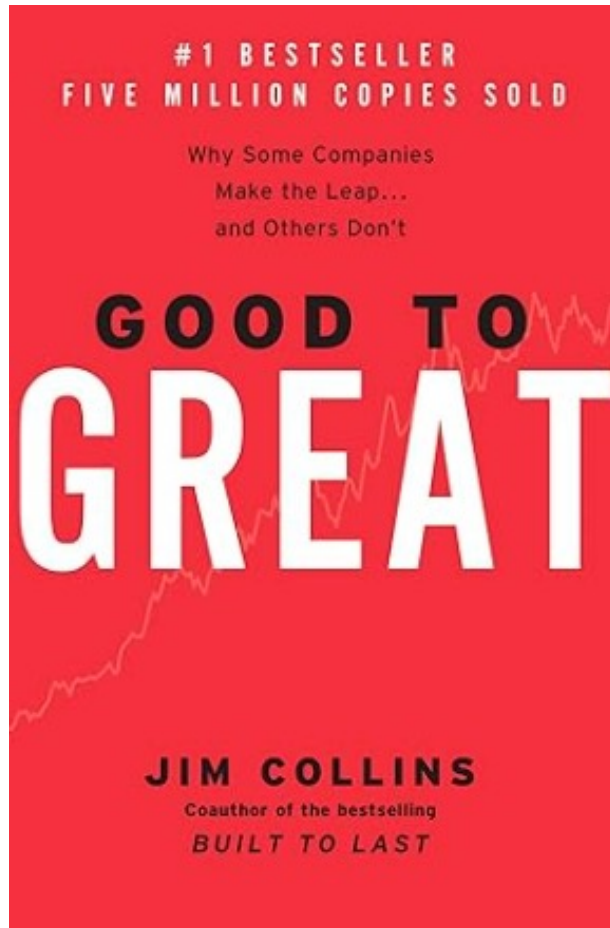
“I think as a community we have done an amazing job in standardization, standardization through a common data model, standardization of tools that will execute this data model, and it makes these types of studies much easier...

We have **abjectly failed** on the next step, and that's providing standardized tools that allow us to synthesize and then deliver this evidence in a way that's actionable not only in our community, but across healthcare and clinical practice in general.”





### Three Circles of the Hedgehog Concept





When poll is active respond at [PollEv.com/patrickryan800](https://PollEv.com/patrickryan800)



## What Are We Deeply Passionate About?

Nobody has responded yet.

Hang tight! Responses are coming in.



# Exercise

- Name a drug that we think patients deserve reliable evidence about
- Name an adverse event that we think patients deserve reliable evidence about
- Do patients deserve to know:
  - What is the incidence of adverse event amongst new users of drug?
  - Does exposure to drug cause adverse event?
  - What is the probability that I have adverse event after initiating drug, given my medical history?



# Large-scale analysis

- Characterization
  - HowOften: [https://results.ohdsi.org/app/08\\_HowOften\\_George](https://results.ohdsi.org/app/08_HowOften_George)
  - Comparator selector: <https://data.ohdsi.org/ComparatorSelectionExplorer/>
- Patient-level Prediction
  - Whatllhappentome: [https://results.ohdsi.org/app/04\\_WhatllHappenToMe](https://results.ohdsi.org/app/04_WhatllHappenToMe)
- Population-level Estimation
  - LEGEND results:
    - Hypertension: <https://data.ohdsi.org/LegendBasicViewer/>
    - Type 2 diabetes: <https://data.ohdsi.org/LegendT2dmClassEvidenceExplorer/>
  - LEGEND Med Central: <https://data.ohdsi.org/LegendMedCentral/>



# Evidence dissemination opportunities

- Standardized output of analytics
  - Finalize/document Strategus results model to enable generation of:
    - Protocol
    - Results tables and graphs
    - Publication
  - Develop/test alternative dissemination models
    - Interactive visualizations (Rshiny)
    - Periodic reports/presentations for key stakeholders
- Disseminate more evidence!





# Workgroups

APAC		ATLAS/WebAPI				Clinical Trials		Healthcare Systems		Latin America		Medical Devices		Medical Imaging		Methods Research							
	Mul Van Zandt		Christopher Knoll		Alexey Manoylenko		Anthony Sena		Mike Hamidi		Tom Walpole		Melanie Philofsky		Jose Posada		Aalyah Lin		Paul Nagy		Seng Chan You		Martijn Schuemie
Clinical Trials		Common Data Model		Dentistry		Early-Stage Researchers		Education		Methods Research		Natural Language Processing		Network Data Quality		Oncology		Open-Source Comm.					
	Lin Zhen		Clair Blacketer		Robert Koski		Faalzah Arshad		Ross Williams		Kristin Kostka		Marc Suchard		Vipina Keloth		Hua Xu		Clair Blacketer		Asieh Golozar		Adam Black
Eye Care & Vision Research				FHIR and OMOP				Open-Source Comm.		Patient-Level Prediction		Perinatal and Reproductive Health											
	Sally Baxter		Kerry Goetz		Michelle Hribar		Davera Gabriel		Christian Reich		Gus Tsafnat		Paul Nagy		Jenna Reps		Ross Williams		Allison Callahan		Stephanie Leonard		Louisa Smith
GIS - Geographic Information System			HADES		Health Equity			Phenotype Development & Evaluation		Psychiatry		Registry		Steering Group									
	Robert Miller		Andrew Williams		Kyle Zollo-Venecek		Martijn Schuemie		Atif Adam		Jake Gillberg		Gowtham Rao		Azza Shoalbi		Dmitry Dymshyts		Andrew Williams		Tina Parciak		George Hripcsak
Steering Group		Surgery and Perioperative Medicine			Vaccine Vocabulary		OHDSI Workgroups Homepage		Join an OHDSI														
	Patrick Ryan		Jenny Lane		Evan Minty		Oliver He		Aalyah Lin														

## 2024 Resolution:

- 1) All workgroup leaders will provide their purpose and 2024 Objectives and Key Results by end of January
- 2) All workgroups will present on a community call in February to encourage participation



# Breadth and depth: where can OHDSI make an impact?

- Anesthesiology
- Cardiology
- Dermatology
- Digestive/liver disease
- Emergency Medicine
- Endocrinology
- Hematology
- Infectious disease
- Neurology
- Nephrology
- Obstetrics/Gynecology
- Oncology
- Ophthalmology
- Otolaryngology
- Orthopedic surgery
- Palliative care
- Pediatrics
- Pulmonary
- Psychiatry
- Rheumatology
- Radiology
- Rehabilitation and regenerative medicine
- Surgery
- Urology





# Community collaboration events

## In-person events:

- OHDSI Europe, Rotterdam, NL, June 1-3
- OHDSI Global, New Brunswick, NJ, USA, October 22-24
- OHDSI APAC, Singapore, December 6-9



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What collaboration activities should we pursue in 2024 together?

Nobody has responded yet.

Hang tight! Responses are coming in.



## Support The Journey

### OHDSI Sponsorship Helps Provide A Foundation For Our Global Research Efforts

The OHDSI Central Coordinating Center provides support for our open-source community and its mission to improve health by empowering a community to collaboratively generate the evidence that promotes better health decisions and better care. OHDSI collaborates in all aspects of the journey from data to evidence, including open community data standards, open-source software development, open methodological research, and open network clinical research.

Collectively, thousands of OHDSI collaborators contribute their time and expertise to the community to advance the mission.

**The OHDSI central coordinating center assumes the costs associated with central infrastructure and community coordination, which currently exceeds \$1 million/year.**

### What Does The OHDSI Coordinating Center Do, And How Does Your Sponsorship Impact OHDSI's Future? (George Hripcsak)



for more information, contact [sponsorship@ohdsi.org](mailto:sponsorship@ohdsi.org)

<https://ohdsi.org/sponsorship/>