

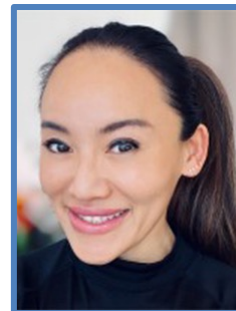


Building Capacity for OHDSI within your Organization



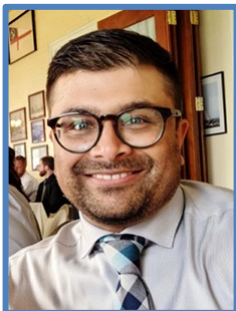
Greg Klebanov

CTO/SVP •
Odysseus Data Services, Inc.



Keran Moll

Director, HEOR Real World
Data & Analytics Research •
Regeneron



Ajit Londhe

Senior Manager, Center for
Observational Research •
AMGEN



Paul Nagy

Program Director for Graduate
Training in Biomedical
Informatics and Data Science
• Johns Hopkins University



“You’ll never walk
alone on your
OHDSI Journey.”
– Peter Rijnbeek
(probably)



Walking the road of OHDSI

PubMed Manuscripts using OHDSI	367 (1500+ authors)
Videos of YouTube	603 (200k+ hours watched)
Courses on Ehden	18 (2200+ course completions)
Working Groups	28 (3000+ members)

OHDSI

CAREER SPEAKER EVENT

Organized by Early Stage Researchers WG

ASIEH GOLOZAR

VICE PRESIDENT, GLOBAL
HEAD OF DATA SCIENCE at
Odysseus Services



MONDAY
AUGUST 8, 2022



TIME
11 AM - 12 PM EST

JOIN: MS TEAMS

<https://bit.ly/OHDSILeaders>



- Professor & director of clinical research at OHDSI Center in Northeastern university.
- 20+ years of experience in life science research and medicine.
- Medical degree from Tehran University of Medical Sciences, PhD in epidemiology and a MHS in biostatistics from Johns Hopkins University, supported by a postdoctoral research fellowship award with the NCI's Division of Cancer Epidemiology and Genetics.
- Interested in cancer, diabetes epidemiology, and evidence-based findings.
- Former leader and expert at Regeneron Pharmaceuticals, AstraZeneca and Bayer.
- Leader of OHDSI Oncology Working Group since 2018, extending the OMOP CDM to support oncology use cases and advance large-scale observational research.

<http://dash.ohdsi.org/>



Are there others in your organization interested in OHDSI?

- Is it worth forming an interest group?
 - Journal club?
- What are ways you can effect change in your organization to leverage OHDSI?
- What ways do you address the potential barriers of culture, history, structures, incentives, resource allocation, politics and inertia in your organization?



Organizations using OHDSI

Healthcare Systems

Healthcare Coverage Organizations

Government Agencies

Pharmaceutical and Device Manufacturers

Clinical Research Organizations

Policy Research Organizations

Data and Technology Engineering R&D



Benefit to health systems adopting OMOP

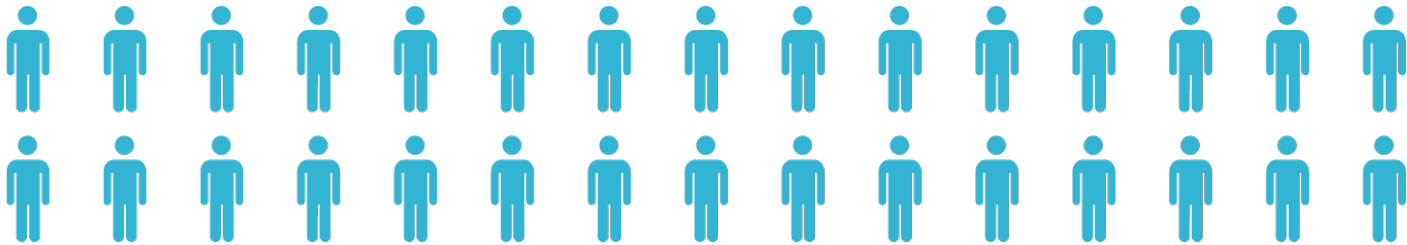
1. An increase in productivity among staff, providers, and researchers when utilizing the CDM for data storage, data analysis, and collaborative and internal research studies.
2. Increased ease of recruitment and retention of staff, providers, and researchers.
3. Control of the cost and risk associated with extensible technology and data platforms, and the ability to access external expertise.
4. Increased control over data privacy since standardization happens within the health system and the need to share patient-level data is reduced.



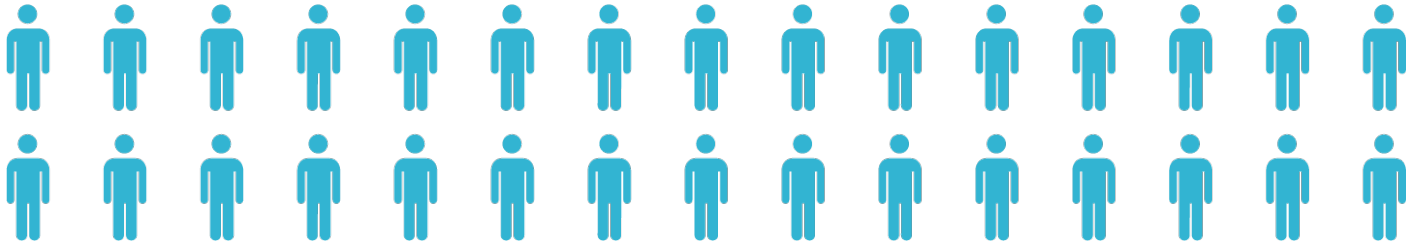
The Clinician Researcher

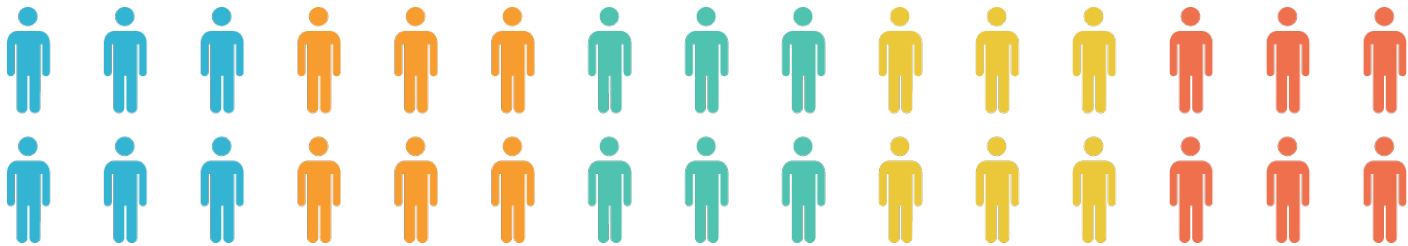
- Seeing patients
- Ordering tests.
- Observing results to medications and procedures.
- Looking for patterns.
- Forming questions.



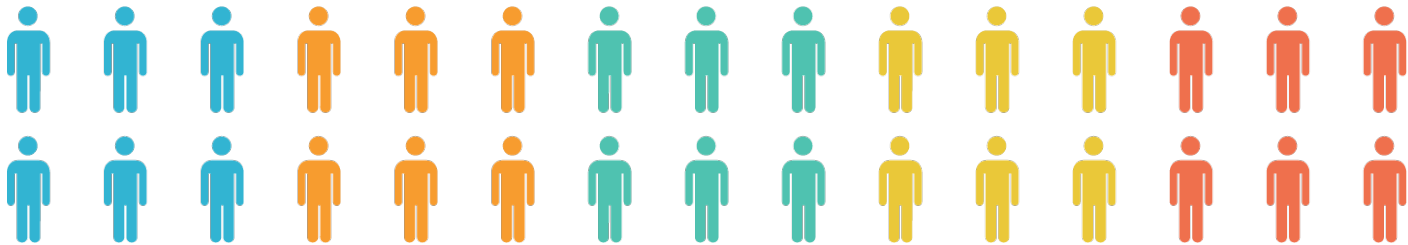


All patients with the same diagnosis are not the same





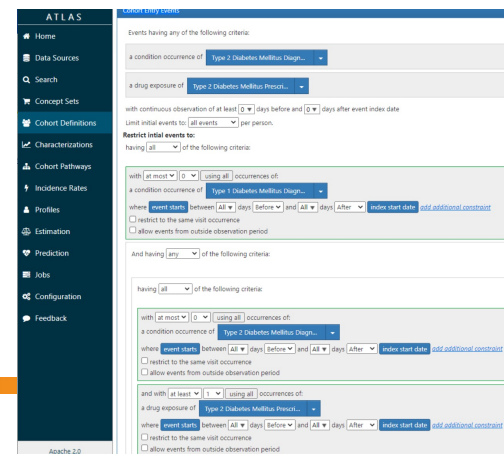
Subgroups need distinct approaches to management

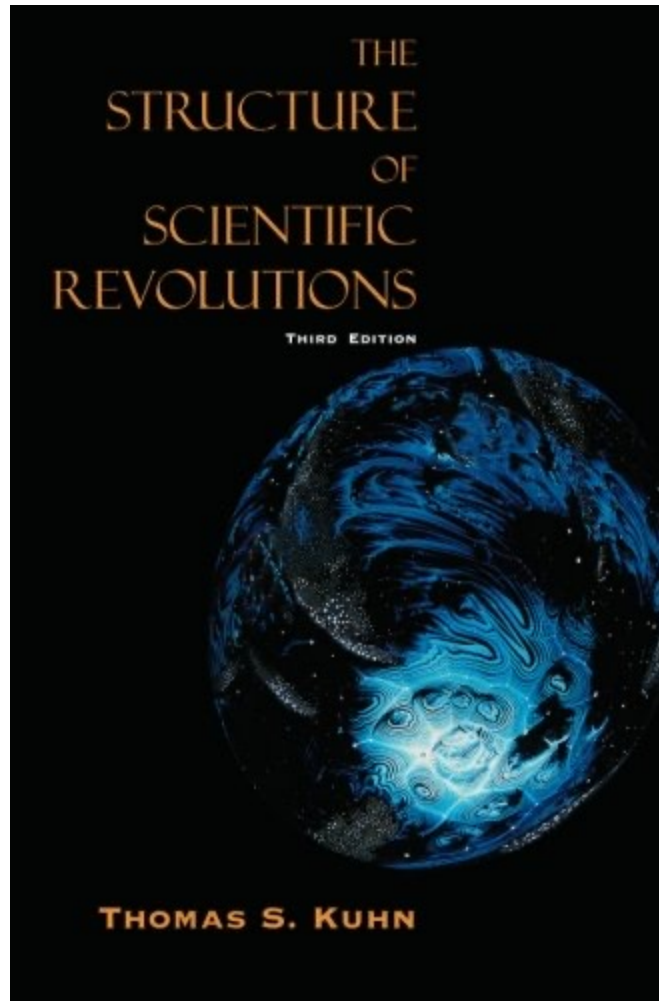




Clinical Researcher barriers to working with EMR Data

- The Data is not curated and requires a lot of data cleaning and preparation.
- 90% are not interested and don't have 100s of hours to learn SQL, R, Python.
- They need applications they can ask **clinical questions** in a **statistical valid way** and **scale across health systems**.
- Data Science as a Service





“Under normal conditions the research scientist is not an innovator but a solver of puzzles, and the puzzles upon which he concentrates are just those which he believes can be both stated and solved within the existing scientific tradition.”

— **Thomas S. Kuhn**





Patterson Influence Model

Organizational
Ability

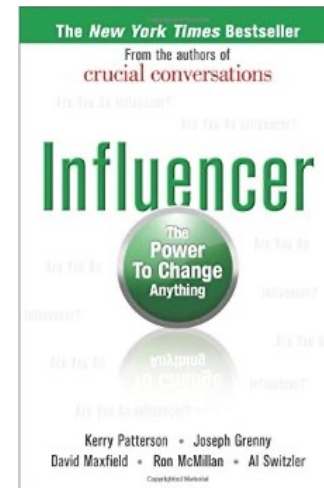
Organizational
Motivation

Team Ability

Team
Motivation

Individual
Ability

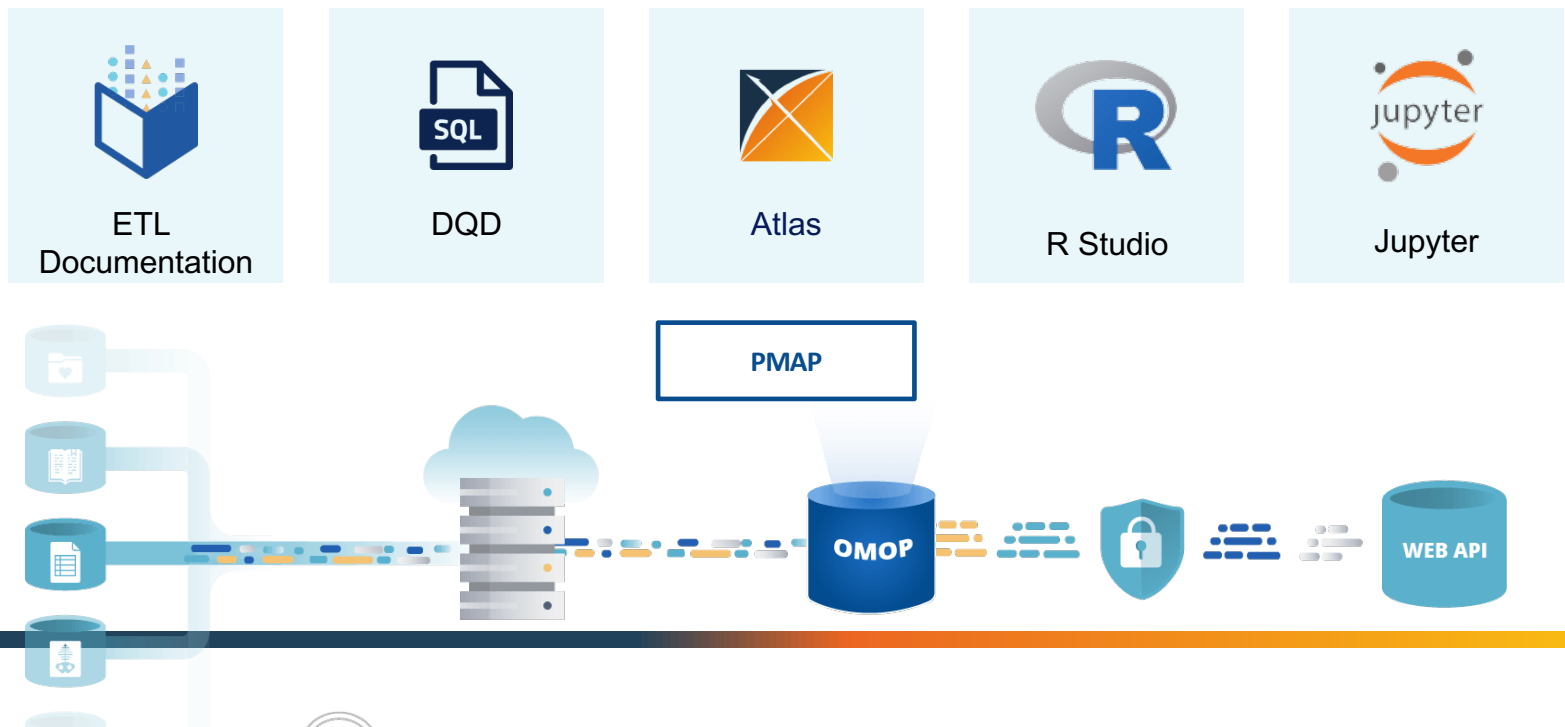
Individual
Motivation





Organizational Ability

- **Data.** Create up-to-date CDM of OMOP from local EMR data
- **Tools.** Provide Secure R/Python/SQL environment
- **Tools.** Stand up OHDSI tools (Atlas, DQD)
- **Process-** Train research data service team in OMOP to support IRB requests





Organizational Ability

- **Create** up-to-date CDM of OMOP from local EMR
- **How to request** - Train research data service team in OMOP to support IRB requests
- **How to Access.** Provide secure analytic environment
- **How to Access.** Stand up OHDSI tools (Atlas, DQD)
- **Awareness** - Institutional Website
- **What's available.** Pre-IRB Cohort Discovery De-ID Atlas Dataset



Precision Medicine Symposium 2022: Tickets are open and event is free to Register.

REGISTER



How It Works

Researcher Resources

Centers of Excellence

Pricing

Help

TRY FREE

Log In

OMOP on PMAP

Frequently Asked Questions

How can I learn about the OMOP Common Data Model (CDM) and what data is available?



What is the cost of OMOP?



With approved eformS, there is no additional cost for access to this data. There are labor costs from the Core for Clinical Research Data Acquisition (CCDA) for the data set. For creation of a prospective registry, Precision Medicine pricing applies and can be found here: <https://pm.jh.edu/pricing/>.

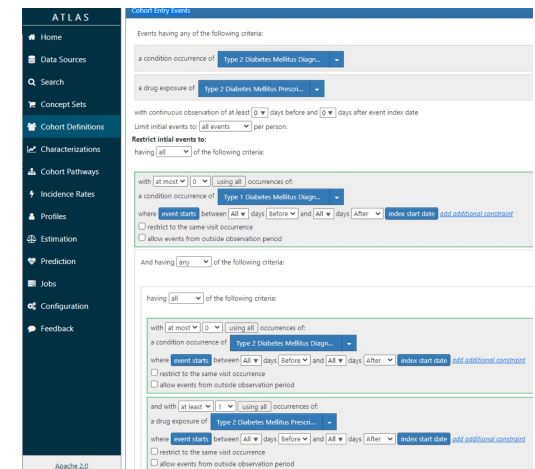
How can I get access to the OMOP data?





De-identified OMOP dataset for cohort discovery

- Shift and Truncate (SANT) method (Columbia)
- Removal of rare concepts ($n < 10$)
- Patients over 90 are shifted to 90
- Removal of clinical site, provider,
- and GIS location information
- 3 digital ZIP code truncation
- Atlas user interface



JOURNAL ARTICLE EDITOR'S CHOICE

Preserving temporal relations in clinical data while maintaining privacy ^{FREE}

George Hripcsak, Parsa Mirhaji, Alexander FH Low, Bradley A Malin

Journal of the American Medical Informatics Association, Volume 23, Issue 6, November 2016, Pages 1040–1045, <https://doi.org/10.1093/jamia/ocw001>

Published: 24 March 2016 Article history ▼



Organizational Motivation

- Demonstrate leadership support for OHDSI
- Letters of Support from informatics, analytics, and statistical resources
- Work with IRB to make the process easier and faster for review





Team Ability

- Build MS Teams environment for project listings and people interested in OHDSI at JH
- Attract interdisciplinary group of researchers working with OHDSI. Increase the cross section of interaction.

Analytics

Data Mgmt
JH Enterprise IT
Johns Hopkins Medicine

Informatics

Biomedical Informatics
and Data Science
School of Medicine
Johns Hopkins University

Statistical
Methods

Biostatistics
School of Public Health
Johns Hopkins University

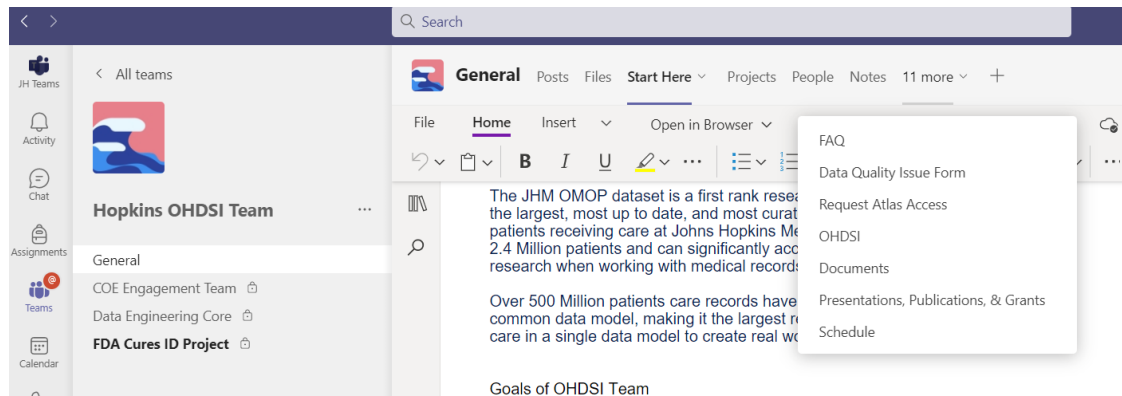
Clinical
Domains

22 Clinical Depts
School of Medicine
Johns Hopkins University



JH OHDSI Research Community

- 80 researchers
 - 20+ MD's
 - 10+ PhD's
 - 25+ projects
- Started 3/2021 (1.5 years old)
- How to create a clinical registry at JH
- How to lead a study with the OHDSI Research Network
- Grant templates (K,R,F)
- IRB Templates





JH OHDSI Research Community

Weekly calls

- Updates on People, Projects, & Grants
- Updates on Infrastructure
- Updates from OHDSI WG's
- Invited Guests
- Paper Review
- Abstracts & Publications

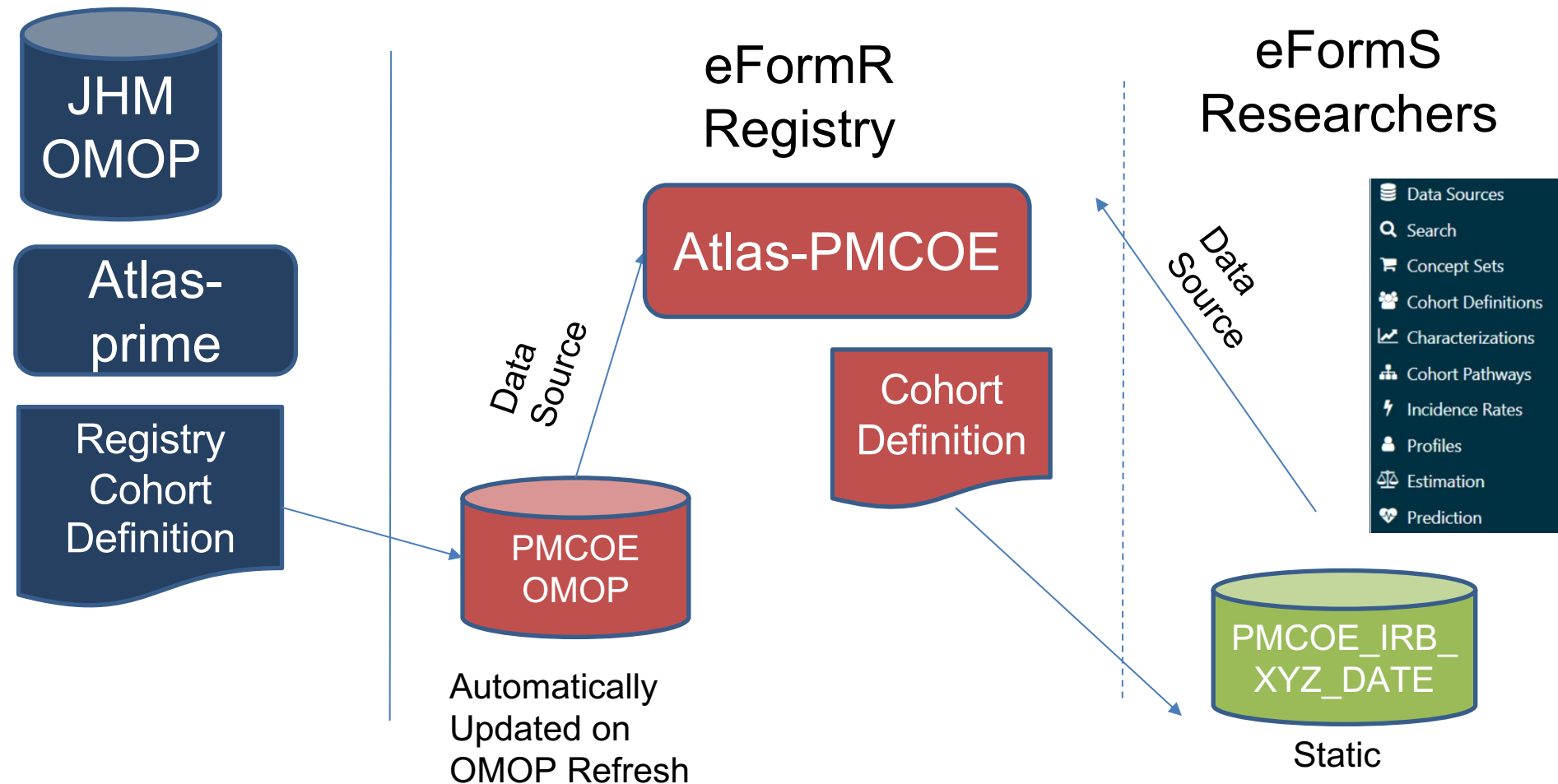
OMOP resources

- Grant & IRB templates
- Data acquisition and storage
- Data protections and management
- Patient safety and waivers of consent



Team Ability

- Sub-setting process for clinical registries.





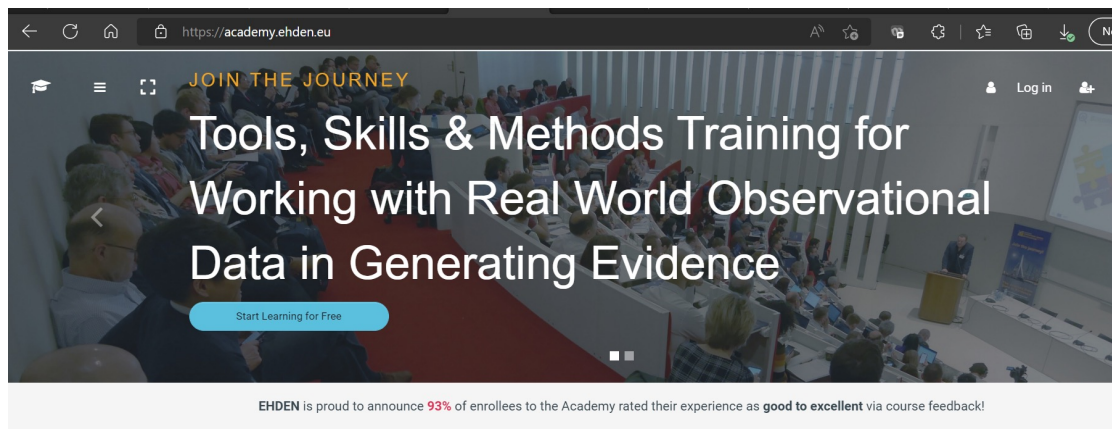
Team Motivation

- Peer support from JHU OHDSI weekly meeting to facilitate collaboration.
- Mentoring network for teams trying to launch a clinical registry
- Data Science graduate student projects partnering with clinical researchers.
Internships and independent study electives.



Individual Ability

- Highlight EHDEN training and Book of OHDSI
- Graduate training course in OHDSI/OMOP for faculty, staff, and students.



Learning for Anyone, Anywhere

On-demand training and development programmes developed by the OHDSI and EHDEN community.



Tool Ecosystem

Learn to use our latest tools for observational research in your organisation



Meet Like-minded People

Share and develop your ideas with an interdisciplinary group of learners



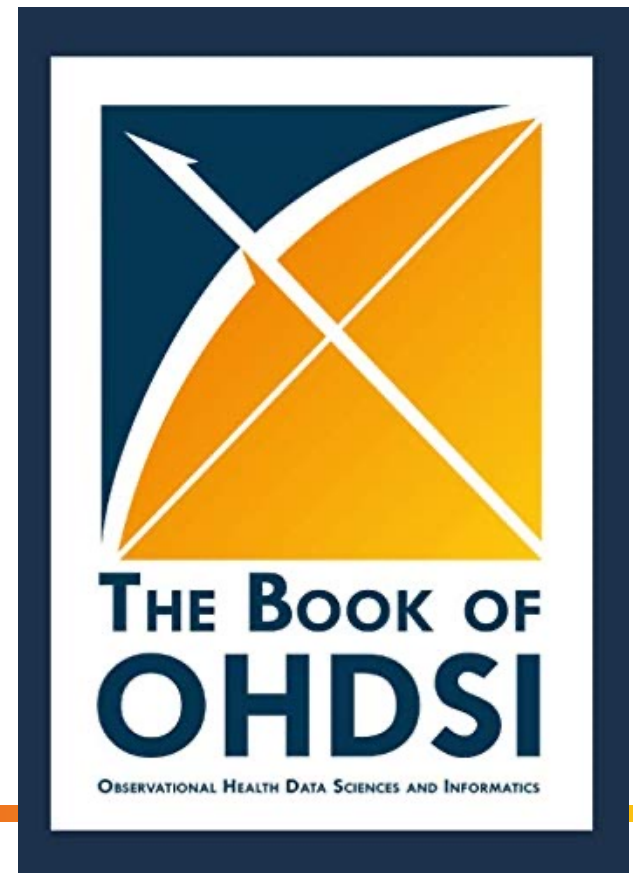
Join the Journey

Prepare to participate in worldwide research initiatives across the OHDSI community



Connect with Experts

Learn from internationally acknowledged expert trainers and educators





Observational Research Methods 250.782

Observational Research Methods with Medical Records Data

- Understand the OMOP common data model
 - Work with de-identified medical records in OMOP on cohort definitions and data characteristics
 - Reproducible research methods with clinical terminologies
-
- Q3. January - March
Live on MS Teams | Tuesdays 5-6:30 PM EST
 - Faculty & staff may qualify for tuition remission
 - Contact JHInformatics@jhu.edu with questions



Paul Nagy
PhD, FSIIM

Director of Education
Biomedical Informatics and Data
Science



Jay Vaidya, MBBS,
MPH, PhD

Associate Professor
Internal Medicine



Individual Motivation

- Get your data faster. Streamline data provision through OMOP sub-setting.
- Access to multi-institution data through network studies.
- Facilitate grants with language library on Data Management. More competitive grants with reproducible transparent methods



Individual Motivation

- More citations. More competitive publications through computability and reproducibility.
- Building international professional network through OHDSI workgroup participation
- Invited OHDSI Speakers to Grand rounds to raise awareness and interest
- Testimonials of successful local researchers using OHDSI to get grants

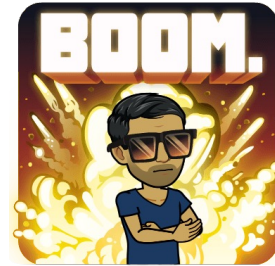


Thanks to the JH OHDSI Community

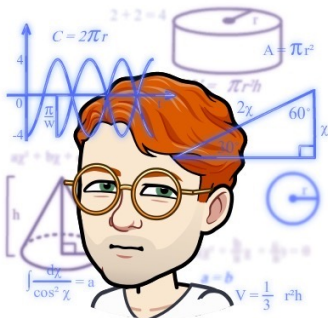
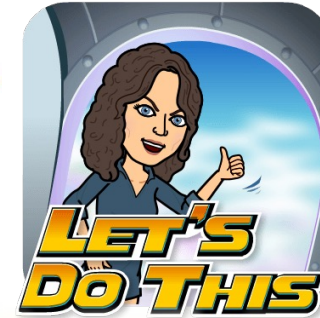
- Mary Grace Bowring
- Michael Cook
- Khyzer Aziz, MD
- Aki Nishamura, PhD
- Alan Coltri
- Kerry Smith
- Star Liu
- Zachary Wang
- Antony Rosen, MD, PhD
- Tanner Zhang, MD
- Chris Mecoli, MD
- Joe Murray, MD
- Jen Park
- Will Kelly
- Robert Koski, DDS
- Cindy Cai, MD
- Adam Sapirstein, MD
- David Hager, MD
- Stephanie Hong
- Davera Gabriel
- Siggie Gold
- Ben Saeks
- Matthew Robinson, MD
- Jay Vaidya, PhD
- Jules Bergmann, MD, PhD
- Harold Lehmann, MD, PhD
- Chris Chute, MD, PhD
- Ariel Leong



The OHDSI community has your back.



YOU DA BEST!!





Aug. 2 Community Call: Building Organizational Support Within Your Community



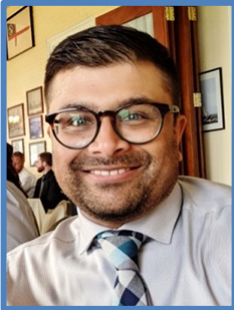
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