



# Health Equity Visualizations

**OHDSI Community Call**  
**July 27, 2021 • 11 am ET**



# Upcoming OHDSI Community Calls

Date	Topic
July 27	Health Equity Visualization Challenge
August 3	OHDSI Asia-Pacific (APAC) Regional Updates
August 10	2021 Global Symposium Preview
August 17	New Developments In OHDSI
August 24	Back to School
August 31	NO MEETING

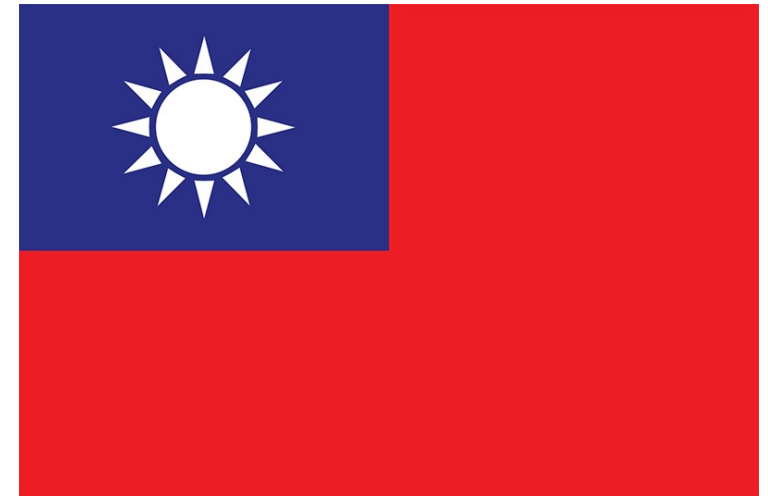
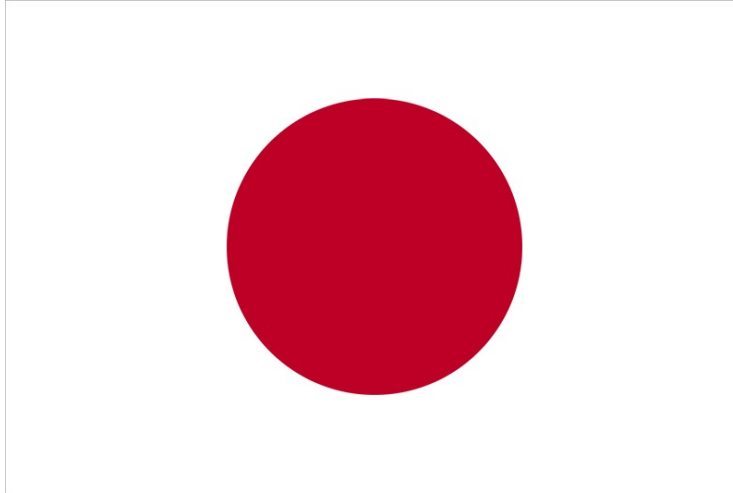
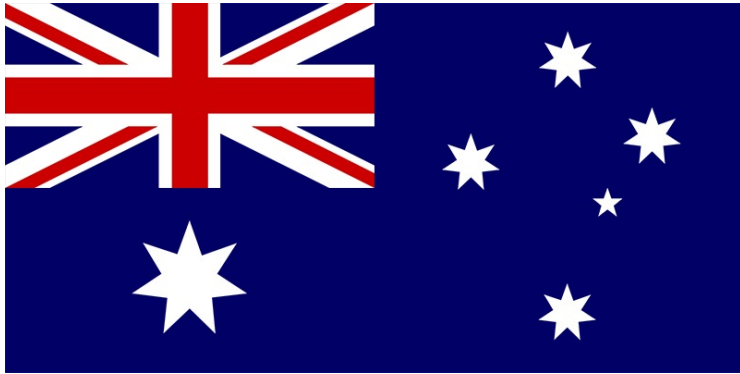


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# August 3 Community Call: APAC Regional Updates





# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# OHDSI Shoutouts!



Congratulations to **RuiJun Chen, Marc Suchard, Harlan Krumholz, Martijn Schuemie, Steven Shea, Jon Duke, Nicole Pratt, Christian Reich, David Madigan, Seng Chan You, Patrick Ryan, and George Hripcsak** on the publication of **“Comparative First-Line Effectiveness and Safety of ACE (Angiotensin-Converting Enzyme) Inhibitors and Angiotensin Receptor Blockers: A Multinational Cohort Study”** in Hypertension.

Hypertension

## ORIGINAL ARTICLE

### Comparative First-Line Effectiveness and Safety of ACE (Angiotensin-Converting Enzyme) Inhibitors and Angiotensin Receptor Blockers A Multinational Cohort Study

RuiJun Chen<sup>1</sup>, Marc A. Suchard<sup>2</sup>, Harlan M. Krumholz<sup>3</sup>, Martijn J. Schuemie<sup>4</sup>, Steven Shea<sup>5</sup>, Jon Duke, Nicole Pratt, Christian G. Reich<sup>6</sup>, David Madigan<sup>7</sup>, Seng Chan You, Patrick B. Ryan, George Hripcsak<sup>8</sup>

**ABSTRACT:** ACE (angiotensin-converting enzyme) inhibitors and angiotensin receptor blockers (ARBs) are equally guideline-recommended first-line treatments for hypertension, yet few head-to-head studies exist. We compared the real-world effectiveness and safety of ACE inhibitors versus ARBs in the first-line treatment of hypertension. We implemented a retrospective, new-user comparative cohort design to estimate hazard ratios using techniques to minimize residual confounding and bias, specifically large-scale propensity score adjustment, empirical calibration, and full transparency. We included all patients with hypertension initiating monotherapy with an ACE inhibitor or ARB between 1996 and 2018 across 8 databases from the United States, Germany, and South Korea. The primary outcomes were acute myocardial infarction, heart failure, stroke, and composite cardiovascular events. We also studied 51 secondary and safety outcomes including angioedema, cough, syncope, and electrolyte abnormalities. Across 8 databases, we identified 2 297 881 patients initiating treatment with ACE inhibitors and 673 938 patients with ARBs. We found no statistically significant difference in the primary outcomes of acute myocardial infarction (hazard ratio, 1.11 for ACE versus ARB [95% CI, 0.95–1.32]), heart failure (hazard ratio, 1.03 [0.87–1.24]), stroke (hazard ratio, 1.07 [0.91–1.27]), or composite cardiovascular events (hazard ratio, 1.06 [0.90–1.25]). Across secondary and safety outcomes, patients on ARBs had significantly lower risk of angioedema, cough, pancreatitis, and GI bleeding. In our large-scale, observational network study, ARBs do not differ statistically significantly in effectiveness at the class level compared with ACE inhibitors as first-line treatment for hypertension but present a better safety profile. These findings support preferentially prescribing ARBs over ACE inhibitors when initiating treatment for hypertension. (*Hypertension*. 2021;78:00–00. DOI: 10.1161/HYPERTENSIONAHA.120.16667.) • [Data Supplement](#)

**Key Words:** angiotensin receptor blocker ■ angiotensin receptor ■ cardiovascular outcomes ■ hypertension ■ safety



# OHDSI Shoutouts!



Congratulations to **Nicholas Giangreco and Nicholas Tatonetti** on the publication of “Evaluating risk detection methods to uncover ontogenic-mediated adverse drug effect mechanisms in children” in BioData Mining.



BioData Mining

[Home](#) [About](#) [Articles](#) [Submission Guidelines](#)

Research | [Open Access](#) | [Published: 22 July 2021](#)

## Evaluating risk detection methods to uncover ontogenic-mediated adverse drug effect mechanisms in children

[Nicholas P. Giangreco](#) & [Nicholas P. Tatonetti](#) 

[BioData Mining](#) **14**, Article number: 34 (2021) | [Cite this article](#)

**78** Accesses | **2** Altmetric | [Metrics](#)

### Abstract

#### Background

Identifying adverse drug effects (ADEs) in children, overall and within pediatric age groups, is essential for preventing disability and death from marketed drugs. At the same time, however, detection is challenging due to dynamic biological processes during growth and maturation, called ontogeny, that alter pharmacokinetics and pharmacodynamics. As a result, methodologies in pediatric drug safety have been limited to event surveillance and have not focused on investigating adverse event mechanisms. There is an opportunity to identify drug event patterns within observational databases for evaluating ontogenic-mediated adverse event mechanisms. The first step of which is to establish statistical models that can identify temporal trends of adverse effects across childhood.





# OHDSI Shoutouts!



Congratulations to **Jin Ge, Mark Pletcher, Jennifer Lai,** and members of the **N3C Consortium** on the publication of “**Outcomes of SARS-CoV-2 Infection in Patients with Chronic Liver Disease and Cirrhosis: a N3C Study**” in Gastroenterology.

> [Gastroenterology](#). 2021 Jul 17;S0016-5085(21)03244-3. doi: 10.1053/j.gastro.2021.07.010. Online ahead of print.

## Outcomes of SARS-CoV-2 Infection in Patients with Chronic Liver Disease and Cirrhosis: a N3C Study

[Jin Ge](#)<sup>1</sup>, [Mark J Pletcher](#)<sup>2</sup>, [Jennifer C Lai](#)<sup>3</sup>, [N3C Consortium](#)

Collaborators, Affiliations + expand

PMID: 34284037 PMCID: [PMC8286237](#) DOI: [10.1053/j.gastro.2021.07.010](#)

[Free PMC article](#)

### Abstract

**Background and aims:** In chronic liver disease (CLD) patients with or without cirrhosis, existing studies on the outcomes with SARS-CoV-2 infection have limited generalizability. We used the National COVID Cohort Collaborative (N3C), a harmonized electronic health record (EHR) dataset of 6.4 million, to describe SARS-CoV-2 outcomes in patients with CLD and cirrhosis.

**Methods:** We identified all CLD patients with or without cirrhosis who had SARS-CoV-2 testing in the N3C Data Enclave as of 7/1/2021. We used survival analyses to associate SARS-CoV-2 infection, presence of cirrhosis, and clinical factors with the primary outcome of 30-day mortality.

**Results:** We isolated 220,727 patients with CLD and SARS-CoV-2 test status: 128,864 (58%) Non-Cirrhosis/Negative, 29,446 (13%) Non-Cirrhosis/Positive, 53,476 (24%) Cirrhosis/Negative, and 8,941 (4%) Cirrhosis/Positive patients. Thirty-day all-cause mortality rates were 3.9% in Cirrhosis/Negative and 8.9% in Cirrhosis/Positive patients. Compared to Cirrhosis/Negative, Cirrhosis/Positive had 2.38-times adjusted hazard of death at 30 days. Compared to Non-Cirrhosis/Positive, Cirrhosis/Positive had 3.31-times adjusted hazard of death at 30 days. In stratified analyses among patients with cirrhosis with increased age, obesity, and comorbid conditions (diabetes, heart failure, and pulmonary disease); SARS-CoV-2 infection was associated with increased adjusted hazards of death.

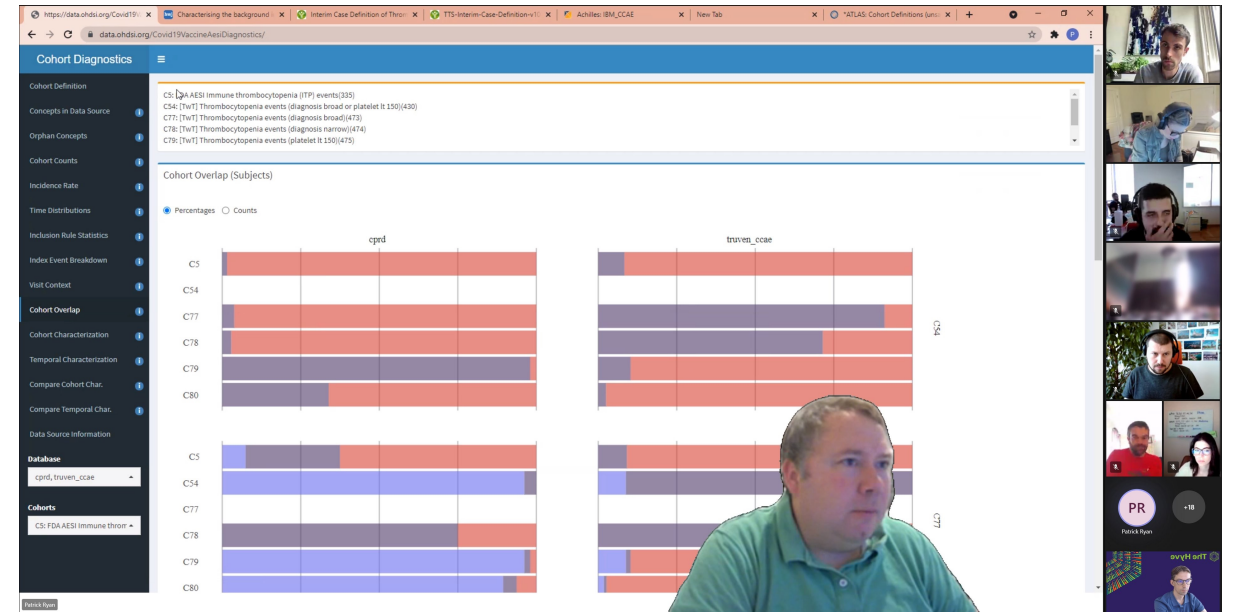




# OHDSI Shoutouts!



The EHDEN and OHDSI communities led a two-day EThon last week to expand the AESI study to new databases around Europe.





# OHDSI Shoutouts!



**Any shoutouts from the community? Please share and help promote and celebrate OHDSI work!**

Have a study published? Please send to [sachson@ohdsi.org](mailto:sachson@ohdsi.org) so we can share during this call and on our social channels.  
Let's work together to promote the collaborative work happening in OHDSI!





# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# Upcoming Workgroup Calls



Date	Time (ET)	Meeting
Tuesday	2 pm	Health Equity
Wednesday	8 am	Vaccine Vocabulary
Wednesday	10 am	OMOP CDM Oncology – Development Subgroup
Thursday	1 pm	OMOP CDM Oncology – CDM/Vocabulary Subgroup
Monday	10 am	GIS-Geographic Information System
Tuesday	9 am	OMOP CDM Oncology – Genomic Subgroup

[www.ohdsi.org/upcoming-working-group-calls](http://www.ohdsi.org/upcoming-working-group-calls)



# July 29 APAC Community Call

The July 29 APAC Community Call will feature a presentation on the **EUMAEUS (Evaluating Use of Methods for Adverse Event Under Surveillance)** study. This will be from the June 29 OHDSI global community call.



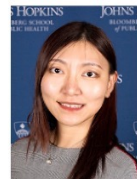
## Literature review

Lana Lai



## Overview of the EUMAEUS Experiment Design

Marc Suchard



## Bias, precision and timeliness of historical rate comparison methods

Xintong Li



## Combining Methods in a Safety Surveillance System

Faaizah Arshad



## Estimation for Two-Dose Vaccines

Ty Stanford



## Comparison of performance across methods

Martijn Schuemie

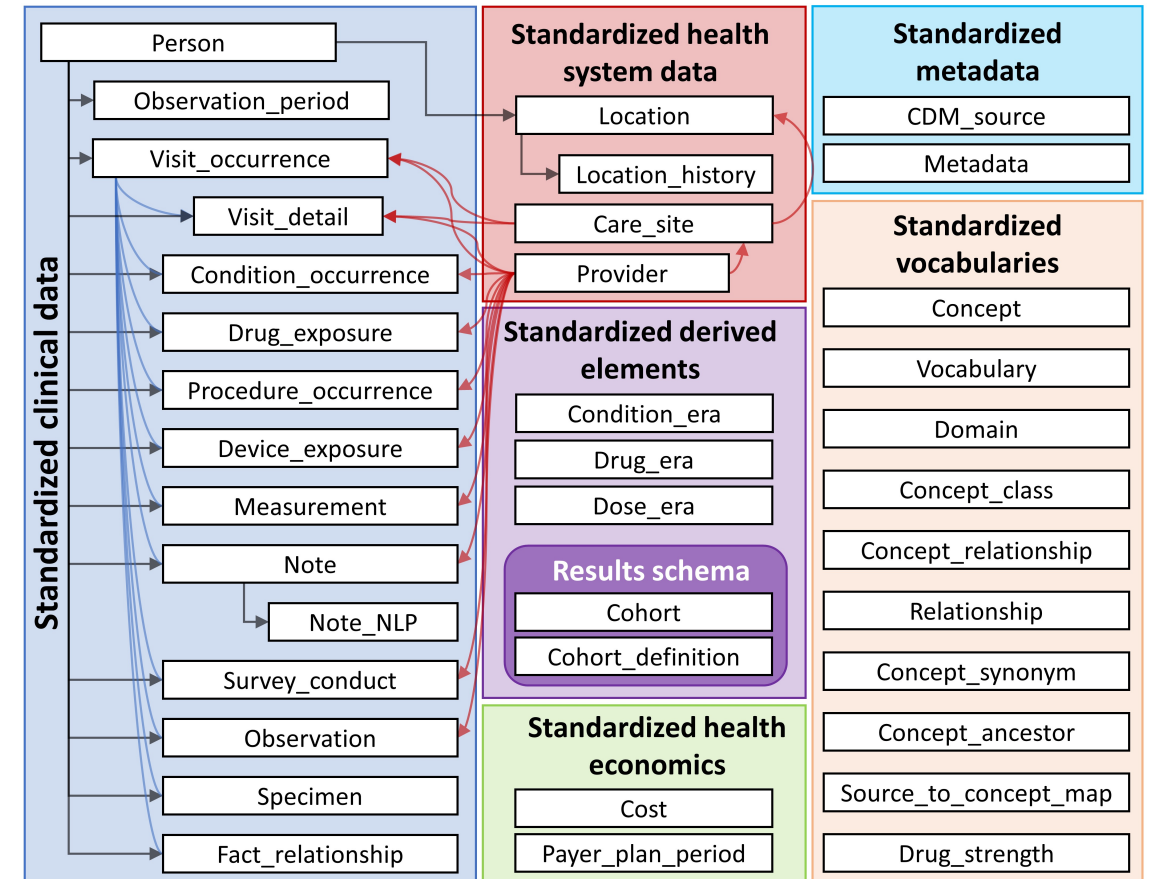




# CDM Hack-A-Thon

The CDM Working Group will be holding a Hack-a-Thon on August 18-19.


In preparation for the symposium they will be readying CDM v5.4 by writing both R code and documentation of the model. No matter your skill-level you are welcome to join!







# Get Access To Different Teams/WGs/Chapters



## OHDSI

OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

[Who We Are](#) [OHDSI Updates & News](#) [Standards](#) [Software Tools](#) [OHDSI Studies](#) [Book of OHDSI](#) [Resources](#) [New To OHDSI?](#)

[EHDEN Academy](#) [This Week In OHDSI](#) [2021 Global Symposium](#) [Events/Collaborations](#) [Collaborate in MSTeams](#) [Follow OHDSI](#)

### Welcome to OHDSI!

The Observational Health Data Sciences and Informatics (or OHDSI, pronounced "Odyssey") program is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data through large-scale analytics. All our solutions are open-source.

OHDSI has established an international network

### 2020 OHDSI Symposium

Our 2020 OHDSI Global Symposium brought together a global research community for 18 hours of open science, international collaboration and community fun. The day included research presentations from community members, panels that brought together leaders from major healthcare organizations, as well as network sessions, the annual collaborator

5. Select the workgroups you want to join (you can refer to the WIKI for work group objectives [www.ohdsi.org/web/wiki/doku.php?id=projects:overview](http://www.ohdsi.org/web/wiki/doku.php?id=projects:overview))

- ☐ ATLAS
- ☐ Clinical Trials
- ☐ Common Data Model
- ☐ Data Quality Dashboard Development
- ☐ Early-stage Researchers
- ☐ Education Work Group
- ☐ Electronic Health Record (EHR) ETL
- ☐ Geographic Information System (GIS)
- ☐ HADES Health Analytics Data-to-Evidence Suite
- ☐ Health Equity
- ☐ Latin America
- ☐ Medical Devices
- ☐ Natural Language Processing
- ☐ OHDSI APAC
- ☐ OHDSI APAC Steering Committee
- ☐ OHDSI Steering Committee
- ☐ Oncology
- ☐ Patient-Generated Health Data
- ☐ Pharmacovigilance Evidence Investigation
- ☐ Phenotype Development and Evaluation
- ☐ Population-Level Effect Estimation / Patient-Level Prediction
- ☐ Psychiatry
- ☐ Registry (formerly UK Biobank)
- ☐ Surgery and Perioperative Medicine
- ☐ Vaccine Safety
- ☐ Vaccine Vocabulary
- ☐ Women of OHDSI

6. Select the chapter(s) you want to join

☐ Australia

☐ China

☐ Europe

☐ Japan

☐ Korea

☐ Singapore

☐ Taiwan

7. Select the studies you want to join

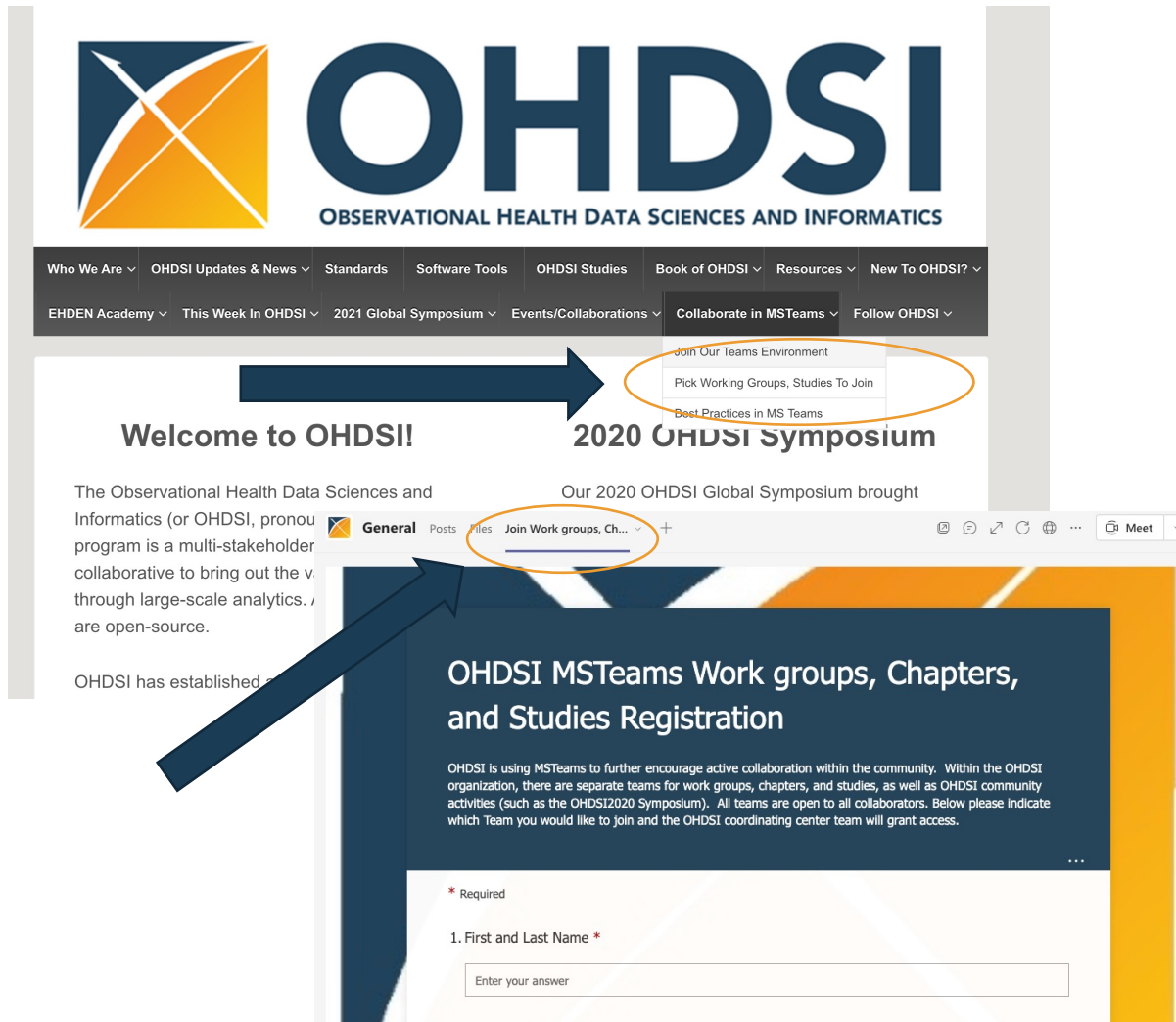
☐ HERA-Health Equity Research Assessment

☐ PIONEER for Prostate Cancer (study-a-thon ended)

☐ SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses)



# Get Access To Different Teams/WGs/Chapters



The screenshot shows the OHDSI website with the following elements:

- OHDSI Logo:** OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS
- Navigation Bar:** Who We Are, OHDSI Updates & News, Standards, Software Tools, OHDSI Studies, Book of OHDSI, Resources, New To OHDSI?, EHDSN Academy, This Week In OHDSI, 2021 Global Symposium, Events/Collaborations, Collaborate in MStTeams, Follow OHDSI.
- Welcome to OHDSI!** The Observational Health Data Sciences and Informatics (or OHDSI, pronounced "oh-dsee") program is a multi-stakeholder collaborative to bring out the value of health data through large-scale analytics. We are open-source.
- 2020 OHDSI Symposium:** Our 2020 OHDSI Global Symposium brought...
- Join Work groups, Chapters, and Studies Registration:** OHDSI is using MStTeams to further encourage active collaboration within the community. Within the OHDSI organization, there are separate teams for work groups, chapters, and studies, as well as OHDSI community activities (such as the OHDSI2020 Symposium). All teams are open to all collaborators. Below please indicate which Team you would like to join and the OHDSI coordinating center team will grant access.
- Registration Form:** 1. First and Last Name \*

Annotations include arrows pointing to the "Collaborate in MStTeams" link in the navigation bar, the "Join Work groups, Chapters, and Studies Registration" section, and the "Join Work groups, Chapters, and Studies" dropdown menu.

5. Select the workgroups you want to join (you can refer to the WIKI for work group objectives [www.ohdsi.org/web/wiki/doku.php?id=projects:overview](https://www.ohdsi.org/web/wiki/doku.php?id=projects:overview))

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- ☐ SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses)



# CBER Seminar Series

The next edition of the CBER BEST Initiative Seminar Series will be **July 28 at 11 am ET. Jessica Gronsbell** (University of Toronto) will present a talk on “**Statistical learning with electronic health records data.**”

Get more information and register by using the **NEW LINK** below.



Webinar Registration



Topic	CBER BEST Initiative Seminar Series - Statistical learning with electronic health records data
Description	<p>The adoption of electronic health records (EHRs) has generated massive amounts of routinely collected medical data with potential to improve our understanding of healthcare delivery and disease processes. However, the analysis of EHR data remains both practically and methodologically challenging as it is recorded as a byproduct of billing and clinical care, and not for research purposes. In this talk, I will discuss methods that bridge classical statistical theory and modern machine learning tools in an effort to efficiently and reliably extract insight from EHR data. I will focus primarily on (i) the challenges in obtaining annotated outcome data, such as presence of a disease or clinical condition, from patient records and (ii) how to reduce the annotation burden by leveraging unlabeled data in model estimation and evaluation.</p> <p>Presented by: Dr. Jessica Gronsbell, University of Toronto</p>
Time	Jul 28, 2021 11:00 AM in <a href="#">Eastern Time (US and Canada)</a>



[Register Here](#)



# 2021 Global Symposium: Sept. 12-15

## 2021 Global OHDSI Symposium

We are excited to announce that general registration for the 2021 Global OHDSI Symposium, which will be held virtually in Microsoft Teams, Sept. 12-15, is now open! This will be our seventh annual OHDSI Symposium, and it will provide another opportunity for our community to come together, share ideas, learn from each other and network with our fellow collaborators.

We are working on many details for the four-day event, which will feature plenary talks, a state of the community presentation and our collaborator showcase. One detail has not changed — the symposium remains free to attend and is open to anybody, whether you are a community veteran or a newcomer looking to learn more about how we generate real-world evidence that promotes better health decisions and better care.

Please continue to check the OHDSI website ([www.ohdsi.org](http://www.ohdsi.org)) and the OHDSI social platforms periodically for updates as we plan for a rewarding, online event!

While we are excited to again create an opportunity for everyone to participate in the Symposium for free if they choose, there are costs associated with coordinating all OHDSI community activities. To help offset these costs, we provide the additional optional opportunity for participants to support the OHDSI community through 'registration contribution' and 'optional registration fee' tickets. Thank you in advance for your generous support! **Should you require a tax receipt for your contribution, please email [symposium@ohdsi.org](mailto:symposium@ohdsi.org) BEFORE you make the contribution through the Eventbrite registration site.**

In addition, as all OHDSI activities depend largely on government grants and organization sponsorships, please email [symposium@ohdsi.org](mailto:symposium@ohdsi.org) if you would like to consider sponsorship opportunities for this year's symposium.

Should you wish to change or cancel your registration ticket, kindly log into your Eventbrite account where you may edit or cancel your free registration ticket at any time. Registration contribution tickets/optional registration fee tickets are non-refundable; however, if you need to make changes to this ticket, kindly email us at [symposium@ohdsi.org](mailto:symposium@ohdsi.org). Also, if you make any changes to your registration ticket such as a name change or update an email address, please email us at [symposium@ohdsi.org](mailto:symposium@ohdsi.org) to inform us as well. Thank you!

To Register for the 2021 Global OHDSI Symposium, please click the button below:

[Register For #OHDSI2021 Here!](#)

### What Can You Expect At #OHDSI2021?

The 2021 Global OHDSI Symposium will be held virtually for the second straight year. This allows both veteran collaborators and those new to OHDSI from around the world to come together and share ideas, learn from each other and enjoy the spirit of our community. If you missed our 2020 Global Symposium, check out the link below to get a sense of what takes place during our biggest event of the year.

[The 2020 Global Symposium](#)

[Symposium Information and Registration](#)



# Where Are We Going?

**Any other announcements  
of upcoming work, events,  
deadlines, etc?**





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