Health Equity Visualizations

OHDSI Community Call
July 27, 2021 • 11 am ET
## Upcoming OHDSI Community Calls

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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!


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®, Marc A. Suchard®, Harlan M. Krumholz®, Martijn J. Schuemie®, Steven Shea®, Jon Duke, Nicole Pratt, Christian G. Reich®, David Madigan®, Seng Chan You, Patrick B. Ryan, George Hripcsak®

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 1/06 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 2,979,781 patients initiating treatment with ACE inhibitors and 673,936 patients with ARBs. We found no statistically significant difference in the primary outcomes of acute myocardial infarction (hazard ratio, 0.91; 95% CI, 0.8-1.03) for ACE versus ARB (0.96; 95% CI, 0.92-1.02). Heart failure (hazard ratio, 1.03; 95% CI, 1.02-1.04), stroke (hazard ratio, 1.07; 95% CI, 1.01-1.12), or composite cardiovascular events (hazard ratio, 1.06; 95% CI, 1.00-1.12). Across secondary and safety outcomes, patients on ARBs had a 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;78:90-00. DOI: 10.1161/HYPERTENSIONAHA.120.16667. • Data Supplement

Key Words: angiotensin receptor blocker ★ angiotensin receptor ★ cardiovascular outcomes ★ hypertension ★ safety
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.
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.

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 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

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<th>Time (ET)</th>
<th>Meeting</th>
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<tr>
<td>Tuesday</td>
<td>2 pm</td>
<td>Health Equity</td>
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<tr>
<td>Wednesday</td>
<td>8 am</td>
<td>Vaccine Vocabulary</td>
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<tr>
<td>Wednesday</td>
<td>10 am</td>
<td>OMOP CDM Oncology – Development Subgroup</td>
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<tr>
<td>Thursday</td>
<td>1 pm</td>
<td>OMOP CDM Oncology – CDM/Vocabulary Subgroup</td>
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<tr>
<td>Monday</td>
<td>10 am</td>
<td>GIS-Geographic Information System</td>
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<tr>
<td>Tuesday</td>
<td>9 am</td>
<td>OMOP CDM Oncology – Genomic Subgroup</td>
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[www.ohdsi.org/upcoming-working-group-calls](http://www.ohdsi.org/upcoming-working-group-calls)
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.
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

Welcome to OHDSI!

The Observational Health Data Sciences and Informatics (OHDSI) 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.

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)

- XTLAS
- 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

- HEERA-Health Equity Research Assessment
- PIONEER for Prostate Cancer (study a-thon ended)
- SCIYLA (SARS-CoV-2 Large-scale Longitudinal Analyzes)
Get Access To Different Teams/WGs/Chapters

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)

- [ ] XT,LS
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- [ ] Patient-Generated Health Data
- [ ] Pharmacovigilance Evidence Investigation

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7. Select the studies you want to join

- [ ] HMEZ-Health Equity Research Assessment
- [ ] PSEs for Prostate Cancer (study-specific ended)
- [ ] SCYLLA (SARS-CoV-2 Large-scale Longitudinal Analysis)
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.
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) 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 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 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. 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 to inform us as well. Thank you!

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

Register For #OHDSI2021 Here!
Where Are We Going?

Any other announcements of upcoming work, events, deadlines, etc?
Three Stages of The Journey

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