Workgroup Updates
Medical Devices, Oncology, Psychiatry, NLP

OHDSI Community Call
March 9, 2021 • 11 am ET
## March/April OHDSI Community Calls

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The good news: fitting a linear model through the last 90 days of global COVID-19 case counts, and extrapolating that to the future suggests a drop to 0 before the summer! The bad news: The number of COVID-19 papers is predicted to grow for a long time, and the number of new COVID papers per week is predicted to exceed the number of new COVID cases soon.

Disclaimer: may contain some cherry-picking

Case data courtesy of the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University.

Publication data courtesy of PubMed.

Code for generating the plot is here.
Patrick Ryan  3/5 9:26 AM

**Highlighting the breadth and depth of CHARYBDIS exploration opportunities**

Motivated by Edward Burn’s ‘imaginary summary of CHARITYBDIS’, I thought it would be interesting to visualize the true scope of depth and breadth that is contained within CHARITYBDIS. Here’s what I came up with (also full-size JPEG attached).

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**How’d I make this?** I downloaded the ‘cohort counts’ results from [this link](https://data.ohdsi.org/Covid19CharacterizationCharitybdis)... Go to Cohort Counts, click ‘Share/Frame’ to download flat data. I then pasted these results into R (using `ggplot2`) visualization. Set my hierarchy as ‘database’ -> ‘targetName’ -> ‘strataName’. Set my size as ‘cohortSubjects sum’, and set my color as ‘strataName’. CSV/JSON format. Under customize, I changed the color scheme to ‘Turbo discrete’. Total time to make this: 12 minutes.

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**Why I think this plot is interesting:** CHARITYBDIS was OHDSI’s attempt to systematically define populations of interest throughout the disease lifecycle of SARS-CoV-2 and COVID-19, from testing to diagnosis to hospitalization and intensive services. We wanted to explore these health states overall, and also examine heterogeneity within patient subpopulations (young/old, male/female, Black/White, with/without cancer, with/without obesity, etc) and across databases in US, Europe, and Asia-Pacific regions. This plot represents the total number of unique subpopulations that are now available for exploration in the CHARITYBDIS 1.0 results. Each dot is a population that can be explored further with its characteristics, sized by the total number of persons within that population (e.g. one dot = population would be something like: in the Sidawi database, cohort = ‘Persons with a COVID-19 diagnosis of a SARS-CoV-2 positive test with at least 3853 prior observations’; strata = ‘sex=female’, where there are 70,633 persons summarized. They dots are organized hierarchically by database as the outer grouping, and target cohort as the inner grouping, and the color represents the strata. You can see how we had an amazing community effort with so many different data partners participating, and you can also see that each database has a rich story to tell within it. In total, we have 17,299 cohorts summarized in CHARITYBDIS. While I’m incredibly proud of all the work the CHARITYBDIS team has already led (shout out to Anthony Sera Kristin Kollak Albert Prok Undre Tessa Duarte Sally), and the dozens of manuscripts that have been prepared based on this evidence, this visualization emphasizes how we really have only scratched the surface of what’s possible to learn about the disease natural history of COVID-19, and hopefully motivates others to explore the resultant farther. Heck, maybe CHARITYBDIS will eventually become the self-fulfilling prophecy that Martin Schuemie cautioned us about, while the number of cases of this virus impacting patients should hopefully decrease, the advancement of knowledge from scientists via publications can continue to persist..
OHDSI Challenge March 2021

COVID Visualizations

The OHDSI community has generated a large array of evidence throughout the pandemic, including characterizations (CHARITYDS), estimation (SCYLLA, hydroxychloroquine studies), and prediction (COVER). We have other efforts in the works, including EUMAUS and AEStudiesCharacterization. We also have plenty more work across community or locally. And that’s on top of work that someone could do de novo using OHDSI standardized tools, like ATLAS and HADES.

Sometimes though, even with all that evidence, it can be hard to tell a story. So, if a picture is worth a thousand words, what one visualization using OHDSI too/ultra/results tells the most compelling story that touches on the COVID pandemic?

The challenge: We are asking community collaborators to submit a static image (something that could be scaled to print 8.5x11, landscape or portrait) or link to an interactive visualization that stands on its own, and then accompany it with a 1-paragraph summary of why you think the image tells a compelling story.

This image could be something that’s already sitting in one of our papers or out on data.ohdsi.org, which you could use as is, or perhaps you could augment it to help tell your story (if you do alter a graphic from another study, please add an attribution). Perhaps it could be a new graphic that you produce based on available results, or even something produced based on new analysis.

Whatever the graphic is, we want to know why it’s meaningful to you — and perhaps why it should be meaningful to all of us.

All submissions should be posted in the OHDSI team in the channel ‘OHDSI Challenge - March 2021’ by Thursday, March 25, at 8 pm ET. On the March 30 community call, we will review the visualization gallery and recognize the contributions.
Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?
OHDSI Shoutouts!

Congratulations to Jenna Reps, Chungsoo Kim, Ross Williams, Aniek Markus, Cynthia Yang, Talita Duarte-Salles, Thomas Falconer, Jitendra Jonnagaddala, Andrew Williams, Sergio Fernández-Bertolín, Scott DuVall, Kristin Kostka, Gowtham Rao, Azza Shoaiib, Anna Ostropolets, Matthew Spotnitz, Lin Zhang, Paula Casajust, Ewout Steyerberg, Fredrik Nyberg, Benjamin Skov Kaas-Hansen, Young Hwa Choi, Daniel Morales, Siaw-Teng Liaw, Maria Tereza Fernandes Abrahão, Carlos Areia, Michael E Matheny, María Aragón, Rae Woong Park, George Hripcsak, Christian Reich, Marc Suchard, Seng Chan You, Patrick Ryan, Daniel Prieto-Alhambra, and Peter Rijnbeek on this paper published by JBIR Medical Informatics: Can we trust the prediction model? Illustrating the importance of external validation by implementing the COVID-19 Vulnerability (C-19) Index across an international network of observational healthcare datasets.
OHDSI Shoutouts!

Congratulations to Jingqi Wang, Noor Abu-el-Rub, Josh Gray, Huy Anh Pham, Yujia Zhou, Frank Manion, Mei Liu, Xing Song, Hua Xu, Masoud Rouhizadeh, and Yaoyun Zhang on this recent JAMIA study: COVID-19 SignSym: a fast adaptation of a general clinical NLP tool to identify and normalize COVID-19 signs and symptoms to OMOP common data model.

Abstract

The COVID-19 pandemic swept across the world rapidly, infecting millions of people. An efficient tool that can accurately recognize important clinical concepts of COVID-19 from free text in electronic health records (EHRs) will be valuable to accelerate COVID-19 clinical research. To this end, this study aims at adapting the existing CLAMP natural language processing tool to quickly build COVID-19 SignSym, which can extract COVID-19 signs/symptoms and their attributes (body location, severity, temporal expression, subject, condition, ...).
OHDSI Shoutouts!

The Prostate Cancer Study-A-Thon started yesterday with more than 200 registered participants. This is a collaborative effort between PIONEER, EHDEN and the OHDSI community.

Kees van Bochove shared this word doodle from Day 1 in the OHDSI Visualization Challenge!
OHDSI Shoutouts!

Any shoutouts from the community? Please share and help promote and celebrate OHDSI work!
Three Stages of The Journey

Where Have We Been?
Where Are We Now?
Where Are We Going?
# Upcoming Workgroup Calls

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<td>Wednesday</td>
<td>10 am</td>
<td>Natural Language Processing</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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<td>Friday</td>
<td>10 am</td>
<td>China Chapter</td>
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<tr>
<td>Friday</td>
<td>1 pm</td>
<td>Phenotype Development and Evaluation</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/)
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 of researchers and observational health databases with a central coordinating center housed at Columbia University.

Read more about us, about our goals, and how

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 showcase, and plenty more. Check it all out at the link below.

2020 OHDSI Global Symposium
Everybody is invited to the weekly OHDSI community call, which takes place each Tuesday at 11 am ET. These calls are meant to inform and engage our community through a variety of call formats, including community presentations, working group updates, breakout sessions, focus topics, newcomer-focused sessions, and more. The upcoming schedule is available to the right.

Use this link to get to the weekly meeting.

Videos and slides from previous calls will be posted below. Both videos and slides from community calls prior to 2021 remain available.

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The March 2 OHDSI Community Call featured breakout sessions on some important tools/processes for collaborative research: ETL, ATLAS and HADES.

**OHDSI Highlights and Updates**

OHDSI and ETL recently announced a collaboration to address the sharing and tracking of data in the healthcare and research industries by creating a single common data model. The organizations will integrate HL7 Fast healthcare interoperability Resources (FHIR) and OHDSI's OMOP common data model to achieve this goal. Read more about this here.

Congratulations to Ed Bunn, Anthony Sena, Kristin Kosika, Talita Durante-Salles, Dani Prieto-Alhambra and the full team (42 authors) on this February Medium post from our OHDSI COVID19 week in CHAMPIONS! Use of digital technologies and artificial membrane permeation studies 642,928 patients hospitalized with COVID-19 in the United States. Community feedback is appreciated for these preprints.

Congratulations to Kristin Kosika, Talita Durante-Salles, Albert Prieto-Urbe, Anthony Sena, and the entire team for submitting the manuscript about the overall CHAMPIONS study for peer review. The study is now available as a preprint via Research Square.

The upcoming PIONEER/OHDSI study is to know the natural history of esophageal cancer. Visit in less than one week. You can register for the event, scheduled for March 9-11, by clicking here.

**Save The Dates**

The 2021 OHDSI Symposium will be Sept. 12-15, with the main symposium taking place Monday, Sept. 13. We don't know if this will be in-person, hybrid or completely virtual, so there are more details to come, but please save these dates.

**Presentation Slides**

- Introduction

**Recordings**

- ATLAS Breakout (Facilitators: Greg Klabans and Anthony Sena)
The next **APAC Community Call** will be held tomorrow, March 9, at 10 pm ET. This will feature presentations of work from the 2020 APAC Collaborator Showcase.

The meetings are now in the **OHDSI APAC Teams** environment. Please check your calendar, or find the link on the OHDSI APAC Teams page.
Get Access To Different Teams/WGs/Chapters

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3. Select the workgroups you want to join (you can refer to the Wiki for work group objectives)
   www.ohdsi.org/wiki/mdl/wiki?d?/projects/overview
   - ATLAS
   - Clinical Trials
   - Common data model
   - Data Quality Dashboard Development
   - Electronic Health Record (EHR) ETL
   - Geographic Information System (GIS)
   - HADES Health Analytics Data-to-Evidence Suite
   - 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

4. Select the chapter(s) you want to join
   - Australia
   - China
   - Europe
   - Japan
   - Korea
   - Singapore
   - Taiwan

5. Select the studies you want to join
   - CHARITY (Characterizing Health Associated Risk and Your Baseline Disease in SARS-CoV-2)
   - HEDA-Health Equity Research Assessment
   - PIONEER for Prostate Cancer
   - SCYLLA (SARS-CoV-2 Large-scale Longitudinal Analysis)
Where Are We Going?

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

Where Have We Been?
Where Are We Now?
Where Are We Going?
March 9 Community Call Topic

Workgroup Updates

Medical Devices
Asiyah Lin, Data and Technology Advancement Scholar, NIH

Oncology
Shilpa Ratwani, Associate Director, IQVIA

Psychiatry
Dmitry Dymshyts, Vocabulary Team Lead, Odysseus Data Services, Inc.

Natural Language Processing
Hua Xu, Professor and Director of Center for Computational Biomedicine, UTHealth