

# **OHDSI Coordinating Center**

OHDSI Community Call April 12, 2022 • 11 am ET

n ohdsi



## **Upcoming OHDSI Community Calls**

Date	Topic	
April 19	Workgroup Updates	
April 26	Open-Source Community	
May 3	DARWIN EU	
May 10	Mother's Day-Themed Breakouts	
May 17	OHDSI Debates	
May 24	Open Studies	
May 31	Workgroup OKRs	







# **Upcoming OHDSI Community Calls**

Date	Topic	
April 19	Workgroup Updates	
April 26	Open-Source Community	
May 3	DARWIN EU	
May 10	Mother's Day-Themed Breakouts	
May 17	OHDSI Debates	
May 24	Open Studies	
May 31	Workgroup OKRs	







## **April 19 Community Call: Workgroup Updates**



**Eye Care and Vision Research** 

Sally Baxter
Assistant Professor,
Ophthalmology • UCSD



**FHIR & OMOP** 

Christian Reich Vice President, RWE Systems • IQVIA



Oncology

Asieh Golozar

VP, Global Head of Data
Science • Odysseus Data
Services



#### **Steering Group**

Jody-Ann McLeggon Program Manager • Columbia University





# Three Stages of The Journey

Where Have We Been? Where Are We Now? Where Are We Going?







#### **OHDSI Shoutouts!**



Congratulations to the team of Berta Raventós, Andrea Pistillo, Carlen Reyes, Sergio Fernández-Bertolín, Maria Aragón, Anna Berenguera, Constanza Jacques-Aviñó, Laura Medina-Perucha, Edward Burn, and Talita Duarte-Salles on the publication of "Impact of the COVID-19 pandemic on diagnoses of common mental health disorders in adults in Catalonia, Spain: a population-based cohort study" in BMJ Open.

Open access Original research

BMJ Open Impact of the COVID-19 pandemic on diagnoses of common mental health disorders in adults in Catalonia, Spain: a population-based cohort study

Berta Raventós <sup>©</sup>, <sup>1,2</sup> Andrea Pistillo, <sup>1</sup> Carlen Reyes <sup>©</sup>, <sup>1</sup> Sergio Fernández-Bertolín, <sup>1</sup> Maria Aragón, <sup>1</sup> Anna Berenguera <sup>©</sup>, <sup>1,2</sup> Constanza Jacques-Aviñó, <sup>1,2</sup> Laura Medina-Perucha <sup>©</sup>, <sup>1,2</sup> Edward Burn <sup>©</sup>, <sup>1,3</sup> Talita Duarte-Salles <sup>©</sup> <sup>1</sup>

To cite: Raventós B, Pistillo A, Reyes C, et al. Impact of the COVID-19 pandemic on diagnoses of common mental health disorders in adults in Catalonia, Spain: a population-based cohort study. BMJ Open 2022;12:e057866. doi:10.1136/bmpnene.2021.057868

▶ Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2021-057866).

EB and TD-S are joint senior authors.

Received 29 September 2021 Accepted 10 March 2022

#### **ABSTRACT**

**Objective** To investigate how trends in incidence of anxiety and depressive disorders have been affected by the COVID-19 pandemic.

Design Population-based cohort study.

**Setting** Retrospective cohort study from 2018 to 2021 using the Information System for Research in Primary Care (SIDIAP) database in Catalonia, Spain.

**Participants** 3640204 individuals aged 18 or older in SIDIAP on 1 March 2018 with no history of anxiety and depressive disorders.

Primary and secondary outcomes measures The incidence of anxiety and depressive disorders during the prelockdown period (March 2018–February 2020), lockdown period (March—June 2020) and postlockdown period (July 2020–March 2021) was calculated. Forecasted rates over the COVID-19 periods were estimated using negative binomial regression models based on prelockdown data. The percentage of reduction was estimated by comparing forecasted versus observed events, overall and by sex, age and socioeconomic status.

Results The incidence rates per 100 000 person-months of anxiety and depressive disorders were 151.1 (95% CI 150.3 to 152.0) and 32.3 (31.9 to 32.6), respectively, during the prelockdown period. We observed an increase

#### Strengths and limitations of this study

- This study was based on primary care data of 3.6 million people in Catalonia, Spain.
- This study has quantified the impact of the COVID-19 pandemic on trends in incidence of anxiety and depressive disorders among adults living in Catalonia, Spain and how it differs by sex, age and socioeconomic status.
- Forecasted rates were estimated based on data from 2 years and we validated our modelling approach in the year prior to the COVID-19 pandemic.
- Our analysis investigates the COVID-19-related effects up to March 2021, providing data up to a year after the onset of the lockdown measures in Controlled

#### INTRODUCTION

The outbreak of the COVID-19 pandemic and the associated control measures have impacted many aspects of people's lives. In Spain, a national lockdown was implemented on 14 March 2020, limiting mobility with few exceptions such as grocery shopping, health emerical materials.

in ohdsi



#### **OHDSI Shoutouts!**



Congratulations to the team of Tae-Hoon Kim, SiHyeong Noh, Youe Ree Kim, ChungSub Lee, Ji Eon Kim, Chang-Won Jeong, and Kwon-Ha Yoon on the publication of "Development and validation of a management system and dataset quality assessment tool for the **Radiology Common Data Model** (R CDM): A case study in liver disease" in the International Journal of Medical Informatics.

International Journal of Medical Informatics 162 (2022) 104759



Contents lists available at ScienceDirect

#### International Journal of Medical Informatics



journal homepage: www.elsevier.com/locate/ijmedinf

Development and validation of a management system and dataset quality assessment tool for the Radiology Common Data Model (R\_CDM): A case study in liver disease

Tae-Hoon Kim <sup>a,1</sup>, SiHyeong Noh <sup>a,1</sup>, Youe Ree Kim <sup>b</sup>, ChungSub Lee <sup>a</sup>, Ji Eon Kim <sup>a</sup>, Chang-Won Jeong <sup>a,\*</sup>, Kwon-Ha Yoon <sup>a,b,\*</sup>

<sup>a</sup> Medical Convergence Research Center, Wonkwang University, Iksan 54538, Republic of Korea

ARTICLE INFO

Keywurds: Chronic liver disease (CLD) Metadata Radiology\_common data model (R\_CDM)

#### ABSTRACT

Background: The Observational Medical Outcomes Partnership—Common Data Model (OMOP-CDM), a distributed research network, has low clinical data coverage. Radiological data are valuable, but imaging metadata are often incomplete, and a standardized recording format in the OMOP-CDM is lacking. We developed a web-based management system and data quality assessment (RQA) tool for a radiology\_CDM (R\_CDM) and evaluated the feasibility of clinically applying this dataset.

Methods: We designed an R\_CDM with Radiology\_Occurrence and Radiology\_Image tables. This was seamlessly linked to the OMOP-CDM clinical data. We adopted the standardized terminology using the RadLex playbook and mapped 5,753 radiology protocol terms to the OMOP vocabulary. An extract, transform, and load (ETL) process was developed to extract detailed information that was difficult to extract from metadata and to compensate for missing values. Image-based quantification was performed to measure liver surface nodularity (LSN), using customized Wonkwang abdomen and liver total solution (WALTS) software.

Results: On a PACS, 368,333,676 DICOM files (1,001,797 cases) were converted to R\_CDM chronic liver disease (CLD) data (316,596 MR images, 228 cases, 926,753 CT images, 782 cases) and uploaded to a web-based management system. Acquisition date and resolution were extracted accurately, but other information, such as "contrast administration status" and "photography direction", could not be extracted from the metadata. Using WALTS, 9,609 pre-contrast axial-plane abdominal MR images (197 CLD cases) were assigned LSN scores by METAVIR fibrosis grades, which differed significantly by ANOVA (p < 0.001). The mean RQA score (83.5) indicated good quality.

Conclusion: This study developed a web-based system for management of the R\_CDM dataset, RQA tool, and constructed a CLD R\_CDM dataset, with good quality for clinical application. Our management system and R\_CDM CLD dataset would be useful for multicentric and image-based quantification researches.



Department of Radiology, Wonkwang University School of Medicine and Wonkwang University Hospital, Iksan 54538, Republic of Korea



#### **OHDSI Shoutouts!**



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

Have a study published? Please send to <a href="mailto:sachson@ohdsi.org">sachson@ohdsi.org</a> 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	12 pm	Common Data Model Vocabulary Subgroup
Tuesday	3 pm	OMOP CDM Outreach/Research Subgroup
Wednesday	10 am	FHIR and OMOP Digital Quality Measurements Subgroup (ZOOM)
Wednesday	2 pm	Natural Language Processing
Wednesday	12 pm	FHIR and OMOP Terminologies Subgroup (ZOOM)
Thursday	12 pm	FHIR and OMOP Oncology Subgroup
Thursday	1 pm	OMOP CDM Oncology Vocabulary Subgroup
Thursday	6 pm	FHIR and OMOP Terminologies Subgroup (ZOOM)
Friday	9 am	GIS – Geographic Information System Development
Friday	10:30 am	Clinical Trials
Friday	11:30 am	Steering Group

www.ohdsi.org/upcoming-working-group-calls





## **Get Access To Different Teams/WGs/Chapters**



OHDSI has established an international network of researchers and observational health databases with a central coordinating center

through large-scale analytics. All our solutions

The 2021 OHDSI Global Symposium featured plenary presentations on OHDSI's Impact on the COVID-19 Pandemic, as well as on the Journey to Reliable Evidence. The main days included the State of the Community Presentation, the Collaborator Showcase, and a memorable Closing Ceremony that focused on OHDSI's work through the perspective of a patient.

There were also a pair of full-day activities,

ATLAS	
Clinical Trials	Psychiatry
	Registry (formerly UK Biobank)
Common Data Model	Surgery and Perioperative Medicine
Data Quality Dashboard Development	☐ Vaccine Evidence
Early-stage Researchers	☐ Vaccine Vocabulary
Education Work Group	
FHIR and OMOP	6. Select the chapter(s) you want to join
Geographic Information System (GIS)	Africa
HADES Health Analytics Data-to-Evidence Suite	Australia
Healthcare Systems Interest Group (formerly EHR)	China
Health Equity	Europe
Latin America	Japan
Medical Devices	☐ Korea
Medical Imaging	Singapore
Natural Language Processing	☐ Taiwan
OHDSI APAC	
OHDSI APAC Steering Committee	7. Select the studies you want to join
OHDSI Steering Committee	HERA-Health Equity Research Assessment
Oncology	☐ PIONEER for Prostate Cancer (study-a-thon ended)
Open-source Community	SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses)
Phenotype Development and Evaluation	

are open-source.

harrand at Calumbia I Iniversity





### **Get Access To Different Teams/WGs/Chapters**



Select the workgroups you want to join (you can refo www.ohdsi.org/web/wiki/doku.php?id=projects:over	
ATLAS	
Clinical Trials	Psychiatry
Common Data Model	Registry (formerly UK Biobank)
	Surgery and Perioperative Medicine
Data Quality Dashboard Development	☐ Vaccine Evidence
Early-stage Researchers	☐ Vaccine Vocabulary
Education Work Group	
FHIR and OMOP	6. Select the chapter(s) you want to join
Geographic Information System (GIS)	Africa
HADES Health Analytics Data-to-Evidence Suite	Australia
Healthcare Systems Interest Group (formerly EHR)	China
Health Equity	☐ Europe
Latin America	Japan
Medical Devices	☐ Korea
Medical Imaging	Singapore
Natural Language Processing	Taiwan
OHDSI APAC	7. Select the studies you want to join
OHDSI APAC Steering Committee	HERA-Health Equity Research Assessment
OHDSI Steering Committee	☐ PIONEER for Prostate Cancer (study-a-thon ended)
Oncology	SCYLLA (SARS-Cov-2 Large-scale Longitudinal Analyses)
Open-source Community	
Phenotype Development and Evaluation	
Population-Level Effect Estimation / Patient-Level Prediction	1





## **OHDSI Dev Con**

April 22, 2022 (8 am - 12 pm)



The Open-Source Community is hosting the first **Dev Con** as a way of accepting and mentoring new contributors to our environment. We are planning multiple workshops, talks and a panel discussion to both welcome and engage both current and future developers within OHDSI.

Don't miss this opportunity! Use the link at the bottom to register!

Time	Topic
8 am	Open-Source Workshops
10 am	State of the OHDSI Community (Paul Nagy, Adam Black)
10:20 am	Keynote – Grand Vision for OHDSI Software Ecosystem (Martijn Schuemie)
11 am	Industry Panel Discussion (How Do/Should We Connect It All Together?)

bit.ly/OHDSIDev22

#### Are You Interested In ...

- participating with an OHDSI project team?
- seeing 'under the hood' of the OHDSI engine?
- being mentored by professional developers?

**Use This Link To Register Today!** 





# **DevCon Agenda**

Time (ET)	Track 1	Track 2	
8 am	ATLAS (Anthony Sena)	HADES Introduction (Adam Black)	
8:30 am	WebAPI (Anthony Sena)	CohortDiagnostics (James Gilbert)	
9 am	White Rabbit/Rabbit In A Hat (Maxim Moinat)	Patient-Level Prediction (Jenna Reps)	
9:30 am	Data Quality Dashboard (Clair Blacketer)	Cyclops (Marc Suchard)	
10 am	State of OHDSI Development (Adam Black and Paul Nagy)		
10:20 am	Keynote (Martijn Schuemie)		
11 am	Panel Discussion (Putting The Pieces Together)  Lee Evans - Broadsea (OHDSI)  Cory Stevenson - OHDSI on Azure (Microsoft)  James Wiggins — OHDSI on AWS (Amazon)  Vivian Neilley - OHDSI on Google Cloud		





# 2022 OHDSI Symposium

#### **Registration is OPEN for #OHDSI2022!**

The 2022 OHDSI Symposium will be held Oct. 14-16 at the **Bethesda North Marriott Hotel** & Conference Center.

















#### **An Introductory Journey From Data To Evidence**

OHDSI2022 Tutorial • Saturday, Oct. 15 • Bethesda, Md.



The OHDSI Journey: Where Are We Going?

**Patrick Ryan** 



Creating Cohort Definitions

**Asieh Golozar** 



**Estimation** 

**Martijn Schuemie** 



OMOP Common Data Model and Vocabulary

**Clair Blacketer** 



**Phenotype Evaluations** 

**Gowtham Rao** 



**Prediction** 

Jenna Reps



ETL – A Source Database Into OMOP CDM

**Melanie Philofsky** 



Characterization

**Kristin Kostka** 



The OHDSI Journey: Where Do We Go From Here?

**George Hripcsak** 





#### **Next CBER Best Seminar**

Topic

CBER BEST Seminar Series - Addressing Selection and Confounding Bias in Test-Negative Study Designs for Flu and COVID-19 Monitoring

Description: The test-negative design (TND) has become a standard approach to evaluate vaccine effectiveness against the risk of acquiring infectious diseases such as Influenza, Rotavirus, Dengue fever and more recently COVID-19 in real world settings. Despite the TND's potential to reduce unobserved differences in healthcare seeking behavior (HSB) between vaccinated and unvaccinated subjects, substantial variability in unobserved HSB may remain among study participants. As latent HSB is likely also a strong predictor of selection into the TND sample, confounding bias of the vaccine's causal effect by latent HSB may be induced by collider stratification bias resulting from the TND.

#### **Speakers**



Dr. Eric Tchetgen Tchetgen

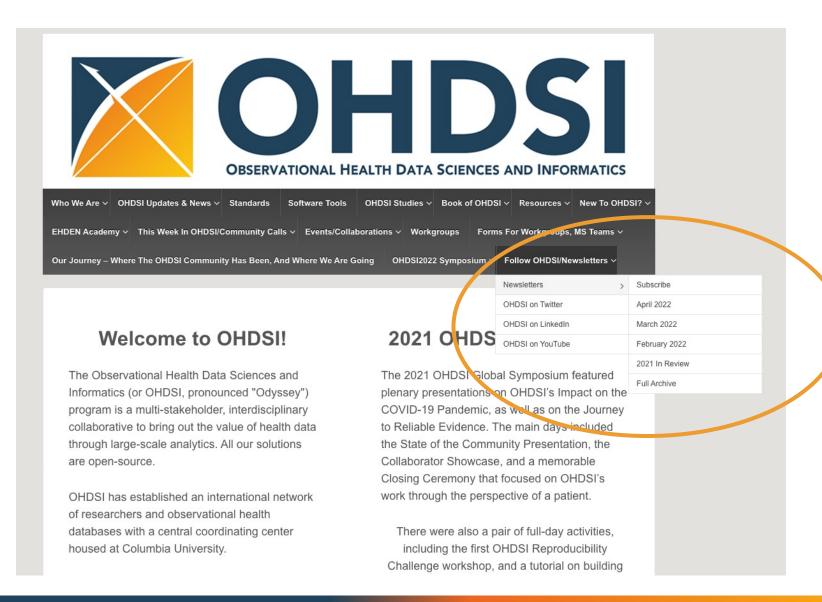
Luddy Family President's Distinguished Professor @Wharton School of the University of Pennsylvania

Eric J. Tchetgen Tchetgen is the Luddy Family President's
Distinguished Professor at the Wharton School of the University of
Pennsylvania. Professor Tchetgen Tchetgen comes to the University of
Pennsylvania from Harvard University, where he has served since
2008 as Professor of Biostatistics and Epidemiologic Methods with
joint appointments in the departments of Biostatistics and
Epidemiology at the T.H. Chan School of Public Health. He researches
infectious diseases, including HIV/AIDS, and the role of genetic and
social factors in the patterns, causes, and effects of public health.
Professor Tchetgen Tchetgen has received grants from the National
Institutes of Health and the Centers for Disease Control. He
completed his Ph.D. in Biostatistics at Harvard University in 2006
under the supervision of Professor James M. Robins. He received his
B.S. in Electrical Engineering from Yale University in 1999.

Wed., April 27, 11 am ET



#### **Latest OHDSI Newsletter Is Out**







# 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?









**Denys Kaduk** 



