



# 10-Minute Tutorials

OHDSI Community Call  
May 14, 2024 • 11 am ET



# Upcoming Community Calls

Date	Topic
May 14	10-Minute Tutorials
May 21	Open Studies in the OHDSI Community
May 28	Collaborator Showcase Brainstorm
June 4	<b>NO CALL – EUROPEAN SYMPOSIUM</b>
June 11	European Symposium Review
June 18	Application of LLMs In Evidence Generation Process
June 25	Recent OHDSI Publications



# 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	Generative AI and Analytics
Tuesday	6 pm	Eyecare & Vision Research
Wednesday	7 am	Medical Imaging
Wednesday	3 pm	Joint Vulcan/OHDSI Meeting
Thursday	8 am	India Community Call
Thursday	9 am	Medical Devices
Thursday	9 am	OMOP CDM Oncology Vocabulary/Development Subgroup
Thursday	10 am	Rehabilitation
Thursday	12 pm	HADES
Thursday	7 pm	Dentistry
Friday	10 am	GIS-Geographic Information System
Friday	11:30 am	Steering Group
Monday	9 am	Vaccine Vocabulary
Monday	10 am	Healthcare Systems Interest Group
Monday	11 am	Data Bricks User Group
Monday	2 pm	Electronic Animal Health Records





# Next CBER Best Seminar: May 22

**Topic:** Reliability in Observational Research:  
Assessing Covariate Imbalance in Small  
Studies

**Presenter:** George Hripcsak, Vivian Beaumont  
Allen Professor of Biomedical Informatics,  
Columbia University

**Logistics:** 11 am – 12 pm EST, Zoom webinar



[ohdsi.org/cber-best-seminar-series](https://ohdsi.org/cber-best-seminar-series)



# Kheiron Cohort Application Is Open

The Kheiron Cohort, now in its third year, is a program designed to onboard new contributors into OHDSI and empower them to become active contributors and maintainers.

## Career Development

- training opportunities within the cohort from OHDSI technical leaders
- interaction and mentoring from OHDSI leadership



Applications are due June 1



# Announcing the Maternal Health Data Science Fellowship

## Career Development



- Create evidence from real-world data
- Leverage standard data models for reproducible research
- Build skills on effective network studies

## Practice



- Design effective observational research protocols
- Master OHDSI tools
- Write papers & grants

## Networking



- Build relationships with mentors & fellow learners
- Coordinate with colleagues in the OHDSI data network, spanning 450 sites worldwide & 960 million unique patients

Want to build  
your career?

Generate  
reproducible  
evidence by leading  
multi-institutional  
studies!

**Application deadline  
extended to Wednesday,  
May 22, 2024**



Find out more and apply here  
by May 15th, 2024 !



# Top 10 Reasons to Apply for the Maternal Health Data Science Fellowship

1. If you want to make an impact on a major public health issue that's complex to address
2. If you want to catalyze your career in maternal health research
3. If you want to learn how to conduct inter-institutional network studies
4. If you want to lead a publication on evidence generated via an OHDSI Network Study
5. If you want to be part of an active data network to create evidence at scale
6. If you want to become a leader in the OHDSI Community
7. If you want to learn how to do reproducible research
8. If you want personal career mentoring on publishing, writing grants, and research
9. If you want to learn team science
10. If you want to learn how to create validated cohorts



# The Center for Advanced Healthcare Research Informatics (CAHRI) at Tufts Medicine welcomes:

Peter Robinson, MD



*Alexander von Humboldt Professor for AI  
Berlin Institute of Health @ Charité*

‘The GA4GH Phenopacket Schema: A Standard for Computable Case Reports to Support Translational Genomic Research and Clinical Decision Support Software’

May 30, 2024, 11am-12pm EST

Virtually via [Zoom](#)

Please contact Marty Alvarez at [malvarez2@tuftsmedicalcenter.org](mailto:malvarez2@tuftsmedicalcenter.org) for calendar invite or questions.

**Tufts**Medicine  
Tufts Medical Center





# OHDSI Europe Symposium

Registration is OPEN for the **2024 OHDSI Europe Symposium**, which will be held June 1-3 in Rotterdam, Netherlands.

**June 1** – tutorial/workshop  
**June 2** – tutorial/workshop  
**June 3** – main conference



[ohdsi-europe.org](https://ohdsi-europe.org)



# #OHDSI2024 Registration Is Open!

Registration is now OPEN for the 2024 OHDSI Global Symposium, which will be held Oct. 22-24 at the Hyatt Regency Hotel in New Brunswick, N.J., USA.

**Tuesday:** Tutorials

**Wednesday:** Plenary/Showcase

**Thursday:** Workgroup Activities



[ohdsi.org/OHDSI2024](https://ohdsi.org/OHDSI2024)





# #OHDSI2024 Collaborator Showcase

Submissions are now being accepted for the 2024 Global Symposium Collaborator Showcase.

**All submissions are due by 8 pm ET on Friday, June 21.**

Notification of acceptance will be made by Tuesday, Aug. 20.



[ohdsi.org/OHDSI2024](https://ohdsi.org/OHDSI2024)







# #OHDSISocialShowcase This Week

## TUESDAY

# Examining differential measurement error due to race, age, and sex in mental health disorders using PheValuator

(Joel Swerdel, Dmytro Dymshyts)

Presenter: Joel Swerdel

### BACKGROUND

- Misclassification of health condition status is a serious threat to validity in research involving observational data from insurance administrative claims data.
- The problem would be exacerbated if there was differential misclassification between population subgroups.
- For example, is the degree of misclassification the same for older vs. younger subjects when examining mental health conditions, such as bipolar disease.
- PheValuator is a methodology within the OHDSI toolstack that uses diagnostic predictive modeling to determine the probability that a subject has a specific health outcome during a specified period of time.(1)
- It was designed to evaluate the performance characteristics, i.e., sensitivity, specificity, and positive and negative predictive value, of phenotype algorithms in observational data.
- The objective of this study was to use the results from PheValuator to estimate subpopulation differences between phenotype algorithm sensitivity and positive predictive value (PPV) across a set of mental health disorders. Populations were subgrouped by race, sex, and age.

### METHODS

- We developed phenotype algorithms for eight mental health disorders: anxiety disorder, attention deficit hyperactivity disorder (ADHD), autism, bipolar disorder, depression, post-traumatic stress disorder (PTSD), schizoaffective disorder, and schizophrenia.
- We examined these conditions in three databases which include subjects of all ages: IBM® MarketScan® Multi-State Medicaid Database (MDCD), Optum's Clinformatics® Data Mart (SES), and Optum's Longitudinal EHR repository (EHR).
- We stratified the subjects in the analysis by sex; race, Black and White; and age, 65 years old (YO) and younger and 66 YO and older.
- We used PheValuator (V2.2.6) for the analyses.
- We developed algorithms for each condition using an empirical process previously documented involving the use of the standard OHDSI tools ATLAS, CohortDiagnostics, PHOEBE, and PheValuator.

We estimated and compared:

**Sensitivity** = true positives/(true positives + false negatives)

**PPV** = true positives/(true positives + false positives)

for each condition across the three databases.

## Examining differential measurement error due to race, age, and sex in mental health disorders using PheValuator.

## Researchers may introduce bias into their mental health research if they assume non-differential misclassification by sex, age, or race.

**Males: higher sensitivity estimates for:**

- ADHD
- Autism
- Schizophrenia
- Schizoaffective disorder

**Blacks: higher sensitivity estimates for:**

- Schizophrenia
- Schizoaffective disorder

**Younger Subjects: higher sensitivity estimates for:**

- Autism
- Bipolar disease
- PTSD
- Schizophrenia
- Schizoaffective disorder

**Females: higher sensitivity estimates for:**

- Anxiety
- Bipolar disorder
- Depression
- PTSD

**Whites: higher sensitivity estimates for:**

- Anxiety
- Bipolar disorder
- Depression



### RESULTS

- By Sex:** We found higher estimates for sensitivity for female subjects compared to male subjects for anxiety, bipolar, depression, and PTSD as shown by the positive values in each graph. We found lower estimates for sensitivity for female subjects compared to male subjects for ADHD, autism, schizoaffective disorder, and schizophrenia as shown by the negative values in each graph.
- By Race:** We found large differences in sensitivity estimates for schizoaffective disorder and schizophrenia between Blacks and Whites where the sensitivity for Blacks was higher than that for Whites. We found consistently lower sensitivity estimates for Blacks compared to Whites for anxiety, bipolar disorder, and depression.
- By Age:** We found that in five of the disorders, autism, bipolar disorder, PTSD, schizoaffective disorder, and schizophrenia, the estimates for sensitivity were much lower in the older age group than the younger age group.
- PPV:** The differences were much smaller for PPV estimates between the groups compared to the sensitivity estimate differences for race and sex. The differences were larger when comparing age differences.

### CONCLUSIONS

- In this study we examined differences in the performance characteristics, sensitivity and PPV, for phenotype algorithms for eight mental health disorders for subgroup populations divided by race, sex, and age.
- We found large differences in sensitivity estimates for many of the conditions in each of the subgroups.
- The results from this study parallel findings in previous research examining sex, race, and age disparities in diagnosis and treatment of different mental health disorders. For example:
  - Hull et al suggest that females are underdiagnosed for autism compared to males possibly due to the expression of autism in females that do not meet diagnostic criteria [2]. In our estimates the sensitivity of the autism algorithm was significantly lower for females indicating that the number of false negatives, i.e., missing diagnosis codes for autism, was higher in females than males.
  - van Nieuwerk and colleagues report that autism disorder is underdiagnosed in the older population especially those presenting with comorbid psychiatric disorders [3]. In our current study, we find lower sensitivity for autism in those over age 65.
  - Vanderrinden and Esala found that females were more likely diagnosed with anxiety disorder compared to males as were Whites compared to Blacks [4]. This is similar to our findings of higher sensitivity, i.e., fewer missed diagnoses, for females compared to males as well as lower sensitivity in Blacks compared to Whites.
- Future research should be conducted to determine how these differences may affect study results such as those from drug comparative effectiveness analyses.

### REFERENCES

1. Swerdel JN, Higgins D, Sun PB. PheValuator: Development and evaluation of a phenotype algorithm evaluator. *Journal of Biomedical Informatics*. 2016;59:103-110.
2. Hull J, et al. Sex differences in the prevalence of autism spectrum disorder: A meta-analysis. *Journal of Autism and Developmental Disorders*. 2016;46:103-110.
3. Vanderrinden L, Esala L. Bipolar Disorder, Race and Gender. *Frontiers in Psychiatry*. 2016;7:111-20.
4. van Nieuwerk M, et al. Underdiagnosis of Autism Spectrum Disorder in Older Adults. *Journal of Autism and Developmental Disorders*. 2012;42:170-176.

Joel N. Swerdel<sup>1,2</sup> and Dmytro Dymshyts<sup>1,2</sup>  
<sup>1</sup> Cleveland Health Data Analytics, Cleveland, Ohio, USA  
<sup>2</sup> Cleveland Health Data Analytics and Informatics, New York, NY, USA



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# #OHDSISocialShowcase This Week

## WEDNESDAY

# Treatment pattern of osteoporosis in postmenopausal women using OMOP CDM

(Dachung Boo, Seungjin Baek, Namki Hong, Yumie Rhee, Seng Chan You)

### Treatment pattern of osteoporosis in postmenopausal women using OMOP CDM : a multi-center study

PRESENTER: Dachung Boo

#### INTRODUCTION

- The prevention and treatment of osteoporosis, which causes bones to become weak and easily fractured, is crucial to mortality and quality of life in the older.
- There are mainly two types of osteoporosis medications: antiresorptives including Antiresorptive agents include selective estrogen receptor modulators (SERMs), bisphosphonates (BPs), and denosumab; osteogenesis promoters such as recombinant human parathyroid hormone 1-34 (rhPTH); and the dual-action agent, romosozumab.
- Denosumab, a novel anti-osteoporosis drug, is known to provide better adherence than BPs. However, changes in routine clinical practice remains elusive.

#### OBJECTIVE

- This study aimed to evaluate changes in the treatment patterns of osteoporosis treatment in postmenopausal women over the past decade following the approval (2017) and insurance coverage (2019) of denosumab, a novel anti-osteoporosis drug.
- The effectiveness of denosumab and BPs was compared to estimate osteoporotic fracture risk according to treatment change.

#### METHODS

- This study used 3 OMOP-CDM databases from Severance Hospital, Inha University Hospital and Korea University Anam Hospital.

#### Treatment Pathways

- The population of interest includes: 1) 50+ women and 2) patients diagnosed with osteoporosis between 2012 and 2021.
- To account for the approval and insurance coverage of denosumab, patients were divided into three groups based on their diagnoses: 2012-2017, 2017-2018, 2019-2021.
- Medication was defined that a group patients receiving SERM, BPs (dose type, PO or IV), denosumab, rhPTH, and romosozumab after the first diagnosis of osteoporosis as each.

## This is preliminary result. Treatment Pathways has changed since the introduction of novel drug (Denosumab) on the Korean market.



Take a picture to link to the Study Repository (Github)



Take a picture to link to the Shiny viewer

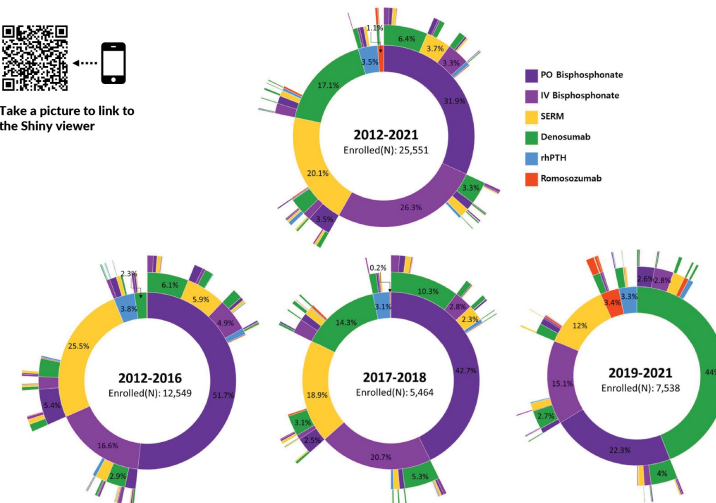


Figure 1. Treatment pathways for all cohorts. The inner circle shows the first medication the patient was prescribed, the second circle shows the second medication, and so on.

Table 1. Comparative risk of osteoporotic fracture between first line user of denosumab versus bisphosphonate

	Denosumab			Bisphosphonate (IV)			HR (95% CI)
	Patients	Events	IR (1,000 PY)	Patients	Events	IR (1,000 PY)	
2-year risk	448	21	31.45	448	27	40.72	0.77 (0.43-1.36)
On-treatment	232	9	27.88	232	9	34.46	0.83 (0.32-2.13)

Table 2. Subgroup analyses for 2-year risk of osteoporotic fracture events by dose type of bisphosphonate

	Denosumab, No. of events/total NO.	Bisphosphonate, No. of events/total NO.	HR (95% CI)
Dose type of BPs			
PO BPs	29/958	16/958	1.77 (0.98-3.34)
IV BPs	21/448	27/448	0.77 (0.43-1.36)

#### METHODS(Cont.)

#### Comparative Effect Estimation

- Patients aged over 50 years who were new users of denosumab or BPs as first treatment for osteoporosis.
- The primary outcome was the 2-year risk of osteoporotic fractures.
- After the 1:1 propensity score (PS) matching, the association of exposure with outcome was estimated by Cox proportional hazard regression models.
- We set up one more time-at-risk window for sensitivity analysis.
- Subgroup analyses were performed by dose type of BPs (PO or IV).

#### RESULTS

- This is preliminary research. Total 25,551 postmenopausal women with osteoporosis were treated with osteoporosis medications.
- BPs were the most used medication (68.3%) in 2012-2016 but with gradual increase of denosumab use and decrease of BPs use, denosumab became the most common medication (44%) in 2019-2021. (Figure1)
- The most common second-line medication after BPs was denosumab, while the most common second-line medication after denosumab was oral BPs.
- A total of 3,737 user of denosumab and 14,792 user of BPs were included.
- The risk of osteoporotic fracture in denosumab was no significant difference than BPs. The results were consistent across sensitivity analyses. (Table1 & 2)

#### CONCLUSION

- Our study of postmenopausal women with osteoporosis revealed a shift in the sequential use of medications since the approval of denosumab, with a gradual increase in its use both as first-line and second-line.
- There was no difference in risk of osteoporotic fracture between the first line user of denosumab and BPs.
- In future research, we aim to investigate the global trends in anti-osteoporosis medications.

Dachung Boo, Seungjin Baek, Seong Hee Ahn, Kyoung Jin Kim, Namki Hong, Yumie Rhee, Seng Chan You







# #OHDSISocialShowcase This Week

## THURSDAY

# Unraveling the Mediating Role of Frailty: Understanding Health Care Utilization among Older Sexual and Gender Minority Adults in the All of Us Research Program

(**Chelsea N Wong**, Louisa H Smith, Robert Cavanaugh, Brianne Olivieri-Mui)

**Unraveling the Mediating Role of Frailty: Understanding Health Care Utilization among Older Sexual and Gender Minority Adults in the All of Us Research Program**

PRESENTER: **Chelsea Wong, MD**  
CONTACT: [cnwong@bidmc.harvard.edu](mailto:cnwong@bidmc.harvard.edu)

### INTRO:

- Older sexual and gender minority adults (OSGM) face a higher burden of frailty and mental health conditions
- Frailty is associated with higher health care utilization among the cisgender heterosexual (non-OSGM) adults
- How does frailty impact the association between sexual and gender minority (SGM) status and health care utilization?

### METHODS:

- Data: All of Us Version 6 Controlled Tier
- Participants: Adults ≥ 50 years old
- Survey Questions:
  - SGM self-identified via 3 questions:
    - Sex-assigned-at-birth
    - Sexual Orientation
    - Gender Identity
  - Health care utilization: General doctor and mental health visits in the past year
  - Frailty index: 33 items
- Analysis: Marginal structural model to test whether frailty mediates the association between SGM status and health care utilization (Figure 1)

Figure 1. DAG of Mediation Analysis



DAG for general doctor (PCP) visits in blue (A) and mental health (MH) visits in green (B). Covariates in black, please note general mental health is added as a covariate for the outcome of mental health visits.

## Older sexual and gender minority adults have higher health care utilization regardless of frailty status

Table 2. Results of Marginal Structural Model

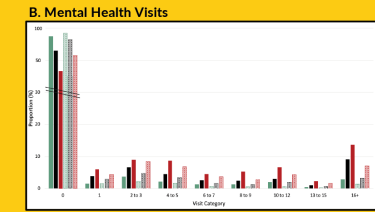
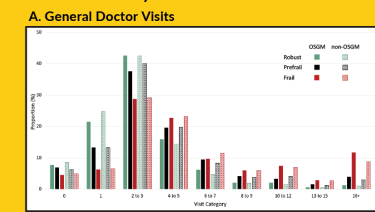
100 Bootstraps	Measure	Estimate	95% CI
<b>General Doctor Visits</b>			
What is the effect SGM status on visits controlling for covariates*	Rte	1.11	1.07, 1.14
What is the effect of SGM status on visits if all were robust?	Rde	1.11	1.06, 1.17
<b>Mental Health Visits</b>			
What is the effect SGM status on visits controlling for covariates**	Rte	1.88	1.70, 2.07
What is the effect of SGM status on visits if all were robust?	Rde	1.73	1.40, 2.24

Rde: Ratio of controlled direct effect; Rte: Ratio of total effect; SGM: sexual and gender minority. \*Baseline covariates: age, race/ethnicity, income. \*\*Time varying covariates: HIV status, marital status, general mental health



Take a picture to download the full paper

Figure 2. Visits by Frailty and Sexual and Gender Minority Status



Self-report (A) general doctor and (B) mental health visit categories in past 12 months by frailty category: Robust (green), Pre frail (black), Frail (red) and sexual and gender minority status: older sexual and gender minority adults (OSGM, n=4,736, solid) and older cisgender heterosexual adults (non-OSGM, n=68,146, dotted). Please note: proportion axis scale is different for each visit type.

### RESULTS:

Table 1. Characteristics of All of Us participants by sexual and gender minority status

Characteristic	OSGM N = 4,736	non-OSGM N = 68,146
Sexual Orientation		
Bisexual	1,218 (26%)	0 (0%)
Gay	1,821 (39%)	0 (0%)
Lesbian	977 (21%)	0 (0%)
Straight	546 (12%)	68,146 (100%)
Gender Identity		
Female	1,991 (42%)	42,194 (62%)
Male	2,456 (52%)	25,952 (38%)
Gender-diverse	217 (4.6%)	0 (0%)
Skip	99 (2.1%)	0 (0%)
Age, mean years (SD)	63 (8)	66 (8)

Figure 3. Frailty by Sexual and Gender Minority Status

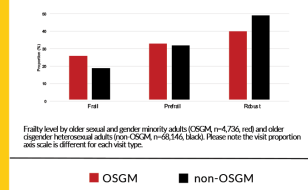
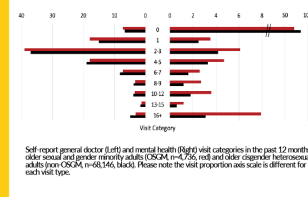


Figure 4. Visits by Sexual and Gender Minority Status



### CONCLUSIONS:

- OSGM had higher health care utilization of general doctor and mental health visits compared to non-OSGM
- OSGM have higher health care utilization regardless of frailty status
- Among OSGM factors other than frailty may influence health care utilization

### NEXT STEPS:

- Assessing agreement in health care utilization measures from survey and electronic health record data

Chelsea N Wong, MD<sup>1,2</sup>, Louisa H Smith, PhD<sup>2,4</sup>, Robert Cavanaugh, PhD<sup>3</sup>, Brianne Olivieri-Mui, PhD<sup>2,3,4</sup>

1. Division of Gerontology, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, USA  
2. Honda and Arthur Marcus Institute for Aging Research, Hebrew SeniorLife, Boston, Massachusetts, USA  
3. Roux Institute, Northeastern University, Portland, ME, USA  
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Support for this work was provided by the National Institutes of Aging of National Institutes of Health under award number T32 AG023480





# #OHDSISocialShowcase This Week

## FRIDAY

# GUSTO Data Vault: Laying the foundations for an open science system with OMOP Data Catalogue

(Cindy Ho, Li Ting Ang, Maisie Ng, Hang Png, Shuen Lin Tan, Estella Ye, Sunil Kumar Raja, Mengling Feng, Johan G Eriksson, Mukkesh Kumar)

**GUSTO Data Vault:**  
*Laying the foundations for an open science system with OMOP Data Catalogue*

PRESENTER: **Cindy Ho, Mukkesh Kumar**

### INTRO:

- Growing Up in Singapore Towards healthy Outcomes (GUSTO) aims to understand how conditions in pregnancy and early childhood influence the subsequent health and development of women and children.
- The A\*STAR/GUSTO Data Vault platform have advanced data exploration capabilities for research data, biospecimens and publications asset management.
- The OMOP Data Catalogue was created in GUSTO Data Vault to showcase the GUSTO data which have been converted into OMOP CDM format.

### METHODS

- Data Vault (containerized web application with Docker) was built using PostgreSQL database and Django.
- Tools used: HTML, CSS, jQuery, Ajax, Python, Plottly Dash, Dashboard engine in Dash Enterprise, AWS Cloud Platform.
- OMOP fields were mapped using Athena and customized R programming scripts.

### RESULTS

- OMOP Data Catalogue makes GUSTO cohort-specific CDM fields to be discovered across the Person, Condition, Observation and Measurement tables by the global research community.
- Metadata is described with relevant attributes such as CDM Field, Concept ID, Name, Subject Type, Visit Timepoint, Description and Domain.
- Data profiling of the OMOP Concept IDs enables GUSTO data to be reused, described, discovered, and identified by researchers (FAIR data principles).
- OMOPed data from incremental OMOP conversions can be seamlessly integrated in OMOP Data Catalogue by GUSTO data curators.
- This enables database level characterizations for GUSTO study.

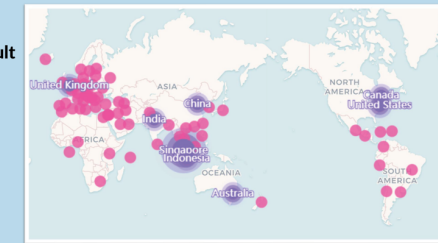
## GUSTO OMOP Data Catalogue lays the foundations for developing cross-study OMOP Data Catalogues expanded across APAC and global OHDSI data partners, enabling database level characterizations.



Scan to visit  
GUSTO Data Vault  
(<https://gustodatavault.sg>)



Scan to  
download the  
abstract

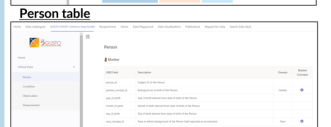


Global Impact of GUSTO Data Vault



Our future work includes the optimization of GUSTO OMOP data conversion journey using advanced OMOP conversion tools such as the IQVIA OMOP Converter.

Snippets of OMOP Data Catalogue Landing Page



Cindy Ho, Li Ting Ang, Maisie Ng, Hang Png, Shuen Lin Tan, Estella Ye, Sunil Kumar Raja, Mengling Feng, Johan G Eriksson, Mukkesh Kumar





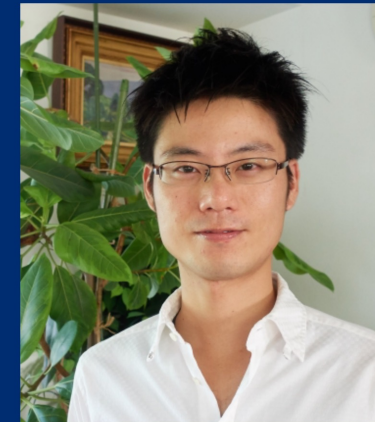
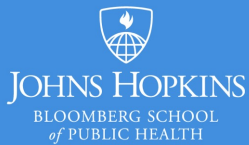
# Openings: Postdoctoral Fellow, Johns Hopkins Univ.

## PHARMACOEPIDEMIOLOGY POST-DOCTORAL TRAINING PROGRAM

**Co-Directors:** Caleb Alexander, MD, MS and Jodi Segal, MD, MPH

The **Pharmacoepidemiology Training Program** at the Johns Hopkins Bloomberg School of Public Health (BSPH) is currently **seeking to support postdoctoral fellows**. All supported trainees work with core faculty on existing or newly developed research projects on pharmacoepidemiology, so as to optimize the safe and effective use of medicines to treat heart, lung and blood diseases in the United States. |

**Deadline for applications: rolling**





# Opening: Junior Research Software Engineer, Tufts



## INFORMATICS

### Research Services

COVID-19 Information and Resources

Data and Safety Monitoring Board (DSMB) Program

Center for Clinical Trials (CCT)

Program Evaluation

Qualitative and Mixed Methods Service

Clinical Trial Design Labs

Dissemination and Implementation (D&I) Core

Science Communications



“Our Informatics team can help you collect and manage research data, develop databases, and identify study participants. We’ll find the best data collection solution for your study. To get started, please submit a request below.”

**William Harvey, MD, MSc, FACR**  
Co-Director, Informatics and Tufts Medical Center CMIO

## Overview

We participate in development of a robust institutional informatics infrastructure, enabling research teams to maintain their focus on scientific discovery and analyses rather than on data wrangling. Our infrastructure and support systems are dynamic, to keep pace with the changing and interdependent fields of health informatics, bioinformatics, statistics, and data science; expandable, to accommodate new data types and analytic methods; and scalable, to support efficient and methodologically rigorous multisite/institution research. These defining traits allow us to elucidate novel methods and operational principles, harmonize datasets, and create pipelines for data sharing and analytics.





# Opening: Research Assistant, University of Oxford



UK date and time: 23-April-2024 15:25

## Applicant Options

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## Job Details

### Research Assistant in Health Data Sciences

**Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Botnar Research Centre, Windmill Road, Oxford, OX3 7LD**

We have an exciting opportunity for a Research Assistant in Health Data Sciences to join the Pharmacology and Device epidemiology research group led by Professor Daniel Prieto-Alhambra at the Botnar Research Centre, NDORMS, University of Oxford. The NDORMS Pharmacology and Device epidemiology research group is involved in a number of national and international studies exploring the conditions of use (adherence, compliance, off and on-label use) of a number of licensed drugs, devices, and vaccines for the prevention and treatment of human disease in 'real world' (routine practice) conditions.

As a Research Assistant in Health Data Sciences you will contribute to the programming of analytical pipelines for the analysis of routinely collected data mapped to the OMOP Common Data Model. You will analyse real world data to address regulatory questions related to the prevalence/incidence of disease, use of medicines/vaccines, and the risks or benefits of medicines/vaccines or devices. You will prepare analytical packages to run a number of pre-specified analyses, contribute to wider project planning, including ideas for new research projects and gather, analyse, and present scientific data from a variety of sources.

You will hold a relevant BA or MSc degree in Mathematics, Engineering, or a related field. Knowledge of medical statistics and experience analysing large datasets, experience in biostatistics and/or health data sciences and experience in the programming of R packages are essential. Experience in propensity scores, overlap weighting, inverse probability weighting and/or similar methods, expertise in pharmacology or vaccine epidemiology and experience of working with electronic medical records/routinely collected data are desirable.

This is a full-time fixed-term appointment for 2 years.

The closing date for this position is 12 noon on 10 May 2024. You will be required to upload a CV and supporting statement as part of your online application.

**Contact Person :** HR Team, NDORMS  
**Contact Phone :**  
**Pay Scale :** STANDARD GRADE 6  
**Salary (£) :** £32,332 - £38,205 p.a

**Vacancy ID :** 172348  
**Closing Date & Time :** 10-May-2024 12:00  
**Contact Email :** [hr@ndorms.ox.ac.uk](mailto:hr@ndorms.ox.ac.uk)





# Where Are We Going?

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





# Three Stages of The Journey

**Where Have We Been?**

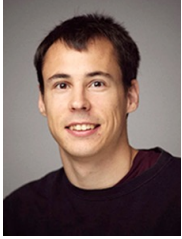
**Where Are We Now?**

**Where Are We Going?**





# May 14: 10-Minute Tutorials



**Martí Català Sabaté**

Medical Statistician/Data Scientist  
University of Oxford

Drug Utilization



**Kim López Güell**

Dphil Student  
University of Oxford

Cohort Survival



**Maarten van Kessel**

Software Developer  
Erasmus MC

Treatment Patterns



**Louisa Smith**

Assistant Professor  
Northeastern University

All of Us Research





**The weekly OHDSI community call is held every Tuesday at 11 am ET.**

**Everybody is invited!**

**Links are sent out weekly and available at:**  
**[ohdsi.org/community-calls](https://ohdsi.org/community-calls)**