



# Farewell, 2023!

**OHDSI Community Call**  
**Dec. 19, 2023 • 11 am ET**



# Upcoming Community Calls

Date	Topic
Dec. 19	Holiday-Themed Goodbye to 2023!
Dec. 26	No Call
Jan. 2	No Call
Jan. 9	Welcome Back! What Can OHDSI Accomplish in 2024?
Jan. 16	Connections For Collaborations
Jan. 23	2023 UK Study-A-Thon Lessons Learned
Jan. 30	Phenotype Phebruary Introduction



# 2023 Community Calls

**Thank You** to the **113** people who participated in community calls this year:

Boudewijn Aasman, **Atif Adam**, Thamir Alshammary, **Arya Aminorroaya**, Faaizah Arshad, **Cesar Barboza**, Daniel Beachler, **Adam Black**, Clair Blacketer, **Jack Brewster**, Fan Bu, Ed Burn, **Cindy Cai**, Alison Callahan, **Tiffany Callahan**, Yong Chen, **Catherine Cohet**, Alexander Davydov, **Lovedeep Dhingra**, Paul Dougall, **Talita Duarte-Salles**, Dmitry Dymshyts, **Clark Evans**, Lee Evans, **Mengling 'Mornin' Feng**, Davera Gabriel, **Sarah Gasman**, Jamie Gilbert, **Jake Gillberg**, Hugh Glover, **Kerry Goetz**, Ismail Gogenur, **Asieh Golozar**, Mike Hamidi, **Ben Hamlin**, Jill Hardin, **Oliver He**, Tatsuo Hiramatsu, **Cindy Ho**, Stephanie Hong, **Jared Houghtaling**, Michelle Hribar, **George Hripcsak**, Jason Hsu, **Nigel Hughes**, Jack Janetzki, **Michael Kallfelz**, Vipina Keloth, **Chungsoo Kim**, Sylvia Kiwuwa-Muyingo, **Robert Koski**, Christopher Knoll, **Jenny Lane**, Laurence Lawrence-Archer, **Peter Leese**, Harold Lehmann, **Xintong Li**, Asiyah Lin, **Lei Liu**, Kim López Guell, **Renske Los**, Hao Luo, **Craig Mayer**, Jody-Ann McLeggon, **Evan Minty**, Maxim Moinat, **Daniel Morales**, Paul Nagy, **Niklas Nóren**, Anna Ostropolets, **Chao Pang**, Tina Parciak, **Yuan Peng**, Melanie Philofsky, **Luis Pinheiro**, Albert Prats-Urbe, **Nicole Pratt**, Daniel Prieto-Alhambra, **Jose Posada**, Gowtham Rao, **Berta Raventós**, Alexander Rekkas, **Christian Reich**, Peter Reinbeek, **Jenna Reps**, Patrick Ryan, **Craig Sachson**, Katy Sadowski, **Martijn Schuemie**, Sarah Seager, **Anthony Sena**, Azza Shoaibi, **Louisa Smith**, Andrey Soares, **Gyeol Song**, Marc Suchard, **Cynthia Sung**, Jiayi (Jessie) Tong, **Michael van Campen**, Mui Van Zandt, **Katia Verhamme**, Erica Voss, **Jeff Weaver**, Jamie Weaver, **Nick Williams**, DuWayne Willett, **Qiong Wu**, Junqing (Frank) Xie, **Hua Xu**, Zenas Yiu, **Yue Yu**, Oleg Zhuk, **Kyle Zollo-Venecek**



# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# OHDSI Shoutouts!



Congratulations to the team of **Romina Blasini, Kornelia Marta Buchowicz, Henning Schneider, Birgit Samans, and Keywan Sohrabi** on the publication of **Implementation of inclusion and exclusion criteria in clinical studies in OHDSI ATLAS software** in *Scientific Reports*.

[www.nature.com/scientificreports](https://www.nature.com/scientificreports)

**scientific** reports

Check for updates

OPEN **Implementation of inclusion and exclusion criteria in clinical studies in OHDSI ATLAS software**

Romina Blasini<sup>1,3</sup>, Kornelia Marta Buchowicz<sup>1,2</sup>, Henning Schneider<sup>1,2</sup>, Birgit Samans<sup>2</sup> & Keywan Sohrabi<sup>1,2</sup>

Clinical trials are essential parts of a medical study process, but studies are often cancelled due to a lack of participants. Clinical Trial Recruitment Support Systems are systems that help to increase the number of participants by seeking more suitable subjects. The software ATLAS (developed by Observational Health Data Sciences and Informatics) can support the launch of a clinical trial by building cohorts of patients who fulfill certain criteria. The correct use of medical classification systems aiming at clearly defined inclusion and exclusion criteria in the studies is an important pillar of this software. The aim of this investigation was to determine whether ATLAS can be used in a Clinical Trial Recruitment Support System to portray the eligibility criteria of clinical studies. Our analysis considered the number of criteria feasible for integration with ATLAS and identified its strengths and weaknesses. Additionally, we investigated whether nonrepresentable criteria were associated with the utilized terminology systems. We analyzed ATLAS using 223 objective eligibility criteria from 30 randomly selected trials conducted in the last 10 years. In the next step, we selected appropriate ICD, OPS, LOINC, or ATC codes to feed the software. We classified each criterion and study based on its implementation capability in the software, ensuring a clear and logical progression of information. Based on our observations, 51% of the analyzed inclusion criteria were fully implemented in ATLAS. Within our selected example set, 10% of the studies were classified as fully portrayable, and 73% were portrayed to some extent. Additionally, we conducted an evaluation of the software regarding its technical limitations and interaction with medical classification systems. To improve and expand the scope of criteria within a cohort definition in a practical setting, it is recommended to work closely with personnel involved in the study to define the criteria precisely and to carefully select terminology systems. The chosen criteria should be combined according to the specific setting. Additional work is needed to specify the significance and amount of the extracted criteria.



# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**







# OHDSI releases: ATLAS/WebAPI 2.14.0

## Atlas / WebAPI 2.14.0 Released

■ General



Chris\_Knoll

8d

We are pleased to announce that the 2.14.0 release of Atlas and WebAPI have been formally released on GitHub. You can find the release notes at the following links:

Atlas: <https://github.com/OHDSI/Atlas/releases/tag/v2.14.0> 5

WebAPI: <https://github.com/OHDSI/WebAPI/releases/tag/v2.14.0> 1

Many thanks to everyone who contributed to this release.

Please see release notes for special instructions related to the new features included in this release.  
Thank you!

1 ❤️ 🔗 ⋮ ↩ Reply





# Strategus Development Update

## Strategus sub-team formation

■ Developers hades



**anthonymsena**

3h

In the HADES Working Group, we've discussed and decided to form a sub-team focused on the design of Strategus software for OHDSI network studies. There has been a lot of discussion of Strategus here on the forums [link](#), in the HADES workgroup, the [Save Our Sisyphus Challenge](#), the 2023 OHDSI Hack-a-thon and of course on the [Strategus GitHub Issue Tracker](#).

Now we'd like to formalize the work around the Strategus project into a sub-team of the HADES Working Group and we want to open this up to developers in the OHDSI community that are interested in collaborating. I have opened a [poll on the HADES Working Group OHDSI Teams Channel](#) to see who is interested in meeting and some options for meeting days/times. Please feel use that link to vote and to join the sub-team! I'm aiming to start this sub-team in January 2024.

(If you don't have access to the OHDSI Teams environment, please see: [OHDSI Workgroups – OHDSI](#) and click the "Join A Workgroup" link)

    Reply





# #OHDSISocialShowcase This Week

## MONDAY

# Development of Medical Imaging Data Standardization for Imaging-Based Observational Research: OMOP Common Data Model Extension

(Woo Yeon Park, Kyulee Jeon, Teri Sippel Schmidt, Haridimos Kondylakis, Seng Chan You, Paul Nagy)

### Development of Medical Imaging Data Standardization for Imaging Based Observational Research: OMOP CDM Extension

PRESENTER: **Woo Yeon (Jen) Park**

#### INTRO:

- The OMOP CDM benefits from representing medical images as imaging findings provide deep knowledge into disease progression and diagnostic evidence.
- This study aims to bridge the gap between imaging research and observational research by integrating image-based measurements into OMOP CDM.

#### METHODS

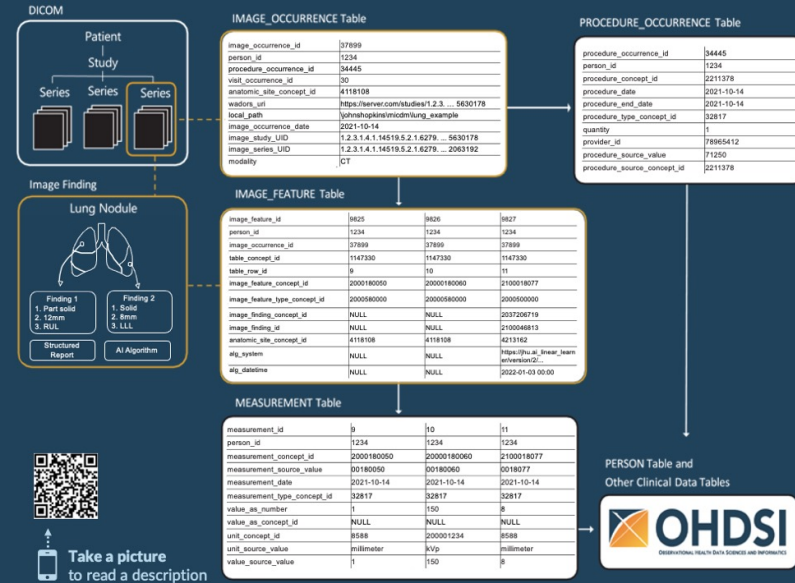
- The research was led by the **Medical Imaging Workgroup**.
- This study proposes **two new tables** to encompass imaging events and features provenance, which can be algorithms or structured reports.
- Compared to **Radiology-CDM** (Park et al., 2020), the proposed model is a) generalized to encompass more specialties, such as pathology and ophthalmology, b) provides linkage of DICOM images, and c) tracks feature provenances.

#### RESULTS

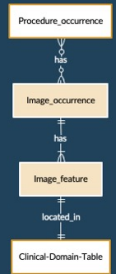
- We have developed two tables, **Image\_occurrence** table and **Image\_feature** table, for standardized representation of complex medical imaging events and features.
- We propose to incorporate widely used imaging vocabularies such as **DICOM** and **RadLex** into OMOP CDM Standard Vocabulary table.

Contact: [wpark11@jhu.edu](mailto:wpark11@jhu.edu)

## Medical Imaging Extension from DICOM to OMOP CDM



	Image_occurrence	Image_feature
<b>Semantics</b>	<b>DICOM</b> (Digital Imaging and Communication in Medicine) <ul style="list-style-type: none"> <li>Properties of image acquisition</li> </ul> <b>SNOMED</b> <ul style="list-style-type: none"> <li>Anatomical Location &amp; Procedures</li> </ul>	<b>RadLex</b> (Radiology Lexicon) <ul style="list-style-type: none"> <li>Radiological Findings absent from SNOMED</li> </ul> <b>SNOMED</b> <ul style="list-style-type: none"> <li>Anatomical Location</li> </ul> <b>LOINC</b> <ul style="list-style-type: none"> <li>Measurements</li> </ul>
<b>Structure</b>	<ol style="list-style-type: none"> <li>Link to the DICOM images at the study or series level</li> <li>Link Procedure_occurrence to Image_occurrence</li> <li>Provide provenance for Image_feature</li> <li>Provide local_path or/and DICOMweb address to retrieve other information stored in DICOM files</li> </ol>	<ol style="list-style-type: none"> <li>Provide provenance from a clinical data table entry of a feature extracted from a medical image</li> <li>Link to Image_occurrence to point to which images were used to create the feature at the study or series level</li> <li>Provide a group to group multiple imaging features</li> <li>Provide provenance of the algorithms and structured reports used to create the image feature</li> </ol>



### Imaging-based Observational Research

- Researchers using EHR data often have access to the disease burden or patient outcomes common in medical records, while imaging researchers can study biomarkers and granular changes in diseases that are provided by medical imaging.
- Digital Imaging and Communication in Medicine (DICOM) is the ubiquitous international standard for medical imaging, and its format allows to store both pixel and metadata of the images.
- Radiology Lexicon (RadLex) is an addendum of the SNOMED-CT vocabulary to include imaging findings used by the radiologist

#### IMAGE\_OCCURRENCE Legends

anatomic_site_concept_id	1110108 refers to entire thorax
wadors_url	DICOMweb URI
local_path	User's local path of the series
image_occurrence_date	{0008,0020} Study Date
image_study_uid	{0020,000D} Study Instance UID
image_series_uid	{0020,000E} Series Instance UID
modality	{0008,0050} Modality

#### IMAGE\_FEATURE Legends

table_concept_id	1147330 refers to the MEASUREMENT table.
image_feature_concept_id	Custom IDs generated based on DICOM tags, e.g., 2000180050 for {0018,0050} Slice Thickness
image_feature_type_concept_id	2000580000 refers to acquisition parameters, 2000500000 refers to algorithms
image_finding_concept_id	2037206719 refers to a node
image_finding_id	2100046813 refers to the node that the feature is describing
anatomic_site_concept_id	4213162 refers to lung structure

Woo Yeon Park, Kyulee Jeon, Teri Sippel Schmidt, Haridimos Kondylakis, Tarik Alkasab, Blake Dewey, Seng Chan You, Paul Nagy





# #OHDSISocialShowcase This Week

## TUESDAY

### A distributed multi-site latent class analysis (dMLCA) algorithm for federated disease subphenotype detection

(Naimin Jing, Xiaokang Liu, Qiong Wu, Suchitra Rao, Asuncion Mejias, Mitchell Maltenfort, Julia Schuchard, Vitaly Lorman, Hanieh Razzaghi, Ryan Webb, Chuan Zhou, Ravi Jhaveri, Grace M. Lee, Nathan M. Pajor, Deepika Thacker, L. Charles Bailey, Christopher B. Forrest, and Yong Chen)

#### A distributed multi-site latent class analysis (dMLCA) algorithm for federated disease subphenotype detection

PRESENTER: Naimin Jing

##### INTRO:

LCA is a parametric model for detecting disease subphenotypes, but its application on distributed multi-site data is unclear due to:

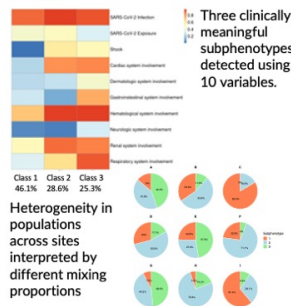
1. Patient-level data cannot be shared.
2. Populations are heterogenous across sites.
3. Divide-and-conquer doesn't apply for unsupervised clustering.

We proposed dMLCA to address this issue.

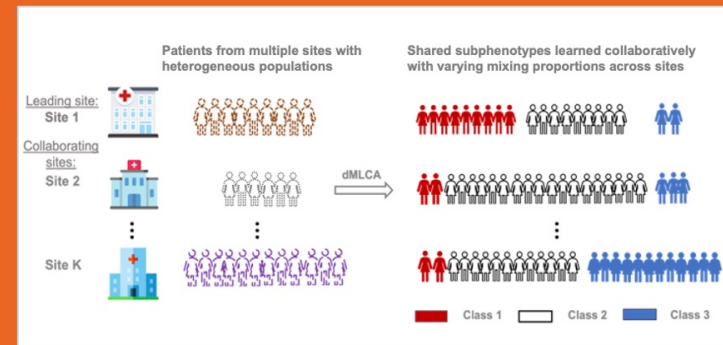
##### METHOD: dMLCA algorithm

- **Input:** Manifest categorical variables Y (and covariates X) for each patient.
- **Model:** based on LCA but allow the mixing proportions of the subphenotypes to vary across sites to handle heterogeneous populations.
- **Estimation:** EM algorithm with 1-step Newton-Raphson updating formula, decomposable by sites so that each site only needs to share aggregated results for part of the formula.
- **Output:** The characteristics of the variables in each subphenotype, the proportion of each subphenotype, individual membership
- **Application:** Detect subphenotypes of MIS-C (a serious sequelae COVID-19 in children) with EHR data of 864 MIS-C patients from 9 PEDSnet institutions (Mar 2020 - Dec 2021).

##### RESULTS



## dMLCA: an effective lossless unsupervised federated learning algorithm based on latent class analysis for detecting disease subphenotypes.



##### FORMULAS

$y = (y_1, y_2, \dots, y_q)$ : manifest variables  
 $C$ : number of subphenotypes (or latent class)  
 $K$ : number of sites  
 $f(y, \pi_c)$ : distribution of  $y$  under class  $c$   
 $\lambda_{k1}, \lambda_{k2}, \dots, \lambda_{kc}$ : prevalence of the classes in site  $k$ . When the patient-level class membership is of interest, dMLCA allows for a regression model  $\lambda_{kc}(x) = \lambda_{kc} + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p$ , where  $x = (x_1, x_2, \dots, x_p)$  are patient-level covariates (e.g., age).

- **Distribution:**  $f_k(y) = \sum_{c=1}^C \lambda_{kc} f(y, \pi_c)$
- **Posterior probability of a patient belonging to a class  $c$ :**  $\theta_c(x) = \lambda_{kc}(x) f(y, \pi_c) / \sum_{c=1}^C \lambda_{kc}(x) f(y, \pi_c)$

##### MORE FOR MIS-C SUBPHENOTYPING

- **Characterize the subphenotypes using more variables:** Calculate variables' prevalence in each latent class through an estimated average weighted by the patients' posterior class membership probabilities
- **Choosing the number of latent classes:** Selected based on model fit criteria including AIC, BIC, adjusted BIC, the interpretability of the latent classes, and clinicians' judgement and expertise.

##### dMLCA vs Estimation using pooled data

- They have the same results as the updating formula in dMLCA is exactly calculated.

##### dMLCA vs Estimation using single-site data

- Compared through simulation studies
- With more sites, estimation errors and their variances decrease.

##### LIMITATION

- Multiple communication rounds among institutions are needed to achieve the optimal result.

##### FUTURE WORKS

- We are now working on making the iterative communications be few-shots and developing an R package based on this version.

Naimin Jing, Xiaokang Liu, Qiong Wu, Suchitra Rao, Asuncion Mejias, Mitchell Maltenfort, Julia Schuchard, Vitaly Lorman, Hanieh Razzaghi, Ryan Webb, Chuan Zhou, Ravi Jhaveri, Grace M. Lee, Nathan M. Pajor, Deepika Thacker, L. Charles Bailey, Christopher B. Forrest, Yong Chen





# #OHDSISocialShowcase This Week

## WEDNESDAY

# Building community, infrastructure, and insights for perinatal and reproductive health research in OHDSI

(Alison Callahan, Stephanie Leonard, Louisa Smith)

**Building community, infrastructure and insights for perinatal and reproductive health research in OHDSI**

TEAM: **Alison Callahan,**  
**Stephanie Leonard, Louisa Smith**

### INTRO

- Childbirth is the number one reason for hospitalizations worldwide, but pregnancy is understudied.
- Pregnant people are systematically excluded from most trials and studies, despite often being in greatest need of effective therapies.
- More than 90% of pregnant patients use at least one medication, yet studies of medication safety and effectiveness during pregnancy using traditional approaches such RCTs are limited due to concerns for fetal safety.

### METHODS

- We founded the Perinatal and Reproductive Health Work Group (PRHeG) in December 2022.
- PRHeG members (Figure 1) have expertise in informatics, data science, maternal-fetal medicine, and perinatal pharmacoepidemiology.
- Our objectives are to: improve capture and representation of pregnancy and reproductive health data in the OMOP CDM, create a network of partners interested in pregnancy and reproductive health research, and launch at least one network study in our first year.

### RESULTS

- PRHeG members at Stanford University have developed ProgressDB, a database of 100,000 pregnancies and 30,000 live births (Figure 2).
- PRHeG members at Janssen R&D have developed an algorithm for linking mothers and infants in two USA commercial healthcare claims databases.
- PRHeG members at IDIAPJGol in Spain, the University of Oslo in Norway, the University of Oxford in England, and the University of Dundee in Scotland have developed a perinatal expansion for the OMOP CDM, and implemented it at two OHDSI sites in Europe.

The Perinatal and Reproductive Health Work Group consists of more than 40 investigators across approximately 20 institutions. PRHeG's purpose is to develop tools and standards for pregnancy and reproductive health data to foster collaborative studies and advance research in the field.

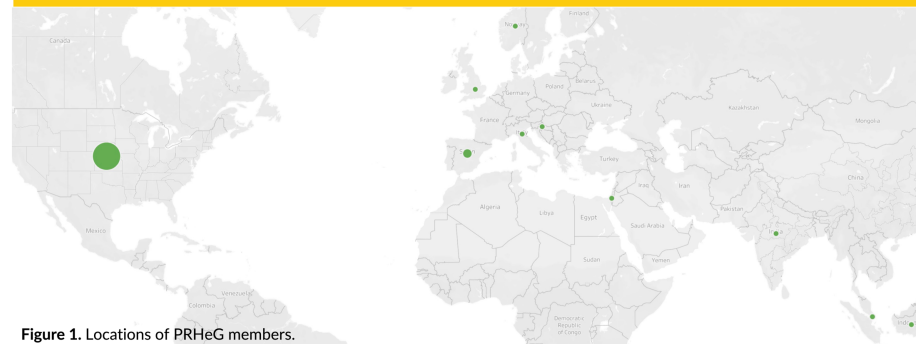
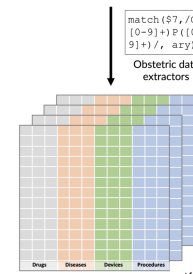
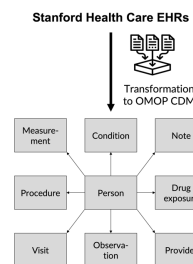


Figure 1. Locations of PRHeG members.



Take a picture to download the full paper

Get in touch with us!  
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ProgressDB

Figure 2. Process of creating the ProgressDB database.

Alison Callahan<sup>1</sup>, Stephanie A. Leonard<sup>2</sup>, Louisa Smith<sup>3</sup>; The OHDSI Perinatal and Reproductive Health Work Group  
<sup>1</sup>Center for Biomedical Informatics Research, School of Medicine, Stanford University, <sup>2</sup>Dundee Maternal-Fetal Medicine Center, Stanford University, <sup>3</sup>Department of Health Sciences, Bouvé College of Health Sciences, Northeastern University







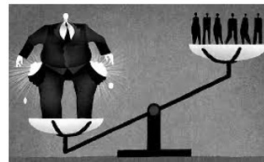
# #OHDSISocialShowcase This Week

## THURSDAY

### The importance of including socioeconomic characteristics in prediction models of COVID-19 in Brazil, and in other highly unequal societies

(Valentina Martufi, Renzo Flores-Ortiz, Priscilla Normando, Vinicius A. Oliveira, Maria Yury Ichihara, Mauricio L. Barreto, Elzo P. P. Júnior)

Socioeconomic factors in predictive models  
*Understanding COVID-19 in Brazil, and in other highly unequal societies*



#### WHY

**COVID-19 pandemic provided:**

- Global momentum for coordinated efforts to study available, real-world data;
- Exacerbation of socioeconomic and health inequalities. **Interventions for improvement of population's health should:**
- Take advantage of real-world evidence;
- Consider socioeconomic factors affecting susceptibility to a given disease, and potential outcomes.

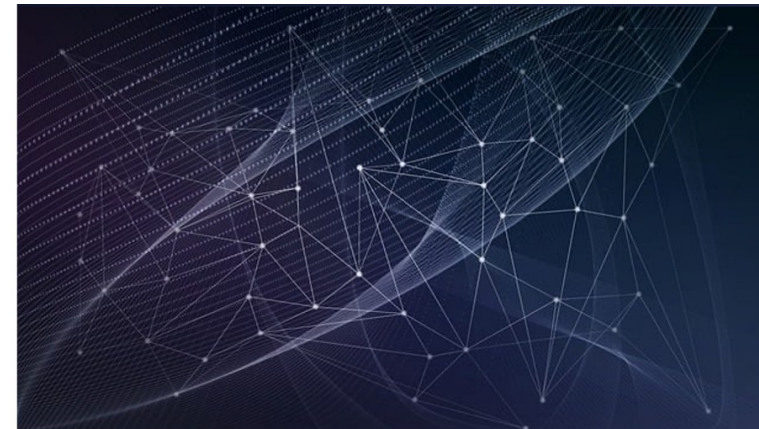
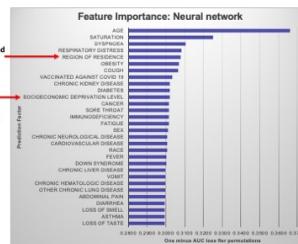
#### HOW

- Retrospective cohort study
- Followed TRIPOD guidelines
- Patients hospitalized with COVID-19 (Feb 2020 - July 2022) in Brazil
- Data from Ministry of Health SARS database
- Outcome: and/or
  - IMV support;
  - ICU admission;
  - Death.
- Studied 30 prediction factors
- Logistic regression and machine learning approaches to build prediction models of critical in-hospital events

#### WHAT

**5<sup>th</sup> most important** – right after respiratory distress and before having been vaccinated against Covid-19

**11<sup>th</sup> most important** – before immunodeficiency, cardiovascular disease and other chronic lung disease



### Predictive models must include socioeconomic characteristics, such as region of residence and level of socioeconomic deprivation - especially in highly unequal societies.



Visit CIDACS' website and learn more about our Real-World Evidence Cohorts!



Learn more about our Cohort from our Cohort Profile paper!



PRESENTER: Valentina Martufi  
AUTHORS: Valentina Martufi, Renzo Flores-Ortiz, Priscilla Normando, Vinicius A. Oliveira, Maria Yury Ichihara, Mauricio L. Barreto, Elzo P. P. Júnior

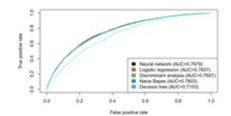
**Prediction factors considered:** age, sex, race, material deprivation, macro-region of residence, **pre-existing comorbidities** (cardiovascular disease, diabetes, obesity, cancer, asthma, immunodeficiency, chronic kidney disease, other chronic lung disease, chronic hematologic disease, down syndrome, chronic liver disease, chronic neurological disease), **symptoms of severe acute respiratory syndrome** (fever, cough, sore throat, dyspnoea, respiratory distress, low oxygen saturation, diarrhoea, vomit, abdominal pain, fatigue, loss of smell, loss of taste), and an indicator of **vaccination against COVID-19**

#### Details of results:

- 97,768 hospitalized patients
- 75,457 experienced at least one critical in-hospital event

Little variation in:

- AUC values: 0.6515 to 0.7002 (highest -> neural network model)
- Root mean square of residuals: 0.468 to 0.563 (lowest -> neural network model)





# #OHDSISocialShowcase This Week

## FRIDAY

# Telehealth Utilization for Diabetes Care Among Individuals with Medicare and Medicaid Coverage

(Nick Williams)

**Title: Study effects lost in translation?**  
*ICD-10-CM vs SNOMED-CT*

Nick Williams, Ph.D

### INTRODUCTION:

- Translation of data from one vocabulary to another is standard practice in our era.
- The information loss which occurs when mapping real world data across vocabularies is under described.
- Some translations can cause type one or type two study errors.

### METHODS

1. We used a 100% sample of Medicare and Medicaid Records from 2018-2020.
2. We extracted a case series of diabetics by telehealth and survival status before and during the Covid-19 emergency.
3. Extracts were either left native ICD-10-CM or mapped through Athena to Snomed-CT.
4. Detection of study effects were graphed and evaluated.

### RESULTS

The study period (2018-2020) included 24,693,384 distinct individuals across 562,735,758 diagnostic events. Cases were more likely to survive the study period if they used telehealth, at least once (2020 mortality 4.6% vs 5.6%). We detect an exponential increase in telehealth utilization within diabetes claims over the study period (monthly distinct case range of 2,109-261,627). SNOMED-CT mapping within index aggregation terms returned 142 distinct diagnostic codes, while ICD10CM offered 259 codes within index aggregation terms. The SNOMED-CT aggregates produced 503,048 aggregate records while ICD10-CM produced 627,219 records.

Translating real world data from ICD-10-CM to SNOMED-CT may introduce information loss, effect size inflation, type 1 and type 2 errors. Translate real world data with extreme caution and attention to detail!

### Diabetic cases and deaths by telehealth status

Year	Survived	Died	Total	Rate
<b>2018-2020</b>				
Telehealth Ever	911,102	50,780	961,882	5.28%
Telehealth Never	20,876,229	2,855,273	23,731,502	12.03%
<b>Total</b>	<b>21,787,331</b>	<b>2,906,053</b>	<b>24,693,384</b>	<b>11.77%</b>
<b>2020</b>				
Telehealth Ever	953,893	45,978	999,871	4.60%
Telehealth Never	14,534,035	875,810	15,409,845	5.68%
<b>Total</b>	<b>15,487,928</b>	<b>921,788</b>	<b>16,409,716</b>	<b>5.62%</b>

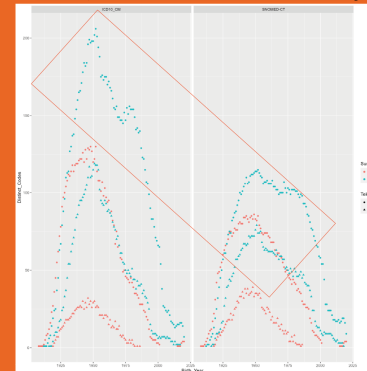
Distinct Cases	Telehealth Class	Share
23,731,502	No Telehealth	0.961047
961,882	Any Telehealth	0.038953

Distinct Cases	Gender Class	Share
24,329	Unknown	0.000985
13,740,403	Female	0.556441
10,928,652	Male	0.442574

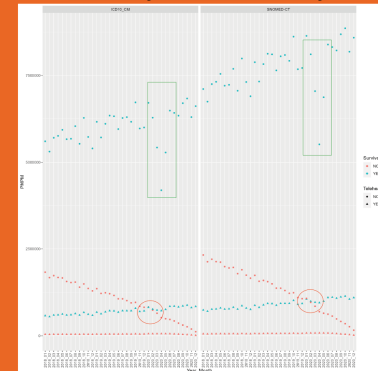
Distinct aggregates demonstrate that telehealth-ever and non-surviving users have smaller diagnostic breath in both vocabulary aggregations.

However, case event volumes are inflated after Snomed-CT conversion, and model effects were deflated too.

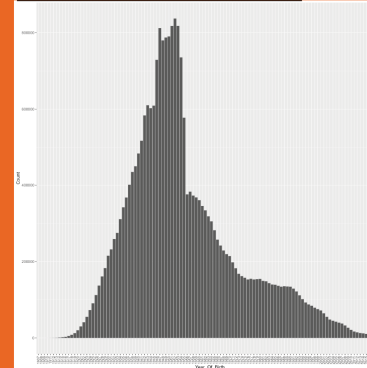
**A: Distinct code by birth cohort, survival status, telehealth status and vocabulary**



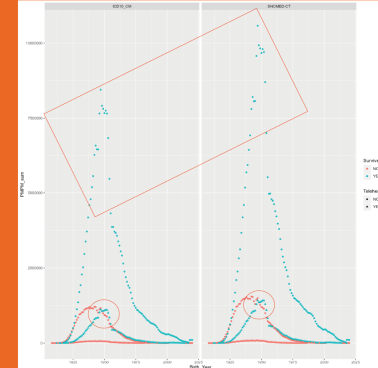
**B: PMPM by survival and telehealth status over study time and vocabulary**



**C: Diabetic cases over birth cohort**

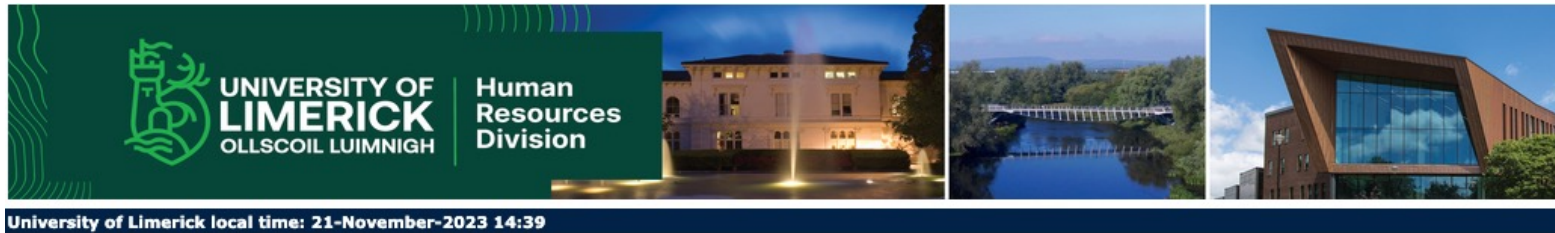


**D: SUM PMPM over birth cohort by vocabulary**





# Opening: Limerick Digital Cancer Research Centre



University of Limerick local time: 21-November-2023 14:39

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"THE UNIVERSITY OF LIMERICK IS AN EQUAL OPPORTUNITIES EMPLOYER AND COMMITTED TO SELECTION ON MERIT"



## Job Spec

Advertisement/Information for Applicants

Please click on Information for Applicants/Job Description link below for full job

### Post Doctoral Researcher (Level 1 or 2) in Cancer Digital Health Real World Evidence (2 Positions)

With over 18,000 students and 2,000 members of staff, the University of Limerick (UL) is an energetic, research led and enterprising institution with a proud record in innovation and excellence in education, research and scholarship. The dynamic, entrepreneurial and pioneering values which drive UL's mission and strategy ensure that we capitalise on local, national and international engagement and connectivity. We are renowned for providing an outstanding student experience and conducting leading-edge research. Our commitment is to make a difference by shaping the future through educating and empowering our students.

With the River Shannon as a unifying focal point, UL is situated on a superb riverside campus of over 130 hectares. Outstanding recreational, cultural and sporting facilities further enhance the campus's exceptional learning and research environment.

Applications are invited for the following position:

Faculty of Education & Health Sciences

School of Medicine

Post Doctoral Researcher (Level 1 or 2) in Cancer Digital Health Real World Evidence (2 Positions) Specific Purpose Contract

Salary Scales: PD1 €42,033 - €48,427 p.a. pro rata

PD2 €49,790 - €54,153 p.a. pro rata

Informal enquires regarding the post may be directed to:

Professor Aedin Culhane  
School of Medicine  
University of Limerick  
Email: [aedin.culhane@ul.ie](mailto:aedin.culhane@ul.ie)

"This is a professional training and development role and the training and development relevant to this position will be completed within the period of the contract. Postdoctoral Researchers appointed will be expected to complete the Researcher Career Development Programme."

The closing date for receipt of applications is Friday, 15th December 2023.

Applications must be completed online before 12 noon, Irish Standard Time on the closing date.

The University of Limerick supports blended working





# Openings: Bill and Melinda Gates Foundation



**Distinguished Scientist, Artificial Intelligence & Large Language Models**

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# Job Opening: Stanford University

**Stanford** | Office of Postdoctoral Affairs  
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## Open Postdoctoral position, faculty mentor Brian Bateman

Our research team is looking for a postdoctoral scholar in perinatal pharmacoepidemiology. The scholar will work closely with Drs. Brian Bateman and Stephanie Leonard on NIH-funded research projects on the comparative safety and effectiveness of medications in pregnancy and related research topics. Our projects employ advanced analytical methods in large databases, which include claims data and electronic health record data in conventional structures and in common data models. Current topical focus areas include mental health, behavioral health and cardiovascular health of people who are pregnant or postpartum.

Our research group prioritizes a collaborative and inclusive team environment. The principal investigators are experienced mentors who are highly committed to supporting the postdoctoral scholar in advancing their career as a future independent investigator. The

### Important Info

**Faculty Sponsor (Last, First Name):**  
Bateman, Brian

**Other Mentor(s) if Applicable:**  
Stephanie Leonard

**Stanford Departments and Centers:**  
Anesthes, Periop & Pain Med

**Postdoc Appointment Term:**  
Initial appointment is 1 year with renewal after the first year for an additional 1-2 years by mutual agreement

**Appointment Start Date:** Flexible start date

**Group or Departmental Website:**



# 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?**





OHDSI End-of-year holiday fun!