Around the Asia-Pacific (APAC) Region

OHDSI Community Call
July 25, 2023 • 11 am ET

Upcoming Community Calls

Date	Topic
July 25	Around The Asia-Pacific Region
Aug. 1	OMOP on CQL on FHIR: The Intersection of Interoperability Standards and Digital Quality
Aug. 8	TBA
Aug. 15	New Community Member Introductions
Aug. 22	OMOP Supporting Clinical Registries
Aug. 29	Vocabulary Release Update

Aug. 1 - OMOP on CQL on FHIR: The Intersection of Interoperability Standards and Digital Quality

Ben Hamlin

Senior Research Informaticist, Quality Measurement and Research Group
National Committee for Quality Assurance

Andrew Williams

Informatics Co-Leader; Faculty; Assistant Professor
Tufts CTSI, ICRHPS; Tufts University School of Medicine

Clark Evans

Tufts Medical Center

Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?

OHDSI Shoutouts!

Congratulations to the team of **David Oniani, Bambang Parmanto, Andi Saptono, Allyn Bove, Janet Freburger, Shyam Visweswaran, Nickie Cappella, Brian McLay, Jonathan C Silverstein, Michael Becich, Anthony Delitto, Elizabeth Skidmore, and Yanshan Wang** on the publication of **ReDWINE: A clinical datamart with text analytical capabilities to facilitate rehabilitation research** in the *International Journal of Medical Informatics*.

ELSEVIER

International Journal of Medical Informatics
Volume 177, September 2023, 105144

ReDWINE: A clinical datamart with text analytical capabilities to facilitate rehabilitation research

David Oniani [a], Bambang Parmanto [a], Andi Saptono [a], Allyn Bove [c], Janet Freburger [c], Shyam Visweswaran [d e f], Nickie Cappella [d f], Brian McLay [d f], Jonathan C. Silverstein [d f], Michael J. Becich [d f], Anthony Delitto [c], Elizabeth Skidmore [b], Yanshan Wang [a d e f]

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Abstract

Rehabilitation research focuses on determining the components of a treatment intervention, the mechanism of how these components lead to recovery and rehabilitation, and ultimately the optimal intervention strategies to maximize patients' physical, psychologic, and social functioning. Traditional randomized clinical trials that study and establish new interventions face challenges, such as high cost and time commitment. Observational studies that use existing clinical data to observe the effect of an intervention have shown several advantages over RCTs. Electronic Health Records (EHRs) have become an increasingly important resource for conducting observational studies. To support these studies, we developed a clinical research datamart, called ReDWINE (Rehabilitation Datamart With Informatics iNfrastructure for rEsearch), that transforms the rehabilitation-related EHR data collected from the UPMC health care system to the Observational Health Data Sciences and Informatics (OHDSI) Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM) to facilitate

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2023 Europe Symposium Collaborator Showcase

1	The EHDEN Portal – Simplifying the access to OMOP CDM databases	João Rafael Almeida, Nigel Hughes, Peter Rijnbeek, José Luís Oliveira
2	Privacy-preserving using k-anonymity and l-diversity in OMOP CDM databases	João Rafael Almeida, José Luís Oliveira
3	The Dutch ICU Data Warehouse: towards a standardized multicenter electronic health record database	Ameet Jagesar, Martijn Otten, Tariq Dam, Laurens Biesheuvel, Patrick Thoral, Armand Girbes, Harm-Jan de Grooth, Paul Elbers
4	Community Contribution to the OHDSI Vocabularies, User-Level QA and a New Entity Mapping System SSSOM	Oleg Zhuk, Anna Ostropolets, Nicolas Matentzoglu, Melissa Haendel, Alexander Davydov, Christian Reich
5	Extract, Transform, and Load of the Infectious Disease CDM for Harmonizing and Accessing Data in Real-time Infectious Disease Surveillance	Byungjin Choi, Junhyuk Chang, Soobeen Seol, Seongwon Lee, Rae Woong Park
6	Roadmap and improvement of OHDSI Vocabularies	Christian Reich, Alexander Davydov, Anna Ostropolets
7	Integrating the OMOP CDM into the AI Sandbox of the German Health Data Lab	Elham Taghizadeh, Maxim Moinat
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19	Capture and consolidation of renal specific concepts into a cohesive OMOP dataset	Jared Houghtaling, Jose Antonio Ramírez García, Clémence Le Cornec, Lore Vermeylen, Nir Assaraf, Lars Halvorsen
20	Creation of a reusable OMOP transformation workflow for Belgian electronic health record systems	Jared Houghtaling, Lore Vermeylen, Louise Vandenbroucke, Korneel Bernaert, Brecht Dekeyser, Freija Descamps
21	Construction of a central ontology platform for semantic mapping coordination and vocabulary augmentation across a multi-partner oncology consortium	Jared Houghtaling, Peter Prinsen, Maaike van Swieten, Chiara Attanasio, Lars Halvorsen
22	Application of the R-CDM extension to capture metadata and features extracted from quantitative brain MRI and CT data	Jelle Praet, Jared Houghtaling, Frederic Jung, Steve De Backer, Jeroen Pinxten and Dirk Smeets
23	NNRD-AI: a national neonatal research database for rapid insights with machine learning and artificial intelligence	Julia Lanoue, Kayleigh Ougham, Neena Modi, Sam Greenbury
24	OMOP-CDM Data conversion for the Papageorgiou General Hospital in Greece	Achilleas Chytas, Maria Bigaki, Pantelis Natsiavas
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THURSDAY

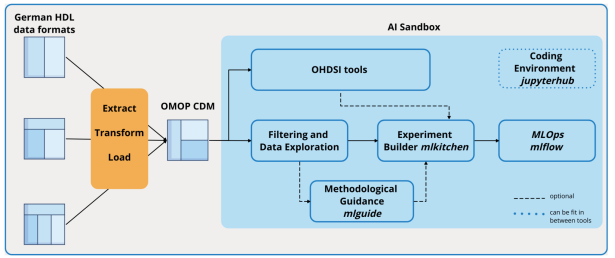
Integrating the OMOP CDM into the AI Sandbox of the German Health Data Lab

(Melissa Finster, Elham Taghizadeh, Maxim Moinat)

Integrating the OMOP CDM into the AI Sandbox

Background: The German Health Data Lab (HDL) is going to maintain pseudonymized claims data of approximately 90% of German citizens insured within the statutory health system, once it is operational. After a successful application at the HDL researchers can access secure processing environments. To investigate AI-readiness, the AI Sandbox is developed as a prototype and might become an additional secure processing environment in the future.

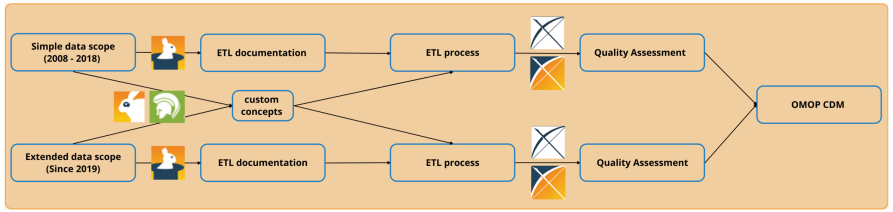
Result:



The AI Sandbox supports the users on implementing their AI pipeline with guidance, implemented algorithms, and lifecycle management. Having the data in the OMOP CDM enables international interoperability and the use of OHDSI tools for observational studies.

Method:

During a collaboration between Fraunhofer MEVIS and Erasmus MC, we transformed fictional claims data from two different HDL formats into the OMOP CDM.



Limitation:

- Missing required fields due to data scope and synthetization/pseudonymization
  - ➢ Assumptions are made and transparently documented
- Some source information cannot be mapped directly to the OMOP CDM
  - ➢ Use of observation table and custom concepts to keep information
  - ➢ Some information was dropped (e. g. type of payment, teeth position)
- Mapping of German pharmacy product catalog (PZN) is missing due to licensing

This work was funded based on a resolution of the German parliament by the German Federal Ministry of Health (BMG, Project KI-FDZ, Funding Code: 2521DAT01B).
We thank Dörte Corr, Markus Wenzel, Johannes Bunk and the whole mlguide team for the great support and project work.

Contact:
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FRIDAY

The Dutch ICU Data Warehouse: towards a standardized multicenter electronic health record database

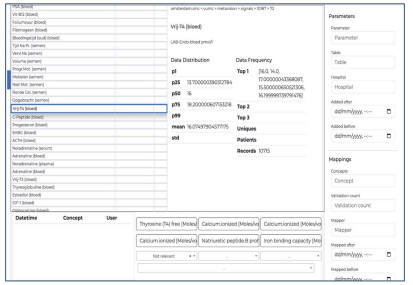
(Ameet Jagesar, Martijn Otten, Tariq Dam, Laurens Biesheuvel, Patrick Thoral, Armand Girbes, Harm-Jan de Grooth, Paul Elbers)

The Dutch ICU Data Warehouse: towards a standardized multicenter electronic health record database

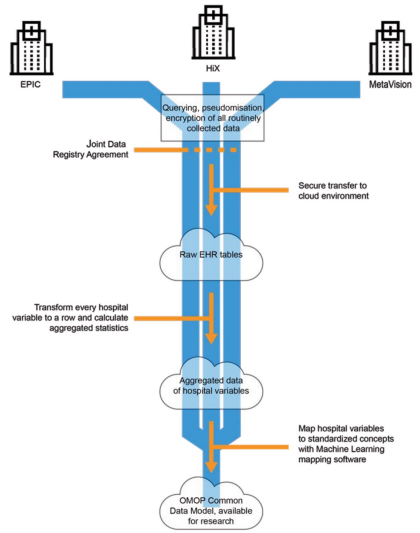
Background: For research purposes, Intensive Care Unit professional have initiated a widespread collaboration to collect routinely stored electronic health record data of different ICUs and unifying them in the Dutch ICU Data Warehouse. The Data Warehouse will be standardized to the OMOP common data model.

Methods

1. Organisational structure of ICUdata



3. Mapping tool for standardization of concepts



2. Technical infrastructure

Results: The ICUdata foundation was formally established in 2022. Nine hospitals have signed the data sharing agreement. The first data extraction has been successfully transferred and is ready to be mapped to standardized concepts.

Ameet Jagesar, Martijn Otten, Tariq Dam, Laurens Biesheuvel, Dagmar Ouweneel, Geert Klop, Leon Derks, Lucas Fleuren, Ronald Driessen, Patrick Thoral, Armand Girbes, Jonas Rubrech, Dave Dongelmans, Bas van Bussel, Marga Hoogendoorn, Margo van Mol, Christiaan Boerma, Paul Elbers, on behalf of the ICUdata foundation representing all participating ICUs.

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MONDAY

Hierarchical clustering of microbial resistance profiles and ventilation protocols using the oncology extension

(Jared Houghtaling, Frederic Jung, Ankur Krishnan, Marc Padros Goossens, Frank Leus, Lauren Maxwell, Tom Feusels, Freija Descamps)

Links between each patient's microbiological identification and microbiological cure episodes, as well as their VAP onset and clinical cure episodes, **can provide significant clinical insights** into disease diagnoses, presentation, progression, treatment, and prognosis.

Title: Hierarchical clustering of microbial resistance profiles and ventilation protocols using the oncology extension

Rationale:

- Ventilator associated pneumonia (VAP), often caused by multi-drug resistant bacteria, is a frequent complication of mechanically-ventilated ICU patients
- Failing to distinguish between location of infection is challenging and leads to unnecessary use of broad-spectrum antibiotics which produces antimicrobial resistance (AMR)
- Ecraid Base, a Horizon Europe project, funded by EHDEN to work with ehdenceHealth to transform participant-level data captured using CDASH to OMOP CDM to facilitate reuse of participant-level data from collected from a European network of VAP-related perpetual observational studies (POSs)

The dataset in OMOP CDM format will facilitate:

- Timely reuse of the data through participation in international federated studies on prevention, diagnosis and treatment of VAP and hospital-associated pneumonia (HAP)
- Efforts to improve AMR surveillance and Antimicrobial Stewardship (AMS)

Figure 1: Hierarchical structure and linking of events related to microorganisms and their various attributes and antibiotic resistance profiles. Note that each block may represent more than one event per hierarchical tree, and that a patient may have multiple episodes on a given day if multiple samples were drawn.

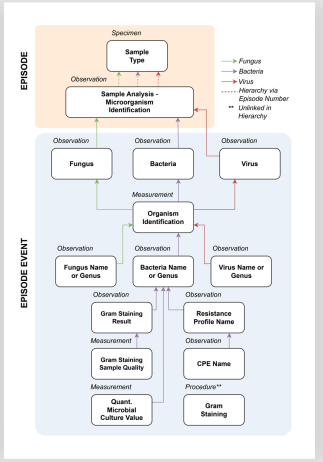
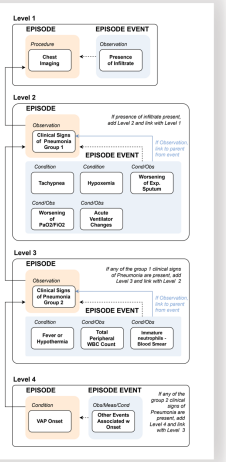


Figure 2: Hierarchical structure and linking of events related to VAP onset and relevant clinical criteria deduced through chest imaging. Note that each block may represent more than one event per hierarchical tree.



Challenges:

- OS-VAP data must appropriately record hierarchical, cross-domain, inter-event dependencies, a challenge within the current OMOP CDM specifications
- VAP events must be understood through the quality and direction of their linkages to other events
- Microbiological identification, microbiological cure episodes, VAP onset, and clinical cure episodes must be linked to addequately describe disease diagnoses, presentation, progression, treatment, and prognosis

Approach:

- Reused oncology OMOP CDM 5.4 extension
- Created hierarchical clusters for (1) samples collected and measurements performed related to antimicrobial resistance and (2) Clinical criteria-based protocols implemented for invasive mechanical ventilation
- Linked events in each cluster unidirectionally from child to great-grandparent
- Created nested episodes for each type of cluster
- Linked nested episodes to all events in tree using EPISODE and EPISODE_EVENT tables
- Linked events using patient and date information
- Transfored data into OMOP relational tables

Discussion and Future Directions:

- Clustering approach facilitates accurate analyses of complex patient presentations through relation-based covariates like quantity and type of child AMR for parent bacterial species, and context-based covariates like combinations of fungi and bacteria present in sputum sample
- Clusters defined by patient and date; enabling multiple clusters within patients related to different ICU admissions
- Nuanced approach to describing relationships used here may be reused in other domains with complex hierarchical structures like pregnancy
- Limited in that: (1) oncology extension not designed for capturing VAP or AMR-related data, and (2) events are restricted to one parent in the hierarchies but might have multiple ancestor events
- Moving forward, we will design an extension based on OMOP vocabulary structure with a CONCEPT-ANCESTOR-like table with hierarchical relationships and degrees of separation to enable accurate monitoring of drug resistance across hospital networks

Jared Houghtaling[a], Frederic Jung[a], Ankur Krishnan[b], Marc Padros Goossens[b], Frank Leus[b], Lauren Maxwell[b], Tom Feusels[a] and Freija Descamps[a]

AFFILIATIONS
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b European Clinical Research Alliance on Infectious Diseases (Ecraid)

REFERENCES
[1] Kostyanev, Tomislav, et al. "COMBACTE LAB-Net: building a European laboratory network for clinical trials on anti-infectives." Future Microbiology 16.9 (2021): 635-647.
[2] https://forums.ohdsi.org/t/fact-relationships-searching-for-an-extensible-approach/16560
[3] Jones, Sara, et al. "Who is pregnant? Defining real-world data-based pregnancy episodes in the National COVID Cohort Collaborative (N3C)." medRxiv (2022).

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TUESDAY

An Evaluation and maintenance of cohorts and concept sets the in OMOP Vocabulary Evolution Model

(Dmytry Dymshyts, Frank DeFalco, Anthony Molinaro, Clair Blacketer)

Title: Evaluating the impact of different vocabulary versions on cohort definitions and ETL processes

PRESENTER: **Dmitry Dymshyts**

INTRO:

- **Vocabulary changes are drastic, for example, between Apr-2022 and Jan-2023 releases:**

- 19 965 concepts changed their standard status,
- 80 021 concepts changed their mapping,
- 58 327 concepts changed their immediate parent

- This affects the ETL output and concept sets resolution and thus the cohorts.
- And we must know what exactly changed for our studies!

METHODS

1. Concept set definitions are extracted from cohort definitions and resolved on two different vocabulary versions (including source concepts).
2. Output is the comparison of source and standard concepts included.
3. Results are written in Excel file with a tab for each metric.

RESULTS

The tool provides a recipe of what should be **changed in a concept set expression accordingly to the vocabulary update:**

Comparison output	User's action
non-standard concepts with their replacement mappings	Replace these concepts with their mapped equivalents
concepts above which the hierarchy is altered (peak concepts)	add peak concepts to concept set definitions to preserve the hierarchy
Added or excluded source concepts with their old and new target concepts	Add or exclude new target concepts
domain changes in included concepts	Change the event table

- If detected changes are due to errors in the vocabulary update, submit a report for a vocabulary change

How the vocabulary change affects cohorts?

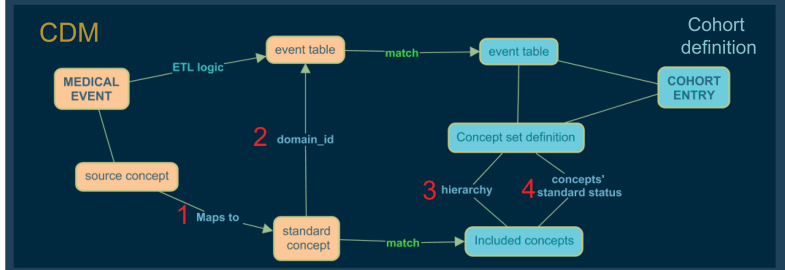

Figure 1. *Medical event inclusion into cohort, simplified.*

Numbers correspond to the metrics below.

Changes captured by the tool

1. Related source concepts that were added or removed due to mapping change.
2. Included standard concepts changed their domain
3. Hierarchy changes that affect concept set resolution*
4. Non-standard concepts used in concept set definitions.

* The concept above which the hierarchy is altered is shown

Scan to access the github page

Example of the output and action required

Hierarchy change	
cohortdefinitionid	10657
cohortname	Rhabdomyolysis
conceptsetname	Trauma
node_concept_id	440921
node_concept_name	Traumatic injury
isexcluded	0
includedescendants	1
action	Added
peak_concept_id	436676
peak_concept_name	Posttraumatic stress disorder
peak_drc	167673919

Explanation: In this case, the 'Posttraumatic stress disorder' branch (peak concept) is the new descendant of "Traumatic injury" (Node concept) hierarchy.
This is an important change, since the count of concepts in this branch in a data source is 167673919 (peak_drc).

Action: PTSD is not a part of physical trauma concept set, so it should be fixed by
- adding add the Node concept 'Posttraumatic stress disorder' to concept set definition with IsExcluded = 'True', includeDescendants = 'True'.
- submitting the issue to the OMOP vocabulary.

Dmitry Dymshyts, Frank DeFalco, Anthony Molinaro, Clair Blacketer

Erasmus MC University Medical Center Rotterdam

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WEDNESDAY

Mapping Data of Patients with Hematological Malignancies to the OMOP Common Data Model: A Case Study of Chronic lymphocytic Leukemia

(Evangelia Minga, Dimitra Chamou, Thomas Chatzikonstantinou, Pantelis Natsiavas, Kostas Stamatopoulos, Evangelos Handakas, Anastasia Chatzidimitriou)

A comprehensive **ETL framework**, based on OHDSI suite and open-source tools, to support mapping data from patients with **Hematological Malignancies** to **OMOP format**

Title: *Mapping Data of Patients with Hematological Malignancies to the OMOP Common Data Model: A Case Study of Chronic Lymphocytic Leukemia*

Background:

Chronic lymphocytic leukemia (CLL)
- A **paradigmatic** hematological malignancy of mature B cells
- The most prevalent adult leukemia in western countries [1]
- Highly **heterogeneous** clinical course and outcome

Need for large scale collaborations
- to facilitate **multi-center research**
- to guide the selection of therapeutic protocols towards **precision medicine** [2]

In this study, we aimed to explore the provided solutions and face the challenges involved in mapping CLL data to the Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM)

Results

Unveiling Transformative Results

ETL Framework for Relational Database with CLL data
- OHDSI tools
- In-house code (SQL and Python)
- Docker Container

Mapping process
- 12 table-to-table transformation
- 17 OMOP vocabularies

Transformation assessment
- Applied to a representative subset of anonymized clinical and laboratory data, and the current pass rate of the DQD is 99%, indicating successful execution

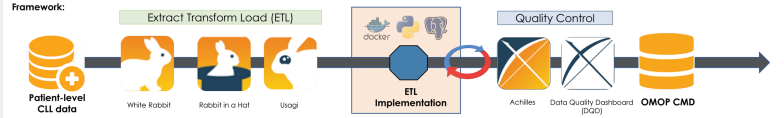
Handling challenges in OMOP ETL process of research data
- **Treatment description:** Mapping treatment lines and corresponding regimens for CLL to EPISODE vs DRUG EXPOSURE vs DRUG ERA tables
- **Reporting adverse events:** as described for each treatment line
- **Positive vs Negative reports:** Include rule-out conditions and observations
- **Molecular information in standardized vocabularies:** Missing suitable concepts in order to describe Immunoglobulin (IG) analysis results
- **Free text:** Refinement of source data prior to transformation, reducing missing values
- **Missing dates:** Converting description of timepoints to specific date reporting

Methods

Dataset:

We used retrospective and observational, anonymized data coming from multiple research collaboration between a wide network of hematology centers in Greece.

Framework:



Conclusions:
- We highlighted the challenges and provided a **solution framework** involved in mapping data coming from patients with hematological malignancies to the OMOP CDM and demonstrated the feasibility of this approach using as a pilot the example of CLL.
- This study revealed the importance of **collaboration and quality assurance measures** in ensuring the accuracy and reliability of data in medical research.
- We provide a foundation for future work in this area and network collaborating studies and highlight the potential benefits of using a common data model to support **clinical and translational research**.

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References
[1] Kipps TJ, Stevenson FK, Wu CJ, Croce CM, Packham G, Wierda WG, O'Brien S, Gribben J & Rai K. Chronic lymphocytic leukaemia. Nature Reviews Disease Primers volume 3, Article number: 16096 (2017)
[2] Burger JA. Treatment of Chronic Lymphocytic Leukemia. New England Journal of Medicine 2020;383(5):460-473.

Evangelia Minga[1], Dimitra Chamou[1], Thomas Chatzikonstantinou[1], Pantelis Natsiavas[1], Kostas Stamatopoulos[1], Evangelos Handakas[2,3 *], Anastasia Chatzidimitriou[1*]

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* Equal contribution

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THURSDAY

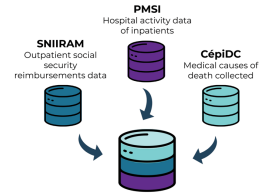
Standardization of the French national database SNDS in OMOP-CDM

(Gaëlle Collumeau, Cécile Charles, Elena Mylonas, Gil Lampe, Stéphanie Combes, Lorien Benda)

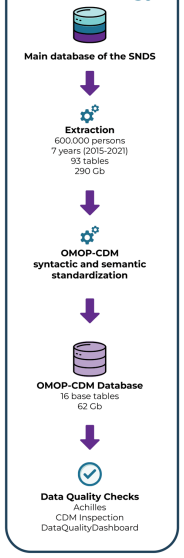
Standardization of the French National healthcare database (SNDS) in OMOP-CDM

Introduction

- The **SNDS** (*Système National des Données de Santé*) is one of the world's largest **healthcare database**, encompassing **outpatients claims**, **hospital discharge summaries**, and **national death registry** for the **whole French population.**
- SNDS relies on a **complex structure** (180 tables, 4500 variables) and **numerous specific french vocabularies** : e.g., CCAM and CSARR (procedures), NABM (laboratory tests), LPP (medical devices), CIP and UCD (drugs).
- Data standardization is needed to **improve the reuse of the SNDS** for **real-world evidence generation** and **promote script and program sharing**.



Methodology



Results

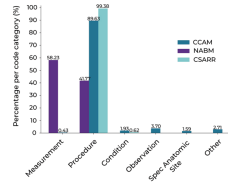


Figure 1. Distribution of target codes by domain

- French ontologies map to **6 major domains** in the OMOP-CDM standard domains (Figure 1).
- For CCAM codes (medical act), **90%** of the target codes are **procedures**.
- NABM represents biological acts, CSARR represents physical and speech therapy. Mapping was performed in collaboration with BPE.

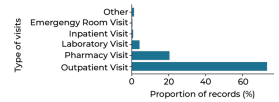


Figure 2. Types of visit

- About **75%** of visit records are **outpatient visits** (Figure 2).
- Almost **98%** of visit records come from the **SNIIRAM** (Figure 2).

Double identification of individuals: change of social security number when over 18 or completing studies.

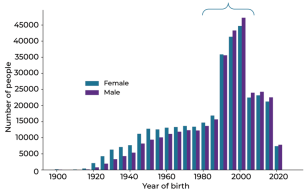


Figure 3. Distribution of people per year of birth

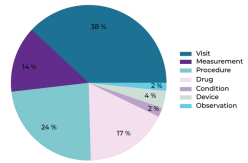


Figure 4. Distribution of records by domain

- More than **⅓ of records** belong to the **Visit domain** (Figure 4).
- **Half of records** are part of **Measurement**, **Procedure** and **Drug** domains (Figure 4).

Conclusion

- **Syntactic harmonization** has been **successfully conducted** and the **data quality checks are ongoing**.
- **Semantic harmonization** was made **complex** by the level of detail captured by the French Ontologies and is currently being improved.
- The **current ETL already enables the execution of federated real-world study in SNDS** using OHDSI tools, making its power available for health outcome research.

Documentation

ETL

Gaëlle Collumeau, Cécile Charles, Elena Mylonas , Gil Lampe, Stéphanie Combes, Lorien Benda
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14 Rwandan hospitals - comprising more than 3,5 million patients - transformed EHR and Covid-19 data to OMOP CDM as part of a federated data network

FRIDAY

The LAISDAR project – hospital EHR harmonization in Rwanda through mapping to OMOP CDM; outcome, challenges and lessons learned

(**Lars Halvorsen,** Jared Houghtaling, Emma Gesquiere, Benjamin Burke, Charles Rurangae, Marc Twagirumukizah, Gilbert Rukundo, Clarisse Musanabaganwa, Claude Mambo Muvunyi, Jean Claude Semuto Ngabonziza, Aurore Nishimwe)

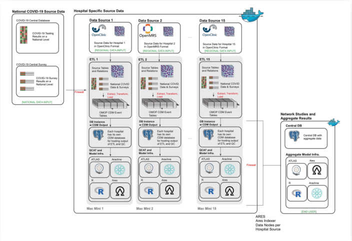
Title: The LAISDAR project – hospital EHR harmonization in Rwanda through mapping to OMOP CDM; outcome, challenges and lessons learned

Background: In response to the COVID-19 pandemic, a federated data network (FDN) of 15 hospitals was established in Rwanda; *"Leveraging Artificial Intelligence and Data Science Techniques in Harmonizing, Sharing, Accessing and Analysing SARS-COV-2/COVID-19 Data in Rwanda (LAISDAR)"* [1, 2].

The project objective was to leverage the federated hospital data sets, extended with data from centralized COVID-19 test results and survey data, to support Rwandan government needs in monitoring and predicting the COVID-19 burden. The impact of various public health measures on the pandemic evolution, social-economic situation, and mental health were also key study objectives. Although the project was originally focused on COVID-19 research, the possible research topics have since widened to other disease areas.

Figure 1: Participating sites in LAISDAR network

Figure 2: Overall LAISDAR architecture.



Methods: Two different EHR systems, openClinic GA [3] and openMRS [4], were in scope, for which logic to transform to OMOP CDM was defined and implemented, which can also incorporate data from the national COVID-19 testing and COVID-19 survey results. Each hospital node was set up on a dedicated Mac Mini with the ETL (Extract-Transform-Load) script, OHDSI tooling and other supporting services installed.

On a central server, OMOP CDM versions of the national COVID-19 testing and survey results are hosted and made available to the hospital ETLs through a secure access point.

Results: As of April 2023, the ETL to transform the hospital EHR data to OMOP CDM has been run at 14 of the hospitals. Some of the data quality issues encountered were related to inconsistencies with birth dates and gender-specific clinical events. Other challenges were related to different configurations of the same EHR system at different sites, necessitating additional logic in the ETL, and concept mappings that need further work and completion. All these issues are being followed up.

Initially, the deployment and setup of the hospital nodes and central server were supported remotely, which was not always an optimal approach. Onsite visits by edenceHealth and Ghent University personnel helped finalize the node setups and solve remaining technical challenges, such as optimizing the build and deployment approach for updates on the Mac Mini nodes.

Arachne node and server instances were built and deployed as Docker containers but have not yet been activated due to some remaining challenges with the execution engine configuration. The deployment of Ares [5] was instead prioritized at this stage, and the Arachne deployment will be continued at a later stage.

Finally, a proof-of-concept for a reporting solution was developed, through which the mandatory monthly reports from the hospitals to the Ministry of Health can be partially automated based on OMOP CDM.

Conclusion: The LAISDAR project has accomplished much; 14 hospital nodes with EHR data transformed to OMOP CDM, with a total of about 3,5M patients represented. The national COVID-19 test results have been converted to OMOP CDM, as has the results of a COVID-19 related survey from 2022 that included 10 000 participants. A sustainable infrastructure for regular updates of the hospitals' OMOP CDM database instances have been established, with centralized quality assurance and data coverage overviews based on Ares.

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REFERENCES
[1] Halvorsen, L. et al. "LAISDAR - A federated data network to support COVID-19 research in Rwanda". OHDSI 2021 Global Symposium
[2] Nishimwe, A., Ruranga, C., Musanabaganwa, C. et al. "LAISDAR Project: study design and rationale." BMC Medical Informatics and Decision Making 22, 214 (2022).
[3] OpenMRS: open-source platform to build customized EMR system. https://openmrs.org
[4] OpenClinic GA: open-source integrated hospital information management system. https://sourceforge.net/projects/open-clinic/
[5] Houghtaling, J. et al. "Implementation of the ARES application to monitor network-wide data quality and mapping coverage for 16 unique OMOP sources across Rwanda". OHDSI Europe Symposium 2023

LAISDAR is funded by Canada's International Development Research Centre (IDRC) and the Swedish International Development Cooperation Agency (Sida), under the Global South AI4COVID Program.

OHDSI Shoutouts!

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

Do you have anything you want to share? Please send to sachson@ohdsi.org so we can highlight 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
Wednesday	9 am	OMOP CDM Oncology Outreach/Research Subgroup
Wednesday	10 am	Surgery and Perioperative Medicine
Wednesday	12 pm	Latin America
Wednesday	7 pm	Medical Imaging
Thursday	9 am	Medical Devices
Thursday	9:30 am	Network Data Quality
Thursday	7 pm	Dentistry
Friday	9 am	GIS – Geographic Information Systems General
Friday	11 am	Clinical Trials
Monday	10 am	Healthcare Systems Interest Group
Tuesday	10 am	Common Data Model

Titan Award Nominations Are Open!

To recognize OHDSI collaborators (or collaborating institutions) for their contributions towards OHDSI's mission, the OHDSI Titan Awards were introduced at the 2018 Symposium and have been handed out at the Global Symposium each year since.

bit.ly/2023TitanNominations

Global Symposium

Global Symposium

Oct. 20-22 • East Brunswick, NJ, USA

ohdsi.org/OHDSI2023

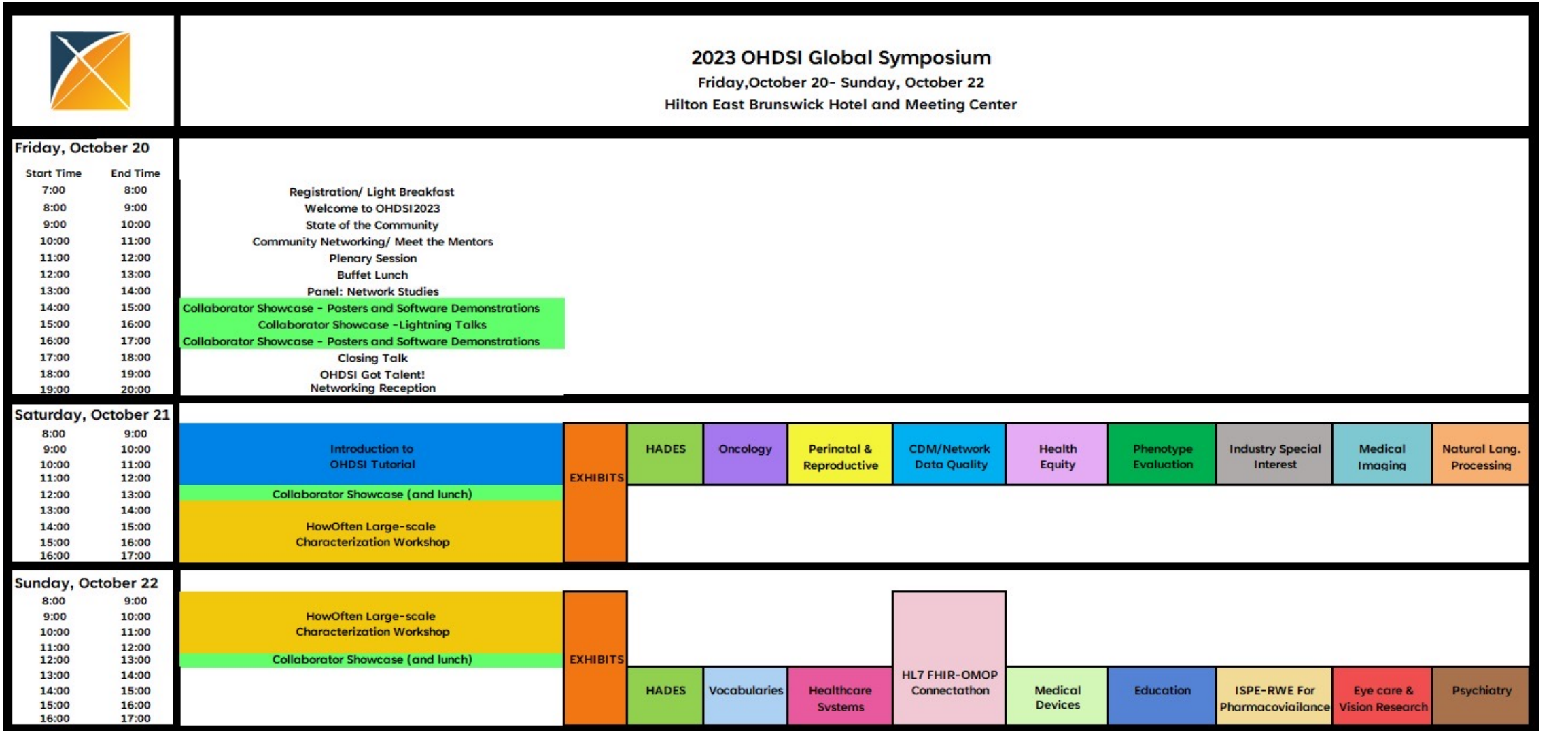
OHDSI 2023 Global Symposium

** This agenda is tentative and subject to change*

October 20-22 • East Brunswick, NJ, USA

	Friday, Oct 20	Saturday, Oct 21	Sunday, Oct 22
8:00am	Welcome to OHDSI2023!	Intro to OHDSI Tutorial & OHDSI workgroup activities	OHDSI collaborative workshop: HowOften
9:00am	State of the Community		
10:00am	Community networking		
11:00am	Plenary session		
12:00pm	Lunch	**Collaborator Showcase: posters & demos**	**Collaborator Showcase: posters & demos**
1:00pm	Panel: Network studies	OHDSI collaborative workshop: HowOften	OHDSI workgroup activities
2:00pm	**Collaborator Showcase: posters & demos**		
3:00pm	**Collaborator Showcase: Lightning talks**		
4:00pm	**Collaborator Showcase: posters & demos**		
5:00pm	Closing talk	Free time ☺	Time to go home ☹
6:00pm	OHDSI Got Talent!		

Global Symposium



2023 OHDSI Global Symposium

Friday,October 20- Sunday, October 22

Hilton East Brunswick Hotel and Meeting Center

Friday, October 20

Start Time	End Time	
7:00	8:00	Registration/ Light Breakfast
8:00	9:00	Welcome to OHDSI2023
9:00	10:00	State of the Community
10:00	11:00	Community Networking/ Meet the Mentors
11:00	12:00	Plenary Session
12:00	13:00	Buffet Lunch
13:00	14:00	Panel: Network Studies
14:00	15:00	Collaborator Showcase - Posters and Software Demonstrations
15:00	16:00	Collaborator Showcase -Lightning Talks
16:00	17:00	Collaborator Showcase - Posters and Software Demonstrations
17:00	18:00	Closing Talk
18:00	19:00	OHDSI Got Talent!
19:00	20:00	Networking Reception

Saturday, October 21

8:00	9:00	Introduction to OHDSI Tutorial	EXHIBITS	HADES	Oncology	Perinatal & Reproductive	CDM/Network Data Quality	Health Equity	Phenotype Evaluation	Industry Special Interest	Medical Imaging	Natural Lang. Processing
9:00	10:00											
10:00	11:00											
11:00	12:00											
12:00	13:00	Collaborator Showcase (and lunch)										
13:00	14:00											
14:00	15:00	HowOften Large-scale Characterization Workshop										
15:00	16:00											
16:00	17:00											

Sunday, October 22

8:00	9:00	HowOften Large-scale Characterization Workshop	EXHIBITS				HL7 FHIR-OMOP Connectathon				
9:00	10:00										
10:00	11:00										
11:00	12:00										
12:00	13:00	Collaborator Showcase (and lunch)									
13:00	14:00			HADES	Vocabularies	Healthcare Systems		Medical Devices	Education	ISPE-RWE For Pharmacovigilance	Eye care & Vision Research	Psychiatry
14:00	15:00										
15:00	16:00										
16:00	17:00										

OHDSI HADES releases: CohortDiagnostics 3.2.3

CohortDiagnostics 3.2.3 | Reference | Articles | Changelog | HADES

CohortDiagnostics

CohortDiagnostics is part of HADES.

Introduction

CohortDiagnostics is an R utility package for the development and evaluation of phenotype algorithms for OMOP CDM compliant data sets. This package provides a standard, end to end, set of analytics for understanding patient capture including data generation and result exploration through an R Shiny interface. Analytics computed include cohort characteristics, record counts, index event misclassification, captured observation windows and basic incidence proportions for age, gender and calendar year. Through the identification of errors, CohortDiagnostics enables the comparison of multiple candidate cohort definitions across one or more data sources, facilitating reproducible research.

Features

- Show cohort inclusion rule attrition.
- List all source codes used when running a cohort definition on a specific database.
- Find orphan codes, (source) codes that should be, but are not included in a particular concept set.
- Compute cohort incidence across calendar years, age, and gender.
- Break down index events into the specific concepts that triggered them.
- Compute overlap between two cohorts.
- Characterize cohorts, and compare these characterizations. Perform cohort comparison and temporal comparisons.
- Explore patient profiles of a random sample of subjects in a cohort.

Links

Browse source code

Report a bug

Ask a question

License

Apache License

Citation

Citing CohortDiagnostics

Developers

Jamie Gilbert
Author, maintainer

Gowtham Rao
Author

Martijn Schuemie
Author

Patrick Ryan
Author

James Weaver
Author

More about authors...

New Opening: Tufts Medicine

TuftsMedicine

Project Manager - Informatics

Apply

II. PRINCIPAL DUTIES AND ESSENTIAL FUNCTIONS

- Demonstrates thorough knowledge of the project aims, scope, budget, and timeline. Creates and executes project plans with guidance from leadership, and revises as appropriate to meet changing needs and requirements. Ensures timely review and finalization of documents prepared by the team before submission.
- Contributes to new proposal development and writes/edits substantive sections.
- Manages day-to-day interaction with internal and external stakeholders, including managing expectations. Communicates effectively to identify needs and evaluate alternative business solutions.
- Facilitates internal and external meetings effectively. Holds regular status meetings with project team(s). Effectively communicates relevant project information to leadership, including task status and progress to milestones. Resolves and/or escalates issues in a timely fashion.
- Understands how to communicate difficult/sensitive information to varied stakeholders.
- Develops clear, actionable plans, coordinating completion of action items, setting deadlines, and tracking milestones.
- Convenes and aids committees or working groups to develop and sustain new and existing initiatives, including providing excellent written and verbal communications such as reports, proposals, and presentations to keep all stakeholders informed.
- Collects and analyzes data to track program/project progress and to inform continuous improvement, strategic decisions, and resource allocation.
- Manages events, meetings, including scheduling and logistical arrangements, serving as liaison to presenters/invitees, agenda preparation, materials distribution, minutes, follow-up, media, and audio-visual needs.
- Maintains collaborative team relationships with peers and colleagues to help foster a positive work environment.
- Performs other similar and related duties as required or directed.

Job Openings – This Week In OHDSI page

OMOP Data Analyst

Apply

Wayne, PA, Unites States of America

Full time
Posted 5 Days Ago
R1363929

OMOP Data Analyst
Job Overview
Under broad guidance, performs data analytics activities related to complex business problems and issues to provide insight to decision makers. May provide analytic support for internal project teams and for external client consulting or services engagements.

Essential Functions
• Under broad guidance, performs quantitative or qualitative analyses to support the development of solutions for internal or external client project teams.
• Identifies and interprets trends and patterns in datasets to support the development of recommendations .
• Constructs impact assessment based on business data and market knowledge. Creates specifications for reports and analysis based on business needs and required or available data elements.
• May directly produce datasets and reports for analysis using system reporting tools.
• Verifies data for accuracy and completeness.
• May manipulate and transform data to optimize analyses.
• Performs audits of own work or that of others to ensure conformance with established procedures or to resolve routine issues.
• May work with stand alone data systems or enterprise wide tools supporting activities such as inquiry resolution, data validation, and trend analysis.
• SQL programming is a must.
• OMOP data model work experience is required.
• Experience with clinical data, EHR or pharmaceutical data is required.

About Us

IQVIA

IQVIA is a world leader in using data, technology, advanced analytics, and expertise to help customers drive healthcare – and human health – forward. Together with the companies we serve, we are enabling a more

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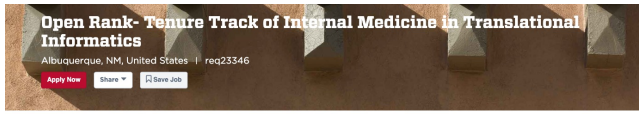
Tenure Track Faculty

#105752

Description

The Department of Biomedical Informatics (DBMI) of Columbia University seeks exceptional junior-level faculty members in the tenure track.

The positions are open to researchers interested in developing and applying informatics theory and achieving tangible benefits to health care and biology. Three particular foci are (1) machine learning for healthcare and health-related data science, (2) health information technology-based interventions to improve health care and the health of individuals and populations, and (3) translational bioinformatics.



Back to Search

Open Rank- Tenure Track of Internal Medicine in Translational Informatics

Posting Number	req23346
Employment Type	Faculty
Faculty Type	Open Rank
Hiring Department	IM Translations Informatics (B52T)
Academic Location	School of Medicine
Benefits Eligible	The University of New Mexico provides a comprehensive package of benefits including medical, dental, vision, and life insurance. In addition, UNM offers educational benefits through the tuition remission and dependent education programs. See the Benefits home page for more information.
Position Summary	The University of New Mexico, Health Sciences Center, Department of Internal Medicine, seeks a faculty member to join the Division of Translational Informatics. This position is at the Open rank and Tenure track. While the focus of the position is research-oriented, optionally, the position affords the opportunity for the candidate to have a joint clinical appointment for part-time clinical service with the University of New Mexico, and/or the Raymond G. Murphy VA Medical Center. Salary will be commensurate with experience and education.

Software Dev Analyst II - Res - G&C - CTSI

Job ID: REF9053H
Date posted: 2/20/2023

Employment Type: Full Time
Shift: Days
Location: Boston, MA

Boehringer Ingelheim is an equal opportunity global employer who takes pride in maintaining a diverse and inclusive culture. We embrace diversity of perspectives and strive for an inclusive environment which benefits our employees, patients and communities.

Senior Associate Director, Real World Data & Analytics (Remote)-232633

Description:

The purpose of this job is to:

- Generate real world evidence (RWE) to support in-line and pipeline products.
- Provide statistical advice on the analysis of real world data (RWD) to various internal and external stakeholders.
- Contribute to the RWD acquisition strategy and tool evaluation.
- Participate in the development and presentation of RWE trainings.

As an employee of Boehringer Ingelheim, you will actively contribute to the discovery, development and delivery of our products to our patients and customers. Our global presence provides opportunity for all employees to collaborate internationally, offering visibility and opportunity to directly contribute to the companies' success. We realize that our strength and competitive advantage lie with our people. We support our employees in a number of ways to foster a healthy working environment, meaningful work, diversity and inclusion, mobility, networking and work-life balance. Our competitive compensation and benefit programs reflect Boehringer Ingelheim's high regard for our employees.

Duties & Responsibilities:

- Provide expert advice in the analysis of real world data (such as medical claims, electronic health records, registries) for stakeholders in epidemiology, market access / HEOR, medical affairs, and other functional areas. These analyses may include:

R&D

Associate Director, Observational Health Data Analytics – Global Epidemiology

JOB TITLE	Associate Director, Observational Health Data Analytics – Global Epidemiology
FUNCTION	R&D
SUB FUNCTION	Epidemiology
LOCATION	Raritan, New Jersey, United States; Horsham, Pennsylvania, United States; United States; Titusville, New Jersey, United States
DATE POSTED	May 23 2023
REQUISITION NUMBER	2306123161W

Apply Now

Research Programmer Analyst (RPA) Remote/Hybrid
IT EDW Operations
Full Time
72973BR

Job Summary

Work as a Research Programmer Analyst (RPA) on a small team to develop, operate, and maintain ETL processes, clinical data warehouses, and associated data products for health research.

The RPA's role is multi-faceted, involving domain knowledge (clinical data, research informatics), technical expertise, and communication skills. The RPA will operate, monitor, and enhance existing ETL processes and infrastructure, develop data profiles, perform quality assessments, investigate data anomalies, and create/maintain related documentation and annotated data dictionaries. The RPA will routinely communicate with researchers, clinicians, data scientists, and other stakeholders to stay aligned with needs and understand data requirements and translate them into efficient, well-documented ETL solutions.

The RPA will support multiple projects and data assets, including the PCORnet CDM (and related research projects), the UC Health Data Warehouse (UC HDW Operational OMOP), and the "All of Us" Research Program.

Responsibilities include, but are not limited to the following:

1. Work closely with researchers, data scientists, and other stakeholders to understand their data requirements and translate them into efficient ETL solutions.
2. Develop, implement, and maintain ETL processes using SSIS and t-SQL stored procedures to extract, transform, and load data from Epic EHR and other sources into common data models like PCORnet CDM and OHDSI's OMOP.
3. Ensure data quality and integrity throughout the ETL process by performing data mapping, transformation, and validation.
4. Optimize ETL processes for performance, scalability, and reliability, identifying and resolving bottlenecks as needed.
5. Collaborate with team members to integrate data from disparate sources and ensure seamless data flow for research purposes.
6. Maintain up-to-date knowledge of the healthcare domain, including clinical terminologies, workflows, data standards, and regulations.
7. Adhere to data security best practices and ensure compliance with privacy regulations like HIPAA.
8. Provide (and request) technical support and guidance to (and from) other team members as needed.
9. Contribute to project management, setting priorities, and meeting deadlines.

To see the salary range for this position (we recommend that you make a note of the job code and use that to look up): TCS Non-Academic Titles Search (ucop.edu)

Please note: The compensation ranges listed online for roles not covered by a bargaining unit agreement are very wide, however a job offer will typically fall in the range of 80% - 120% of the established mid-point. An offer will take into consideration the experience of the final candidate AND the current salary level of individuals working at UCSF in a similar role.

For roles covered by a bargaining unit agreement, there will be specific rules about where a new hire would be placed on the range.

To learn more about the benefits of working at UCSF, including total compensation, please visit: https://ucnet.universityofcalifornia.edu/compensation-and-benefits/index.html

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?

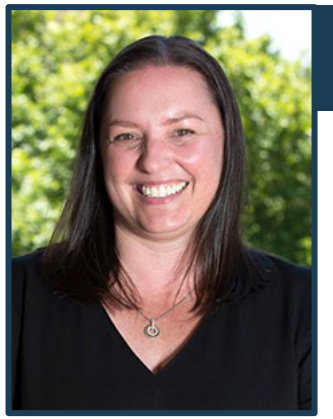
July 25: Asia-Pacific (APAC) Regional Updates

Jason Hsu

Taiwan Chapter

Lei Liu

China Chapter



Nicole Pratt

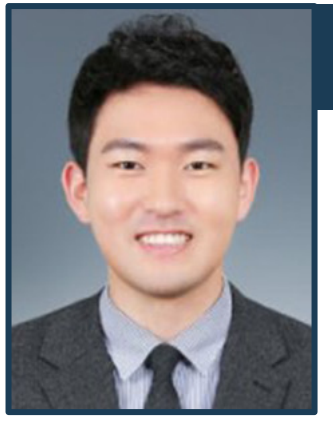
Australia Chapter

Tatsuo Hiramatsu

Japan Chapter

Mengling Feng

Singapore Chapter



Chungsoo Kim

Korea Chapter