OHDSI “Speed Dating”

OHDSI Community Call
Aug. 16, 2022 • 11 am ET
### Upcoming OHDSI Community Calls

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Aug. 23 Community Call: Workgroup Updates

**Registry**
- Tina Parciak
  - PhD Student • UHasselt/BIOMED

**Latin America**
- Jose Posada
  - Assistant Professor • Universidad del Norte

**Health Equity**
- Jake Gillberg
  - Software Developer • Tufts Clinical and Translational Science Institute

**GIS**
- Robert Miller
  - Software Development Analyst • Tufts Clinical and Translational Science Institute
Three Stages of The Journey

Where Have We Been?

Where Are We Now?

Where Are We Going?
Congratulations to the team of Antoine Lamer, Mouhamed Djahoum Moussa, Romaric Marcilly, Régis Logier, Benoit Vallet and Benoît Tavernier on the publication of Development and usage of an anesthesia data warehouse: lessons learnt from a 10-year project the Journal of Clinical Monitoring and Computing.
Congratulations to the team of Aurore Nishimwe, Charles Ruranga, Clarisse Musanabaganwa, Regine Mugeni, Muhammed Semakula, Joseph Nzabanita, Ignace Kabano, Annie Uwimana, Jean N. Utumatwishima, Jean Damascene Kabakambira, Annette Uwineza, Lars Halvorsen, Freja Descamps, Jared Houghtaling, Benjamin Burke, Odile Bahati, Clement Bizimana, Stefan Jansen, Celestin Twizere, Kizito Nkurikiyeyezu, Francine Birungi, Sabin Nsanzimana and Marc Twagirumukiza on the publication of Leveraging artificial intelligence and data science techniques in harmonizing, sharing, accessing and analyzing SARS-COV-2/COVID-19 data in Rwanda (LAISDAR Project): study design and rationale in BMC Medical Informatics and Decision Making.

Leveraging artificial intelligence and data science techniques in harmonizing, sharing, accessing and analyzing SARS-COV-2/COVID-19 data in Rwanda (LAISDAR Project): study design and rationale

Aurore Nishimwe1, Charles Ruranga2, Clarisse Musanabaganwa3, Regine Mugeni4, Muhammed Semakula5, Joseph Nzabanita5, Ignace Kabano5, Annie Uwimana5, Jean N. Utumatwishima5, Jean Damascene Kabakambira5, Annette Uwineza5, Lars Halvorsen5, Freja Descamps5, Jared Houghtaling5, Benjamin Burke5, Odile Bahati5, Clement Bizimana5, Stefan Jansen5, Celestin Twizere5, Kizito Nkurikiyeyezu5, Francine Birungi5, Sabin Nsanzimana5 and Marc Twagirumukiza5

Abstract

Background: Since the outbreak of COVID-19 pandemic in Rwanda, a vast amount of SARS-COV-2/COVID-19-related data have been collected including COVID-19 testing and hospital routine case data. Unfortunately, those data are fragmented in silos with different data structures or formats and cannot be used to improve understanding of the disease, monitor its progress, and generate evidence to guide prevention measures. The objective of this project is to leverage the artificial intelligence (AI) and data science techniques in harmonizing datasets to support Rwandan government needs in monitoring and predicting the COVID-19 burden, including the hospital admissions and overall infection rates.

Methods: The project will gather the existing data including hospital electronic health records (EHR), the COVID-19 testing data and will link with longitudinal data from community surveys. The open-source tools from Observational Health Data Sciences and Informatics (OHDSI) will be used to harmonize hospital EHRs through the Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM). The project will also leverage other OHDSI tools for data analytics and network integration, as well as R Studio and Python. The network will include up to 15 health facilities in Rwanda, whose EHR data will be harmonized to OMOP CDM.

Expected results: This study will yield a technical infrastructure where the 15 participating hospitals and health centres will have EHR data in OMOP CDM format on a local Mac Mini (Data node), together with a set of OHDSI open-source tools. A central server or portal, will contain a data catalogue of participating sites, as well as the OHDSI tools that are used to define and manage distributed studies. The central server will also integrate the information...
OHDSI Shoutouts!

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

Have a study published? Please send to sachson@ohdsi.org so we can share during this call and on our social channels. Let’s work together to promote the collaborative work happening in OHDSI!
Three Stages of The Journey

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

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<tr>
<th>Date</th>
<th>Time (ET)</th>
<th>Meeting</th>
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<tr>
<td>Tuesday</td>
<td>1 pm</td>
<td>Common Data Model</td>
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<tr>
<td>Wednesday</td>
<td>9 am</td>
<td>FHIR and OMOP Data Model Harmonization Subgroup (ZOOM)</td>
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<tr>
<td>Wednesday</td>
<td>9 am</td>
<td>Africa Chapter</td>
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<td>Wednesday</td>
<td>10 am</td>
<td>FHIR and OMOP Digital Quality Measurements Subgroup (ZOOM)</td>
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<td>Wednesday</td>
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<td>Health Equity</td>
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<td>Thursday</td>
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<td>HADES</td>
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<td>Thursday</td>
<td>12 pm</td>
<td>FHIR and OMOP Oncology Subgroup Vocabulary/Development Subgroup</td>
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<td>Thursday</td>
<td>1 pm</td>
<td>OMOP CDM Oncology</td>
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<td>Thursday</td>
<td>6 pm</td>
<td>FHIR and OMOP Terminologies Subgroup (ZOOM)</td>
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<td>Friday</td>
<td>9 am</td>
<td>GIS – Geographic Information System Development</td>
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<td>Friday</td>
<td>10:30 am</td>
<td>Clinical Trials</td>
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<tr>
<td>Tuesday</td>
<td>4 pm</td>
<td>OMOP CDM Oncology Genomic Subgroup</td>
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[www.ohdsi.org/upcoming-working-group-calls](www.ohdsi.org/upcoming-working-group-calls)
Titan Awards Nominations Are Open

Nominations for the 2022 Titan Awards are now OPEN! Please use the form below to nominate an individual or institution for a top contribution to the OHDSI community this past year!

2022 Nomination Form

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 U.S./Global Symposium each year since. Annually, community members are invited to nominate individuals or institutions they feel have made significant contributions towards advancing OHDSI’s mission, vision and values. Once nominations are submitted, the OHDSI Titan Award Committee will select the award winners. Award winners will be announced before the networking reception at the annual symposium. The award categories, as well as all previous recipients, can be found below.

Titan Award for Data Standards – to recognize extraordinary contributions by an individual, organization, or team in development or evaluation in community data standards, including OMOP common data model and standardized vocabularies
- 2021 – Maxim Moisnet, The Hyve-Earlam University Medical Center
- 2020 – Clare Blocker, Janisim Research and Development
- 2019 – Oncology Workgroup (Michael Gurley, Northwestern Univ; Rimma Belenkaya, Memorial Sloan Kettering Cancer Center; Robert Miller, Tufts CTSI)
- 2018 – Vocabulary Team (Christian Reich, IQVIA; Anna Ostropolski, Columbia Univ; Dmitry Dymshyts, Odyssey Data Services)

@OHDSI www.ohdsi.org #JoinTheJourney
2022 OHDSI Symposium

Registration is OPEN for #OHDSI2022!

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

www.ohdsi.org/ohdsi2022symposium
2022 OHDSI Symposium

Oct. 14-16 • Bethesda North Marriott Hotel & Conference Center

We are thrilled to announce that registration for the 2022 OHDSI Symposium, which will be held Oct. 14-16 at the Bethesda North Marriott Hotel & Conference Center, is now open!

It is so exciting to bring our community back together this fall. Our collaborative showcase will return; please click the link to see how you can take part in our poster presentations, software demos and lightning talks. The full agenda for our conference is still being developed, so please continue to check the OHDSI website (www.ohdsi.org) and our social platforms for updates as we plan for the 2022 Symposium.

The main conference will be held Friday, Oct. 14. A full-day tutorial will be held Saturday, Oct. 15, while other community activities will be held both Oct. 15 and Oct. 16.

Symposium Registration Details

Friday, Oct. 14 – Main Conference

Registration Fee: $995*

* This is an open and inclusive event; if the registration fee represents a burden to you, please contact symposium@ohdsi.org.

Should you need to make changes or cancel your registration ticket, please follow the instructions you will receive on your Eventbrite confirmation upon registration completion. Please note that tickets can be refunded up until 7 days prior to the event; Eventbrite fees are not refundable.

Register For The Main Conference - Friday, Oct. 14

Saturday, Oct. 15 – Full-Day Tutorial: An Introductory Journey From Data To Evidence

Registration Fee: $300*

* This is an open and inclusive event; if the registration fee represents a burden to you, please contact symposium@ohdsi.org.

Should you need to make changes or cancel your registration ticket, please follow the instructions you will receive on your Eventbrite confirmation upon registration completion. Please note that tickets can be refunded up until 7 days prior to the event; Eventbrite fees are not refundable.

Register For The Full-Day Tutorial - Saturday, Oct. 15

Saturday, Oct. 15 and Sunday, Oct. 16 — Community Activities

A highlight of the OHDSI Symposium will be a full weekend of workshop activities and meetings within the Bethesda North Marriott Hotel & Conference Center. You are now able to register for any workshop sessions as long as there is no overlap between any two sessions; registration is free, but please do so early as this will be first-come, first-served due to room capacity.

See The Schedule & Agenda For Workshop Activities - Weekend of Oct. 15-16

Register For Workshop Activities - Weekend of Oct. 15-16

Hotel Information and Sleeping Room Block

Hotel: Bethesda North Marriott Hotel & Conference Center
Address: 4791 Merrifield Road, Rockville, Maryland, 20852
Hotel Main Number: (301) 332-8200
Reservations Toll Free: (877) 212-0762
Reservations Local Phone: (301) 822-8200

This year, OHDSI is holding a sleeping room block for the nights of Oct. 13 and 14 with a special room rate of $97 plus taxes. Please note that all sleeping rooms are on a first-come, first-served basis. To help us in the planning process, we ask that you do not cancel your hotel room ordered through the OHDSI Room Block. If you must cancel, please let us know prior to Thursday, Sept. 1, so that we can offer the room to others who may need one. Once the room block is full, or if specific nights are sold out, you may make additional room reservations on the hotel’s website or by calling the hotel phone number above. Please note that OHDSI is not holding any sleeping rooms on Saturday, Oct. 15. Therefore, please call the hotel phone number or make this reservation online should you plan to stay Saturday night.

ohdsi.org/ohdsi2022symposium
Conversion of Estonian health data into the OMOP CDM: insurance claims, prescription data and electronic health records

Lead: Marek Oja

This Week

Repeatable ETL process to transform Estonian health data to OMOP CDM

MONDAY
Developing a frailty concept in the OMOP CDM among sexual minority older adults (age 50+) in the All of Us database

Lead: Brianne Olivieri Mui

OSGM potentially have higher frailty at younger ages

Results:
- The AQU-FI is a ratio (range 0-1) with a maximum of 35-items worth up to 1 point each.
- Both AQU-FI distributions had expected gamma shapes (Figure 3).
- The non-OSGM mean was higher (p<0.01) than the known Canadian FI distribution (mean=0.24; sd=0.09).
- The OSGM mean was higher than the known Canadian distribution, but lower (p<0.05) than the FI for people with intellectual disabilities (mean=0.37; sd=0.13).
- 35-items are each independently contributing to the AQU-FI, justifies our choice of the items (Figure 2).
- Both groups were <60% white. Non-OSGM were 42% male, 61% age 60 or younger, ~1% had HIV. OSGM were 54% male, 70% age 60 or older, 5% had HIV.
- Compared to non-OSGM, mean age of OSGM was significantly lower (65 [sd=8] vs 61 [sd=5]), but the AQU-FI was significantly higher (p<0.01).
- Age trends for FI were as expected for non-OSGM (Figure 3).

Discussion:
- AQU-FI is consistent with shape and behavior of established FI distributions.
- OSGM potentially have higher frailty at younger ages compared to a general older population.
- Adding the AQU-FI as a concept to the OMOP CDM for AOU users will be critical to maximizing the utility of these data for studying vulnerable subpopulations of older adults.

TUESDAY
CohortsExport: A Shiny app to explore and export data from the OMOP Common Data Model

Lead: Vittoria Ramella

Export patient-level data from the OMOP CDM.

More about the app
In the Data Tables box the user can see a preview of the data to be exported. Additional columns have been added beside each "concept", "ID" column making explicit the concept name, to help researchers and improve modularity.

Future developments
- Login step
- Integrate the WebApp with SAS user permissions
- Database definitions and export settings for reproducibility
- Export patient-level data grouped by visit ID
- Additional filters (e.g., date range, ...)

Vittoria Ramella, Matteo Galletto, Nicola Barabino
Analyzing the impact of COVID-19 on the healthcare system: an OMOP-CDM framework applied to Northern Italy

Lead: Sara Conti

Estimates of COVID-19 impact derived from OMOP-CDM data sources reproduced those obtained on the original ones. This approach can be used to compare different contexts within the EHDEN network.
Mapping UKB to the OMOP CDM: Challenges and Solutions

Lead: Sofia Bazakou

A powerful and flexible ETL framework together with existing open-source tools from the OHDSI suite allowed us to perform the conversion and to deliver a high-coverage mapping without direct access to the UKB data.

Figure 1. Data conversion workflow using existing OHDSI tools together with an internal ETL pipeline. Detailed.

We implemented tests with the ETL framework described above. The data we then delivered at ICIN to be explored on the original data. Last, we performed quality assessments with both Arqalis and the Data Santa's benchmark.

Results

our effort to convert the UK Biobank data to the OMOP CDM to demonstrate if successful collaboration and community engagement, detailed working with ICD to enable the OMOP data to be used for research, like the OMOP CDM, are needed for research and development. The ETL workflow group, as well as setting up and sharing, and OHDSI Forum discussions on issues that we encountered were the most useful feedback as a whole.

In our, the ETL framework includes 38 data to 11 individual table models, and includes use of OMOP equivalents for such semantic modeling. The code has been committed on the code at the ICD current working on the ETL message. Such a high rate is a direct result of regular connectivity with the community, which we are pleased with our insights for code improvements, as well as the use of Stanley's samba's execution log and summary reports to facilitate the investigation of data quality issues.

Reference

3. Sofia Bazakou, Andrei Nicolae, Denis Pendar, Anne van Meeteren, Sophie Payeur, Traci P Microsoft. Sono Diana

The Hyve

FRIDAY
Call for Participation: Phenotyping Metadata Framework Survey

Researchers

mattspotnitz

Dear OHDSI Friends,

We are looking for participants to fill out a brief survey to assess the comprehensiveness of a novel phenotyping metadata framework. As you may know, many electronic phenotype algorithms have been developed in the past decade. It is imperative to develop a metadata framework to catalogue and categorize these electronic phenotypes to help researchers better discern their differences and select suitable phenotypes for certain tasks. This metadata framework defines about 40 metadata elements. We would like researchers to grade how useful each data element is. The survey will take 5-10 mins to complete. We’d greatly appreciate your input and support by 08/25. We welcome anyone interested in participating on this project as a collaborator or co-author.

Here is a link to the survey:
https://cumc.co1.qualtrics.com/jfe/form/SV_8hUQx18rsDiGvhs

@OHDSI www.ohdsi.org #JoinTheJourney
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 Speed Dating!

- Groups of 7-8 people
- 8-minute sessions
- 4 sessions total

What can you share?
OHDSI Speed Dating!

Name:

Organization:

Where have you been on your OHDSI journey?

Where do you want to be on the OHDSI journey?

Will you be coming to the OHDSI Symposium in October in Bethesda, Md., USA?
OHDSI Speed Dating!

+ 1 Special Question

Round 1: What's the OHDSI standard/tool/best practice you've most recently used?

pollev.com/patrickryan800
OHDSI Speed Dating!

+ 1 Special Question

Round 2: Where is the ideal location for the next OHDSI collaborative event?

pollev.com/patrickryan800
OHDSI Speed Dating!

+ 1 Special Question

Round 3: What is the best swag you've ever gotten at a scientific conference?

pollev.com/patrickryan800
OHDSI Speed Dating!

+ 1 Special Question

Round 4: You've decided to form a new OHDSI workgroup that you'll all be founding members of, what is it called?

pollev.com/patrickryan800