

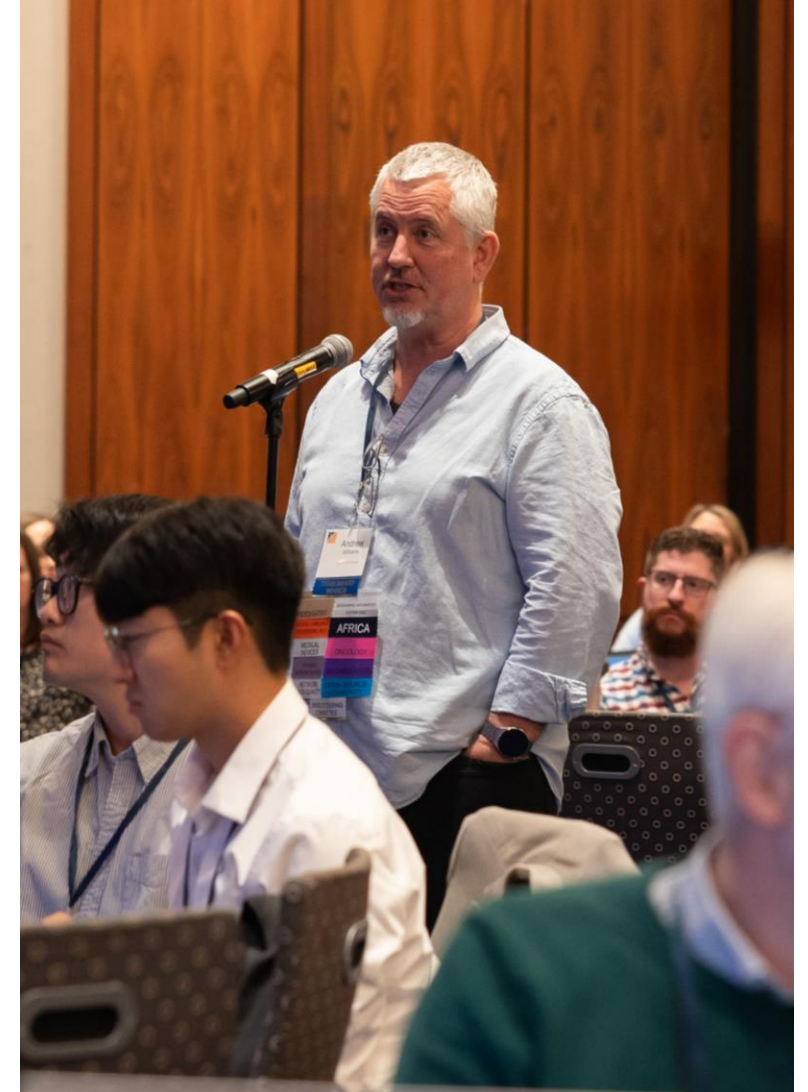


# Standardized Vocabulary Summer Refresh

**OHDSI Community Call**  
**Sept. 2, 2025 • 11 am ET**



# Andrew Williams: 1963-2025





# Upcoming Community Calls

Date	Topic
Sept. 2	Standardized Vocabulary Summer Refresh Update
Sept. 9	Global Symposium Preview
Sept. 16	OHDSI/OMOP Research Spotlight
Sept. 23	Educating on OHDSI: Lessons Learned
Sept. 30	OHDSI 2025 Poster Preview Mad Minutes / Symposium Logistics
Oct. 7	No Call – OHDSI Symposium
Oct. 14	Welcome to OHDSI
Oct. 21	Meet the Titans



# Three Stages of The Journey

**Where Have We Been?**

**Where Are We Now?**

**Where Are We Going?**





# OHDSI Shoutouts!



Congratulations to the team of **Jae-Hyuk Jang, ChulHyoung Park, Chungsoo Kim, Youngsoo Lee, Eunyoung Lee, Rae Woong Park, and Hae-Sim Park** on the publication of **Real-World Effectiveness of Omalizumab Treatment in Adult Asthma Patients** in the *Yonsei Medical Journal*.



## Original Article

Yonsei Med J 2025 Sep;66(9):545-555  
<https://doi.org/10.3349/ymj.2024.0320>

Yonsei Medical Journal  
**YMJ**  
pISSN: 0513-5796 • eISSN: 1976-2437

## Real-World Effectiveness of Omalizumab Treatment in Adult Asthma Patients

Jae-Hyuk Jang<sup>1\*</sup>, ChulHyoung Park<sup>2\*</sup>, Chungsoo Kim<sup>3,4</sup>, Youngsoo Lee<sup>1</sup>, Eunyoung Lee<sup>5</sup>, Rae Woong Park<sup>2,6</sup>, and Hae-Sim Park<sup>1</sup>

<sup>1</sup>Department of Allergy & Clinical Immunology, Ajou University School of Medicine, Suwon, Korea

<sup>2</sup>Department of Biomedical Informatics, Ajou University School of Medicine, Suwon, Korea

<sup>3</sup>Department of Internal Medicine, Section of Cardiovascular Medicine, Yale University School of Medicine, New Haven, CT, USA

<sup>4</sup>Center for Outcomes Research and Evaluation, Yale-New Haven Hospital, New Haven, CT, USA

<sup>5</sup>Department of Neurology, McGovern Medical School, University of Texas Health Science Center at Houston, Houston, TX, USA

<sup>6</sup>Department of Biomedical Sciences, Ajou University Graduate School of Medicine, Suwon, Korea.

**Purpose:** Omalizumab improves clinical outcomes for patients with severe asthma (SA), but its long-term effectiveness and potential biomarkers for predicting patient response require further investigation. This study aimed to evaluate the real-world effectiveness of omalizumab in treating SA and to identify potential biomarkers for predicting a favorable treatment response.

**Materials and Methods:** Clinical outcomes were compared between asthma patients receiving omalizumab (omalizumab group) and those on inhaled corticosteroid with long-acting beta-agonist (ICS-LABA) alone (ICS-LABA group). Propensity score matching and Cox proportional hazards model were used to calculate hazard ratios (HRs). Study outcomes included severe asthma exacerbation (SAE), incompletely controlled asthma, intravenous (IV) corticosteroid use, and asthma-related hospitalization. Incompletely controlled asthma was defined by blood eosinophil counts  $\geq 150$  cells/ $\mu$ L, fractional exhaled nitric oxide (FeNO)  $\geq 25$  ppb, forced expiratory volume in one second (FEV1%)  $< 80\%$ , or SAE occurrence.

**Results:** The omalizumab group had significantly lower risks of SAE (HR 0.17,  $p=0.03$ ), incompletely controlled asthma (HR 0.56,  $p=0.04$ ), IV corticosteroid treatment (HR 0.38,  $p=0.02$ ), and asthma-related hospitalization (HR 0.27,  $p=0.05$ ). Blood eosinophil count stayed lower in the omalizumab group. FEV1% was higher with the omalizumab group, while blood neutrophil count, FeNO, and serum total IgE showed no differences. Furthermore, subgroup analysis showed patients with treatment-favorable response ( $>50\%$  reduction in systemic corticosteroid dose) exhibited decreased blood neutrophil counts but increased FEV1% and serum total IgE levels compared with the treatment-unfavorable group.

**Conclusion:** Omalizumab treatment effectively reduces SAE and improves lung function and asthma control. Blood neutrophil counts and serum total IgE may be potential biomarkers for predicting favorable responses to omalizumab treatment.

**Key Words:** Asthma, IgE, omalizumab, neutrophils



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# OHDSI Shoutouts!



Congratulations to the team of **Seon Beom Jo, Sun Tae Ahn, Hyung Joon Joo, Jong Wook Kim, and Mi Mi Oh** on the publication of **Carbapenem Resistance and ESBL-Producing Enterobacteriaceae in Patients with Urological Infections from 2012 to 2021 in Three Korean Hospitals** in *Diagnostics*.



Article

## Carbapenem Resistance and ESBL-Producing Enterobacteriaceae in Patients with Urological Infections from 2012 to 2021 in Three Korean Hospitals

Seon Beom Jo <sup>1</sup>, Sun Tae Ahn <sup>1</sup>, Hyung Joon Joo <sup>2</sup>, Jong Wook Kim <sup>1</sup> and Mi Mi Oh <sup>1,\*</sup>

<sup>1</sup> Department of Urology, Korea University Guro Hospital, Seoul 08308, Republic of Korea

<sup>2</sup> Department of Cardiology, Korea University Anam Hospital, Seoul 02841, Republic of Korea

\* Correspondence: mamah@hanmail.net

### Abstract

**Background:** Urinary tract infections (UTIs) remain a leading cause of community- and hospital-onset bacterial infections worldwide. Although many countries have implemented antimicrobial resistance (AMR) surveillance systems, longitudinal multicenter data on key uropathogens in Korea remain limited. **Methods:** We retrospectively evaluated *Escherichia coli* and *Klebsiella pneumoniae* isolates from patients with clinically diagnosed UTIs at three tertiary-care Korean hospitals (2012–2021). Using a harmonized Observational Medical Outcomes Partnership Common Data Model (OMOP CDM), we analyzed antibiotic susceptibility based on Clinical and Laboratory Standards Institute breakpoints. Trends in resistance to key antibiotics (including fluoroquinolones, cephalosporins, and carbapenems) were assessed using the Cochran–Armitage test. **Results:** From 2012 to 2021, ESBL-producing *E. coli* and *K. pneumoniae* increased from 24.1% to 38.2% and 39.2% to 46.4%, respectively. The rates for *K. pneumoniae* remained stable over the last 6 years, and for *E. coli*, they remained stable over the last 3 years. Resistance rates for *E. coli* increased from 44.5% to 60.0% (ciprofloxacin) and from 26.3% to 40.2% (cefotaxime), while carbapenem resistance (ertapenem) remained low, at 0.3% to 1.2%. In contrast, *K. pneumoniae* exhibited high resistance levels to fluoroquinolones, cephalosporins, and other broad-spectrum antibiotics, with notable increases in resistance to ertapenem, from 3.0% to 18.1%, and imipenem, from 0.4% to 16.8%. This escalation mainly stemmed from the rise in ertapenem (6.6% to 17.0%) and imipenem (0.8% to 14.6%) resistance rates among *Klebsiella*-ESBL producers. **Conclusions:** We conclude that in Korea, the proportion of ESBL-producing *E. coli* and *K. pneumoniae* increased significantly from 2012 to 2018 and has since remained stable for the last 3 years (*E. coli*) and 6 years (*K. pneumoniae*). Although carbapenem resistance in *E. coli* remains low, *K. pneumoniae* has experienced a significant rise, primarily attributable to its ESBL-producing strains. These findings underscore the importance of vigilant antimicrobial stewardship and continuous surveillance to guide empirical UTI therapies in Korean clinical practice.



Academic Editor: Alessandro Russo

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**Citation:** Jo, S.B.; Ahn, S.T.; Joo, H.J.; Kim, J.W.; Oh, M.M. Carbapenem Resistance and ESBL-Producing Enterobacteriaceae in Patients with Urological Infections from 2012 to 2021 in Three Korean Hospitals. *Diagnostics*



# 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	ATLAS/WebAPI
Wednesday	7 am	Medical Imaging
Wednesday	8 am	Psychiatry
Wednesday	11 am	Common Data Model
Thursday	11 am	Themis
Thursday	11 am	Industry
Thursday	12 pm	Medical Devices
Thursday	12 pm	Methods Research
Thursday	1 pm	Oncology Vocabulary/Development Subgroup
Thursday	2 pm	Early-Stage Researchers
Thursday	7 pm	Dentistry
Friday	10 am	Transplant
Friday	10 am	GIS – Geographic Information System
Friday	11:30 am	Steering
Monday	10 am	Healthcare Systems Interest Group
Tuesday	9 am	Oncology Genomic Subgroup



# 2025 Europe Community Calls

Date	Topic
Sept. 11	Europe Community Call Introduction / DARWIN EU Update
Oct. 9	TBA
Nov. 13	Patient-Reported Outcome Measures (PROMs)
Dec. 11	Vocabularies in Europe



**OHDSI**  
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

Who We Are > Updates & News > Standards > Software Tools > Network Studies > Community Forums > Education > New To OHDSI? >

Community Calls > Past Events > Workgroups > 2024 'Our Journey' Annual Report > Current Events > Support & Sponsorship >

2025 Africa Symposium > 2025 APAC Symposium > Github > YouTube > Twitter > LinkedIn > Newsletters >

2025 Community Calls

Europe Community Calls

APAC Community Calls

2024 Community Calls

2023 Community Calls

2022 Community Calls

2021 Community Calls

### Welcome to OHDSI!

Health Data Sciences and Informatics (or OHDSI, pronounced "Odyssey") program is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data through large-scale analytics. All our solutions are open-source.

OHDSI has established an international network of researchers and observational health databases with a central coordinating center housed at Columbia University.

Read more [about us](#), about [our goals](#), and how you can [help support the OHDSI community](#).

### 2025 Global Symposium

Please join us at the 2025 Global Symposium, which will be held at the Hyatt Regency Hotel in New Brunswick, N.J., on Oct. 7-9. There will be tutorials Oct. 7, the main conference Oct. 8, and workshop activities Oct. 9.

[Global Symposium Homepage](#)

[Register Me for the Symposium](#)

# Science Summit 2025

alongside the United Nations General Assembly (UNGA80)

9 – 26 September 2025



## Science for a Sustainable Future: Showcasing Science Collaboration

The role and contribution of **science in attaining the United Nations Sustainable Development Goals (SDGs)** will be the central theme of the Science Summit. The objective is to enable science collaborations to demonstrate how science supports the attainment of the UN SDGs and Agenda 2030.

The Summit will examine what **enabling policy, regulatory and financial environments** are needed to implement and sustain the science mechanisms required to support genuinely global scientific collaborations across continents, nations and themes.

Scientific discovery through the analysis of massive data sets is at hand. This data-enabled approach to science, research and development will be necessary if the SDGs are to be achieved.

**SCIENCE FOR GLOBAL CHALLENGES →**

Full programme is [here](https://sciencesummitnyc.org/)

<https://sciencesummitnyc.org/>

## Registration links

Part 1 Sep 18, 8:30-10:30 EDT: <https://event.sciencesummitnyc.org/list-of-sessions/detail/131>

Part 2: Sep 18, 11:00-13:00 EDT <https://event.sciencesummitnyc.org/list-of-sessions/detail/130>

Full programme here: <https://event.sciencesummitnyc.org/list-of-sessions>

- Part 1

1. *Observational Health Data Science and Informatics (OHDSI): Inclusive and Collaborative Science.* George Hripcsak
2. *Promoting Data Harmonization and Data Science in Africa.* Agnes Kiragga
3. *Rapid Response to the Covid-19 Pandemic Using a National Scale Database.* Chan Seng You
4. *OHDSI in Asia and the Pacific Rim.* Nicole Pratt
5. *Q&A Session*

- Part 2

1. *Enabling Reliable Evidence Generation from Real-world Data in Europe.* Peter Rijnbeek
2. *DARWIN-EU® – Delivering Real World Evidence to Support Regulatory Decision-making by the European Medicines Agency.* Katia Verhamme
3. *OHDSI Adoption and Current Implementation Landscape in Latin America.* Julio Cesar Barbour Oliveira
4. *Learning Opportunities for OHDSI Skills Development.* Cynthia Sung
5. *Clinical and Public Health Impact of OHDSI.* Patrick Ryan
6. *Q&A Session*



# Titan Award Nominations Are Open

The Titan Awards have been handed out annually since 2018 to recognize OHDSI collaborators (or collaborating institutions) for their contributions towards OHDSI's mission.

Nominations for the 2025 Titan Awards are now open. **Please complete your nominations by our Sept. 9 (8 pm ET) deadline!**

[ohdsi.org/titan-awards](https://ohdsi.org/titan-awards)



# September Newsletter is Available



## The Journey Newsletter (September 2025)

LLM Innovations throughout OHDSI were highlighted recently, and those talks are included in this newsletter. The Global Symposium (Oct. 7-9, New Brunswick, NJ) is quickly approaching, and new updates are shared below. Don't miss your chance to learn, share and network with our worldwide community; visit [www.ohdsi.org/ohdsi2025](http://www.ohdsi.org/ohdsi2025) to secure your place before registration is capped! [#JoinTheJourney](#)

## Podcast: LLMs, Collaboration & OHDSI2025



## Agenda Posted For OHDSI 2025; Collaborator Showcase Accepts 140+ Posters/Demos/Talks



We're just weeks away from the OHDSI 2025 Global Symposium! From Oct. 7-9, the Hyatt Regency in New Brunswick, NJ, will host our 11th annual event, bringing the global community together to advance open science and collaboration. Registration is open, so don't miss your chance to learn, share, and network with colleagues from across the world.

We heard the community's wishes for more time for the collaborator showcase, and we have adjusted the format for 2025. Following the Scientific Review Committee's acceptance of 140+ submissions, we will add an extra series of lightning talks and extended time for posters and demos. We are also opening up a poster preview session during our networking reception, which will now be Tuesday, Oct. 7, at 6 pm ET.

The three-day agenda, which includes Tuesday tutorials and Thursday workgroup activities, has been posted and is available below. Specific information will be shared during the Sept. 9 community call, which will preview all three days of the symposium. Use the links below to learn more information, and we hope to see you next month in New Brunswick!

[Register Me for OHDSI 2025](#)

[OHDSI 2025 Homepage](#)

[OHDSI 2025 Agenda](#)

[OHDSI 2025 Tutorials](#)

## Community Updates

### Where Have We Been?

- The Scientific Review Committee accepted more than 140 submissions for the 2025 Global Symposium Collaborator Showcase, including posters, software demos and lightning talks. The showcase will be extended this year to feature two sets of lightning talks and a poster preview during the Tuesday night networking reception. See the full symposium agenda later in this newsletter.
- The vocabulary team completed [the 2025 Summer Refresh](#) last week, and the leadership team will provide updates during the [Sept. 2 community call](#). You can watch the recording from that session on the OHDSI [community calls](#) or [YouTube](#) pages.
- The Aug. 26 community call welcomed collaborators around the world to [provide brief presentations on LLM-related projects](#) they are working on. This session showed the breadth of LLM work happening in OHDSI, but it also created avenues for collaboration within the network. Learn more later in this newsletter.

### Where Are We Now?

- The Global Symposium will be held Oct. 7-9 at the Hyatt Regency Hotel in New Brunswick, N.J., USA. [Registration is open](#), and details for the event are on the [OHDSI2025 homepage](#), as well as later in this newsletter. The Sept. 9 community call will provide a full preview of the event.
- The OHDSI community will lead multiple sessions during [the 2025 United Nations Science Summit](#) on Thursday, Sept. 18. The [8:30 am ET session](#) and the [11:00 am ET session](#) will both be available online, and speakers for each are listed on their specific session pages.
- The [#OHDSISocialShowcase](#) is highlighting research from the 2024 Europe Symposium this month. Please follow our [LinkedIn](#), [Twitter/X](#), [Bluesky](#) and [Instagram](#) feeds to learn more about the research happening in our community.

### Where Are We Going?

- OHDSI Europe will begin a monthly community call series Sept. 11, and the opening session will include an update on DARWIN EU. Calls will be hosted the second Thursday of each month at 1 pm CET; the meeting link, slides and videos are available on the [EU community call homepage](#).
- The first [2025 OHDSI Africa Symposium](#) will be held Nov. 10-12 in Kampala, Uganda, [and registration is open](#). The abstract submission deadline is Sept. 10. A tentative agenda can be found on the event homepage.
- The [2025 OHDSI Asia-Pacific Symposium](#) will be held Dec. 6-7 in Shanghai, China. [Registration recently opened](#), and the deadline for the collaborator showcase is Sept. 7.

## Global Researchers Showcase Their LLM Innovations, Share Collaboration Opportunities



The Aug. 26 community call welcomed collaborators around the world to provide brief presentations on LLM-related projects they are working on, to both show the breadth of work happening in OHDSI, but to also create avenues for collaboration within the network. The following collaborators provided presentations: Georgina Kennedy, Olga Endrich, Joel Swerdel, Zsolt István, Jianlin Shi, Rowan Perry, Iurii Iurchenko, Subin Kim, Sumin Lee, and Hanjae Kim.

Presentations and slides from this session are available below. There were also several LLM-related submissions showcased at the 2025 Europe Symposium, and others that will be shared at the upcoming Global Symposium.

[Video: LLM Innovations in OHDSI](#)

[Slides: LLM Innovations in OHDSI](#)



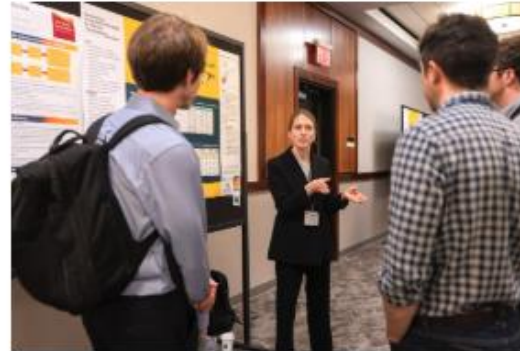
# Global Symposium: Oct. 7-9



OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

- Who We Are ▾
- Updates & News ▾
- Standards
- Software Tools ▾
- Network Studies ▾
- Community Forums ▾
- Education ▾
- New To OHDSI? ▾
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- 2025 Global Symposium Homepage
- Register for OHDSI2025
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- OHDSI 2025 Tutorials



## 2025 OHDSI Global Symposium

[ohdsi.org/ohdsi2025](https://ohdsi.org/ohdsi2025)







# Africa Symposium: Nov. 10-12

[2025 Global Symposium](#) [2025 Africa Symposium](#) [2025 APAC Symposium](#) [Github](#) [YouTube](#) [Twitter](#) [LinkedIn](#) [Newsletters](#)

## Join Us At The Inaugural OHDSI Africa Symposium

Nov. 10-12, 2025 • Joint Clinical Research Centre (JCRC) & Mestil Hotel Kampala



The inaugural OHDSI Africa Symposium will be held in Kampala at the Joint Clinical Research Centre (JCRC) and Mestil Hotel. Our community is delighted to introduce a new face-to-face opportunity in Africa, where OHDSI is growing at an exciting pace. We hope you will join us for this historical moment.

The first OHDSI Africa symposium will be hosted by JCRC and will begin with a dedicated one-day training course at JCRC, followed by a two-day main conference at Mestil hotel. Below are some important dates for you to save to your calendar:

**Collaborator Showcase**

- Submissions deadline: September 10
- Submissions review: September 11-30
- Notification of acceptance: October 5

**Symposium**

- Tutorial: November 10 at JCRC
- Main conference: November 11-12 at Mestil Hotel

**Mestil Hotel Accommodations**

**Booking Code:** JCRC  
**Booking Link:** [https://direct-book.com/properties/MestilDIRECT?promotion\\_code=JCRC25](https://direct-book.com/properties/MestilDIRECT?promotion_code=JCRC25)

Register Me for the 2025 OHDSI Africa Symposium!

2025 OHDSI Africa Symposium Full Agenda

[ohdsi.org/africa2025](https://ohdsi.org/africa2025)



# APAC Symposium: Dec. 6-7

The 2025 OHDSI APAC Symposium will be held Dec. 6-7 in Shanghai, China at the Shanghai Jiao Tong University. It will feature a 1-day tutorial and a 1-day main conference. Here are some important dates for you to save to your calendar:

## Collaborator Showcase

- Submissions deadline: September 7
- Submissions review: September 8 – October 9
- Notification of acceptance: October 17



[ohdsi.org/apac2025](https://ohdsi.org/apac2025)



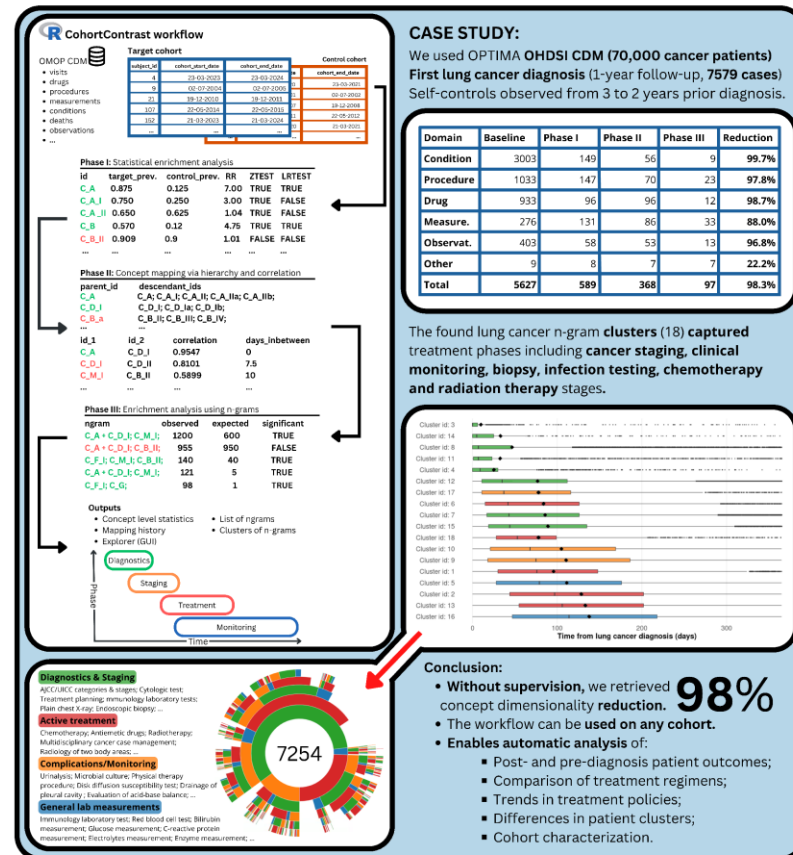
# #OHDSISocialShowcase This Week

Monday

## Automated Identification of Treatment Trajectories on OMOP CDM

(Markus Haug, Raivo Kolde)

### CohortContrast: Identify relevant events characterizing your cohort



Markus Haug\*, MSc  
Neeme Iives, MD  
Raivo Kolde, PhD



UNIVERSITY OF TARTU  
Institute of Computer Science



This study was co-funded by the European Union through the European Regional Development Fund and Estonian Ministry of Education and Research via projects TEM-TA72, 2021-2027.01.24-0444, and Estonian Research Council grant PRG1844



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# #OHDSISocialShowcase This Week

## Tuesday

### RIANA Dashboard: A Blockchain-Enabled Approach for Representing AI Model Intent in OMOP with Atlas-Like Functionality

(Frederic Jung, Guilherme Madureira Sanches Ribeiro, Ankur Lohachab, Stef Rommes, Visara Urovi, Chang Sun, Gökhan Ertaylan, Alfred Attipoe)

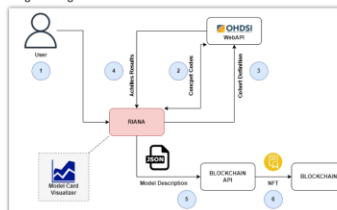
A user-friendly alternative to OHDSI Atlas for documenting and reporting medical AI models claims

Title: *RIANA Dashboard: A Blockchain-Enabled Approach for Representing AI Model Intent in OMOP with Atlas-Like Functionality*



AI models in healthcare face increasing demands for transparency, reproducibility, and regulatory alignment. To meet these needs, we developed the **REALM Intelligent Analytics (RIANA) Dashboard**, an alternative user interface to Atlas specifically designed to capture and formalize the intent behind AI models used in clinical practice. RIANA helps users to define patient cohorts, map input features and report performance metrics using standardized vocabularies and clinical concepts from the OMOP Common Data Model. This structured approach ensures that each AI model is clearly linked to a well-defined target population, streamlining preparation for CE marking and compliance with emerging EU regulatory frameworks.

Figure 1: High-level user workflow in the RIANA dashboard



RIANA simplifies the process of defining and documenting the claims of AI models through an intuitive web-based interface. Model intended purpose and input features can be easily mapped to the standardized OMOP vocabulary (Figure 3).

Figure 1: Based on this structured input, RIANA users can easily search for concept codes 1, 2 to generate cohort definitions 3 translating inclusion and exclusion criteria directly from the model's intended use. Detailed concept distributions and demographics for each scenario are generated from Achilles 4.

Figure 2: Simplified RIANA dashboard reporting workflow using WebAPI and Blockchain API

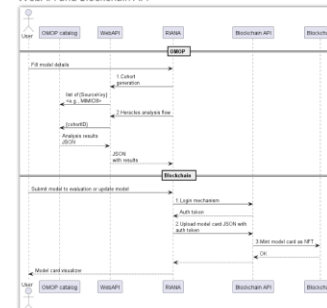
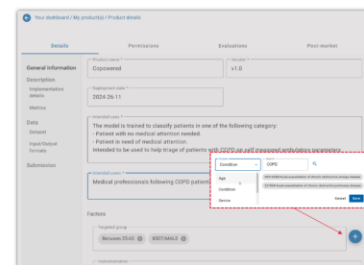


Figure 3: RIANA Dashboard Interface with OMOP Autocomplete for Defining Patient Target Group



Finally, all components, including the cohort definition 5, Achilles outputs 6, and performance metrics, are bundled into a structured JSON model card 7, providing a transparent and reproducible summary that can also be visualized and published 8 for data partners, regulatory authorities and notify bodies.



Frédéric Jung<sup>1</sup>, Guilherme Madureira Sanches Ribeiro<sup>2</sup>, Ankur Lohachab<sup>3</sup>, Stef Rommes<sup>1</sup>, Visara Urovi<sup>3</sup>, Chang Sun<sup>3</sup>, Gökhan Ertaylan<sup>1</sup>, Alfred Attipoe<sup>2</sup>

<sup>1</sup> VITO, Vlaamse Instelling voor Technologisch Onderzoek, Mol, Belgium <sup>2</sup> COMMUNICARE Solutions, Liège, Belgium <sup>3</sup> Institute of Data Science, Maastricht University, Maastricht, the Netherlands



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# #OHDSISocialShowcase This Week

## Wednesday

# Improvement of operational efficiency in clinical studies thanks to OMOP repositories of data from clinical practice

(**Thibault Helleputte**, Maryna Borshchivska, Philippe Olivier)

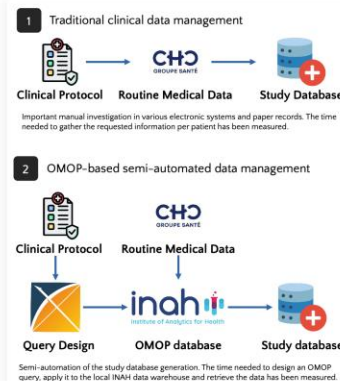
Clinical study data collection  
is up to **10 times faster** thanks to OMOP.

*Improvement of operational efficiency in clinical studies thanks to OMOP repositories of data from clinical practice.*

**Background:** Hospitals play a crucial role in clinical research, from which they may also derive revenues. Validated clinical study protocols (retrospective/prospective) are implemented by clinical researchers. A set of information (inclusion/exclusion criteria, endpoints/covariates of the study) has to be retrieved from hospital records, which takes a considerable time. Having a systematic ingestion of a part of the medical practice data into an OMOP database is an opportunity to increase clinical research efficiency.

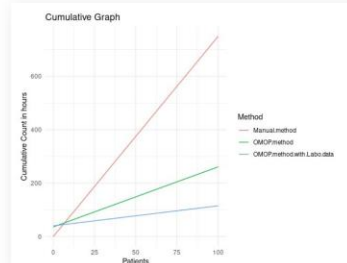
### Method

INAH provides a functional platform to store OMOP-transformed data from medical practice at large scale. We consider an actual request for a retrospective clinical trial from a private sponsor (oncology diagnosis based on imaging). The protocol implies the collection of 108 data items/patient to include in the study cohort.



### Results

The traditional way takes 7.5h per patient to collect data (we omit the extra time to conclude if patients do match all criteria). The semi-automated way has a fixed overhead of 40h (OMOP query design & validation) and covers about ~70% of the requested data items. About 30% of the items must still be gathered manually, leading to 2.25h / patient. Both take a linear time depending on the number of patients.



Adding an extra connector to laboratory data to the INAH platform would increase by 8h the time for design and validation of the OMOP query, but it would speed up the constitution of the cohort even more: 0.75h/patient, i.e. 10% of original time.

**Conclusion :** Routinely extract, transform, and load primary data in an OMOP data warehouse strongly increase the efficiency of clinical study conduct. This efficiency, in turn, can be used to increase hospital attractiveness for external sponsors, increase the competitiveness of the hospital in research and publications, or increase the financial margin of the hospital.



Helleputte Thibault, Borshchivska Maryna,  
Olivier Philippe





# #OHDSISocialShowcase This Week

## Thursday

### Standardization of Routine Clinical Data Using the OMOP Common Data Model: Exploring Its Application in Infectious Disease Research

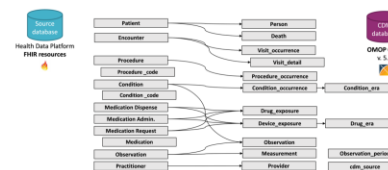
(Maxim Moinat, Joany Zachariasse, Renske Los, Mees Mosseveld, Clementien Vermont, Rianne Oostenbrink, Peter Rijnbeek)

A successful mapping of FHIR tables of a large tertiary hospital to the OMOP CDM, showing value for an infectious disease use case.

STANDARDIZATION OF ROUTINE CLINICAL DATA USING THE OMOP COMMON DATA MODEL: EXPLORING ITS APPLICATION IN INFECTIOUS DISEASE RESEARCH

**Background:** The COVID pandemic offers many opportunities to study the epidemiology and transmission of infectious diseases. However, the use of real-world data from this period is hindered by challenges in electronic health record (EHR) data extraction and standardization. The health data at Erasmus MC, a tertiary hospital in the Netherlands, is made available as FHIR tables. Adding an OMOP CDM mapping on top of this enables use of OHDSI analytical tools and international collaboration.

Figure 1: Source and target OMOP CDM tables. Note that conditions with a 'History' of were mapped to observation. The observation period was populated with data from all source tables, taking first and last event after date of EHR introduction.



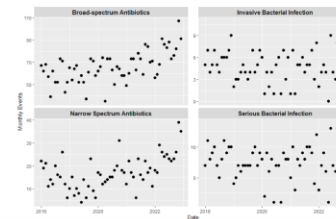
#### ETL METHODS:

- ETL implemented in a Java application
- Reuse of existing mappings of ICD10, DHD Diagnosis and DHD Verrichtingen
- Usagi for manual mappings

#### ETL RESULTS:

- In total, nine source tables were mapped to fifteen OMOP CDM tables (figure 2).
- Eleven local and national coding systems were mapped to the OMOP standard vocabularies.
- One national coding system was reused (Zindex) and eight local coding systems have been partly mapped.

Figure 2: Number of monthly events for broad spectrum antibiotics, invasive bacterial infections, narrow spectrum antibiotics and serious bacterial infections.



#### STUDY METHODS:

- **Design:** single centre, observational study based on routine clinical data
- **Study population:** children <18 years attending the emergency department of a tertiary hospital in the Netherlands
- **Study period:** January 1st, 2018 until 31 March 2023 (throughout and after the COVID-19 pandemic)
- **Outcomes:** monthly counts of 1) bacterial infections (serious and invasive) defined by diagnosis code; 2) antibiotics used (narrow and broad spectrum), defined by RxNorm code
- **Analysis:** Explorative analysis of trends over time.

#### STUDY RESULTS:

- 5529 unique persons, representing 7815 events.
- Monthly counts of serious bacterial and invasive infections were low and remained relatively stable.
- Monthly numbers of antibiotic prescription were more variable; an increase in absolute prescriptions cannot be excluded and requires formal statistical analysis.

**CONCLUSIONS:** With the OMOP mapped data, we were able to directly apply OHDSI Atlas and standardised analytics like IncidencePrevalence. This helped to quickly get initial results and allows for running the analyses in a network of OMOP mapped data sources. Next steps include quality control by chart review, adding microbiology data and formal statistical trend analysis.



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# #OHDSISocialShowcase This Week

Friday

## Enhancing Transparency in Healthcare - Blockchain-Supported Model Cards for AI Evaluation Reporting with OMOP and Heracles

(**Frederic Jung**, Ankur Lohachab, Guilherme Madureira Sanches Ribeiro, Stef Rommes, Visara Urovi, Chang Sun, Gökhan Ertaylan)

### Enhancing transparency in AI for healthcare with OMOP Model Card reporting

Title: *Enhancing Transparency in Healthcare - Blockchain-Supported Model Cards for AI Evaluation Reporting with OMOP and Heracles.*



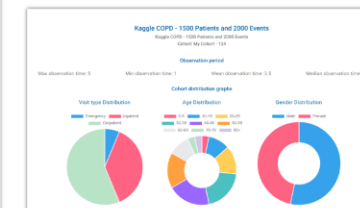
AI models in healthcare demand rigorous documentation to support transparency, trust, and regulatory alignment—particularly under evolving EU regulations like the AI Act and EHDS. We propose an extended model card framework, rooted in OHDSI methodologies and the OMOP CDM, that standardizes the way AI models intent and performance are described. This framework clearly defines target cohorts, input features, evaluation metrics, and data requirements using structured JSON formats linked to OMOP concepts, enabling semantic clarity and consistent model documentation across OMOP-CDM-compliant clinical datasets used for AI model development and evaluation.

Table 1: Structured Model card sections aligned with OMOP CDM

Model Card Section	Representative Examples
<b>Factors</b> Includes demographic or phenotypic groups, environmental conditions, and other stratification factors. These are defined as cohort definitions in JSON format, allowing a structured representation of patient groups.	<pre>{   "expression": {     "concept_id": 8587,     "concept_name": "MALE",   },   "condition_occurrence": {     "concept_id": 12,     "age": {       "value": 22,       "op": "gt"     }   } }</pre>
<b>Features</b> Provides the feature mapping between the input dataset and the OMOP CDM, for each feature and its modalities, the mapping ensures alignment with standardized OMOP concept.	<pre>{   "name": "COMPOSITE",   "source_values": [     "SEVERE",     "MODERATE",   ],   "target_values": [     4209097,     4209098,   ],   "type": "categorical",   "domain": "condition_occurrence", }</pre>
<b>Evaluation Dataset</b> Provides details on the dataset used for quantitative analyses in the model card. This includes Heracles results per OMOP data sources along with patient counts, generation timestamps, summarizing demographics and clinical distributions	<pre>{   "name": "HERACLES",   "dataset_id": "1234",   "summary": {     "concept_name": "MALE",     "concept_id": 8587,     "count_value": 95   },   "condition_distribution": {     "concept_id": 4193588,     "concept_name": "Moderate COPD",     "num_persons": 39,   },   "concept_id": 4209097,   "concept_name": "Severe COPD",   "num_persons": 27 }</pre>
<b>Metrics</b> Reflects the potential real-world impact of the model by capturing performance measures. These metrics are stored alongside the evaluation dataset and are linked using the same dataset ID.	<pre>{   "dataset_id": "1234",   "name": "Accuracy",   "score": "0.85", }, {   "dataset_id": "1234",   "name": "Recall",   "score": "0.92", }</pre>

Table 1 shows how OMOP-aligned JSON fields structure the card, while Figure 1 gives an example of it can be visualized. To ensure traceability and auditability, model cards are published as NFTs on the Polygon blockchain using the ERC-1155 standard. The RIANA dashboard, a web-based interface, guides model developers to create the model card through a 4-step process: (1) cohort definition via WebAPI, (2) cohort generation across OMOP sources, (3) Heracles-driven summary analysis, and (4) model card generation and blockchain publication. Each version is immutable, timestamped, and linked to data source provenance, supporting regulatory and institutional review processes.

Figure 1: Model Card Visualization Component



Each model card encapsulates performance metrics and cohort characteristics in a format interpretable by OHDSI tools such as Atlas. This framework supports manufacturers in regulatory approval processes (e.g. CE marking) and fosters an ecosystem of reproducible and trustworthy medical AI.



Frédéric Jung<sup>1</sup>, Ankur Lohachab<sup>2</sup>, Guilherme Madureira Sanches Ribeiro<sup>3</sup>, Stef Rommes<sup>1</sup>, Visara Urovi<sup>2</sup>, Chang Sun<sup>2</sup>, Gökhan Ertaylan<sup>1</sup>



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# 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?**





# Sept. 2: Standardized Vocabulary Summer Refresh



**Masha Khitrun**

Senior Scientific Curation  
Specialist, EPAM Systems



**Anna Ostropolets**

Associate Director, Johnson &  
Johnson Innovative Medicine;  
Adjunct Assistant Professor,  
Columbia University



**Vlad Korsik**

Vocabulary Technical Lead,  
EPAM Systems



**Melanie Philofsky**

Director Clinical Informatics,  
EPAM Systems



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

**Everybody is invited!**

**Links are sent out weekly and available at:  
[ohdsi.org/community-calls-2025](https://ohdsi.org/community-calls-2025)**