OHDSI GLOBAL SYMPOSIUM 2026

A Year of OHDSI in Print

Notable publications from the OHDSI community, Oct 2025 – Oct 2026

OHDSI Early-Stage Researchers Working Group

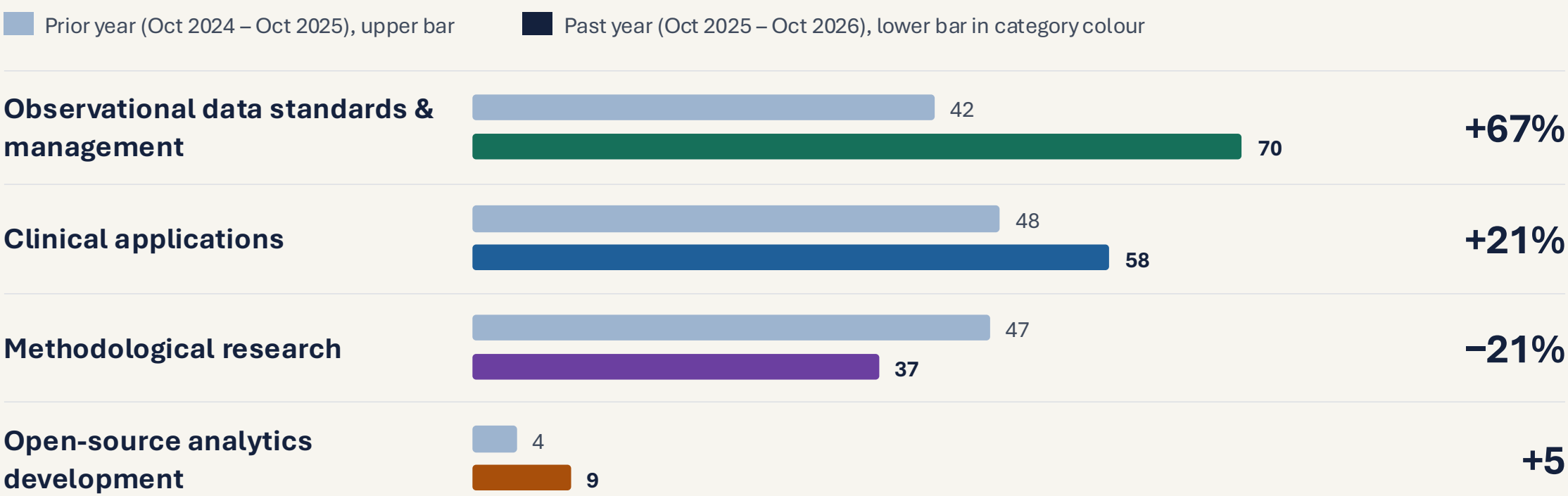
[Peter Musenge · Johns Hopkins University]

[Shounak Chattopadhyay · University of Virginia]

[Benjamin Martin · Johns Hopkins University]

[Jody-Ann McLeggon · Columbia University]

173 Publications in 2026
Growth among 3 of 4 OHDSI Pillars



Papers by the category assigned in the approved-articles list. Both windows run Oct 1 – Oct 13 of the following year.

Where the year's papers appeared the most

Top journals · 174 papers in 88 venues

Journal	Papers
Studies in Health Technology Informatics	30
JAMIA	13
JAMIA Open	8
Pharmacoepidemiology and Drug Safety	7
JMIR Medical Informatics	5
BMC Medical Informatics Decision Making	5
Internation Journal of Medical Informatics	5
International journal of epidemiology	3
PloS one	3
Applied clinical informatics	2
BMJ open	2
Diabetes, obesity & metabolism	2
Frontiers in digital health	2
Journal of medical Internet research	2
Journal of the American College of Cardiology	2

EARLY-STAGE RESEARCHERS

A third of this year's ESR Showcase leads already publish with OHDSI

67

of 163 Showcase 2026 posters (41%) are led by one of 62 early-stage researchers

24

of the 71 ESRs who submitted abstracts appear as authors in the publication list

19

published in the past year: 27 papers, 14 as first author

12

had their first OHDSI paper in 2026

ESR = first listed author of a self-designated Early-Stage Researcher submission; 67 of 163 posters (78 ESR abstracts submitted). Matched by name; 18 of 24 matches confirmed by shared co-authors.

EARLY-STAGE RESEARCHERS · COLLABORATOR SHOWCASE

The ESR Showcase grew by a third this year

ESR-led posters



Early-stage researchers leading them



Who is leading them in 2026



13 returning ESR leads from 2025 · **49 leading an ESR poster for the first time**



Look for the star.
It marks every ESR poster, top-left corner.

2026 ESR posters by focus area: **23** Methods · **17** Clinical · **11** Open-source · **10** Standards · **4** Community · **2** Unassigned

ESR = first listed author of a poster self-designated Early-Stage Researcher. 2026: 67 posters, authors from 26 countries and regions; 2025: 50 posters.

How the highlights were chosen

Four to five papers per category, each meeting one or more of these tests

Top-impact journal

Published in a leading journal for its field

In the news

Picked up by news outlets or institutional press releases

OHDSI working group / network

Produced or supported by an OHDSI working group or network

Stepping stone

Opens the door to a lot of follow-on work

Early-stage researcher

An ESR in the author line; each slide says where

CATEGORY SUMMARY

Clinical applications

58	51	697	12
papers	journals	author names	median authors per paper

Most frequent journals

- *Pharmacoepidemiology & Drug Safety* (4)
- *BMJ Open*, *Diabetes Obes Metab*, *Lancet Reg Health – Europe*, *PLoS One* (2 each)
- Also: *JACC*, *Lancet Public Health*, *Ophthalmology*, *Am J Gastroenterol*

Early-stage researcher highlights

- **Hsin Yi Chen**, Columbia — LEGEND-T2DM extension (first author)
- **Huilin Tang**, Penn — glucose-lowering drugs in dementia (first author)
- **Adit Anand**, Columbia — breast cancer trial data elements (first author)
- **Thi Kim Hien Nguyen**, Taipei Medical Univ. — OMOPCAN protocol co-author

21 ESR-led abstracts submitted in this area

Main themes

- GLP-1RA, SGLT2i and DPP-4i effectiveness & safety
- Cancer incidence, survival and outcomes
- Drug utilisation & safety surveillance
- Multicenter Korean CDM network studies

Most papers of any category after standards; largest teams (up to 48 authors on one paper).

CLINICAL APPLICATIONS

GLP-1RAs and SGLT2is offer comparable cardiovascular protection

Comparative Cardiovascular Effectiveness of Glucagon-Like Peptide 1 Receptor Agonists and Sodium-Glucose Cotransporter 2 Inhibitors in Diabetes Mellitus

1.25M

adults starting second-line diabetes therapy, across 10 US and non-US databases

- Semaglutide vs empagliflozin, 3-point MACE: HR 1.05 (95% CI 0.79–1.39)
- Comparable benefit even with established CVD; choice can rest on safety, cost and preference

Top journal · JACC

OHDSI community · LEGEND-T2DM network study

Stepping stone · Extended to 9 drug classes

Early-stage researcher · Hsin Yi Chen, author 5 of 21

J Am Coll Cardiol **· Jun 2026 · doi:10.1016/j.jacc.2026.02.5123** · 21 authors, 13 institutions · **bold** = early-stage researcher · * affiliation not indexed

Fan Bu[1], Ruopeng Wu[1], Anna Ostropolets*, Arya Aminorroaya[2], **Hsin Yi Chen**[3], Yi Chai[4,5], Lovedeep Singh Dhingra[2], Thomas Falconer[3], Jason C Hsu[6], Chungsoo Kim[2], Wallis C Y Lau[5,7], Kenneth K C Man[5,7], Evan Minty[8], Daniel R Morales[9], Akihiko Nishimura[10], Phyllis Thangraraj[2], Mui Van Zandt[11], Can Yin*, Rohan Khera[2], George Hripcsak[3], Marc A Suchard[12,13]

[1]U Michigan · [2]Yale · [3]Columbia · [4]Shenzhen U · [5]HKU · [6]Taipei Medical U · [7]UCL · [8]U Calgary · [9]U Edinburgh · [10]Johns Hopkins · [11]IQVIA · [12]US Dept of Veterans Affairs · [13]UCLA

CLINICAL APPLICATIONS

Strong CYP2C19-inhibiting PPIs: no extra CV risk on clopidogrel

Comparison of Cardiovascular Events in Patients Receiving Concomitant Clopidogrel and Proton Pump Inhibitors Classified by CYP2C19 Inhibitory Potency

166,000

matched pairs across 14 databases

- No significant difference in 1-year MACE, MI, stroke or death versus weak or non-inhibiting PPIs
- Suggests the clinical impact of the clopidogrel–PPI interaction may be limited

Top journal · ATVB (AHA)

OHDSI community · OHDSI network: US, Korea, Taiwan

Stepping stone · Drug–drug interaction template

Early-stage researcher · Hsin Yi Chen, author 3 of 18; Benjamin Martin, author 6 of 18

Arterioscler Thromb Vasc Biol **· May 2026 · doi:10.1161/ATVBAHA.125.323399** · 18 authors, 6 institutions · **bold** = early-stage researcher

Seonji Kim[1], Jimyung Park[2], **Hsin Yi Chen**[2], Christianus Heru Setiawan[3,4], Haeun Lee[5], **Benjamin Martin**[5], Kyung Joo Lee[6], George Hripcsak[2], Jason C Hsu[4], Paul Nagy[5], Subin Kim[1], Phung-Anh Nguyen[4], Phan Thanh-Phuc[4], Muhammad Solihuddin Muhtar[4], Min-Huei Hsu[4], Woon Geon Shin[6], Seng Chan You[1], Seung In Seo[6]

[1]Yonsei University · [2]Columbia University · [3]Sanata Dharma University · [4]Taipei Medical University · [5]Johns Hopkins University · [6]Hallym University Kangdong Sacred Heart Hospital

CLINICAL APPLICATIONS

Drug shortages ripple through prescribing across two continents

Changes in use and utilisation patterns of drugs with reported shortages between 2010 and 2024 in Europe and North America: a network cohort study

16

drugs with shortages, tracked 2010–2024

- 8 drugs saw new use fall by at least a third during shortages; 9 saw overall use fall by at least a third
- Repurposing (e.g., sarilumab for COVID-19) could trigger secondary shortages

Top journal · Lancet Public Health

In the news · IHI/EHDEN, Medical Xpress

OHDSI community · EHDEN, 50+ data partners

Stepping stone · Best-practice paper; shortage forecasting

Lancet Public Health **· Oct 2025 · doi:10.1016/S2468-2667(25)00194-X** · 30 authors, 26 institutions · * affiliation not indexed

Marta Pineda-Moncusí[1], Alexandros Rekkas[2], Álvaro Martínez Pérez[3], Angela Leis[4], Carlos Lopez Gomez*, Eric Fey[5,6], Erwin Bruninx[7], Filip Maljković*, Francisco Sánchez-Sáez[8,9], Jordi Rodeiro-Boliart[10], Loretta Zsuzsa Kiss[11], Michael Franz[12], Miguel-Angel Mayer[4], Neva Eleangovan[13], Pau Pericàs Pulido[14], Pantelis Natsiavas[2], Selçuk Şen[15], Steven Cooper[16], Sulev Reisberg[17,18], Katrin Manlik[19], David Brendan Price[13,20], Luca Moscetti[21], Manon Merkelbach[22], Mina Tadrous[23], Nadav Rappoport[24], Ravinder Claire[25], Salvador Garcia-Torrens*, Daniel Prieto-Alhambra[1,26], Peter R Rijnbeek[26], Theresa Burkard[1], *Drug Shortages EHDEN Study Group*

[1]Oxford · [2]CERTH (Greece) · [3]IIS La Fe (Valencia) · [4]Hospital del Mar RI · [5]U Helsinki · [6]Helsinki Univ. Hospital · [7]Pfizer · [8]FISABIO (Valencia) · [9]UPV Valencia · [10]IR Sant Joan de Déu · [11]Semmelweis U · [12]BIH at Charité · [13]OPRI · [14]IdISBa (Balearic Islands) · [15]Istanbul U-Cerrahpaşa · [16]Optimum Patient Care · [17]STACC (Estonia) · [18]U Tartu · [19]Bayer · [20]U Aberdeen · [21]AOU di Modena · [22]VieCuri Medical Centre · [23]U Toronto · [24]Ben-Gurion U · [25]NICE (UK) · [26]Erasmus MC

CLINICAL APPLICATIONS

Comorbidity and survival in eight cancers, 1.7M patients

Comorbidities, medication use, and overall survival in eight cancers: a multinational cohort study of 1.7 million patients across Europe

1.7M

patients in 8 countries

- Five-year survival ranged from about 75–85% (breast, prostate) to under 5% in some countries (pancreas)
- Anaemia (GI cancers) and COPD or pneumonia (lung) showed up as precursors

Top journal · Lancet Reg Health – Europe

In the news · Hospital del Mar release, Biotech Spain

OHDSI community · Federated OMOP analysis

Stepping stone · OMOPCAN: 36 cancers

Lancet Reg Health – Europe **· Apr 2026 · doi:10.1016/j.lanepe.2025.101585** · 46 authors, 27 institutions · * affiliation not indexed

Irene López-Sánchez[1,2], Anna Palomar-Cros[2], Ravinder Claire[3], Laura Pérez-Crespo[2], Agustina Giuliodori[2], Ian Koblbauer[4], Jeremy Dietz[3], Jamie Elvidge[3], James Koh[3], Asieh Golozar*, Juan Manuel Ramírez-Anguita[5], Angela Leis[5], Miguel-Angel Mayer[5], Nicola Symmers[6,7], Mahéva Vallet[6,7], Colin McLean[6,7], Peter S Hall[6,7], Mees Mosseveld[8], Katia Verhamme[8], Espen Enerly[9,10], Peter Prinsen[11], Jelle Evers[11], Marek Oja[12], Raivo Kolde[12], Rafael Marcos-Gragera[13,14,15,16,17], Eric Fey[18,19], Kimmo Porkka[18,19], Tiago Taveira-Gomes[20,21], Fernanda Estevinho[22], Alberto Moreno Conde[23,24,25,26], Jesús Moreno Conde[23,24,25,26], Carlos Miguez Sánchez[23], Evelyne Fournier[27], Andrea Pistillo[2], Xihang Chen[4], George Corby[4], Abigail Robinson[4], Maria T Sanchez-Santos[4], Antonella Delmestri[4], Wai Yi Man[4], Martí Català[4], Marta Alcalde-Herraiz[4], Edward Burn[4], Daniel Prieto-Alhambra[4,8], Talita Duarte-Salles[2,8], Danielle Newby[4]

[1]UAB · [2]IDIAP Jordi Gol · [3]NICE (UK) · [4]Oxford · [5]Hospital del Mar RI · [6]Western General Hosp. · [7]U Edinburgh · [8]Erasmus MC · [9]Norwegian Inst. Public Health · [10]Cancer Registry of Norway · [11]IKNL · [12]U Tartu · [13]U Girona · [14]ICO · [15]Josep Carreras Inst. · [16]IDIBGI (Girona) · [17]CIBERESP (Spain) · [18]U Helsinki · [19]Helsinki Univ. Hospital · [20]U Fernando Pessoa · [21]U Porto · [22]ULS Matosinhos (Portugal) · [23]H.U. Virgen Macarena · [24]IBiS Sevilla · [25]U Sevilla · [26]CSIC (Spain) · [27]U Geneva

CLINICAL APPLICATIONS

OMOPCAN: tracking 36 cancers across a multinational OMOP network

Temporal trends in epidemiology and patient characteristics of 36 cancers: a protocol for a multinational population-based cohort study using OMOP-standardised databases to investigate CANcer (OMOPCAN)

A protocol to monitor incidence, prevalence and survival of 36 cancers, linking cancer registries with EHR and claims data mapped to OMOP.

- Standardised code runs locally at each site; only de-identified, aggregated results are shared
- Builds on the 1.7-million-patient, eight-cancer study on the previous slide

OHDSI community · Multinational OMOP network: registries, EHRs, claims

Stepping stone · Ongoing surveillance of 36 cancers

Early-stage researcher · Thi Kim Hien Nguyen, author 31 of 37

BMJ Open **· Jul 2026 · doi:10.1136/bmjopen-2026-119069** · 37 authors, 21 institutions · **bold** = early-stage researcher · * affiliation not indexed

Irene López-Sánchez[1,2], Anna Palomar-Cros[2], Agustina Giuliodori[2], Laura Granés[2], Laura Pérez-Crespo[2], Berta Raventós[3], Edward Burn[4], Anton Barchuk[3], Annelies Verbiest[5], Caroline Eteve-Pitsaer[6], Danielle Newby[4], Elin J Rowlands[4], Espen Enerly[7], Gargi Jadhav[8], Harlinde De Schutter*, Jason C Hsu[9], Jelle Evers[10], Josip Vrancic*, Laia Peruchet-Noray[11], Lillian Sung[12], Loretta Kiss[13], Maaike van Swieten[10], Mario Šekerija[14,15], Mees Mosseveld[3], Patricia L Mabry[16], Raivo Kolde[17], Samuel T Patnoe[16], Seng Chan You[18], Subin Kim[18], Sulev Reisberg[17,19], **Thi Kim Hien Nguyen**[9], Toni Lehtonen[20], Tor Åge Myklebust[21], Zsolt Bagyura[13], Asieh Golozar*, Elena Roel[2], Talita Duarte-Salles[2,3]

[1]UAB · [2]IDIAP Jordi Gol · [3]Erasmus MC · [4]Oxford · [5]U Antwerp / UZA · [6]Cegedim · [7]Cancer Registry of Norway · [8]IQVIA · [9]Taipei Medical U · [10]IKNL · [11]Imperial College · [12]SickKids Toronto · [13]Semmelweis U · [14]U Zagreb · [15]Croatian Inst. Public Health · [16]HealthPartners · [17]U Tartu · [18]Yonsei University · [19]STACC (Estonia) · [20]THL Finland · [21]Ålesund Hospital

CATEGORY SUMMARY

Methodological research

38	22	293	6
papers	journals	author names	median authors per paper

Most frequent journals

- *JAMIA* (6)
- *Stud Health Technol Inform* (5)
- medRxiv preprints (4)
- *JMIR Medical Informatics* (3)
- *JAMIA Open*, *Pharmacoepidemiol Drug Saf* (2 each)

Early-stage researcher highlights

- **Bingyu Zhang**, Penn — lossless one-shot distributed algorithm (*JAMIA*, first author)
- **Fleur Vereijken**, Erasmus MC — loss functions in hyperparameter tuning (*JAMIA*, first author)
- **Aparajita Kashyap**, Columbia — path-specific causal fairness pipeline (FAccT, first author)

27 ESR-led abstracts submitted in this area

Main themes

- Federated and privacy-preserving analysis
- Computable phenotypes and phenotype standards
- LLMs and NLP on EHR data
- Prediction-model methodology

JAMIA is the single biggest home for OHDSI methods work this year; smaller, tighter teams than clinical papers.

METHODOLOGICAL RESEARCH

Lossless multi-site GLMs in one communication round

A lossless one-shot distributed algorithm for addressing heterogeneity in multi-site generalized linear models

1

communication round, using local summaries

- COLA-GLM-H accounts for differences between institutions without sharing patient records
- Matched pooled estimates in a 719,383-patient study. Also tested across 7 databases in 3 countries

Top journal · JAMIA

OHDSI community · Methods Workgroup

Stepping stone · Heterogeneous network analyses

Early-stage researcher · Bingyu Zhang, first author

JAMIA · Mar 2026 · doi:10.1093/jamia/ocaf198 · 14 authors · bold = early-stage researcher

Bingyu Zhang[1], Qiong Wu[1,2], Jenna M Reps[3,4], Lu Li[1], **Jiayi Tong**[1,5], Yiwen Lu[1], Dazheng Zhang[1], Juan Manuel Ramirez-Anguita[6], Jiang Bian[7,8], Milou T Brand[9], Thomas Falconer[10], Miguel A Mayer[6], Ross D Williams[4], Yong Chen[1]

[1]U Pennsylvania · [2]U Pittsburgh · [3]J&J · [4]Erasmus MC · [5]Johns Hopkins · [6]Hospital del Mar/HMRIB · [7]Indiana U · [8]Regenstrief · [9]IQVIA · [10]Columbia

METHODOLOGICAL RESEARCH

Tuning choices can change individual patient risks

Loss function influence on hyperparameter optimization for observational healthcare prediction models

15

tuning metrics across 4 algorithms and 3 prediction tasks

- Models with similar discrimination and calibration could assign different risks to the same patient
- Optimizing AUROC did not consistently produce the model with the highest test AUROC

Top journal · JAMIA

Stepping stone · Patient-level model evaluation

Early-stage researcher · Fleur Vereijken, first author

JAMIA · Aug 2026 · doi:10.1093/jamia/ocag075 · 4 authors · bold = early-stage researcher

Fleur Vereijken[1], Jenna M Reps[1,2], Peter Rijnbeek[1], Ross D Williams[1]

[1]Erasmus University Medical Center · [2]Janssen Research and Development

METHODOLOGICAL RESEARCH

Causal fairness for healthcare prediction

A pipeline for enabling path-specific causal fairness in observational health data

Fairness

A pipeline for addressing bias along specific causal paths

- Separates direct and indirect sources of bias using social and clinical contexts
- Demonstrates how a foundation model can support fairer downstream predictions without fairness constraints during pretraining

Top venue · ACM FAccT

Stepping stone · Context-specific fairness assessment

Early-stage researcher · Aparajita Kashyap, first author

ACM FAccT · Jun 2026 · doi:10.1145/3805689.3806507 · 5 authors · bold = early-stage researcher

Aparajita Kashyap[1], Sara Matijevic[2], Noémie Elhadad[1], Steven A Kushner[1], Shalmali Joshi[1]

[1]Columbia University · [2]University of Oxford

METHODOLOGICAL RESEARCH

Distributed OMOP studies in maternal health

Congenital heart disease in pregnancy and severe maternal morbidity: a distributed data network study

166,033

deliveries across 3 US healthcare organizations

- Each site ran common code locally and shared aggregate results rather than patient records
- Non-transfusion severe maternal morbidity: 6.72% with congenital heart disease vs 2.55% without. RR 2.63 (95% CI 2.33–2.98)

Journal · Pregnancy

OHDSI community · Perinatal and Reproductive Health WG

Stepping stone · Distributed obstetric research

Early-stage researcher · Elizabeth B Sherwin, first author

Pregnancy · Sep 2026 · doi:10.1002/pmf2.70370 · 12 authors · bold = early-stage researcher

Elizabeth B Sherwin[1], **Benjamin Martin**[2], Xiao Xu[3], Anna Booman[1], Alyssa Howren[1], Kimberlee McKay[4,5], Sadaf Kazi[6,7], Sean O'Reilly[2], Katie S Kolla[8], Khyzer Aziz[2], Katherine Bianco[1], Stephanie A Leonard[1]

[1]Stanford · [2]Johns Hopkins · [3]Columbia · [4]Avera McKennan · [5]U South Dakota · [6]MedStar · [7]Georgetown · [8]Stanford Children's Health

METHODOLOGICAL RESEARCH

Assessing skills for real-world evidence research

Assessment of real-world evidence research competencies in federated networks: a maternal health fellowship program evaluation

8

competency domains assessed in 17 fellowship participants

- Adapted a research competency framework to OMOP-based studies in federated networks
- Self-reported competency increased by 2.5 points on a 10-point scale, measuring perceived skills

Journal · JAMIA Open

OHDSI community · Perinatal and Reproductive Health WG

Stepping stone · RWE training evaluation

Early-stage researcher · Hannah Lee, first author

JAMIA Open · Jul 2026 · doi:10.1093/jamiaopen/ooag128 · 10 authors · bold = early-stage researcher

Haeun Lee[1], **Benjamin Martin**[1], Andreea A Creanga[1], Evan Minty[2], Asieh Golozar[1,3], Cindy X Cai[1], Cynthia Sung[4], Sean O'Reilly[1], Khyzer Aziz[1], Paul Nagy[1]

[1]Johns Hopkins University · [2]University of Calgary · [3]Nemesis Health · [4]Duke-NUS Medical School

CATEGORY SUMMARY

Data standards & management

68 papers

29 journals

466 author names

7 median authors per paper

Most frequent journals

- *Stud Health Technol Inform* (22)
- *JAMIA*, *JAMIA Open*, *Int J Med Inform* (5 each)
- *BMC Med Inform Decis Mak* (4)
- *Int J Epidemiol* (3 data resource profiles)

Early-stage researcher highlights

- **Jen Wooyeon Park**, Johns Hopkins — DICOM-in-OMOP framework (*JAMIA*, first author)
- **Somayeh Abedian**, LBI Digital Health — 3 first-author papers
- **Katherine Loomis**, USC — OMOP for stroke rehabilitation data (first author)
- **Adnan Jouned**, MedUni Vienna — patient-reported outcomes in OMOP (first author)

11 ESR-led abstracts submitted in this area

Main themes

- Extending the CDM to new domains
- National and institutional OMOP conversions
- LLM-assisted ETL and vocabulary mapping
- European Health Data Space interoperability

Largest category. Nearly a third of papers appeared in one conference-proceedings volume (May 2026).

DATA STANDARDS & MANAGEMENT

Lessons from running shared vocabularies across a global network

Real-World Use of Controlled Terminologies, Ontologies, and Vocabularies for Evidence Generation Across a Large International Observational Network: Challenges and Lessons Learned From a Mixed Method Study

A mixed-methods look at how terminologies are actually used for evidence generation across OHDSI, and where they break.

- Authors include the vocabulary maintainers (Davydov, Dymshyts, Reich)
- The Vocabularies sit under every CDM conversion in this section

OHDSI community · Standardized Vocabularies team

Stepping stone · Roadmap for vocabulary fixes

JMIR Med Inform **· Sep 2026 · doi:10.2196/92727** · 10 authors, 4 institutions

Anna Ostropolets[1,2], Vlad Korsik[3], Tatsiana Skuhareuskaya[3], Aleh Zhuk[3], Maryia Khitrun[3], Alexander Davydov[3], Dmitry Dymshyts[2], Christian Reich[4], George Hripcsak[1], Patrick Ryan[1,2]

[1]Columbia University · [2]Johnson & Johnson · [3]Odysseus Data Services · [4]Nemesis Health

DATA STANDARDS & MANAGEMENT

Bringing medical imaging into the OMOP CDM

Breaking data silos: incorporating the DICOM imaging standard into the OMOP CDM to enable multimodal research

3

imaging-extension papers this year

- The DICOM-to-OMOP framework (*JAMIA*) and a published response to commentary
- An Alzheimer's case replication on ADNI data (*J Imaging Inform Med*, Jul 2026)

Top journal · JAMIA

OHDSI community · Medical Imaging WG

Stepping stone · Multimodal network studies

Early-stage researcher · Woo Yeon Park, first author

***JAMIA* · Oct 2025 · doi:10.1093/jamia/ocaf091** · 9 authors, 4 institutions · **bold** = early-stage researcher

Woo Yeon Park[1], Teri Sippel Schmidt[1], Gabriel Salvador[1], Kevin O'Donnell[2], Brad Genereaux[1,3], Kyulee Jeon[4], Seng Chan You[4], Blake E Dewey[1], Paul Nagy[1], *Alzheimer's Disease Neuroimaging Initiative*

[1]Johns Hopkins University · [2]Canon Medical Research USA · [3]NVIDIA · [4]Yonsei University

DATA STANDARDS & MANAGEMENT

Putting the imaging CDM to work on Alzheimer's disease

Advancing the FAIRness of Multimodal Imaging Research Through the OMOP MI-CDM Framework: A Case Replication Study in Alzheimer's Disease

A case replication study in Alzheimer's disease, run on ADNI imaging and clinical data held in the OMOP Medical Imaging CDM.

- The follow-on to the DICOM-in-OMOP framework on the previous slide, from the same Johns Hopkins and Yonsei imaging team
- Aims to make multimodal imaging research findable, accessible, interoperable and reusable (FAIR)

OHDSI community · Same Medical Imaging WG team effort

Stepping stone · The MI-CDM in a real analysis

Early-stage researcher · Jen Wooyeon Park, author 2 of 8; Yiju Park, author 4 of 8

J Imaging Inform Med **· Jul 2026 · doi:10.1007/s10278-026-02146-0** · 8 authors, 2 institutions · **bold** = early-stage researcher

Gabriel Salvador[1], **Jen Wooyeon Park**[1], Teri Sippel Schmidt[1], **Yiju Park**[2], Kyulee Jeon[2], Seng Chan You[2], Paul Nagy[1], Blake E Dewey[1], *Alzheimer's Disease Neuroimaging Initiative*

[1]Johns Hopkins University · [2]Yonsei University

DATA STANDARDS & MANAGEMENT

Extending the CDM into extracorporeal life support

Expanding the OMOP common data model to support extracorporeal life support research

An OMOP extension for ECMO and other extracorporeal life support data.

- One of a wave of extensions: critical care (*Crit Care Med*), peripheral vascular disease, patient-reported outcomes, wearables, ECG and lab data

OHDSI community · OHDSI CDM and vocabulary contributors

Stepping stone · Template for specialty extensions

JAMIA Open **· Jun 2026 · doi:10.1093/jamiaopen/ooag112** · 17 authors, 17 institutions

Clemens Rieder[1], Aleh Zhuk[2,3,4], Ahmed Said[5], Andrea S Becker-Pennrich[1], Konstantin Dietz[1], Jan Bělohlávek[6], Jeffrey Geppert[7], Christopher Horvat[8], Ryan P Barbaro[9], Joseph E Tonna[10], Steven A Conrad[11], Lars Mikael Broman[12,13], Christian Reich[2,3], Clair Blacketer[2,14], Daniel Brodie[15], Peta M A Alexander[16,17], Dominik J Hoechter[1]

[1]LMU Munich · [2]OHDSI · [3]Odysseus Data Services · [4]University Hospital Augsburg · [5]WashU · [6]Charles U Prague · [7]Battelle Memorial Institute · [8]U Pittsburgh · [9]U Michigan · [10]U Utah · [11]LSU Health Shreveport · [12]Karolinska Univ. Hospital · [13]Karolinska Institutet · [14]Janssen Research & Development · [15]Johns Hopkins · [16]Boston Children's · [17]Harvard Medical School

DATA STANDARDS & MANAGEMENT

Nationwide data sources, documented and ready for network studies

Data Resource Profiles: HIRA Korean nationwide claims OMOP CDM (2015–24) and EST-Health-30 (Estonia)

2

national OMOP data sources profiled: Korea's HIRA claims and Estonia's EST-Health-30

- Joined this year by conversions in Israel (Kineret), Cameroon (tuberculosis), Korea (Biobank Network) and a validation of UK CPRD

Top journal · Int J Epidemiol

OHDSI community · Long-standing OHDSI data partners

Stepping stone · Citable data-partner profiles

Int J Epidemiol **· Jun 2026 · doi:10.1093/ije/dyag131 · doi:10.1093/ije/dyag113** · 16 authors, 6 institutions

HIRA K-OMOP: Dong Han Yu[1], Sun Mi Lim[1], Hyun Chul Shin[1], Moosung Kim[1], Seng Chan You[2], Rae Woong Park[3], Chungsoo Kim[3,4]

EST-Health-30: Sulev Reisberg[5,6], Marek Oja[5], Kerli Mooses[5], Sirli Tamm[5], Ami Sild[5], Harry-Anton Talvik[5,6], Sven Laur[5], Raivo Kolde[5], Jaak Vilo[5,6]

[1]Health Insurance Review & Assessment Service (Korea) · [2]Yonsei University · [3]Ajou University · [4]Yale University · [5]University of Tartu · [6]STACC (Estonia)

DATA STANDARDS & MANAGEMENT

FHIR and OMOP, side by side in All of Us

A comparison of Fast Healthcare Interoperability Resources and Observational Medical Outcomes Partnership electronic health record data within the All of Us Research Program

A direct comparison of EHR data arriving through FHIR and through OMOP in the NIH All of Us Research Program.

- Shows how an exchange standard and a research standard line up in a national program

Top journal · JAMIA

OHDSI community · Columbia OHDSI team

Stepping stone · FHIR-to-OMOP guidance

Early-stage researcher · Adit Anand, author 4 of 8

JAMIA **· Jun 2026 · doi:10.1093/jamia/ocag095** · 8 authors, 2 institutions · **bold** = early-stage researcher

Jason Patterson[1], Elise Minto[1], Maura Beaton[1], **Adit Anand**[1], Mark Velez[1], Paul Harris[2], George Hripcsak[1], Karthik Natarajan[1]

[1]Columbia University · [2]Vanderbilt University Medical Center

CATEGORY SUMMARY

Open-source analytics

9	6	58	5
papers	journals	author names	median authors per paper

Most frequent journals

- *Stud Health Technol Inform* (3)
- *JAMIA* (2)
- *JAMIA Open*, *Pharmacoepidemiol Drug Saf*, *Healthc Inform Res*, medRxiv (1 each)

Early-stage researcher highlights

- **Hanjae Kim**, Yonsei — LLM-automated target trial emulation (*JAMIA Open*, first author)
- **Natthawut Adulyanukosol & Krittaphas Chaisutyakorn**, Mahidol — drug terminology mapping (*Healthc Inform Res*)
- **Núria Mercadé-Besora**, Oxford — *DrugUtilisation* R package co-author

12 ESR-led abstracts submitted in this area

Main themes

- R packages and frameworks
- LLM-assisted study building
- Cohort, eligibility and terminology tooling

Smallest category, all published April–August 2026.

OPEN-SOURCE ANALYTICS

REWARD: mining real-world data for unknown drug benefits

REWARD—an open-source framework for identifying the unknown benefits of existing medications to inform drug discovery, development, and repurposing

Evaluates medication–outcome relationships to show how real-world data can:

- Identify drug repurposing opportunities
- Help prioritise candidates for further investigation
- Guide potential new therapies for unmet medical needs

Top journal · JAMIA

OHDSI community · OHDSI methods contributors

Stepping stone · Open repurposing hypotheses

JAMIA **· Aug 2026 · doi:10.1093/jamia/ocag137** · 5 authors, 1 institutions

David M Kern[1], Justin Bohn[1], James P Gilbert[1], Christopher Knoll[1], Patrick B Ryan[1]

[1]Johnson & Johnson

OPEN-SOURCE ANALYTICS

DrugUtilisation: an R package for drug-use studies on OMOP

DrugUtilisation: An R Package to Support Drug Utilisation Research Using the OMOP Common Data Model

Dose, exposure, adherence, discontinuation and treatment-pattern analyses, packaged for the OMOP CDM.

- Highlights the use of the OMOP CDM in drug utilisation studies
- Used across the UK, Estonia and the Netherlands in DARWIN EU
- Produces standardised, publication-ready outputs

OHDSI community · DARWIN EU team

Stepping stone · Standard drug-use analyses

Early-stage researcher · Núria Mercadé-Besora, author 4 of 18

Pharmacoepidemiol Drug Saf **· Jul 2026 · doi:10.1002/pds.70433** · 18 authors, 3 institutions · **bold** = early-stage researcher

Yuchen Guo[1], Edward Burn[1], Annika M Jödicke[1], **Núria Mercadé-Besora**[1], Kim López-Güell[1], Xihang Chen[1], Mike Du[1], Xintong Li[1], Raivo Kolde[2], Marek Oja[2], Mees Mosseveld[3], Katia Verhamme[3], Julieta Politi[3], Antonella Delmestri[1], Wai Yi Man[1], Peter R Rijnbeek[3], Daniel Prieto-Alhambra[1,3], Martí Català[1]

[1]University of Oxford · [2]University of Tartu · [3]Erasmus MC

OPEN-SOURCE ANALYTICS

From study design to executable code: automating target trial emulation with LLMs

From study design to executable code: automating target trial emulation with large language models

THESEUS uses LLMs to translate free-text study descriptions into structured, executable analysis code.

- Maps natural-language study descriptions to a JSON schema
- Converts validated specifications to Strategus R scripts
- Evaluated on 30 studies: 15 OHDSI and 15 non-OHDSI
- Could make standardised analyses more accessible and target trial emulation easier, while improving efficiency and reproducibility

OHDSI community · Yonsei OHDSI team

Stepping stone · From protocol to runnable study

Early-stage researcher · Hanjae Kim, first author

JAMIA Open **· Aug 2026 · doi:10.1093/jamiaopen/ooag131** · 4 authors, 1 institutions · **bold** = early-stage researcher

Hanjae Kim[1], Minseong Kim[1], Seonji Kim[1], Seng Chan You[1]

[1]Yonsei University

OPEN-SOURCE ANALYTICS

THIRAWAT: more accurate drug mapping to RxNorm in OMOP

Efficient Drug Terminology Mapping with Bidirectional Late-Interaction Reranking and Deterministic Reordering

THIRAWAT (Terminology Harmonization using Late-Interaction Reranker With Alignment-tuned Transformers) maps medication names and codes to RxNorm within the OMOP CDM.

- Accounts for strength, dosage form, route, release characteristics and brand
- Could improve the accuracy of medication mapping
- Could reduce mapping errors and improve data quality for downstream analyses

OHDSI community · Drug mapping to RxNorm in OMOP

Stepping stone · Open models and code for better drug data

Early-stage researcher · Natthawut Adulyanukosol, first author; Krittaphas Chaisutyakorn, author 2 of 5

Healthc Inform Res · **Apr 2026** · **doi:10.4258/hir.2026.32.2.156** · 5 authors, 1 institutions · **bold** = early-stage researcher

Natthawut Adulyanukosol[1], **Krittaphas Chaisutyakorn**[1], Saknarong Sombutjaroan[1], Suchanan Kanjanapong[1], Prapat Suriyaphol[1]

[1]Siriraj Hospital, Mahidol University

We are just skimming the surface!



The 22 publications highlighted in this presentation are just the “tip of the iceberg”

All the 151 other works published in the last year are important and valuable contributions to science.

And even more work, progress, and scientific value was generated in WG meetings, presentations, lectures, and workshops done across the global community.

THANK YOU ALL FOR A GREAT YEAR!

RECOMMENDED READING

Every paper in this talk

Snap a photo and search any PMID on PubMed, or scan the code to open all 21 at once.

= early-stage researcher among the authors.

All 21 on PubMed

CLINICAL APPLICATIONS

41984016 **GLP-1RA vs SGLT2i outcomes**
Bu · JACC 2026

41783931 **Clopidogrel + PPIs**
Kim S · ATVB 2026

40992879 **Drug shortages, 2010–24**
Pineda-Moncusí · Lancet Public Health 2025

41631168 **Survival in 8 cancers**
López-Sánchez · Lancet Reg Health Eur 2026

42481199 **OMOPCAN: 36 cancers**
López-Sánchez · BMJ Open 2026

METHODOLOGICAL RESEARCH

41259033 **One-shot multi-site GLMs**
Zhang B · JAMIA 2026

42133612 **Loss functions & tuning**
Vereijken · JAMIA 2026

42370200 **Causal fairness pipeline**
Kashyap · ACM FAccT 2026

42569246 **CHD in pregnancy**
Sherwin · Pregnancy 2026

42459943 **RWE competencies**
Lee H · JAMIA Open 2026

OPEN-SOURCE ANALYTICS

42562768 **REWARD: drug benefits**
Kern · JAMIA 2026

42448616 **DrugUtilisation R package**
Guo · Pharmacoepidemiol Drug Saf 2026

42428529 **THESEUS: LLM-built studies**
Kim H · JAMIA Open 2026

42167738 **THIRAWAT: drug mapping**
Adulyanukosol · Healthc Inform Res 2026

DATA STANDARDS & MANAGEMENT

42743438 **Vocabularies across OHDSI**
Ostropolets · JMIR Med Inform 2026

40680297 **DICOM in the OMOP CDM**
Park WY · JAMIA 2025

42527781 **MI-CDM Alzheimer's study**
Salvador · J Imaging Inform Med 2026

42339164 **OMOP for ECLS / ECMO**
Rieder · JAMIA Open 2026

42501369 **HIRA K-OMOP profile**
Yu DH · Int J Epidemiol 2026

42463247 **EST-Health-30 profile**
Reisberg · Int J Epidemiol 2026

42334204 **FHIR vs OMOP, All of Us**
Patterson · JAMIA 2026