Meet The Titans

OHDSI Community Call
Nov. 1, 2022 • 11 am ET
<table>
<thead>
<tr>
<th>Date</th>
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<tr>
<td>Dec. 20</td>
<td>Holiday-Themed Final Call of 2022</td>
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# Upcoming OHDSI Community Calls

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Multi-institutional collaborative research using ophthalmic medical image data standardized by Radiology Common Data Model (R-CDM)

**Best Community Contribution Awards**

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**Analyzing the Effect of Hypertension on Retinal Thickness Using Radiology Common Data Model (R-CDM) (Chul Hyoung Park, Rae Woong Park, Sang Jun Park, Da Yun Lee, Seng Chan You, Ki Hwang Lee)**

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**Data Standards**
Assessing Racial Fairness of Dialysis Allocation in End-Stage Renal Disease (Linying Zhang, Lauren R. Richter, David M. Blei, Yixin Wang, Anna Ostropolets, Noemie Elhadad, George Hripcsak)
Best Community Contribution Awards

Cohort Definition Validation in Atlas
Charity Hilton MS1, Saul Crumpton MS1, Jon Duke MD, MS1,2
1Georgia Tech Research Institute, 2Georgia Institute of Technology

Background
OHDSI Atlas has long been an effective tool for developing role-based cohort definitions in observational data. In the public version of Atlas, thousands of cohort definitions have been created. While patient record studies have been developed and tested, the need for clinical experts to assess data, a tool to verify all cohort definitions, and the need for clinical experts to access data, a tool to review all cohort definitions, is not without difficulties. This paper highlights the need for a tool to review all cohort definitions, a method to gather review data, and a system of collaboration to determine the cohort (case/no-case) participation or not.

Until now, there has been no an Atlas-based system for clinical expert review. For this effort, we introduce the Atlas Cohort Definition Validation tool (ACDV). The tool aims to solve some of the primary concerns around cohort definitions, including those who have been cohesively integrated into the OHDSI Atlas stack. Additionally, the tool allows for creation of more complex validation questions sets, beyond the standard case/no-case assessment.

Methods
We designed and developed two modules around cohort definition validation. The first (1) allows for verification of study question formulations, and the second (2) allows for verification of study questions for clinical reviewers in the Atlas Patient Profile tool.

The ACDV tool introduces a "validation" section in Atlas cohort definition creation, which allows for cohort managers to complete a cohort definition validation workflow. This workflow begins by the creation of question sets. Question sets in the ACDV tool, shown in Figure 3, allow for common types of questions (including text, radio, checkbox, numerals, and dates). Multiple questions in a question set can be created and a case/no-case distinction can be selected at the question level. After a question set has been created, it can be linked to a cohort definition sample, this creates the validation study.

After a validation study is created, cohort managers can assign patients for review in the Atlas Patient Profile tool to clinical reviewers. Study questions are displayed to clinical reviewers at the patient level in a collapsible sidebar (see Figure 3). The study question set at the patient profile level can be accessed via the Cohort Definition tool, the Patient Profile tool, or via a customized link. Once reviewers have viewed patient profiles and answered study questions, study results can be viewed by cohort managers in Atlas or exported to CSV (Figure 4).

Conclusions
The Atlas Cohort Definition Validation tool will provide an integrated way for clinical chart reviewers to validate cohorts, and beyond the question of cohort inclusion or not.

This tool will support research in the OHDSI community by being tightly within the active OHDSI Atlas ecosystem of tools. Additionally, this tool is a part of the OHDSI legacy of open and community-driven tools to advance research in observational health data.

Bibliography
A Pilot Characterization Study Assessing Health Equity in Mental Healthcare Delivery within the State of Georgia (Jacob Zelko, Malina Hy, Varshini Chinta, Emily Liau, Morgan Knowlton, Jon Duke)
Three Stages of The Journey

Where Have We Been?
Where Are We Now?
Where Are We Going?
Congratulations to the team of Philipp Wegner, Geena Mariya Jose, Vanessa Lage-Rupprecht, Sepehr Golriz Khatami, Bide Zhang, Stephan Springstubebe, Marc Jacobs, Thomas Linden, Cindy Ku, Bruce Schultz, Martin Hofmann-Apitius, Alpha Tom Kodamullil for the COPERIMOpus Consortium on the publication of Common data model for COVID-19 datasets in BioInformatics.

Databases and ontologies
Common data model for COVID-19 datasets
Philipp Wegner 1, Geena Mariya Jose 2, Vanessa Lage-Rupprecht 1, Sepehr Golriz Khatami 1, Bide Zhang 1, Stephan Springstubebe 1, Marc Jacobs 1, Thomas Linden 1, Cindy Ku 1, Bruce Schultz 1, Martin Hofmann-Apitius 2, 3, 4 and Alpha Tom Kodamullil 1, 5, 6; and for the COPERIMOpus Consortium

1Department of Bioinformatics, Fraunhofer Institute for Algorithms and Scientific Computing (SCAI), Sanit Augustine, 53767, Germany
2Causality Biometrics, Kintra Hi-Tech Park, Cochin, Kerala 682050, India and 3Bonn-Aachen International Center for IT (B-IT), Rheinische Friedrich-Wilhelms-Universitat Bonn, Bonn 53115, Germany
4To whom correspondence should be addressed.
5Associate Editor: Allison Valencia

Received on January 23, 2022; revised on April 10, 2022; editorial decision on August 10, 2022; accepted on October 13, 2022

Abstract
Motivation: A global medical crisis like the coronavirus disease 2019 (COVID-19) pandemic requires interdisciplinary and highly collaborative research from all over the world. One of the key challenges for collaborative research is a lack of interoperability among various heterogeneous data sources. Interoperability, standardization and mapping of datasets are necessary for data analysis and applications in advanced algorithms such as developing personalized risk prediction modeling.

Results: To ensure the interoperability and compatibility among COVID-19 datasets, we present here a common data model (CDM) which has been built from 11 different COVID-19 datasets from various geographical locations. The current version of the CDM holds 4428 data variables related to COVID-19 such as basic patient information (age, biological sex and diagnosis) as well as disease-specific data variables, for example, Anoxemia and Dyspnea. Each of the data variables in the data model is associated with specific data types, variable mappings, value ranges, data units and data encodings that could be used for standardizing any dataset. Moreover, the compatibility with established data standards like OMOP and FHIR makes the CDM a well-designed CDM for COVID-19 data interoperability.

Contact: alpha.tom.kodamullil@scai.fraunhofer.de
Supplementary Information: Supplementary data are available at BioInformatics online.
OHDSI Shoutouts!

Congratulations to the team of Hao Liu, Simona Carini, Zhehuan Chen, Spencer Phillips Hey, Ida Sim, and Chunhua Weng on the publication of Ontology-based categorization of clinical studies by their conditions in the Journal of Biomedical Informatics.

Title:
Ontology-based categorization of clinical studies by their conditions

Abstract:
Categorizing clinical studies is important for many analyses of the clinical research enterprise, which can inform clinical research resource allocation and clinical evidence gap assessment. It can enable answering questions such as “how many studies are in the cardiovascular domain?” How geographically dispersed are oncology studies?” or “have there been a lack of substantial expansions over a range of disease domains?”. However, in ClinicalTrials.gov, the public registry of clinical trials maintained by the National Library of Medicine (NLM) in the U.S., clinical studies can be browsed under six topics (11): Conditions, Drug Classes, Drug Interactions, History, Immunology, Injuries/Infections, Vasculopathies, Nervous System Diseases, etc. This categorization system helps granularity and flexibility for users who are interested in a specific set of clinical studies.

Visit [https://ctli.org](https://ctli.org), one of the National Institutes of Health (NIH) General Clinical Research Centers (GCRC) re:searchers, exemplifies the need for scalable and customizable study categorization. Visit us is an independent, non-profit organization that has developed a platform for displaying individual participant-level data from completed studies (12). In a process similar, a set of 7,961 studies were manually categorized into disease domain categories. For example, a study where the condition “Musculoskeletal” is clinically relevant was assigned to the Cardiomyopathy/Muscular Dystrophy category. This visualization could be used to aggregate evidence from a large number of clinical studies along the same scale, however, the process was labor-intensive.
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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<td>Population-Level Estimation</td>
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<td>Wednesday</td>
<td>7 am</td>
<td>Medical Imaging</td>
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<td>Wednesday</td>
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<td>FHIR and OMOP Terminologies Subgroup (ZOOM)</td>
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<td>Health Equity</td>
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<td>FHIR and OMOP Data Model Harmonization Subgroup (ZOOM)</td>
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<td>Thursday</td>
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<td>Population-Level Estimation</td>
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<td>Thursday</td>
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<td>OMOP CDM Oncology Vocabulary/Development Subgroup</td>
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<td>Dentistry</td>
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<td>Friday</td>
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<td>GIS – Geographic Information System</td>
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<td>Education</td>
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<td>Monday</td>
<td>10 am</td>
<td>Healthcare Systems Interest Group</td>
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<tr>
<td>Tuesday</td>
<td>9 am</td>
<td>OMOP CDM Oncology Genomic Subgroup</td>
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[ohdsi.org/upcoming-working-group-calls/](ohdsi.org/upcoming-working-group-calls/)
OHDSI Dentistry Workgroup
Objectives and Key Results (OKR)

Lead: Robert Koski
Workgroup Name: Dentistry Workgroup
Workgroup lead: Robert Koski

1. Expand the workgroup
   1Q2023 Key Results:
   1. Recruit a co-lead
   2. Recruit at least three regularly attending members

2. Complete a scoping review of observational research in dentistry and map a dental use case to the OMOP-CDM
   1Q2023 Key Results:
   1. Refine and complete scoping review
   2. Develop use case(s) further and share Miro implementation with OHDSI
   3. Conduct gap analysis of use case mapping to determine future objectives
   4. Submit scoping review for publication to JADA or JAMIA
Dentistry Work Group

Thursdays at 7PM ET on MS Teams
The Journey Newsletter (November 2022)

The 2022 OHDSI Symposium brought together more than 400 collaborators from around the world to share ideas, learn from each other, and have fun, all in the name of Building A Healthier World Together. All of the materials from the main conference and the full-day tutorial are now available in this newsletter, as well as plenty more updates from the OHDSI Community. #JoinTheJourney

November Video Podcast

In the latest On The Journey video, Patrick Ryan and Craig Boschman reflect on the OHDSI symposium weekend, including discussions on the presentations, collaborator showcases and weekend activities. (If the video does not appear, please click "view this article in your browser".)

Community Updates

Where Have We Been?

- The 2022 Symposium featured a plenary session on Objective Diagnostics: A pathway to provably reliable evidence, presentations on OHDSI support for regulatory authority, a record-setting Collaborator Showcase with more than 120 posters and eight lightning talks, and a closing that focused on the path towards Building A Healthier World Together. All of these talks are now available on our symposium homepage.

- The Titan Awards recognize OHDSI collaborators (or collaborating institutions) for their contributions towards OHDSI’s mission, and the 2022 honorees were announced during the closing at the OHDSI Symposium.

- Volume 2 of Our Journey: Where The OHDSI Has Been, And Where We Are Going was introduced and distributed at the symposium. This book provides a high-level look at many aspects of OHDSI, including its mission, collaborators, data network, research, publications, and more.

- What are we up to next year?

- Many of the 400+ collaborators at the symposium weekend were fairly new to the community and wanted to learn more, and 140 of them took part in the community’s first full-day tutorial on an introductory journey from data to evidence. There were eight sessions, and the videos and slides from each are now available on our tutorial homepage.

- Several OHDSI workgroups held meetings and activities during the symposium weekend, and more than 100 people connected for an all-hands meeting to discuss how workgroups could collaborate to address challenges around the community. If you are interested in joining the journey, check out our newsletter archive and see where your interests and passions may align with ongoing OHDSI efforts.

- The Asia-Pacific (APAC) Symposium will be held Nov. 12-13 at the Taipei Medical University, although parts of the main conference on Nov. 13 will be streamed live. Day 1 will be focused on tutorials, while Day 2 will have talks and a collaborator showcase. More information and registration links are available here.

Symposium Welcomes 400+ Collaborators In Hopes of Building A Healthier World Together

More than 400 community members from around the world connected Oct. 14-16 in Bethesda, Md., for the 2022 OHDSI Symposium, the first in-person global symposium since 2019. The weekend theme was “Building A Healthier World Together,” and both the main conference and the weekend activities, including a full-day tutorial, highlighted the different ways OHDSI has impacted global healthcare, and the steps needed to be taken to build on that foundation.

October Publications


Welcome to OHDSI!

The Observational Health Data Sciences and Informatics (or OHDSI, pronounced “Odyssey”) program is a multi-stakeholder, interdisciplinary collaborative to bring out the value of health data.

Building the world

The 2022 OHDSI theme of “Building the world” and it featured the following:

- September 2022
- August 2022
- July 2022
- June 2022
- May 2022

Subscribe to the latest updates and news from OHDSI.
The plenary presentation from the 2022 OHDSI Symposium was led by Martijn Schuemie (Johnson & Johnson) and focused on "Objective Diagnostics: A pathway to provably reliable evidence". The theme of the presentation was to introduce new approaches to improve the scientific practices that can help to solve the critical issues in healthcare. The talk was well-received and provided valuable insights into the field of objective diagnostics.

**Presentations: OHDSI support for regulatory authorities**

The 2022 OHDSI Symposium included a wide range of presentations focused on OHDSI support for regulatory authorities. Each talk included an introduction from a regulatory agency representative.

**Closing: Building A Healthier World Together**

The OHDSI Symposium closing talk was presented by Patrick Ryan (Johnson & Johnson) and emphasized the importance of advancing healthcare together. It highlighted the critical role of collaboration and innovation in improving patient outcomes. The talk was well-received and provided a strong conclusion to the symposium.

**State of the Community**

State of the Community

The symposium included an overview of the current state of the OHDSI community. It highlighted the progress made in advancing objective diagnostics and the role of the OHDSI community in driving this forward. The talk concluded with an invitation to join the OHDSI community and contribute to ongoing projects.

**Slides decks from the main conference**

The symposium included a variety of slides decks from the main conference, covering a range of topics related to objective diagnostics and regulatory support. These slides decks were well-received and provided valuable insights into the current state of the field.

**State of the Community**

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**Slides decks from the main conference**

The symposium included a variety of slides decks from the main conference, covering a range of topics related to objective diagnostics and regulatory support. These slides decks were well-received and provided valuable insights into the current state of the field.
# OHDSI 2022 Tutorial

**OHDSI2022 Tutorial: An Introductory Journey From Data To Evidence**

During the 2022 OHDSI Symposium, community leaders taught a full-day tutorial meant to introduce participants to the varying steps along the journey from data to evidence using the OMOP Common Data Model, OHDSI tools and scientific best practices.

In this 8-hour segment, the class learned the conceptual framing of the problem and approach to the solution. The class had the opportunity to gain hands-on exposure to design and implementation of analyses and interpretation of results. The course was motivated by a real-world case: using observational data to generate evidence about the relationship between an exposure and outcome, and it highlighted how the suite of OHDSI tools and practices can enable such learning.

This class was designed for newcomers to the OHDSI community who were looking for a high-level summary across a wide range of topics covered within the OHDSI community. It was also designed for those in the OHDSI community who may be focused in one particular area of the journey, but who want exposure to the other areas, so they can better understand how their work contributes to the "big picture."

Videos and slides from the tutorial are all available on this webpage.

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**Tutorial Materials**

1. **Overview of the OHDSI Journey: Where are we going?**
   - Faculty: Patrick Ryan
   - Video Slides

2. **OMOP Common Data Model & Vocabulary/ETL a source database into OMOP CDM**
   - Faculty: Clair Blacketer, Melanie Philofsky
   - Video Slides

3. **Creating cohort definitions**
   - Faculty: Asieh Golozar
   - Video Slides

4. **Phenotype evaluation**
   - Faculty: Gowtham Rao
   - Video Slides

5. **Characterization**
   - Faculty: Kristin Kostka
   - Video Slides

6. **Estimation**
   - Faculty: Martijn Schuemie
   - Video Slides

7. **Prediction**
   - Faculty: Jenna Reps
   - Video Slides

8. **Where do we go from here?**
   - Faculty: George Hripcsak
   - Video

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[ohdsi.org/ohdsi2022-tutorial](http://ohdsi.org/ohdsi2022-tutorial)
Healthcare System OMOP Adoption Survey

Do you represent a healthcare system that has adopted OMOP?

The Healthcare Systems Interest Group is gathering evidence to support additional healthcare systems’ adoption decisions

We want to hear about the benefits your organization has realized

Please take our survey:


John Methot, Melanie Philofsky, Brian J. Bush, Paul Nagy, Daniel Smith, Edward Smith
Version 2 of Our Journey

Our Journey
Where The OHDSI Community Has Been
And Where We Are Going
2022 edition

OHDSI
OBSERVATIONAL HEALTH DATA SCIENCES AND INFORMATICS

@OHDSI www.ohdsi.org #JoinTheJourney
**Day 1 (Nov. 12) — Tutorial Workshop**

- 8:30 – 9:00 • Registration
- 9:00 – 9:30 • Overview of the OHDSI Journey: where are we going
- 9:30 – 10:20 • OMOP Common Data Model and vocabulary
- 10:20 – 10:30 • Break
- 10:30 – 11:20 • ETL a source database into OMOP CDM
- 11:20 – 11:30 • Break
- 11:30 – 12:20 • Creating cohort definitions
- 12:20 – 13:30 • Lunch
- 13:30 – 14:20 • Phenotype evaluation
- 14:20 – 14:30 • Break
- 14:30 – 15:20 • Characterization
- 15:20 – 15:30 • Break
- 15:30 – 16:20 • Estimation
- 16:20 – 16:30 • Break
- 16:30 – 17:20 • Prediction
- 17:20 – 17:30 • Recap of the OHDSI Journey, where do we go from here

[Register for Day 1 Here]

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**2022 APAC OHDSI Symposium**

Nov. 12 - 13 • Taipei Medical University

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**Day 2 (Nov. 13) — Main Conference**

- 08:00 – 09:00 • Registration & Light Breakfast
- 09:00 – 09:20 • Welcome Session
- 09:20 – 09:40 • Group Photo

**Session 1: Envisioning of OHDSI Global & OHDSI APAC**

- 09:40 – 10:00 • Keynote – OHDSI Global Presentation
- 10:00 – 10:20 • OHDSI APAC Introduction
- 10:20 – 10:30 • Break

**Session 2: The Implication Experiences in OHDSI Region**

- 10:30 – 11:30 • Researches in OHDSI APAC
- 11:30 – 11:45 • Researches using Taiwan National Data
- 11:45 – 12:00 • Researches using TMUORD Data
- 12:00 – 13:00 • Lunch & Poster Presentation

**Session 3: The Challenges of Research in OHDSI APAC**

- 13:00 – 14:00 • Panel – Standardization & Common Data Models
- 14:00 – 15:00 • Panel – APAC Regional Adaption to Standardization
- 15:00 – 15:15 • Break
- 15:15 – 16:15 • Poster & Networking Session
- 16:15 – 17:00 • Closing Remarks

[Register for Day 2 Here]
Representing and Utilizing Clinical Textual Data for Real World Studies: An OHDSI Approach (Vipina Keloth, Juan Banda, Michael Gurley, Paul Heider, Georgina Kennedy, Hongfang Liu, Feifan Liu, Timothy Miller, Karthik Natarajan, Olga Patterson, Yifan Peng, Ruth M. Reeves, Masoud Rouhizadeh, Jianlin Shi, Xiaoyan Wang, Yanshan Wang, Wei-Qi Wei, Andrew Williams, Rui Zhang, Rimma Belenkaya, Christian Reich, Clair Blacketer, Patrick Ryan, George Hripcsak, Noemie Elhadad, Hua Xu)
Explaining patient-level prediction models using permutation feature importance and SHAP

**Presenter:** Aniek F. Markus, Egill A. Fridgeirsson, Jan A. Kors, Katia M.C. Verhamme, Peter R. Rijnbeek

**Co-authors:** Gijs A. Frijling, Jan A. Kors, Katia M.C. Verhamme, Peter R. Rijnbeek

**Methods:**
1. We develop a prediction model on the Dutch PCG database to perform the following analyses:
   - Explaining patient-level prediction models using permutation feature importance and SHAP.
   - Visualizations of predicted outputs of the model, to provide intuition about the model.
2. To assess the importance of features:
   - We randomly permute the input features and average the resulting importance values.
   - We consider this as our true feature importance values.

**Results:**
- Feature importance methods vary in their implied behavior. For example, permutation feature importance explains model performance and model behavior, while SHAP explains individual model predictions. However, the effect of these differences is so different that it is difficult to choose one method.
- Exploring which feature importance method to use is important for reliable interpretation and communication of predictive models developed within OHDSI.

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**Feature Importance Methods**

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<thead>
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<th>Method</th>
<th>Example 1</th>
<th>Example 2</th>
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<tbody>
<tr>
<td>Permutation</td>
<td>Explaining</td>
<td>Explaining</td>
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<tr>
<td>Feature Importance</td>
<td>patient-level</td>
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<tr>
<td>SHAP</td>
<td>prediction models</td>
<td>prediction models</td>
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**Explaining patient-level prediction models using permutation feature importance and SHAP (Aniek F. Markus, Egill A. Fridgeirsson, Jan A. Kors, Katia M.C. Verhamme, Peter R. Rijnbeek)**
Jackalope: A software tool for meaningful post-coordination for ETL purposes (Eduard Korchmar, Polina Talapova, Maria Kolesnyk, Denys Kaduk)

Some concepts can not be mapped precisely. But many of those can still be post-coordinated. With right tools, full semantic meaning of those concepts can be stored, retrieved and used by representing them as post-coordinated expressions (PCEs).

We envisioned and prototyped one such tool.

**JACKALOPE: ENHANCING ETL COVERAGE THROUGH POST-COORDINATION**

Concepts are presented as PCE. This is the only manual step, although there are tools to simplify it.

Expressions are converted to Normal Form as specified by SNOMED CT algorithms. At this point, pre- and post-coordination are equivalent.

An algorithm, analogous to SNOMED CT internal OWL reasoner, finds a place for the PCE in the exist- ing hierarchy. From there, only child relations are built.

New concepts get added to the local CDM instance. Their hierarchy is unified with SNOMED Vocabulary, ensuring use in concept sets.

Written PCE are stored for reevaluation against newer SNOMED versions.

Hash of the Normal Form is used to identify PCE synonyms.

**JACKALOPE TRANSFORMATION PIPELINE:**

Author → Convert → Classify → Ingest → Preserve

Full article, demonstration video and source code

**Wednesday**
Clinical Sequelae of COVID-19 & Associated Healthcare Utilization: A Study Protocol
Ivan Chun Hang Lam, Yi Chai, Celine Sze Ling Chui, Eric Yuk Fai Wan, Xue Li, Carlos King Ho Wong, Hao Luo, Kenneth Keng Cheung Man, Xiaoyu Lin, Can Yin, Jing Li, Mui Van Zandt, Christian Reich, Katherine Duszynski, Nicole Pratt, Ian Chi Kei Wong
Accurate Oncology Regimen Annotation and analysis of real-world oncology treatment patterns across five academic institutions (Travis Zack, Asieh Golozar, Christian Reich, Atul Butte, Eric Collisson, Jeremy Warner, Julian Hong)
Openings

FDA/CDER’s Division of Hepatology and Nutrition is seeking a clinician with bioinformatics or biostatistics training to work with the Drug-Induced Liver Injury (DILI) Team to evaluate large datasets of liver-related data, collaborate on the Team’s review of drugs with hepatotoxicity signals, and help develop informatics-based processes in DILI evaluation across the Agency.

Contact Judy Racoosin at judith.racoosin@fda.hhs.gov for information about the application process (that will be through USAJOBS).
Andrew Williams recently announced two exciting new openings at Tufts Medicine.

1) Senior Project Manager for a multisite multiyear grant standardizing critical care EHR and waveform data. (CHoRUS Bridge2AI)

2) Lead software developer and research data warehouse manager for Tufts Medicine’s OMOP instance and related services.

Remote work is possible for both positions.
Openings

Research Associate (Data Scientist/Statistical Engineer), Johns Hopkins inHealth and Biostatistics Center

• Execute OHDSI studies (e.g. for cohort characterizations and comparative effectiveness) on Johns Hopkins’s EHR data to support clinicians;

• Collaborate with statisticians and clinicians to continuously integrate state-of-the-art statistical tools to the inHealth/OHDSI tool stack for deployment;

• Mentor trainees on data science and software development skills;

• Co-teach courses on observational health data analytics and data science skills at School of Medicine and Public Health;

• Facilitate adoption of the inHealth tools among the broader OHDSI community by contributing to OHDSI’s Health Analytics Data-to-Evidence Suite.

• https://apply.interfolio.com/114436
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?