Minds Meet Machines: A Phenotyping Challenge

Date: Thursday, October 9, 2025 | **Time:** 8:00 AM – 12:00 PM EDT | **Location:** New Brunswick, NJ

Workshop Overview & Objectives

Welcome to Minds Meet Machines, a hands-on workshop exploring the intersection of human expertise and AI in clinical phenotyping. Our goal is to compare AI tools with traditional OHDSI workflows to generate insights that will shape the future of phenotype development.

Your participation is crucial. In **Phase 1**, you will work in teams to create a clinical concept set using the OHDSI Atlas platform. In **Phase 2**, you will help designated clinical experts adjudicate differences between the human- and AI-generated concepts to create a "Gold Standard" definition in real-time.

*For questions during the event, please find an organizer **Gaurav Dravida**.*

Workshop Agenda

7:00 – 8:00 AM | Pre-Workshop Setup

- *For organizers and volunteers only.*

8:00 – 8:30 AM | Welcome & Team Formation

- **Introduction:** Overview of the day's agenda, instructions, and objectives.
- **Group Logistics:** Participants will select a colored sticker to indicate their experience level (Expert, Familiar, or Observer/New) and join a phenotype-specific table. We will ensure a mix of experience levels at each table to foster collaborative learning.

8:30 – 9:45 AM | Phase 1: Human-Led Concept Set Creation

- **Task:** Build a concept set for your assigned phenotype using the OHDSI ATLAS platform.
- **Method:** Teams will use a "Split and Reconcile" approach.
    1. **Split:** Your table will divide into two subgroups.
    2. **Create:** Each subgroup independently builds a concept set. (Use of GenAI is prohibited in this phase).
    3. **Reconcile:** Subgroups reconvene to negotiate and submit one final, consolidated concept set.
- **9:45 AM: Submission deadline.** The ATLAS instance will be locked.

9:45 – 10:15 AM | Break & AI Presentations

- Enjoy a coffee break while the technical team prepares the adjudication data in the background.
- During the break, AI methodology leads will give brief presentations on their approaches.

10:15 – 11:30 AM | Phase 2: Blinded Adjudication

- **Task:** Participants will move to a new table to help adjudicate a *different* phenotype.
- **Process:** Led by a designated Clinical Expert, each group will review a blinded list containing concepts where human and AI approaches disagreed ("The Delta"). The group will discuss concepts, but the expert makes the final inclusion/exclusion decision to create a gold standard set.

11:30 AM – 12:00 PM | Wrap-Up & Initial Findings

- Adjudication concludes (any remaining concepts will be addressed offline).
- We will present and discuss preliminary results, focusing on overlap metrics (both raw and prevalence-weighted) and the implications for patient population identification.

Workshop Participant Checklist

Phase 1: Setup & Concept Set Creation (8:30 AM - 9:45 AM)

- ☐ Identify Your Expertise: Select a colored sticky note that matches your experience level (Expert, Familiar, or New/Observer) and place it on your badge.
- ☐ Choose Your Phenotype: Select a table labeled with the phenotype you wish to work on.
- ☐ Prepare Your Workspace: Please take out your laptop and ensure you can access the workshop's ATLAS instance.
- ☐ Form Your Group: Mingle at your table to ensure a mix of experience levels. The goal is to sit with participants who have a different colored sticker.
- ☐ Begin the Challenge:
    - ☐ Split into two subgroups at your table.
    - ☐ Work within your subgroup to build the initial concept set.
    - ☐ Reconvene with the other subgroup to create one final, reconciled concept set.

Phase 2: Adjudication (10:15 AM - 11:30 AM)

- ☐ Switch Perspectives: Move to a table with a different phenotype than the one you worked on in Phase 1.
- ☐ Review and Discuss: Participate in the group discussion to review the combined list of concepts from all teams.
- ☐ Contribute to the Gold Standard: Follow the lead of the designated Clinical Expert at your table to help adjudicate the concepts.