

### PatientLevelPrediction (PLP)

Purpose and 2023 OKRs



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#JoinTheJourney





We aim to establish a standardized process for developing accurate and well-calibrated patientcentered predictive models

The main research focusses are:

- Do methods research into best practices for prediction model development
- Apply our data, tools and framework to develop new clinically useful prediction models or validate existing ones
- Run network studies for methods research and clinical model development

Next meeting: Wednesday 8th March @ 9am ET





# Objective: We should meet f2f to help further collaboration

### Key result:

Organise work group meetings at:

- 1. European OHDSI Symposium
- 2. OHDSI Global Symposium
- 3. OHDSI APAC Symposium







### Objective: We want set of benchmark problems

### **Key Results:**

- 1. Have a moment in every workgroup meeting to discuss potential models
- 2. Identify 5-10 prediction tasks of interest
- 3. Add existing prediction models for the tasks of interest into DELPHI to make benchmarking easy



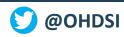




## Objective: We would like to investigate learning models for rare outcomes

### **Key Results**

- 1. Perform large scale study creating learning curves for stacker ensembles on new data
- 2. Perform large scale study creating learning curves for transfer learning on new data
- 3. Publish a paper comparing local model fitting, stacker ensemble and transfer learning on new data with rare outcomes

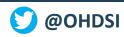




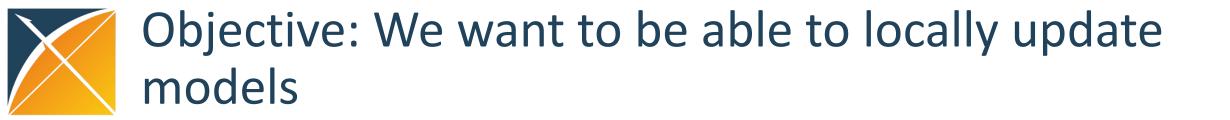


#### **Key results**

- 1. Develop tools to estimate external validation performance
- 2. Develop tools to understand external validation performance





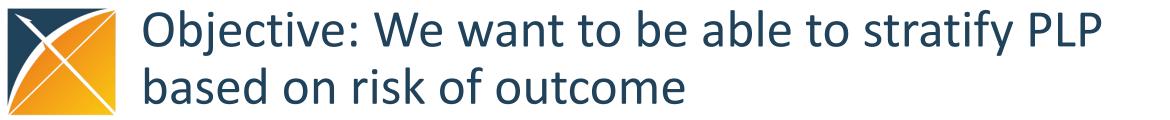


### **Key Results**

- 1. Provide methods within the package to update models locally
- 2. Compare local to general models in terms of performance
- 3. Publish a paper on a framework for updating models locally
- 4. Develop a process for monitoring in situ model performance







### **Key results:**

- 1. Add tools to be able to identify subgroups with different risks
- 2. Apply existing method for counterfactual deep learning as an OHDSI network study
- 3. Produce a paper looking at counterfactual prediction



