OHDSI’s Journey for 2017: Where we should go together

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What’s our journey in 2017?
OHDSI’s areas of focus: A look forward at 2017...

- Generate and disseminate more clinical evidence
- Maintain and evolve open community data and vocabulary standards
- Develop and improve tools to enable large-scale analysis
- Establish and promote community best practices
- Strengthen and expand collaborations across OHDSI research network
- Advance scholarship in observational data science through publication, presentations, and education
- Generate and disseminate more clinical evidence
Building the LHC of observational research?

Schuemie, OHDSI Symposium, 2016
Some ambitious OHDSI community goals for 2017

• Large-scale clinical characterization
  – For all medical interventions, what is the population-level incidence of experiencing all possible outcomes of interest?

• Large-scale patient-level prediction
  – For all medical interventions, what is the personalized prediction of experiencing all possible outcomes of interest?

• Large-scale population-level effect estimation
• Large-scale data management
Open questions to achieve large-scale goals

- How do we define cohorts for ‘all medical interventions’ and ‘all outcomes of interest’ that can be applied across a network of observational datasets?
- How do we evaluate and compare large-scale phenotyping approaches: naïve, heuristic, probabilistic?
- What model(s) and how much data are required to achieve the greatest predictive accuracy?
- How do we appropriately measure performance to ensure the evidence we disseminate is reliable?
Open questions to achieve large-scale goals

- How do we efficiently scale incidence rate calculations for all exposures and all outcomes, across various strata and time-at-risk?
- What approach is computational feasible for data partners to implement predictive model learning?
- How can we transport and apply learned models to other datasets?
- What type of central evidence repository do we need to build to ensure all parties are comfortable with sharing results?
Open questions to achieve large-scale goals

- How do we disseminate the evidence that is generated?
- What API framework would be useful to allow evidence to be automatically integrated into existing clinical decision support systems?
- What type of user interface design would allow patients to ask the question: “What’ll happen to me?” and effectively navigate to evidence that can meaningfully inform their decision making?
<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
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<tbody>
<tr>
<td>8:30 – 9:00am</td>
<td>Registration</td>
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<tr>
<td>9:00 – 9:30am</td>
<td>Welcome Session</td>
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</table>
| 9:30 – 10:30am  | Working Group Breakout Session – Part I  
• Common data model and vocabulary  
• Population-level estimation  
• Hadoop                                                                                      |
| 10:30 – 11:00am | Break                                                                                                                                         |
| 11:00 – 12:00pm | Working Group Breakout Session – Part II  
• Architecture  
• Patient-level prediction  
• LAERTES knowledge base  
• Natural language processing                                                                 |
| 12:00 – 12:30pm | Reconvene the community  
• Summary of key points from each work group                                                                                                  |
| 12:30 – 1:30pm  | Lunch                                                                                                                                         |
| 1:30 – 3:00pm   | Target problems to tackle  
• Patrick Ryan: Presentation of target problems  
• Community discussion to frame each problem                                                                                                  |
| 3:00 – End of day| Hack-a-thon – Three tracks  
• Phenotyping and cohort building  
• Large scale statistical programming  
• Design session: UI experience and information dissemination                                                                                   |
# OHDSI F2F Agenda: Day 2 – March 18

<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
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<tr>
<td>8:00 – 12:30pm</td>
<td>Continue hack-a-thon activities across three tracks:</td>
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<tr>
<td></td>
<td>• Phenotyping and cohort building</td>
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<td>• Large scale statistical programming</td>
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<td>• Design session: UI experience and information dissemination</td>
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<td>12:30 – 1:30pm</td>
<td>Lunch</td>
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<tr>
<td>1:30 – 3:00pm</td>
<td>Reconvene the community</td>
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<td>• Review outcomes from each hack-a-thon track</td>
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<td>3:00 – 3:30pm</td>
<td>Break</td>
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<td>3:30 – 5:30pm</td>
<td>Open community discussion</td>
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<td>• Next steps for following through on group projects</td>
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<td>• Other priorities for collaborative projects</td>
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<td>• Other ways to engage the community and make contributions</td>
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<td>5:30pm</td>
<td>Wrap-up</td>
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OHDSI F2F Logistics

- Meeting: March 17-18 in Atlanta, GA (Georgia Institute of Technology)

- OHDSI F2F is not like OHDSI Symposium
  - No lectures → no passive participation
  - Everyone who comes is expected to roll up their sleeves and make contributions to our shared goals

- Meeting space limited, so you must register to participate

- Registration: [http://www.ohdsi.org/events/2017-ohdsi-collaborator-face-to-face/](http://www.ohdsi.org/events/2017-ohdsi-collaborator-face-to-face/)
Join the journey

• Discussion / questions / comments

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