

The CIMPOD (**C**ausal **I**nference **M**ethods for **PCOR** using **O**bservational **D**ata) Conference was conceived by researchers at the Medical Technology and Practice Patterns Institute in the fall of 2015. These researchers, led by Dr. Yi Zhang, recognized that the observational healthcare research community did not have a conference dedicated to improving causal inference methods, a growing and important scientific field that comprises advanced statistics, clinical investigation, and big-data analysis, all centered around patient outcomes. With the support of patient stakeholder groups, nationally recognized clinicians, life sciences industry leaders and academia's foremost experts on causal inference theory, MTPPI convened 2-day CIMPOD 2016 at the National Academy of Sciences in Washington, DC.

The first year of the conference aimed to investigate the fundamental issues facing researchers who use observational data to determine causation. On day one, speakers addressed foundational topics such as:

- asking the right research questions based on available data,
- understanding the differences between observed and unobserved confounding
- dealing with potential violations of positivity
- how to account for structural threats to validity, namely confounding bias, selection bias and information bias

Day two of the conference focused on giving attendees a roadmap to conduct their own causal inference research using observational data sets. Expert panels discussed how researchers should turn their questions into ideal experiments and statistical models that represent real knowledge based on their existing data. Elements that make a strong study design were discussed, with particular emphasis placed on the importance of the question (scientific investigation) determining the design of the statistical analysis (technical investigation) and not the other way around (data-driven analysis). The conference wrapped up with Q&A discussions on causal inference best practice and considerations to be made specific to Patient-Centered Outcomes Research. While no one method is perfect, adherence to the scientific method along with the honest reporting of limitations can ensure that researchers are contributing to the healthcare community by increasing the knowledge of patients and stakeholders impacted by the answers to the research questions. Recordings and slides presentation can be found at cimpod2016.org.

Based on the responses to the survey given to the 120 in-person attendees, we are confident that we can call CIMPOD 2016 a success. Our researchers are diligently working on the content for CIMPOD 2017, to be held February 27-28 at the National Institutes of Health in Bethesda, Maryland. This edition of the conference is formatted as hands-on workshops over the course of two days. Workshops will focus on subjects such as Targeted Maximum Likelihood Estimation, Inverse Probability Weighting and Propensity Scores among others. Attendees will receive the nuts and bolts training needed to replicate high-quality causal inference research. More information is available at: www.cimpod2017.org