Call for Papers
SPECIAL ISSUE on

Integration of Observational Studies with Randomized Trials

COORDINATING EDITORS

Elias Bareinboim, Department of Computer Science, Columbia University

Mark van der Laan, Division of Biostatistics, School of Public Health UC Berkeley

DESCRIPTION

Designs for causal inferences can be thought of as existing on a spectrum. On the one extreme are tightly controlled experimental studies, in which adherence to ideal randomly assigned treatment is optimized. Such studies minimize challenges to causal identification arising from confounding, but may be susceptible to sample selection bias and other imperfections. In addition, due both to cost and intensity of effort, sample sizes for such studies may be limited. On the other extreme are observational studies, in which data on more comprehensive, representative of real world conditions and larger samples are available. In such studies, however, confounding often poses challenges to causal identification. Both extremes, and especially randomized trials, require transfer techniques when findings are transported to new populations or new environments.

The possibility of using one to alleviate weaknesses of the other has surely occurred to the first generation of statisticians who were confronting the design of experiments. However, lacking a formal language of causal analysis, such possibilities have remained in the realm of informal folklore, or rules of thumb, and have not impacted data analytic practice until recently. The landscape has changed since the introduction of formal causal models (Rubin 1974, Robin and Greenland, 1986, Pearl 2000) especially through the formal definitions of notions such as "causal effects", "confounding" and "counterfactuals". Clever combinations of experimental and observational studies have been shown capable of yielding gains in several aspects of causal analysis; example are provided below:

1. Identification
The theory of transportability and data fusion (Bareinboim and Pearl 2016) has shown how data from diverse sources, both experimental and observational, can be combined to identify causal quantities which are not estimable with of each source in isolation.

2. Explanation and Probabilities of causation
The combination of experimental and observational studies were shown capable of yielding informative bounds on probabilities of sufficiency (PS) and probabilities of necessity (PN), both essential in producing plausible explanations, in the assessment of "Causes of Effects" and in inferring individual behavior from population data. (Tian and Pearl, 2001; Pearl 2015, R-431).

3. Detection of experimental imperfection
The combination of experimental and observational studies were shown capable for detecting experimental imperfections such as selection bias and latent heterogeneity.

4. Variance reduction
Observational studies on certain aspects of a population were shown capable of reducing the variance associated with effect estimates in experimental studies (Pearl, 2018). This reduction is especially useful in the presence of selection bias (Rosenman et al 2021).

This thematic special issue in Journal of Causal Inference is devoted to the publication of both original and survey papers for a special issue of JCI on this general theme. **Authors are strongly encouraged to explicitly indicate in the abstract what aspects of the causal analysis their paper aims to improve by combining experimental and observational studies**.

Authors are requested to submit their full revised papers complying the general scope of the journal. The submitted papers will undergo the standard peer-review process before they can be accepted. Notification of acceptance will be communicated as we progress with the review process.

HOW TO SUBMIT

Before submission authors should carefully read the Instruction for Authors.

Manuscripts can be written in TeX, LaTeX (strongly recommended) - the journal's LATEX template. Please note that we do not accept papers in Plain TEX format. **For an initial submission, the authors are strongly advised to upload their entire manuscript, including tables and figures, as a single PDF file.**

All submissions to the Special Issue must be made electronically via online submission system ScholarOne:

All manuscripts will undergo the standard peer-review process (single blind, at least two independent reviewers). When entering your submission via online submission system please choose the option "*Special Issue on Integration of observational studies with randomized trials*".

Submission of a manuscript implies that the work described has not been published before and it is not under consideration for publication anywhere else.

The deadline for submissions is February 15, 2022, but individual papers will be reviewed and published online on an ongoing basis.

Contributors to the Special Issue will benefit from:

- constructive peer-review
- no space constraints
- quick online publication upon completing the publishing process (**continuous publication model**)
- better visibility due to **Open Access** – free, unrestricted and permanent access to all the content
- **liberal policies on copyrights** (authors retain copyrights) and on self-archiving (no embargo periods)
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We are looking forward to your submission!

In case of any questions please contact **Ms. Monika Maleszka** (Managing Editor; jci_editorial@degruyter.com).