Registered Reports Q&A for Editors

1. How do Registered Reports work?

Unlike conventional research articles, Registered Reports are reviewed over two stages. Editors and reviewers initially consider a detailed study protocol before the research is undertaken, assessing the importance of the research question for current theory or applications, the strength of the scientific rationale, and rigour of the proposed methodology. Following revision, the highest quality protocols are awarded in-principle acceptance, which commits the journal to publishing the final paper, provided the authors adhere to their protocol, the work is performed to a high standard, and the conclusions are supported by the evidence. The paper is published at the end of this process as a complete article that integrates the approved protocol and outcomes.

2. What do Registered Reports add to existing forms of pre-study assessment such as grant review or clinical trial registration?

Registered Reports advance existing processes in three important ways. First, pre-study peer review ensures that protocols are sufficiently well specified to be reproducible while also providing the opportunity for reviewers to correct serious errors before they happen. Second, in-principle acceptance before results are known helps to prevent publication bias. Third, because the protocol is embedded unchanged in the final publication, and re-reviewed by the same reviewers, the format is immune to various forms of selective reporting by authors.

3. What types of research are Registered Reports suitable for?

The format is appropriate for any hypothesis-driven research, including both original studies and replications.

4. Would Registered Reports replace other article types?

No. Registered Reports are a new article type – an added option – not a replacement for existing article types.

5. Our journal publishes mostly exploratory research. This format seems too restrictive for exploratory science.

Registered Reports are designed for research that is at least partly hypothesis- driven, not purely exploratory. But exploratory analyses and serendipitous findings--clearly labeled as such-- may always be

added at Stage 2, alongside the preregistered analyses. In the future, we may offer Exploratory Reports, a new article that champions exploration, as described here.

6. This format seems too restrictive.

RRs do not hinder exploration or serendipitous discoveries. As is evident from the many published examples, authors are welcome to include unregistered exploratory analyses in Registered Reports at Stage 2. The only requirement is that exploratory outcomes are clearly distinguished from the outcomes of the preregistered analyses.

7. Do Registered Reports have any other benefits?

Yes. In addition to helping eliminate publication bias and various forms of researcher bias at the source, Registered Reports are creating novel opportunities to form partnerships between journals and funders. For example, PLOS ONE has recently joined forces with the Children's Tumor Foundation to review Stage 1 Registered Reports simultaneously for both funding and publication.

8. What are the risks to the journal of offering Registered Reports?

There are no known risks. By reducing various forms of bias, it is likely that Registered Reports will produce more "negative" results, but stringent selection at Stage 1 will ensure that the published results, whether positive or negative, will be among the most credible in the journal. One might also suppose that a relative increase in negative results could lead to lower citation rates. However, since Registered Reports were launched in 2013 they have been highly cited, at average rates exceeding the impact factors of the journals in which they are published.

9. Would the journal be required to accept any methodologically sound protocol, regardless of its importance to the field?

No. The journal can apply great stringency during Stage 1 review to ensure that provisional acceptance is restricted to those studies judged to be the most likely to produce outcomes that are informative and important to the field.

10. Would the journal be obligated to publish the results of a study that appeared promising at Stage 1 but was conducted poorly at Stage 2?

No. The Stage 1 review process allows reviewers and editors to pre-specify positive controls, manipulation checks, or data checks for assessing study quality (e.g. data verifying that a particular intervention or measure was administered appropriately). To prevent publication bias, the only requirement is that such tests are pre-specified at Stage 1 before results are known, and that they are

independent of the primary outcome measures.

11. Will reviewers object to being asked to conduct two stages of review per manuscript instead of one?

So far, it doesn't seem so. On the contrary, reviewers have responded enthusiastically to Registered Reports (e.g. frequently contacting editors to praise the format), and the retention rate of reviewers between Stage 1 and Stage 2 is close to 100%.

12. Registered Reports seem ideally suited for large-scale, one-shot experiments, but our journal publishes a lot of multi-experiment papers. Is the format suitable for this style of research?

Yes. Journals have the option of offering incremental registrations, where authors add sequentially to a program of research as they proceed, with in principle acceptance occurring at each point. Stage 1 manuscripts can also include unregistered preliminary experiments, with the proposed protocol including a substantive study to test an idea formulated in the preceding work (e.g. as in this example published at Royal Society Open Science).

13. Are Registered Reports difficult to set up?

Not at all. Setting them up is straightforward, and all major publishers now include at least one journal that offers them. The Registered Reports knowledge base hosted by the Center for Open Science includes a 'Resources for Editors' section including freely reusable template author guidelines, implementation checklist, template author decision letters, reviewer invitation letters, additional FAQs and more.

14. I have other questions.

Additional support is available via David Mellor (david@cos.io) and Chris Chambers (chambersc1@cardiff.ac.uk). David is the Registered Reports project manager at the Center for Open Science (COS) and Chris is chair of the COS Registered Reports committee, and serves as Registered Reports editor at five journals (including Cortex, European Journal of Neuroscience, Royal Society Open Science, Collabra:Psychology, and BMJ Open Science). David, Chris and the COS are happy to provide free custom assistance to journals in establishing the format and have helped launch Registered Reports at dozens of outlets.