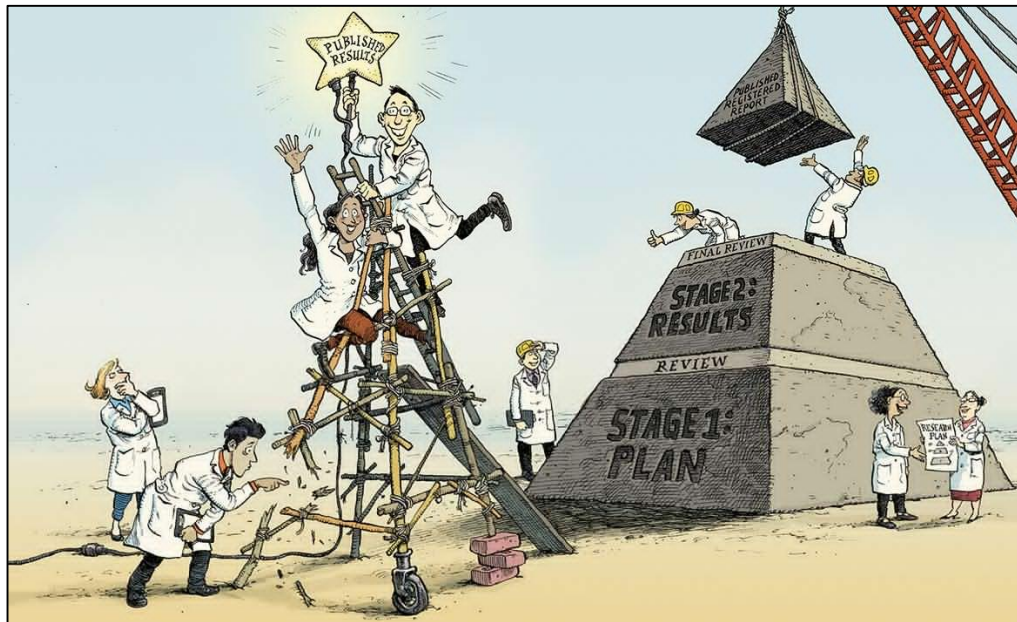


Registered Reports 2.0

Introducing the Peer Community in Registered Reports



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These slides

<https://osf.io/3jtqr/>

Registered Reports



Stage 1
Peer Review ↑

Stage 2
Peer Review ↑

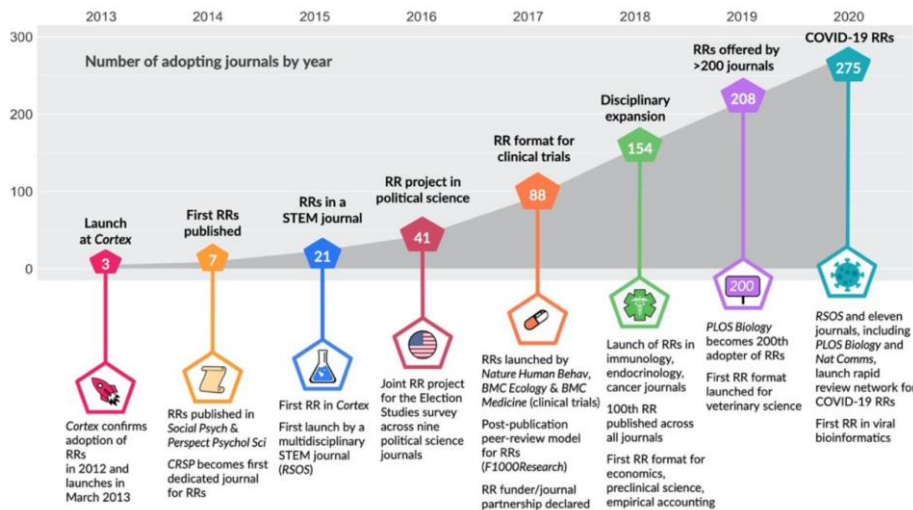
*Reviewers assess
Theory, rationale, rigour,
robustness of method*



**In-principle
acceptance**

*Reviewers assess
Compliance with study protocol and whether
conclusions are based on the evidence*

Currently adopted by >300 journals



Early impacts are promising

- Popular with ECRs: ~80% first authored by PhD students or post docs
- ~5-10 times more likely to **disconfirm** hypotheses (60% vs ~12% across fields; Allen & Mehler 2019; 56% vs 4% in psychology; Scheel et al. 2020)
- Higher computational reproducibility than regular articles (Obels et al. 2019)
- Rated higher in quality than regular articles (Soderberg et al., 2021)
- Cited same or more than regular articles (Hummer et al. 2019)

But they aren't perfect. 10 known limitations include:

1. Stage 1 review time
2. Needing to commit to a journal before results are known
3. Not well suited to programmatic research where one Stage 1 protocol could lead to multiple Stage 2 outputs (current model is one S1 → one S2)
4. Inconsistent editorial standards and levels of training/experience
5. Inconsistent transparency of accepted Stage 1 protocols (Hardwicke et al. 2018)
6. Inconsistent policies on open peer review
7. Inconsistent policies on open access and availability of Stage 2 articles
8. Unclear policies on applicability of RRs for analysis of existing data
9. Limited capability to work with funders on RR research grant models due to legal barriers that restrict cooperation between public funders and corporate publishers
10. Power resides with journals and (largely corporate) publishers to decide which RRs enter the peer-reviewed scientific record, not with authors and the broader scientific community



Peer Community In

Registered
Reports

Free and transparent pre- and post-study
recommendations across research fields



Founders: Corina Logan, Emily Sena, Zoltan Dienes, Chris Chambers, Ben Pujol

Web: <https://rr.peercommunityin.org/>

Twitter: [@PCI_RegReports](https://twitter.com/PCI_RegReports)

Email: contact@rr.peercommunityin.org

- [Peer Community in Registered Reports](https://rr.peercommunityin.org/) (PCI RR) is a free, non-commercial platform dedicated to reviewing and recommending Registered Reports *preprints* across STEM, medicine, the social sciences and humanities
- Once a submission is recommended by PCI RR following peer review, the revised manuscript is posted at the preprint server where the preprint is hosted, and the peer reviews and recommendation are published at the PCI RR website
- Authors then have the option to publish the preprint in a traditional journal, including a growing list of [PCI RR-friendly journals](#) that have committed to accepting PCI RR recommendations *without further peer review*

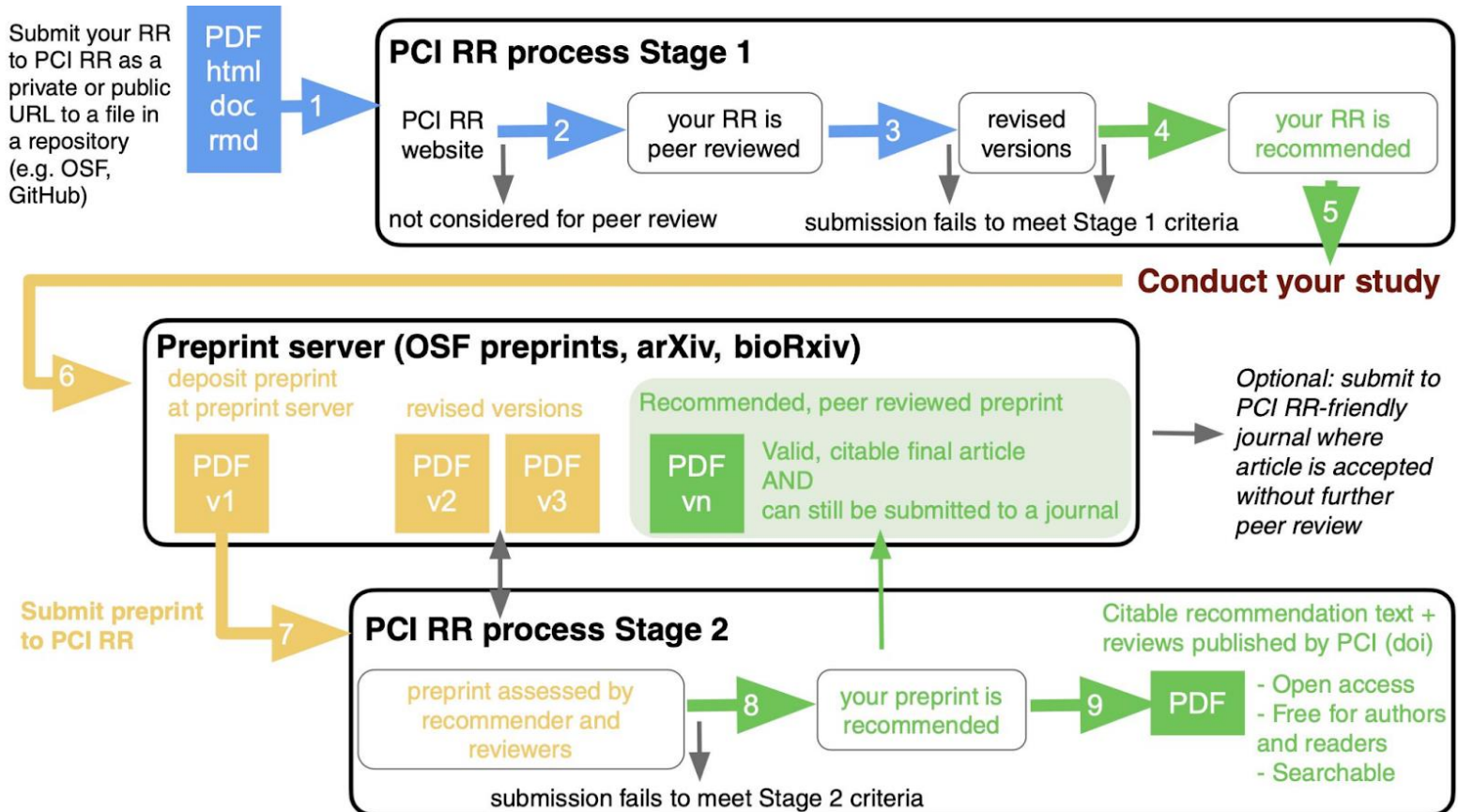


Peer Community In

Free and transparent pre- and post-study recommendations across research fields

Registered Reports

How it works





Peer Community In

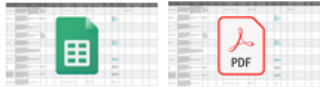
Registered Reports

Free and transparent pre- and post-study recommendations across research fields

List of PCI RR-friendly journals

There are currently **22** PCI RR-friendly journals. The current list can be viewed in spreadsheet and PDF format, and details of each journal's commitment and eligibility requirements are also listed below.

For open access journals, authors are strongly advised to check the journal website for latest information concerning article processing charges.



Journals interested in becoming PCI RR-friendly can learn more about the requirements [here](#) and can apply to join [here](#).

- [Addiction Research & Theory](#)
- [Advances in Cognitive Psychology](#)
- [BMJ Open Science](#)
- [Brain and Neuroscience Advances](#)
- [Cambridge Educational Research e-Journal](#)
- [Cortex](#)
- [Experimental Psychology](#)
- [F1000Research](#)
- [Infant and Child Development](#)
- [Journal for Reproducibility in Neuroscience](#)
- [Journal of Cognition](#)
- [Meta-Psychology](#)
- [NeuroImage: Reports](#)
- [PeerJ](#)
- [PeerJ Computer Science](#)
- [PeerJ Physical Chemistry](#)
- [PeerJ Organic Chemistry](#)
- [PeerJ Inorganic Chemistry](#)
- [PeerJ Analytical Chemistry](#)
- [PeerJ Materials Science](#)
- [Royal Society Open Science](#)
- [Swiss Psychology Open](#)

List of PCI RR-interested journals

Where authors seek to maximise the chances of their manuscript being picked up by a PCI RR-interested journal, we recommend they consult the journal's RR policy to determine what additional conditions may need to be met, over and above the PCI RR review criteria. For instance, some PCI RR-interested journals set a more stringent requirement on pre-planned evidence strength (including prospective statistical power or Bayes factors) while others may only consider RRs where data do not exist prior to in-principle acceptance (in line with [Level 6 of the PCI RR bias-control taxonomy](#)).

The list of PCI RR-interested outlets below includes a link to each journal's RR author guidelines.

- [Affective Science](#) [RR author guidelines TBC]
- [Biolinguistics](#) [RR author guidelines]
- [Collabra: Psychology](#) [RR author guidelines]
- [Nature Human Behaviour](#) [RR author guidelines]
- [PLOS Biology](#) [RR author guidelines]

PCI RR-friendly journals commit to accepting PCI RR recommendations without further peer review. You, the author, decides which journal gets to publish your Stage 2 RR

https://rr.peercommunityin.org/about/pci_rr_friendly_journals



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Other unique features

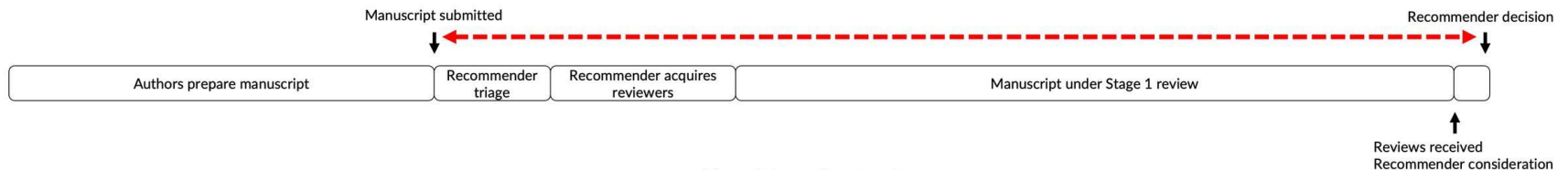
Programmatic RRs: One Stage 1 manuscript leading to multiple Stage 2 outputs

See: https://rr.peercommunityin.org/help/guide_for_authors#h_52492857233251613309610581

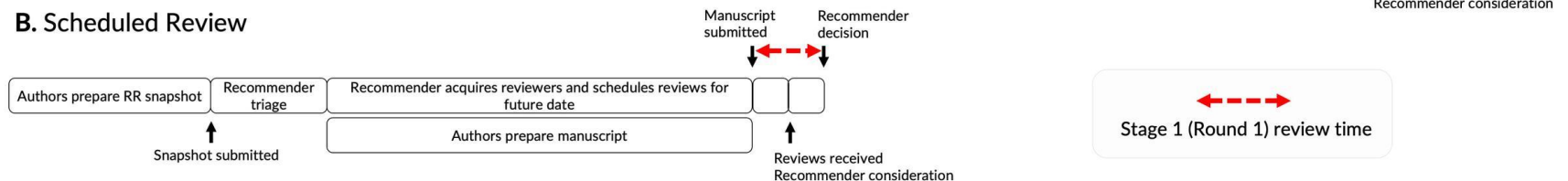
Scheduled Review: Following submission of a one-page Stage 1 “snapshot”, peer review is scheduled in advance so that the Stage 1 review time following full manuscript submission = days rather than weeks

See: https://rr.peercommunityin.org/help/guide_for_authors#h_61998243643551613309672490

A. Standard Review



B. Scheduled Review





Peer Community In

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Peer Community in Registered Reports: Stage 1 Snapshot

Briefly summarise the study protocol using this template (1 page max, A4). Please use Arial font size 10, single-spaced, with a 0.5 inch (1.27cm) margin. All italicised text should be deleted from the submitted template. All bold text, including the header above, must be included.

- 1. Provisional title.** Choose a title for the submission. If a full Stage 1 submission is invited, this can be updated.
- 2. Authors and affiliations.** List all submitting authors and affiliations. If a full Stage 1 submission is invited, this can be changed. For submissions involving a large group of authors, and where listing them all would use too much of the space allocation, it is acceptable to list only the corresponding author and their affiliation, and link to a google doc or other accessible file containing the full list of contributors.
- 3. Field and keywords.** State the general field of research and any specific keywords that identify the sub-field and the research topic.
- 4. Research question(s) and/or theory.** Briefly summarise the research question(s) that will be addressed, and where relevant, the theoretical basis of the proposal. For a Programmatic RR, anticipate which questions will produce which Stage 2 outputs.
- 5. Hypotheses (where applicable).** Where relevant, state any predictions of the study. These can be stated in less precise terms than is required for a full Stage 1 submission, for instance, by referring to specific concepts rather than variables or measurements. If a full Stage 1 submission is invited, this will be updated and refined.
- 6. Study design and methods.** Summarise in broad terms the study design, including (as applicable), key conditions and controls, data acquisition procedures, and variables.
- 7. Key analyses that will test the hypotheses and/or answer the research question(s).** Summarise in broad terms how the data will be analysed. A detailed analysis plan is not required, but the clearer the link between the research question, hypotheses (as applicable), and analysis plans, the more likely the submission is to pass triage.
- 8. Conclusions that will be drawn given different results.** Anticipate a range of possible/plausible results, what they would mean for theory or applications, and how they would answer the research question(s). For example, how would a particular hypothesis being supported vs. unsupported influence theory?
- 9. Key references.** These must be numbered and include DOI URLs. To save space, the reference list can be presented succinctly in a single body of text using the following style: 1. Surname et al. (Year), <https://doi.org/DOI>. 2. Surname et al. (Year), <https://doi.org/DOI>. etc.

RR 'Snapshot' used in the Scheduled Review track



PCI RR recommenders (editors) take a training and pass a test

PCI RR Recommender's Entrance Test

Welcome to the PCI RR Recommender's Entrance Test. This test is designed to assess basic knowledge of the RR format, the core policies of PCI RR, and best approaches for tackling challenging scenarios.

The test includes 66 questions over 5 sections. Please allow 2 hours to complete the test.

All information that prospective recommenders need to pass this test is contained in the guidance and the links at the top of each section. A pass grade is 63 out of 66 points (95% correct) and the test can be taken as many times as necessary.



QUESTION 2: PCI RR recommender test

Which of the following is NOT one of the Stage 1 criteria for a Registered Report evaluation at PCI RR?

- The scientific validity of the research question(s)
- The importance of the research question(s)
- The soundness and feasibility of the methodology and analysis pipeline



QUESTION 2: PCI RR recommender test

Which of the following is NOT one of the Stage 1 criteria for a Registered Report evaluation at PCI RR?

- The scientific validity of the research question(s)
- The importance of the research question(s)
- The soundness and feasibility of the methodology and analysis pipeline



QUESTION 3: PCI RR recommender test

Suppose PCI RR receives a Stage 1 manuscript proposing a study in which the data that will be used to answer the research question have been accessed and partially observed by the authors. The authors also certify that they have NOT yet sufficiently observed the key variables within the data to be able to answer the question. Is this submission likely to be eligible for consideration?

- Yes, provided additional steps are taken to control risk of bias
- No, the risk of bias in this scenario is too high for PCI RR



Peer Community In
Free and transparent pre- and post-study
recommendations across research fields

Suppose PCI RR receives a Stage 1 manuscript proposing a study used to answer the research question have been accessed and authors. The authors also certify that they have NOT yet sufficient variables within the data to be able to answer the question. Is it eligible for consideration?

Yes, provided additional steps are taken to control risk of bias

No, the risk of bias in this scenario is too high for PCI RR

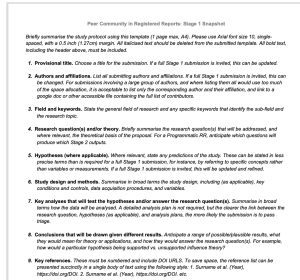
A levels-based system for bias control enables the RR mechanism to “bend” to meet the needs of researchers

If authors have an inflexible data collection start date and have not received in principle acceptance before this date, they may begin collecting data but must adjust the bias-control level accordingly (e.g., if the initial submission was Level 6, it would then drop to Level 3, 2, or 1)

Level	Data already exist or will exist prior to IPA	Data are accessible to the authors	Data have been accessed by the authors	At least some data have already been observed by the authors	Key variables in the data have been observed by the authors	Authors have already analysed key variables in the data	Risk of bias due to prior data observation	Multi-disciplinary inclusivity
6	<i>Level 6 description:</i> No part of the data or evidence that will be used to answer the research question yet exists and no part will be generated until after IPA (so-called “primary RR”)							
	✗	✗	✗	✗	✗	✗	Zero	Very low
5	<i>Level 5 description:</i> ALL of the data or evidence that will be used to answer the research question already exist but are currently inaccessible to the authors and thus unobservable prior to IPA (e.g. held by gatekeeper)							
	✓	✗	✗	✗	✗	✗	Very low	Very low
4	<i>Level 4 description:</i> At least some of the data/evidence that will be used to answer the research question already exists AND is accessible in principle to the authors (e.g. residing in a public database or with a colleague) BUT the authors certify that they have not yet accessed any part of that data/evidence							
	✓	✓	✗	✗	✗	✗	Low	Low
3	<i>Level 3 description:</i> At least some data/evidence that will be used to answer the research question has been previously accessed by the authors (e.g. downloaded or otherwise received), but the authors certify that they have not yet observed ANY part of the data/evidence							
	✓	✓	✓	✗	✗	✗	Moderate	Moderate
2	<i>Level 2 description:</i> At least some data/evidence that will be used to answer the research question has been accessed and partially observed by the authors, but the authors certify that they have not yet sufficiently observed the key variables within the data to be able to answer the research question AND they have taken additional steps to maximise bias control and rigour (e.g. conservative statistical threshold; recruitment of a blinded analyst; robustness testing, multiverse/specification analysis, or other approach)							
	✓	✓	✓	✓	✗	✗	High – additional steps required to control bias	High
1	<i>Level 1 description:</i> At least some of the data/evidence that will be used to answer the research question has been accessed and the authors HAVE sufficiently observed the key variables to be able to answer the research question, but the authors certify that they have not yet performed ANY of their preregistered analyses, and, in addition, they have taken stringent steps to reduce risk of bias. Such measures will be similar to the countermeasures required for Level 2 but even more intensive, including an extremely conservative statistical threshold, recruitment of a blinded analyst, comprehensive robustness testing, the use of a broad multiverse/specification analysis, or other approaches for controlling risk of bias.							
	✓	✓	✓	✓	✓	✗	Very high – stringent steps required to control bias	Very high

Example: post doc or PhD students wanting to complete a series of independent RRs

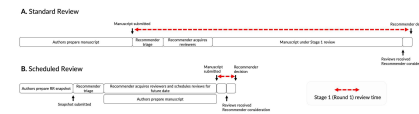
1. Design RRs and complete Stage 1 Snapshot



2. Post Snapshot on the OSF, either publicly or under private embargo



3. Submit the snapshot URL to PCI RR via the "Scheduled Review" track



4. Select future date for review (e.g. 6 weeks head), and once passed the recommender triage process, set to work writing a full "programmatic RR"

5. While designing & writing the Stage 1 RR, consult the list of PCI RR-friendly journals to ensure that you meet any additional requirements for whatever target journals you have in mind (e.g. concerning evidence strength, bias control, etc)

6. Submit your full Stage 1 manuscript by the due date. Because review is planned in advance, reviews & an interim recommendation can be expected in about a week

7. If, likely following revision, you gain in-principle acceptance (IPA), PCI RR will tell you which journals are eligible outlets & will auto-endorse the IPA decision. You can also ask us for a provisional steer prior to IPA. PCI RR makes this decision.

8. With IPA in hand, you now have an approved programme of multiple RRs accepted in advance which you can eventually choose to publish in any eligible PCI RR-friendly journal (or you can submit anywhere else as you see fit). Each Stage 2 RR can go in a different journal.

9. Do research and publish each Stage 2 output as you progress without further peer review, in journal of your choice

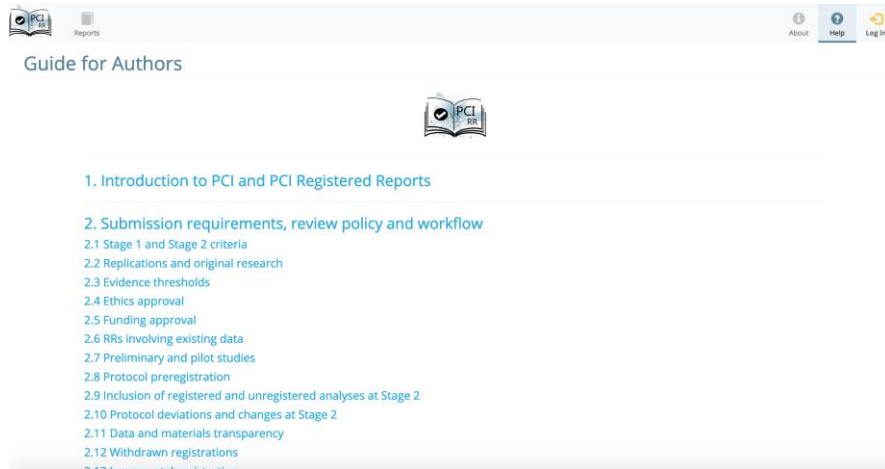


Free and transparent pre- and post-study recommendations across research fields

What are the benefits of PCI RR?	Regular non-RR article at a traditional journal	RR at a traditional journal	RR at PCI RR
Offers pre-study peer review	✗	✓	✓
Offers in-principle acceptance before results are known	✗	✓	✓
Offers programmatic RRs : one Stage 1 RR leading to multiple Stage 2 manuscripts	✗	✗	✓
Offers scheduled review to accelerate the Stage 1 review process	✗	✗	✓
Requires handling editor (or recommender) to have proven their knowledge of RRs by passing an entrance test, which serves as useful training of a rarely taught skill	✗	✗	✓
Peer review undertaken independently of any journal	✗	✗	✓
Author has the power to decide their destination journal (if any)	✗	Very rare	✓
No need for author to decide on destination journal until after Stage 2 acceptance by PCI RR	✗	Very rare	✓
Peer reviews for accepted manuscripts published online and free to read	✗	Very rare	✓
Free for authors and readers	Depends on journal	Very rare	✓

More information on PCI RR

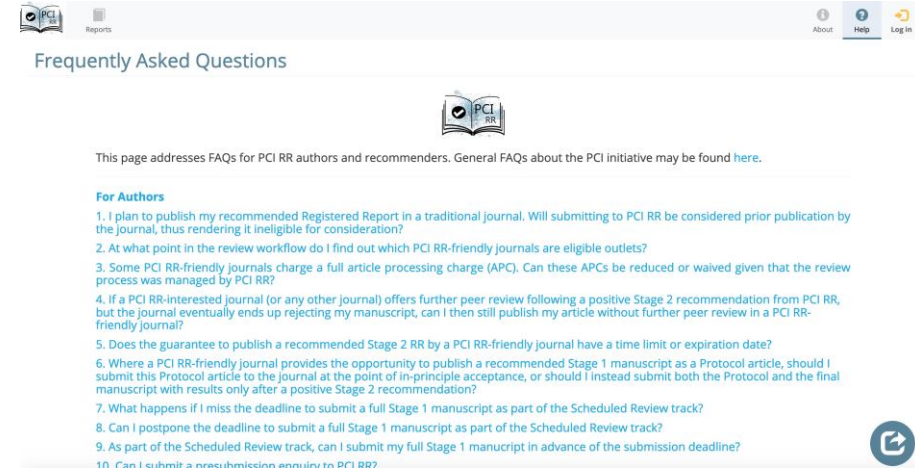
https://rr.peercommunityin.org/help/guide_for_authors



The screenshot shows the 'Guide for Authors' page on the PCI RR website. The page has a navigation bar with 'Reports', 'About', 'Help', and 'Log In' buttons. The main content area is titled 'Guide for Authors' and features a list of sections:

- 1. Introduction to PCI and PCI Registered Reports
- 2. Submission requirements, review policy and workflow
 - 2.1 Stage 1 and Stage 2 criteria
 - 2.2 Replications and original research
 - 2.3 Evidence thresholds
 - 2.4 Ethics approval
 - 2.5 Funding approval
 - 2.6 RRs involving existing data
 - 2.7 Preliminary and pilot studies
 - 2.8 Protocol preregistration
 - 2.9 Inclusion of registered and unregistered analyses at Stage 2
 - 2.10 Protocol deviations and changes at Stage 2
 - 2.11 Data and materials transparency
 - 2.12 Withdrawn registrations
 - 2.13 Incremental registration

<https://rr.peercommunityin.org/help/faq>

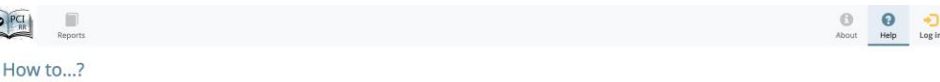


The screenshot shows the 'Frequently Asked Questions' page on the PCI RR website. The page has a navigation bar with 'Reports', 'About', 'Help', and 'Log In' buttons. The main content area is titled 'Frequently Asked Questions' and includes a paragraph: 'This page addresses FAQs for PCI RR authors and recommenders. General FAQs about the PCI initiative may be found [here](#).'

For Authors

1. I plan to publish my recommended Registered Report in a traditional journal. Will submitting to PCI RR be considered prior publication by the journal, thus rendering it ineligible for consideration?
2. At what point in the review workflow do I find out which PCI RR-friendly journals are eligible outlets?
3. Some PCI RR-friendly journals charge a full article processing charge (APC). Can these APCs be reduced or waived given that the review process was managed by PCI RR?
4. If a PCI RR-interested journal (or any other journal) offers further peer review following a positive Stage 2 recommendation from PCI RR, but the journal eventually ends up rejecting my manuscript, can I then still publish my article without further peer review in a PCI RR-friendly journal?
5. Does the guarantee to publish a recommended Stage 2 RR by a PCI RR-friendly journal have a time limit or expiration date?
6. Where a PCI RR-friendly journal provides the opportunity to publish a recommended Stage 1 manuscript as a Protocol article, should I submit this Protocol article to the journal at the point of in-principle acceptance, or should I instead submit both the Protocol and the final manuscript with results only after a positive Stage 2 recommendation?
7. What happens if I miss the deadline to submit a full Stage 1 manuscript as part of the Scheduled Review track?
8. Can I postpone the deadline to submit a full Stage 1 manuscript as part of the Scheduled Review track?
9. As part of the Scheduled Review track, can I submit my full Stage 1 manuscript in advance of the submission deadline?
10. Can I submit a presubmitting enquiry to PCI RR?

https://rr.peercommunityin.org/help/help_practical

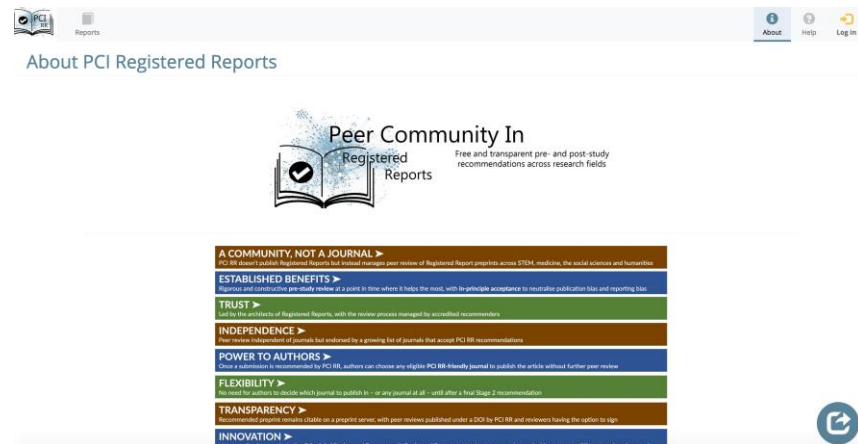


The screenshot shows the 'How to...?' page on the PCI RR website. The page has a navigation bar with 'Reports', 'About', 'Help', and 'Log In' buttons. The main content area is titled 'How to...?' and includes a section for authors:

For authors

- to prepare a report
- to submit a report
- to modify a submission before it has been validated by the managing board
- to cancel a submission
- to suggest (additional) recommenders
- to reply to the reviewers' and recommenders' comments and submit a new version of the report

<https://rr.peercommunityin.org/about/about>



The screenshot shows the 'About PCI Registered Reports' page on the PCI RR website. The page has a navigation bar with 'Reports', 'About', 'Help', and 'Log In' buttons. The main content area is titled 'About PCI Registered Reports' and features the PCI RR logo and a description: 'Free and transparent pre- and post-study recommendations across research fields.'

Peer Community In Registered Reports

- A COMMUNITY, NOT A JOURNAL** > PCI RR doesn't publish Registered Reports but instead manages peer review of Registered Report proposals across STEM, medicine, the social sciences and humanities.
- ESTABLISHED BENEFITS** > Increased and constructive pre-study review at a point in time where it helps the most, with long-term acceptance to neutralize publication bias and reporting bias.
- TRUST** > Led by the architects of Registered Reports, with the review process managed by accredited recommenders.
- INDEPENDENCE** > Editorial independence of journals but endorsed by a growing list of journals that accept PCI RR recommendations.
- POWER TO AUTHORS** > Once a submission is recommended by PCI RR, authors can choose any eligible PCI RR-friendly journal to publish the article without further peer review.
- FLEXIBILITY** > No need for authors to decide which journal to publish in - or any journal at all - until after a final Stage 2 recommendation.
- TRANSPARENCY** > Recommended journal decisions visible on a public server, with peer review published under a DOI by PCI RR and reviewers having the option to sign.
- INNOVATION** > Being the first to offer Scheduled Review and Preemptive Registered Reports to accelerate peer review and wider access to different modes of research.

These slides: <https://osf.io/3jtqr/>

For more info: chambersc1@cardiff.ac.uk