

Advances in peer review

Being a scientific writer: seminar at CHUV Lausanne, 14 January 2016

Dr Trish Groves Head of Research, The BMJ

Competing interests

I'm editor in chief of BMJ Open and Head of Research at the BMJ, a wholly owned subsidiary of the British Medical Association (BMA)

Part of the revenue for BMJ (the company) comes from drug & device manufacturers through advertising, reprint sales, & sponsorship. The BMJ and BMJ Open are open access journals that charge author fees for publication of research

I'm working on a strategy to see how BMJ might help to build health research capabilities in emerging economies. I'm editorial lead for the BMJ Research to Publication eLearning programme (by subscription)

My annual bonus scheme is based partly on the overall financial performance of both BMJ and The BMJ

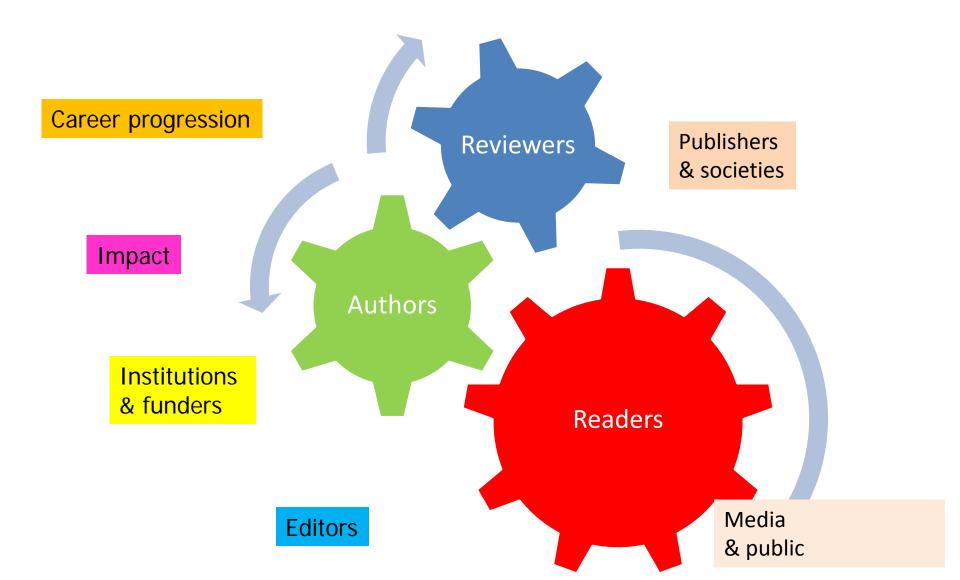


Key points for discussion

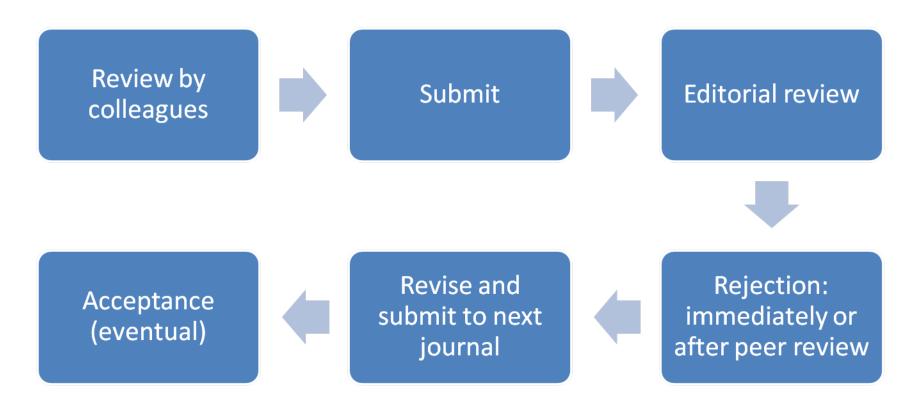
- how can we optimise the benefits of peer review?
- is peer review running out of steam?
- is transparency better than pragmatism?
 - what do open peer review and postpublication review add?
- what are the benefits of patient review?
- what is happening with data sharing?



What journals provide: peer review & scholarly publishing

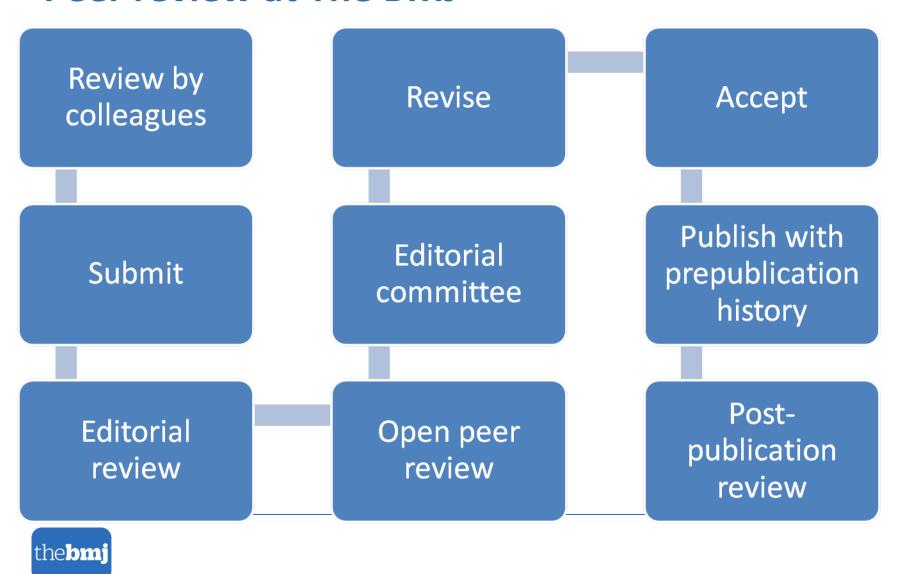


Typical peer review process (repeated)





Peer review at The BMJ



Journal families: making submission easier

Journals

Engaging, informative and influential journals for healthcare professionals and researchers

Our journals, blogs, podcasts and speciality portals

Journals from BMJ

Acupuncture in Medicine

Annals of the Rheumatic Diseases

Archives of Disease in Childhood

BMJ Case Reports

BMJ Innovations

BMJ Open

BMJ Open Diabetes Research & Care

BMJ Open Gastroenterology

BMJ Open Respiratory Research

BMJ Open Sport & Exercise Medicine

BMJ Quality & Safety

BMJ Quality Improvement Reports

BMJ Simulation & Technology Enhanced Learning

BMJ Supportive & Palliative Care

British Journal of Ophthalmology

British Journal of Sports Medicine

Drug and Therapeutics Bulletin

Education & Practice

Emergency Medicine Journal

End of Life Journal

European Journal of Hospital Pharmacy

Evidence-Based Mental Health

BMJ blogs

ADC Online

The BMJ

Richard Lehman's weekly review of journals

BMJ editors' at large

Junior doctors' blogs

BMJ Case Reports blog

BMJ Innovations blog

BMJ Open blog

British Journal of Sports Medicine Blogs

BMJ Supportive & Palliative Care blog

BMJ Web Development blog

Diabetes blog

Emergency Medicine Journal blog

European Journal of Hospital Pharmacy blo

Evidence-Based Medicine blog

Evidence-Based Mental Health Blog

Evidence-Based Nursing blog

Frontline Gastroenterology Blog

Heart JournalScan

Heart Asia blog

Injury Prevention blog

Journal of Family Planning blog

Injury Prevention

In Practice

Journal of Clinical Pathology

Journal of Epidemiology & Community Health

Journal of Family Planning & Reproductive Health

Journal of Medical Ethics

Journal of Medical Genetics

Journal of Neurology, Neurosurgery & Psychiatry

Journal of NeuroInterventional Surgery

Journal of the Royal Army Medical Corps

Lupus Science & Medicine

Medical Humanities

Molecular Pathology Archive

Occupational and Environmental Medicine

Paediatric and Perinatal Drug Therapy Archive

Postgraduate Medical Journal

Practical Neurology

RMD Open

Sexually Transmitted Infections

Student BMJ

The BMJ

Thorax

Veterinary Record

Veterinary Record Case Reports

Veterinary Record Open

Tobacco Control

Lupus Science and Medicine Blog

Medical Humanities

Open Heart Blog

Postgraduate Medical Journal blog

BMJ Quality Blog

Sexually Transmitted Infections blog

Tobacco Control blog

Thorax blog

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Vet Record latest news

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British Journal of Sports Medicine

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Heart

Injury Prevention

Journal of Epidemiology and Community Health

Journal of Family Planning & Reproductive Health

Care

Journal of Medical Ethics

Journal of Neurology, Neurosurgery & Psychiatry Journal of NeuroInterventional Surgery

Medical Humanities



How journals try to minimise bias in peer review: open review

Open review

- open (signed) review
- open (to all) review in real time
- open review with prepublication histories

For open and closed peer review

reviewers should declare competing interests



ORCID: Open Researcher and Contributor ID



DISTINGUISH YOURSELF IN THREE EASY STEPS

ORCID provides a persistent digital identifier that distinguishes you from ever researcher and, through integration in key research workflows such as manusubmission, supports automated linkages between you and your professional that your work is recognized. Find out more.



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Registration takes 30 seconds.



ADD YOUR

Enhance your ORCID record with your professional information and link to your other identifiers (such as Scopus or ResearcherID or LinkedIn).



ORCID ID

Include your ORCID identifier on your Wel when you submit publications, apply for grain any research workflow to ensure you get for your work.

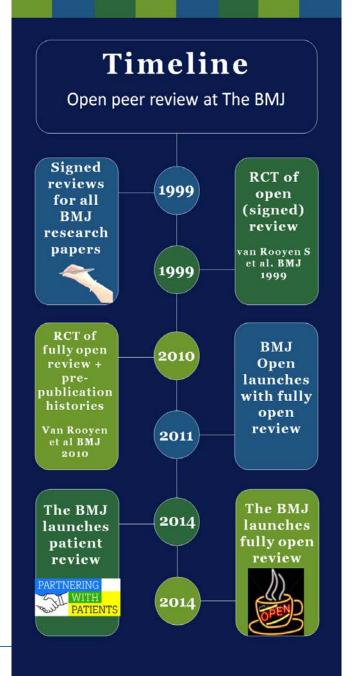
- many journals now ask authors and reviewers to supply ORCIDs
- http://orcid.org/ = online registry of free, unique identifiers for nearly 2 million individual academics
- ORCID links to other researcher ID schemes
- these identifiers can be linked to each researcher's output in order to:
 - enhance scientific discovery process
 - improve efficiency of research funding
 - aid collaboration



The BMJ

http://www.bmj.com/theBMJ publishes all research with open access and, now, with a detailed prepublication history.

This open peer review policy draws on evidence from two randomised controlled trials of open peer review, and on experience of mandatory open peer review for more than 3000 published papers at BMJ Open http://bmjopen.bmj.com/





Does open peer review improve research papers?



For 93 randomised controlled clinical trials published in BMC Medicine series journals in 2012 with pre-publication histories, reviewers requested relatively few changes.

Most changes requested by peer reviewers had a positive impact on the reporting of the final manuscript (n=27). Some changes requested by peer reviewers, however, had a negative impact, such as adding additional unplanned analyses (n=15).

This information is essential to enable readers to have a clear and transparent account of the peer review process. We would strongly recommend this model to other leading journals.



Hopewell S, Collins GS, Boutron I, Yu LM, Cook, Shanyinde M et al. Impact of peer review on reports of randomised trials published in open peer review journals: retrospective before and after study. *BMJ* 2014;349:g4145

How The BMJ is working with patients to publish relevant research

- •authors of research papers state if/how they involved patients in setting research question, outcome measures, design and implementation of study, and results dissemination
- patient review of papers
- patient partnership editor, patient editor



Patient peer review at The BMJ

"If you're a patient living with disease, a carer of a patient, a patient advocate acting on behalf of a patient group, or you play a leading part in advocating for patient participation and partnership in healthcare we'd like to invite you to take part in a unique initiative...

The BMJ has committed to improving the relevance and patient centredness of its research, education, analysis, and editorial articles by asking patients to comment on them."



Research

PAin SoluTions In the Emergency Setting (PASTIES)—patient controlled analgesia versus routine care in emergency department patients with non-traumatic abdominal pain: randomised trial

2015 ; 350 doi: http://dx.doi.org/10.1136/bmj.h3147 (Published 21 June 2015) Cite this as: 2015;350:h3147

Article	Related content	Metrics	Responses	Peer review	
Status		Comments		Date	
Original article submission		Access document		22 December	
Decision letter		Access document		30 March 201	
Author response		Access document		23 April 2015	

Open peer review with patient review



Reviewer(s)' Comments to Authors:

Reviewer: 1

Archive

Recommendation:

Comments:

Pain and its control is of the greatest importance to patients. As a sign of current or developing heath problems it is a key factor in prompting patients to seek medical attention. It is widely understood among the general population that good, effective tools (drugs, etc.) for the relief of many kinds of pain are available, so expectancy for relief is high. Optimising use of these tools clearly makes sense as part of good clinical care and to enhance patient comfort and satisfaction. The best patient care often results from patient and clinician working in partnership with professional staff relinquishing some of their authority to better meet the patient's perceived needs. Wherever possible, patients should be given the opportunity of choice in treatments, although for some patients (those who are gravely ill or uncomfortable in making decisions) this might inflict an additional burden and they would prefer to have their health managed entirely by experts.

This study, where participants are randomised to one arm where standard treatment is applied (TAU group) or to another which permits a measure of personal control in their own therapy (PCA group), in some ways reflects this no choice/choice scenario, albeit group allocation was imposed by the researchers. What is gratifying in the outcome is that where partial patient control was exercised, pain relief appears to have been superior and patient satisfaction higher. More analgesic was used by the PCA group which could be a downside. There are several possible reasons for the favourable reaction in the PCA patients which are not discussed but which may include a feeling of "ownership" in the intervention and of satisfaction that they had contributed personally to their treatment.

No overt statement in the text is made to the role, if any, of patient/public/carer input to the development, etc of the project, but perhaps this is made in the separate protocol paper (no. 22 in ref. list)?

David Britt

Additional Questions:

Please enter your name: David Britt

Job Title: Retired (Patient Reviewer)

Institution: N/A

Reimbursement for attending a symposium?: No

A fee for speaking?: No

Questions for patient peer reviewers at The BMJ

Does this issue matters to you, and/or other patients and carers? Any areas relevant to patients and carers missing or to highlight?

If the study was of an intervention or treatment, do you think it will really work in practice? What challenges might patients face? Are the outcomes and issues discussed in the article important to patients? Are there others that should have been considered?

Do you have any suggestions that might help the author(s) make their paper more useful for doctors to discuss with patients?



"I recently reviewed a paper for *The BMJ* and as a non-academic I was terrified of saying what I actually thought of it — I agonised over the words.... I wanted to be constructive, challenging, and polite, but the bottom line was that I felt that the authors of the paper were in an academic bubble and very divorced from what I experience, read, and talk about in real life.

A huge relief then to see the other reviewer felt the same way! It was a steep learning curve and a big leap to have faith in my own views and not be afraid to share these with the authors and *The BMJ*'s editorial team."



Questions to BMJ authors I

- •did you involve patients/service users/carers/lay people in the study design?
- did their priorities and experiences inform the development and/or selection of outcome measures?
- were they involved in developing plans for participant recruitment and study conduct? If so, how?



Questions to BMJ authors II

- have you planned to disseminate the results of the study to participants?
- are participants thanked in the paper?
- for articles reporting randomised controlled trials: did you assess the burden of the intervention on patients' quality of life and health? If so, what evaluation method did you use, and what did you find?



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Research Involvement and Engagement is an interdisciplinary, health and social care journal focussing on patient and wider involvement and engagement in research, at all stages. The journal is co-produced by all key stakeholders, including patients, academics, policy makers and service users.

Editors-in-Chief

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Mitchell D, Geissler J, Parry-Jones A, Keulen H, Schmitt DC, Vavassori R and Matharoo-Ball B

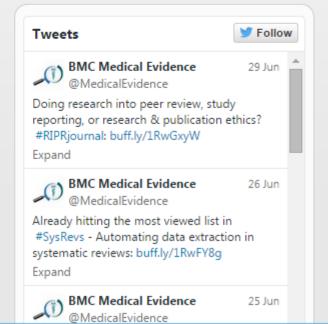
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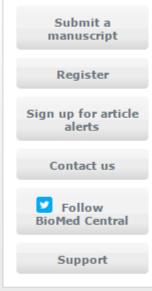
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Post publication peer review

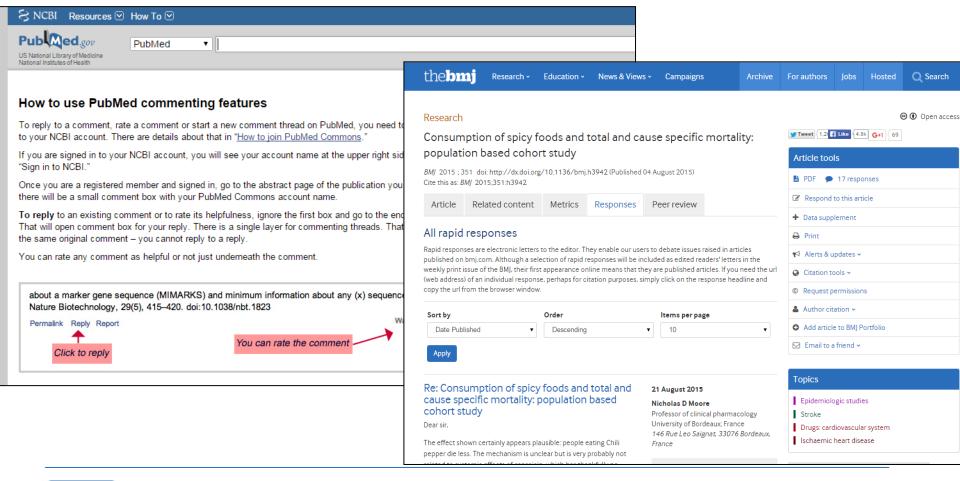
Authors should respond promptly to substantive queries and requests from the editors or readers after publication, particularly regarding the integrity of the published article

Concerns may be raised by editors or readers through:

- letters to the editor
- complaints to the editor, the publisher, or via the Committee on Publication Ethics (COPE)
- media or social media
- other forums eg PubMed Commons



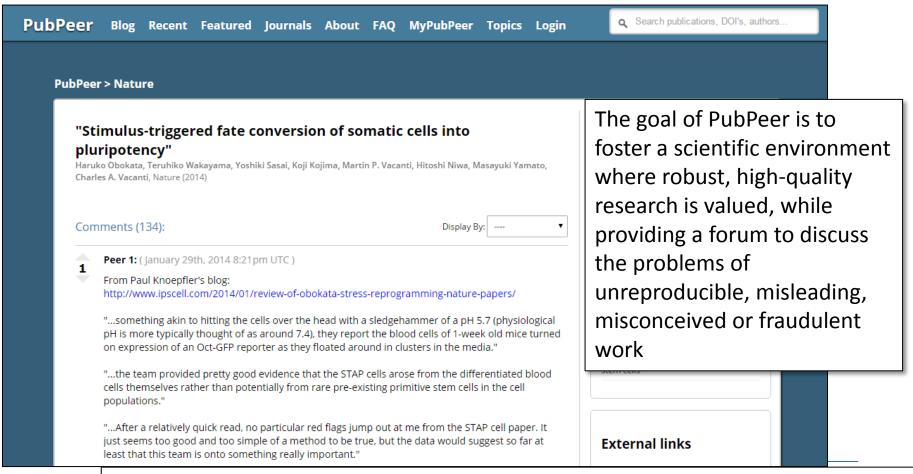
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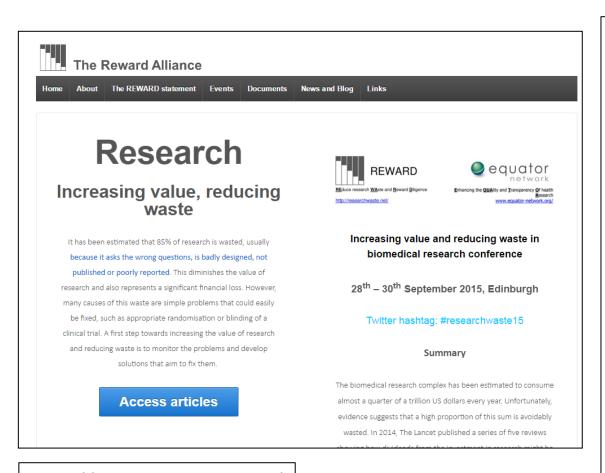
Postpublication review can uncover fraud





Anonymous comments at PubPeer on Nature STAP paper, very soon after publication https://pubpeer.com/publications/24476887

We need research that is less wasteful, more relevant



85% of the resources for biomedical research are wasted, costing more than \$100 billion a year, the REWARD Alliance estimates

Stages of waste in the production and reporting of research evidence relevant to clinicians and patients; from Chalmers and Glasziou, The Lancet 2009

http://researchwaste.net/about/

http://researchwaste.net/

Replication: desirable, but not always possible

- scientific evidence is strengthened when important findings
 are replicated by multiple independent investigators using
 independent data, analytical methods, laboratories, and instruments
- replication is standard in basic sciences
- it is critically important in epidemiological studies, particularly when they affect policy or regulatory decisions
- but the time and expense required for epidemiological studies means that many are often not fully replicable, so policy decisions must be made with the available evidence



Reproducibility: should always be possible

- reproducibility is an attainable minimum standard
- independent investigators subject the original data to their own analyses and interpretations
- reproducibility requires datasets and software to be available for:
 - verifying published findings
 - conducting alternative analyses of the same data
 - eliminating uninformed criticisms that do not stand up
 - expediting interchange of ideas among investigators



ICMJE: principles of data sharing; with full policy coming in 2016

- data can be understood and reanalyzed by others
- authors should share data on reasonable request
- all data that underpin the published results, incl. recent/current data on harms, should be shared
- de-identified individual patient data, data dictionary statistical plan & code used to analyze the data
- IRBs should ensure patient informed consent covers all this
- journals may investigate breaches, express concern, retract
- data users must commit to making results of their analyses public, report methods, credit source



The BMJ mandates data sharing on request

Applies to any paper reporting main endpoints of an RCT of one or more drugs or medical devices in current use.

2012: 31 main reports of RCTs published. None about devices; 6 about drugs. 1 industry sponsored. 2 with datasets available from corresponding authors on request.

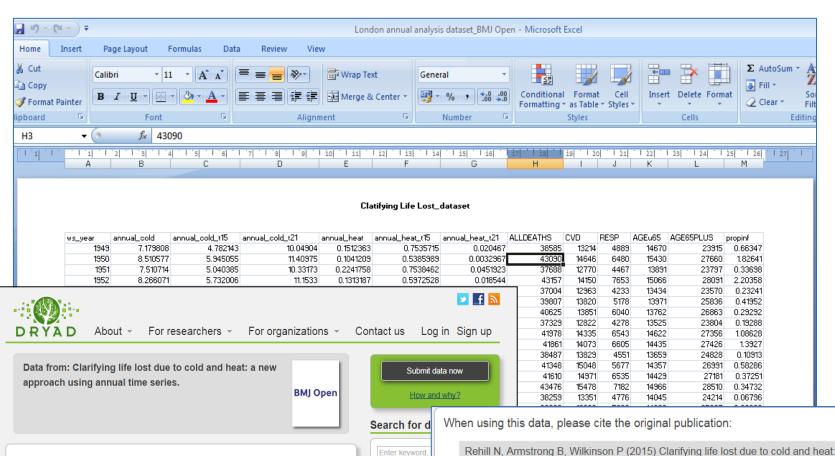
2013: Policy starts in January. 6 eligible trials published: all complied. None rejected because of policy.

2014: 5 eligible trials all complied.

July 2015: extended policy to all trials submitted to The BMJ



Godlee F, Groves T. BMJ 2012;345:e7888 Loder E, Groves T. BMJ 2015; 350:h23733



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Rehill N, Armstrong B, Wilkinson P (2015) Clarifying life lost due to cold and heat: a new approach using annual time series. BMJ Open 5(4): e005640. http://dx.doi.org/10.1136/bmjopen-2014-005640

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Rehill N, Armstrong B, Wilkinson P (2015) Data from: Clarifying life lost due to cold and heat: a new approach using annual time series. Dryad Digital Repository. http://dx.doi.org/10.5061/dryad.02k83

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About

This site

Access to the underlying (patient level) data that are collected in clinical trials provides opportunities to conduct further research that can help advance medical science or improve patient care. This helps ensure the data provided by research participants are used to maximum effect in the creation of knowledge and understanding.

Researchers can use this site to request access to anonymised patient level data and supporting documents from clinical studies to conduct further research.

Next steps

Study sponsors who have committed to use this site are **Bayer**, **Boehringer Ingelheim**, **GSK**, **Novartis**, **Roche**, **Sanofi** and **ViiV Healthcare**.

Other clinical trial sponsors and funders are invited to join with the aim of transitioning to a fully independent system which allows access to data from clinical trials conducted by multiple

How it works

Submission

Researchers can submit research proposals and request anonymised data from clinical studies listed on this site. Study sponsors will add more studies when the site is updated.

Information on sponsor's criteria for listing studies and other relevant sponsor specific information is provided in the Study sponsors section of this site.

Controlled access via a password protected website

After submission and approval of a proposal for secondary research

Keview

Research proposals are reviewed by an Independent Review Panel. The study sponsors are not involved in the decisions made by the panel.

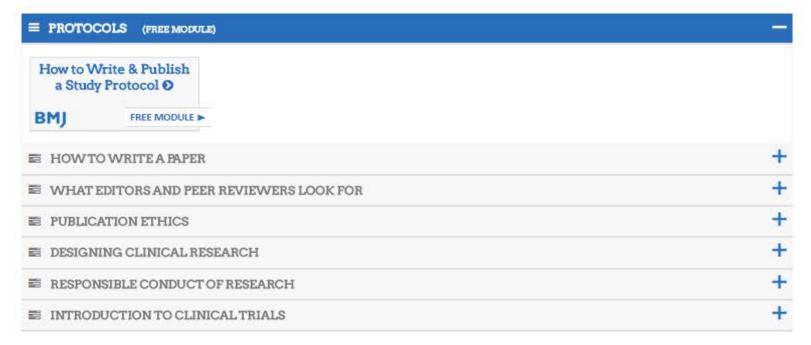
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Thank you

Dr Trish Groves, The BMJ

