What can journals do to reduce research waste? View from The BMJ

Increasing value and reducing waste in biomedical research
Edinburgh, September 2015

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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)

BMJ (the company) receives revenues from drug & device manufacturers through advertising, reprint sales, & sponsorship

I receive a bonus based partly on the financial performance of the BMJ. The BMJ is an open access journal that charges author fees for publication of research articles, as does BMJ Open

I’m currently working on a strategy to see how BMJ might help to build health research capabilities in emerging economies
Transparency policies to reduce selective reporting

For clinical trials:
• mandatory prospective registration + submission of protocols and CONSORT checklists + sharing of deidentified IPD on reasonable request
• RIAT

For all research articles:
• reporting checklists required
• open access, open peer review, patient review
• post publication peer review
• “negative” studies welcome
• transparency statement
BMJ transparency declaration

“The lead author* affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.”

* The manuscript’s guarantor.

Altman DG, Moher D. Declaration of transparency for each research article. BMJ 2013;347:f4796
The BMJ
http://www.bmj.com/theBMJ publishes all research with open access and with a detailed prepublication history

This open peer review policy draws on evidence from two RCTs 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/
Open peer review brings both credit and accountability to reviewers, who have to declare their competing interests openly and may have to defend their comments. Several new initiatives aim to make this explicit: eg Rubriq, Publons, ORCID (soon)
“They challenge medical researchers and funding agencies associated with unpublished or misreported trials to swiftly signal their intent to publish or correct these “abandoned” trials and then to act on this within a year. If no such intention is declared, or if a corrective paper has not been published within a year, they propose offering the opportunity to become “restorative authors” to other responsible researchers, who would restore the integrity of the reporting of the trials involved.”
Restoring Study 329: efficacy and harms of paroxetine and imipramine in treatment of major depression in adolescence

Joanna Le Noury,1 John M Nardo,2 David Healy,1 Jon Jureidini,3 Melissa Raven,3 Catalin Tufanaru,4 Elia Abi-Jaoude5

ABSTRACT
OBJECTIVES
To reanalyse Smith Kline Beecham’s Study 329 (published by Keller and colleagues in 2000), the primary objective of which was to compare the efficacy and safety of paroxetine and imipramine with placebo in the treatment of adolescents with unipolar major depression. The reanalysis is under the restoring invisible and abandoned trials (RIAT) initiative was done to see whether access to and reanalysis of a full dataset from a randomised controlled trial would have clinically relevant implications for evidence based medicine.

DESIGN
Double blind randomised placebo controlled trial.

SETTING

PARTICIPANTS
275 adolescents with major depression of at least eight weeks in duration. Exclusion criteria included a range of comorbid psychiatric and medical disorders and suicidality.

INTERVENTIONS
Participants were randomised to eight weeks double blind treatment with paroxetine (20-40 mg), imipramine (200-300 mg), or placebo.

MAIN OUTCOME MEASURES
The prespecified primary efficacy variables were change from baseline to the end of the eight week acute treatment phase in total Hamilton depression scale (HAM-D) score and the proportion of responders to a HAM-D score of 8 or a 50% reduction in baseline HAM-D) at acute endpoint. Prespecified secondary outcomes were changes from baseline to endpoint in depression items in the SADS-L, clinical global impression, autonomous functioning checklist, self-perception profile, and sickness impact scale; predictors of response; and number of patients who relapse during the maintenance phase. Adverse experiences were to be recorded with a brief adverse event checklist.

BMJ Open
The CEA Second-Look Trial: a randomised controlled trial of carcinoembryonic antigen prompted reoperation for recurrent colorectal cancer

Tom Treasure,1 Kathryn Monson,2 Francesca Fiorentino,3 Christopher Russell4

ABSTRACT
Objective: To identify patients who have undergone a potentially curative resection of colorectal cancer, does a “second-look” operation to resect recurrent disease prompted by monthly monitoring of carcinoembryonic antigen (CEA) improve survival? Design: A randomised controlled trial recruiting patients from 1982 to 1993 was conducted under the Restoring Invisible and Abandoned Trials (RIAT) initiative. Setting: 58 hospitals in the UK. Participants: From 1982 to 1993, 1474 patients were enrolled. Of these 216 met the criteria for carcinoembryonic antigen (CEA) elevation and were randomised to “Aggressive” or “Conventional” arms. Interventions: “Second-look” surgery with intent to remove any recurrence discovered. Primary outcome measure: Survival. Results: By February 1993, 91/108 patients had died in the Aggressive group compared to 92/108 in the Conventional group.

Strengths and limitations of this study
- The carcinoembryonic antigen (CEA) Second-Look Trial was a well-planned and carefully executed study with a clear question and a well-defined outcome of interest.
- Second-look surgery prompted by the best available indicator of recurrence at the time conferred no survival advantage.
- A further strength, and a reason to publish this trial now, is that it shows that randomised trials in surgery can be carried out and that the result may be contrary to the beliefs and expectations of practitioners based on their uncontrolled observations.
- A limitation is that present day means of non-invasive detection of asymptomatic recurrence were not available at the time of the CEA Second-Look Trial. A recently reported randomised controlled trial (RACS) in which regular...
Education to reduce research waste and build research capabilities

The BMJ's Research Methods and Reporting section publishes "how to" articles, with many on reducing research waste *

BMJ Research to Publication elearning programme (300hrs, aimed at integration into curricula) launches in early 2016, to help early career researchers to plan, conduct, and publish more relevant, less wasteful, more transparent research

* meta-research and “journalalology” studies too
Courses & Modules

- How to Write & Publish a Study Protocol
- BMJ

- How to Write a Paper
- What Editors and Peer Reviewers Look For
- Publication Ethics
- Designing Clinical Research
- Responsible Conduct of Research
- Introduction to Clinical Trials

Free Module

http://http://rtop.bmj.com/
The importance of research protocols

Written by: Trish Groves

1. Your department has had a strategy meeting where it decided it would start a prospective cohort study, in which patients with type II diabetes will be followed up over one year and have, every two months, digital photography of their retinas. This is specifically for the purposes of the study and these patients would not normally be examined so frequently. You have been asked to write the research protocol.

Which is the most important reason for creating a research protocol?

a. Having a protocol will make it easier to get funding for the study
b. Making the protocol available to staff who will recruit patients into the study will make patient enrolment quicker
c. The protocol could be published
d. Writing a protocol is an ethical requirement
e. You will benefit from the academic exercise of writing a protocol

The ethical requirement to have a protocol

Learn more about how international standards on research ethics require a protocol for any human study.

International standards on research ethics require a protocol for any human study

WMA Declaration of Helsinki 2013 requires that:

- the design and performance of each research study involving human subjects must be clearly described and justified in a research protocol
- the protocol should state the ethical considerations involved
- the protocol should include information regarding funding, sponsors, institutional affiliations, potential conflicts of interest, incentives for subjects and information regarding provisions for treating and/or compensating subjects who are harmed as a consequence of participation in the research study

Further study

Below we have presented a copy of clause 22 from the World Medical Association’s Declaration of Helsinki. Read through this to understand why a protocol should describe and justify research involving human subjects.

You may also wish to read the full Declaration, last updated in 2013. [2]
Advocacy and campaigning

• The BMJ co-founded COPE and AllTrials and provides editorial support/staff to a wide range of groups, including EQUATOR and Open Trials

• editors from The BMJ have contributed to many reporting statements eg CONSORT 2010, SPIRIT 2013

• investigative journalism
AllTrials: rapid success

Since January 2013:

• 86292 people have signed the AllTrials petition
• 620 organisations have joined
• swayed vote on EU Clinical Trials Regulation
• helped make trial registration an ethics requirement in UK
• helped reverse proposed EMA restrictions on data sharing
• helped amend Canadian C-17 law on posting trial results
• convinced many pharma companies to share data
• audited pharma companies’ transparency policies and actions
• built campaign across Europe and launched in U.S.

All Trials Registered | All Results Reported
Thank you

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