



**Committee on
Publication Ethics**



Publication ethics

Author: Liz Wager; presented at the UKAEA/Euratom Fusion Association, Oxfordshire, UK, December 2006

www.publicationethics.org.uk

Ethical issues in science publishing

- (Research misconduct)
- **Publication misconduct**
unethical behaviour by authors, reviewers or editors relating to the publication of research



Outline of today's talk

- **Transparency**
- **Responsible publication practices**
- **Redundant (duplicate) publication**
- **Ownership of data / ideas**
- **Reviewer & editor misconduct**
- **COPE**



Ethic

- ***“(noun) the moral system or set of principles particular to a certain person, community or group, etc.”***
 - *Chambers 21st Century Dictionary*
- ***Who might be hurt by this action?***



The players

- **Researchers / authors**
- **Reviewers**
- **Journal editors**



Who (or what) could get hurt?

- **Other researchers / authors**
....but perhaps more importantly
 - **Patients**
 - **The environment**



Transparency

- **Who did the work?**
- **Who funded the work?**
- **Anything else we ought to know?**



Enhancing transparency

- **List individuals' contributions (avoid gift and ghost authors)**
- **Include funding details (& role of funder in publication)**
- **Declare competing interests**



Contributor list

- ***“S&T were involved with study design and data interpretation, U performed statistical analysis, V&W collected data, T prepared the first draft, & all authors reviewed the final version”***



Conflict of interest

- **Exists when an author, reviewer or editor has financial or personal relationships that inappropriately influence (bias) his / her actions**
- **Also known as dual commitments, competing interests, competing loyalties**



Competing interests

- **Financial**
 - e.g. share ownership / employment
- **Personal**
 - e.g. partners, relations involved
(should you review a paper by your ex-wife?)
- **Other**
 - e.g. religious, political, ethnic
(what do readers need to know?)



Responsible publication

- **Has all or part of this study been published before?**
- **Have all the outcomes been reported?**
- **Are *post hoc* analyses identified?**



Publication bias

Over-published (redundancy)	Under-published (non-publication)
Statistically significant findings	Statistically non-significant findings
Results that favour sponsor's product	Negative results



Why does this matter?

- **Publication bias distorts the literature**
- **Evidence-based medicine relies on meta-analyses and systematic reviews**
- **Findings of meta-analyses can be skewed by duplicate data**



Tramèr *et al.* 1997

- **Impact of covert duplicate publication on meta-analysis: a case study**
 - **Ondansetron: number needed to treat (NNT*)**

Skewed result with duplicate data (3 trials included twice)	4.9
True result (excluding duplicates)	6.4

*A lower NNT indicates greater efficacy



Melander *et al.* 2003

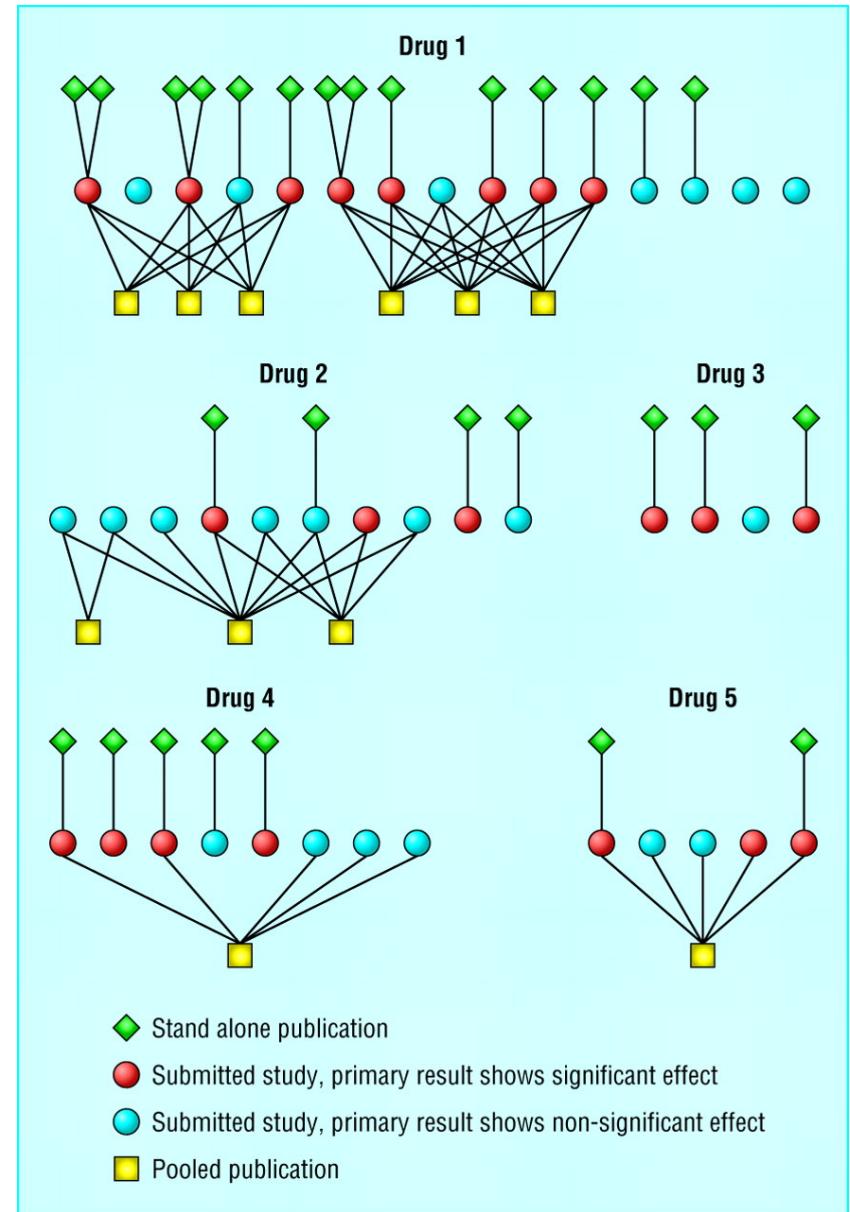
- **Evidence b(i)ased medicine – selective reporting from studies sponsored by pharmaceutical industry**
 - Review of studies in new drug applications



Publication pattern for studies of the five selective serotonin reuptake inhibitors approved in Sweden between 1989 and 1994 for treating major depression

bmj.com

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Committee on Publication Ethics

Melander *et al.* 2003

***“The pooled analyses of published data generally gave larger differences in response rate than did the estimates from all submitted studies....
The overestimates are due to selective reporting”***



Conclusion

- **Over- (redundant) publication or under- (selective / non) publication can give rise to misleading conclusions from meta-analyses**
- **These could lead to inaccurate recommendations and thus harm patients**
- **This type of misconduct is not easy to detect by peer review**



Reducing publication bias

- **Trial registration**
 - Now a requirement for ICMJE journals
- **Trial identifiers (e.g. ISRCTN)**



Trial registration

- **ICMJE member journals will require registration in a public trials registry**
- **Trials must register at or before onset of patient enrolment (i.e. prospectively)**
- **Policy applies to any trial starting enrolment after 1 July 2005 (other trials to be registered by 13 Sept 2005)**
 - *ICMJE statement Sept 2004*



ICMJE Members

- *Annals of Internal Medicine*
- *BMJ*
- *CMAJ (Canadian Medical Association Journal)*
- *Croatian Medical Journal*
- *Journal of the American Medical Association*
- *Journal of the Danish Medical Association*
- *The Lancet*
- *Medical Journal of Australia*
- *Nederlands Tijdschrift voor Geneeskunde*
- *New England Journal of Medicine*
- *New Zealand Journal of Medicine*
- *Norwegian Medical Journal*



Trial registers

- www.clinicaltrials.gov
- ISRCTN scheme (www.controlled-trials.org)
- WHO platform (UTRN)
- www.studyresults.org (PhRMA)



Avoiding selective reporting

- Publish results of all studies
- Include all outcomes / assessments
- Distinguish primary (planned) from secondary (post hoc) analyses
- Use ‘intention to treat’ & ‘last observation carried forward’ techniques
- Publish the protocol



Plagiarism

- ***“to copy (ideas, passages of text, etc) from someone else's work and use them as if they were one's own”***
 - *Chambers 21st Century Dictionary*
- ***“ranges from unreferenced use of others’ published and unpublished ideas ... to submission under ‘new’ authorship of a complete paper”***
 - *COPE guidelines*



Editorial responsibilities

- **Declare competing interests**
- **Ensure that reviewer is qualified (a peer)**
- **Inform the editor who actually did the review (e.g. if passed onto a colleague)**
- **Treat material in confidence**
- **Take steps to avoid biased review**
- **Deliver courteous and timely reviews**



Reviewer misconduct

- Cistron submit DNA sequence for interleukin-1 (IL-1) to *Nature*
- Paper reviewed by Gillis (Immunex): **reject**
- Sequence published in PNAS (corrected)
- Cistron and Immunex file patents for IL-1
- Immunex patent contains 7 errors from original (rejected) *Nature* paper
- Cistron sues Immunex (\$21m settlement)



Editor misconduct

- **Sir Cyril Burt, Editor *Br J Stat Psychol***
 - published 63 articles under his own name
 - altered authors' texts without permission, often misrepresenting their intention and adding favourable references to himself
 - wrote a letter under an assumed name to the editor (himself) and a reply under another name in order to belittle the work of a rival

– *Rennie 1999*



COPE

- **Founded 1997**
- **Provides ‘sounding board’ for editors**
- **Reviews anonymised cases**
- **Produces annual report**
- **www.publicationethics.org.uk**



COPE membership

- About 300 journals / publishers including:
- Big names (*Lancet, BMJ*)
- Overseas journals (*Aust J Physio, Brazil J Urol, Chinese J Dig Dis*)
- *Mutagenesis, Occup & Environ Med*



COPE resources

- **Guidelines for editors**
- **Code of Conduct for editors**
- **Flowcharts (published November 06)**
- **Annual reports**
- **Website (search individual cases)**



COPE flowcharts

- **Redundancy**
- **Plagiarism**
- **Fabricated data**
- **Changes in authorship**
- **Undisclosed conflict of interest**
- **Concerns about research ethics**
- **Complaints against editors**



Conclusions

- **Publication misconduct can cause serious harm**
- **Authors, reviewers and editors have ethical responsibilities**
- **Institutions can help by training / policies**





*“The things that will destroy us are:
politics without principle
pleasure without conscience
wealth without work
knowledge without character
business without morality
science without humanity
and worship without sacrifice”*

– Mahatma Gandhi

