

Authorship: rights and responsibilities

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Bernard Burnand - Disclosure

- Salaried by Lausanne University Hospital
- Affiliated with Lausanne University
- Member of scientific and professional associations
- Partner of Cochrane
- Author / co-author of publications

Itinerary

- Introduction - Authorship
- Who is an author?
- Responsibilities
 - Researcher
 - Author
- Publications guidelines

Why authorship is important

Authorship implications in medical research

- Acknowledgement of competence and contributions
- Academic career
- Financial implications
 - Position
 - Grants
- Social recognition

(www.icmje.org - adapted)

Authors: who contributes?

Sometimes the declared authors

- have not participated in the design of the study
- had no access to the raw data
- had little to do with the interpretation of the data
- instead the sponsors of the study (a pharmaceutical company, a government department) have designed the study and analysed and interpreted the data
- the declared authors might not have ultimate control over whether their studies are published
- the decision to publish (or not) may rest with the funders of the research, which could mean that results unfavourable to the funders are suppressed

Smith R, Editor, BMJ (ICMJE editors) BMJ 2001;323:588



Requesting authorship after publication

CASE NUMBER:

15-17

CASE TEXT (ANONYMISED)

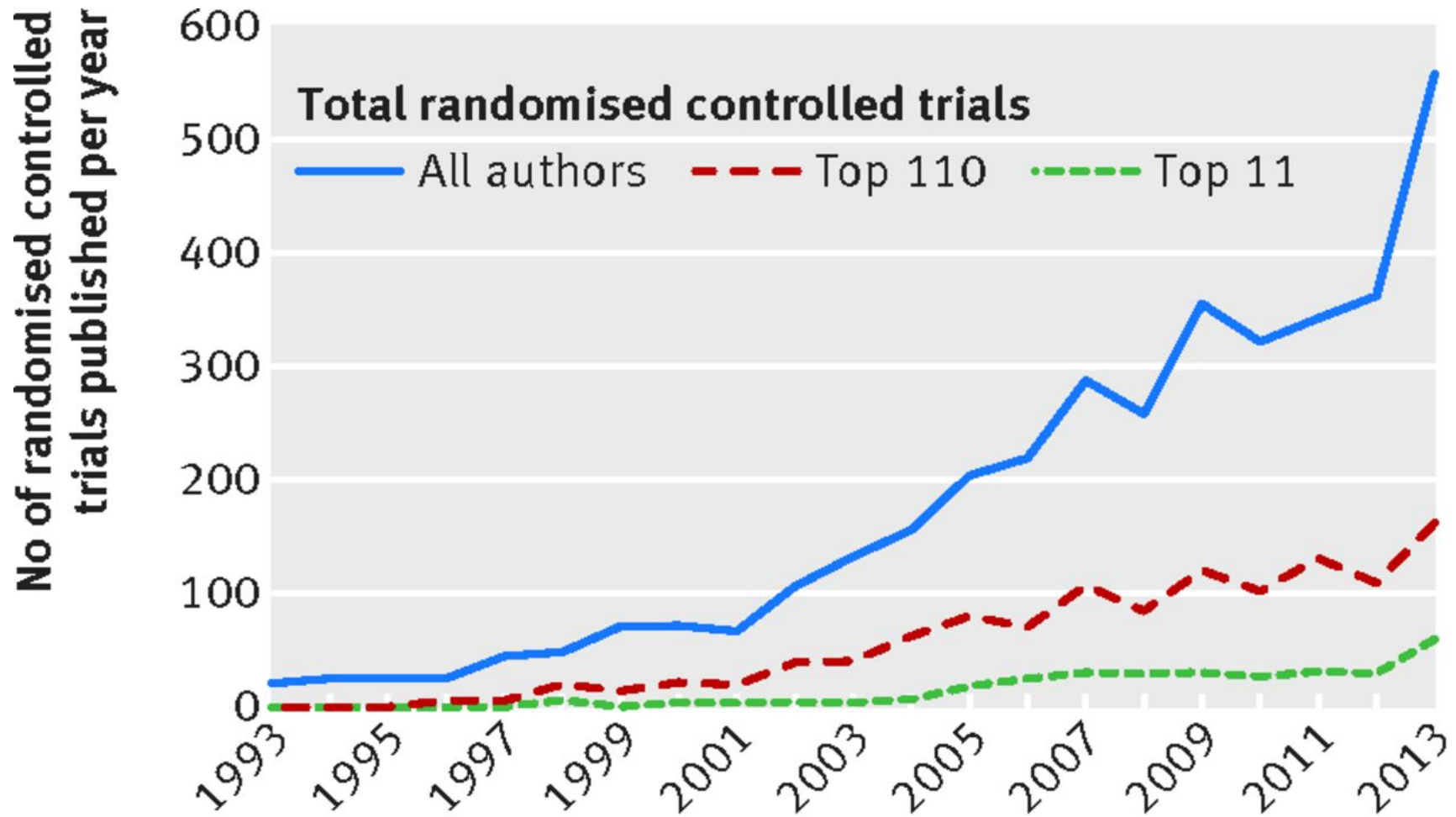
Our journal was contacted by an individual, Dr H, who had recently seen a published article and was surprised that he was not listed as an author because it utilised samples from a database that he established. (The article was published online in November 2014 and in print in February 2015.) He stated that the cohort has spawned many projects, but he was not involved in the “specialist area” in this article. However, he believes he should have been listed as an author because the article would not have been possible without his database.

We told him that the journal conforms strictly to ICMJE’s policy on authorship and asked him for more information on his contributions. Although it appears that he fulfils the first criteria because of his involvement in the original cohort/database, he did not fulfil the other three criteria.

At this point we contacted the corresponding author of the article for more information. The corresponding author said that Dr H contributed substantially to the development of the cohort, but was not involved in the design, evaluation or preparation of the data, and recommended publishing a correction with Dr H listed in a simple acknowledgment (not as an author).

Dr H was not satisfied with this solution, continuing to believe that he should be listed as an author. At this point we

Increase glucose lowering treatments RCT publications over time and prolific authors



Holleman F et al. BMJ 2015;351:bmj.h2638

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Increase glucose lowering treatments RCT publications over time and prolific authors

- 3782 articles from 13 592 authors
- Top 110 authors : 1127 articles (32.4%)
- Top 10 authors : 397 articles (10.5%)
- 48 / 110 authors employed by pharmaceutical companies
- Most (91%) of RCT commercially sponsored

Holleman F et al. BMJ 2015;351:bmj.h2638

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Prolific author / Productive Researcher

Peter Higgs, 2013 Nobel Laureate (Physics) *described himself as an “embarrassment“* to his Edinburgh University department because he published so little:

“Today, I wouldn’t get an academic job.
It’s as simple as that. I don’t think I would be regarded as productive enough.”

The Guardian, 06.12.2013 (Lancet, 2014)

Inflation in number of authors

- Single author publications in NEJM
 - 1928 : 78%
 - 1968 : 3%
 - (Diamond D. NEJM 1969;280:1484)

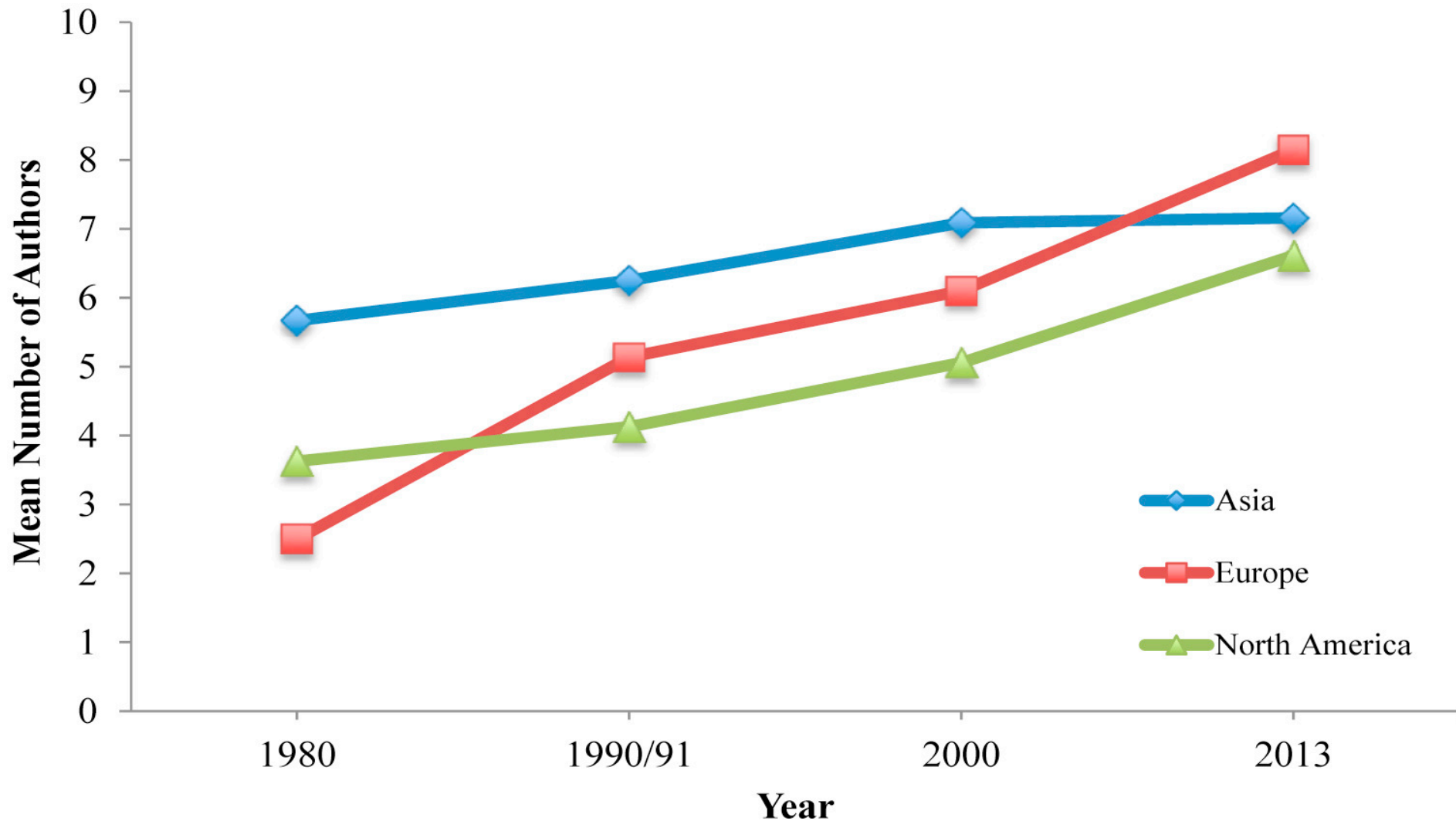
Trends in Authorship Patterns in High-Impact Radiology Publications, 1980–2013

Kapoor N et al. Acad Radiol 2015;22:1587

- Study type, country, author number
- Journals:
Radiology, Am J Roentgen, Eur Radiol
1980, 1990, 2000, 2013
- 682 articles
(572 original research, 110 reviews)
- Overall number of authors per article:
3.6 (1980) – 7.3 (2013) – original research

Trends in Authorship Patterns in High-Impact Radiology Publications, 1980–2013

Kapoor N et al. Acad Radiol 2015;22:1587



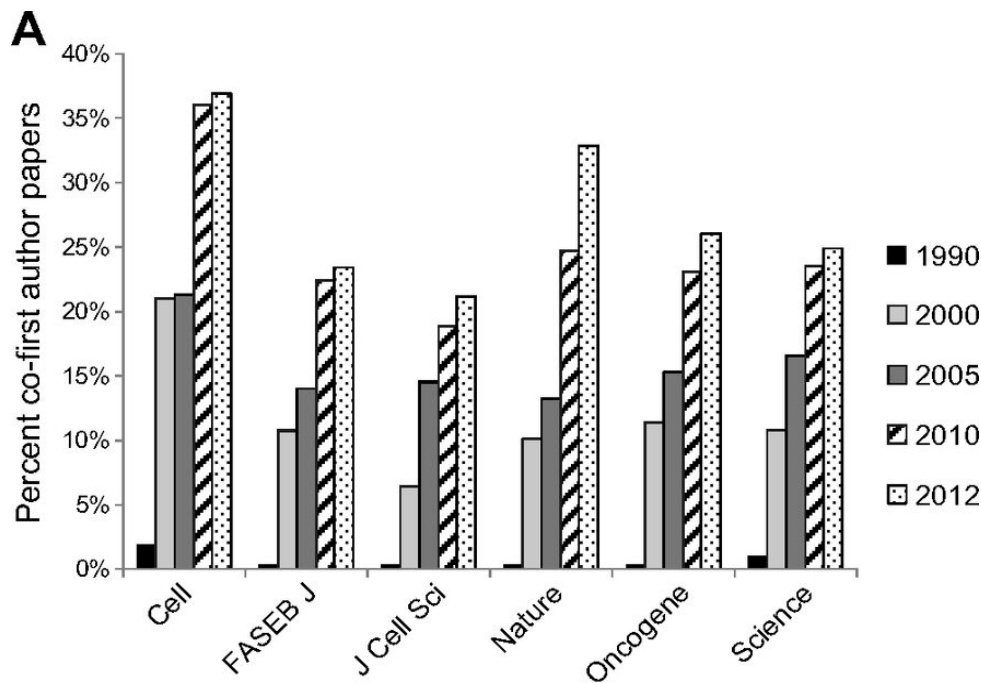
Inflation in number of authors

- **Increased complexity in research**
- VS**
- **Increased pressure to publish**
 - To examine if year of publication is an independent determinant of author number, considering type of design, topic, study size, geographical location, significance of results
 - Random samples of
 - 633 RCT from 7 large Cochrane reviews
 - 313 non RCT studies from 6 large published meta-analyses
 - 310 single case reports from PubMed

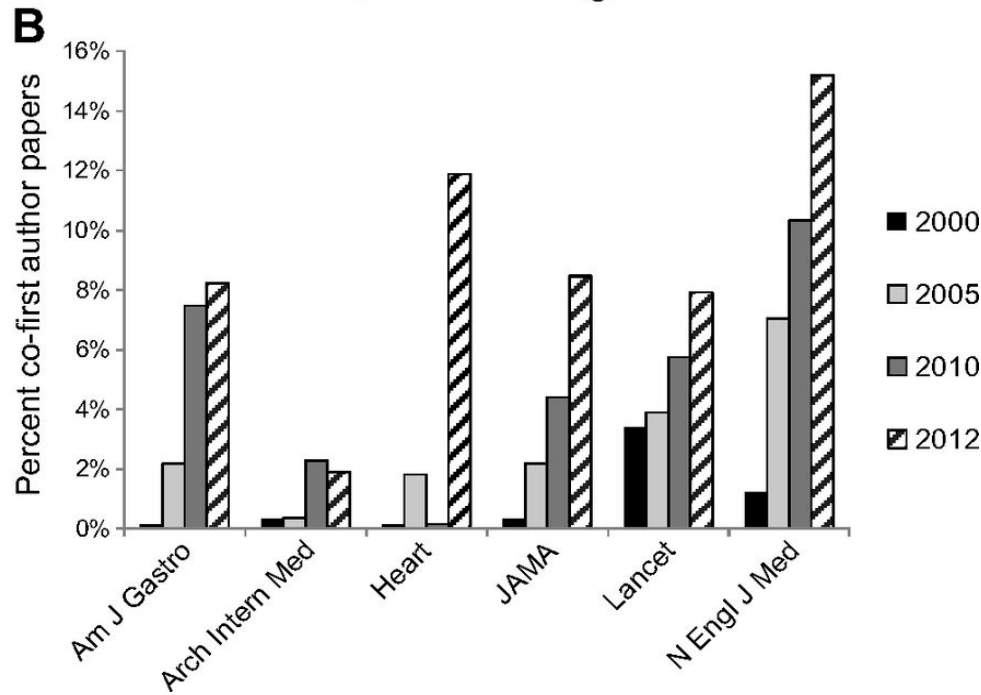
Inflation in number of authors

Determinants of the number of authors were:

- topic
- journal impact factor
- multinational authorship
- geographic location
- for RCT - article length and sample size
- for case reports
 - only geographic location and article length
- After adjusting for topic and other determinants, the **number of authors increased by 0.8 per decade** (P<0.001)



Increased co-first authorships in manuscripts in (A) biomedical journals and (B) clinical journals



Marisa L. Conte et al.
FASEB J 2013;27:3902

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Who is an author?

Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals

Updated December 2015

The ICMJE is a small working group of general medical journal editors whose participants meet annually and fund their own work on the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals

<http://icmje.org>

The screenshot shows the ICMJE website homepage. At the top, the ICMJE logo is displayed as "INTERNATIONAL COMMITTEE of MEDICAL JOURNAL EDITORS". To the right is a search bar with the text "Enter search terms" and a "SEARCH" button. Below the logo is a navigation bar with five tabs: "Recommendations", "Conflicts of Interest", "Journals", "About ICMJE", and "News & Editorials". The "Journals" tab is selected, with the subtext "Following the ICMJE Recommendations".

Two featured content boxes are visible:

- Recommendations:** Titled "Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals*", it includes sub-sections "1. About the Recommendations" and "A. Preparing a Manuscript for Submission to a Journal". Below this box are "BROWSE" and "DOWNLOAD" buttons.
- Conflicts of Interest:** Titled "ICMJE Form for Disclosure of Potential Conflicts of Interest", it includes the ICMJE logo and the text "ICMJE Form for Disclosure of Potential Conflicts of Interest". Below this box is an "ACCESS THE FORM" button.

Text below the boxes reads: "Read the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals." and "Use the ICMJE Form for Disclosure of Potential Conflicts of Interest to generate a disclosure statement for your manuscript."

ICMJE authorship recommendations

- 1) Substantial contributions to
 - a) conception or design, **or**
 - b) acquisition, analysis or interpretation of data; **AND**
- 2) Drafting the article, **or** revising it critically for important intellectual content; **AND**
- 3) Final approval of the version to be published; **AND**
- 4) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

ICMJE authorship recommendations

Authors should :

- 1) be accountable for own contributions
- 2) be able to identify which co-authors are responsible for specific other parts of the work
- 3) be confident in the integrity in the contributions of their co-authors
- 4) have participated sufficiently in the work to take public responsibility for the work

ICMJE authorship recommendations

- Acquisition of funding, collection of data, writing, technical, or language editing, providing and caring for study patients, or general supervision of the research group, alone, does not justify authorship
- All persons designated as authors should qualify for authorship, and all those who qualify should be listed
- Research partners who do not meet all four criteria should be acknowledged
- Investigator-s are responsible for identifying who is an author / potential author

Contributorship

- **Contributors** are listed with details of who did what in planning, conducting, and reporting the work
- One or more of these contributors are listed as guarantors of the paper
 - The **guarantor** accepts full responsibility for the work and/or the conduct of the study, and the accuracy of the data analysis, had access to the data, and controlled the decision to publish

<http://www.bmj.com> authorship – contributorship

Contributorship - Example

Research Maternal use of oral contraceptives and risk of birth defects in Denmark: prospective, nationwide cohort study

- *BMJ 2016;352:h6712*
- Brittany M Charlton, instructor
- Ditte Mølgaard-Nielsen, researcher
- Henrik Svanström, statistician
- Jan Wohlfahrt, chief statistician
- Björn Pasternak, research fellow
- Mads Melbye, professor

Contributorship - Example

Contributors :

- BMC and MM were responsible for study concept and design
- BMC and HS analysed the data
- BMC wrote the manuscript while **all authors** critically reviewed the manuscript and approved the final version
- All authors also had full access to all of the data (including statistical reports and tables) in the study and can take responsibility for the integrity of the data and the accuracy of the data analysis
- BMC acts as guarantor of the study

Contributorship - Example

Competing interests:

- All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declare:
- support from the Harvard T H Chan School of Public Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development, and
- The National Cancer Institute for the submitted work;
- No financial relationships with any organisations that might have an interest in the submitted work in the previous three years;
- No other relationships or activities that could appear to have influenced the submitted work.

Order of authorship

- No universal rules
- Variations across countries, institutions, disciplines, number of authors
- First author
 - Investigator in charge of conducting the study and the analyses
 - Investigator who has written the manuscript
- Last author
 - Principal investigator, guarantor, senior author

Order of authorship

THE AUTHOR LIST: GIVING CREDIT WHERE CREDIT IS DUE

The first author
Senior grad student on the project. Made the figures.

The third author
First year student who actually did the experiments, performed the analysis and wrote the whole paper. Thinks being third author is "fair".

The second-to-last author
Ambitious assistant professor or post-doc who instigated the paper.

Michaels, C., Lee, E. F., Sap, P. S., Nichols, S. T., Oliveira, L., Smith, B. S.

The second author
Grad student in the lab that has nothing to do with this project, but was included because he/she hung around the group meetings (usually for the food).

The middle authors
Author names nobody really reads. Reserved for undergrads and technical staff.

The last author
The head honcho. Hasn't even read the paper but, hey, he got the funding, and his famous name will get the paper accepted.

Authors: collective / group name

- ICMJE
 - Group name
 - Names of authors / collaborators
 - KAPUT / KAPUT writing group
 - A Juste, B Arn Eyse, GR Uyer
for/on behalf of KAPUT
- Journal's recommendations

Honorary & ghost authorship

- Confidential inquiry to corresponding authors of articles published in 2008 in 6 majors journals
- Online questionnaire, 30 questions
- 2297 research, review & editorial articles
- Random stratified sample: 896
- Overall response rate : 70.3% (630)

Wislar JS et al. BMJ 2011;343:d6128

Prevalence of honorary & ghost authorship in 2008 in research articles of 6 journals

Journal	Honorary authors	Ghost authors
Ann Intern Med	23.1	7.7
JAMA	24.1	14.3
Lancet	16.7	13.3
Nature Med	40.7	3.8
NEJM	24.1	15.0
PLoS Med	32.0	10.7
Total - % (95% CI)	25.0 (19.7-31.1) (n=220)	11.9 (8.3-16.9) (n=226)

Wislar JS et al. BMJ 2011;343:d6128

Prevalence of honorary & ghost authorship in 2008 in research articles of 6 journals

Honorary or ghost authorship

- 2008: 21.0% (95%CI 18.0 – 24.3%)
- 1996: 29.2% (95%CI 26.1 – 32.4%)
- $P=0.0004$ – χ^2

Wislar JS et al. BMJ 2011;343:d6128

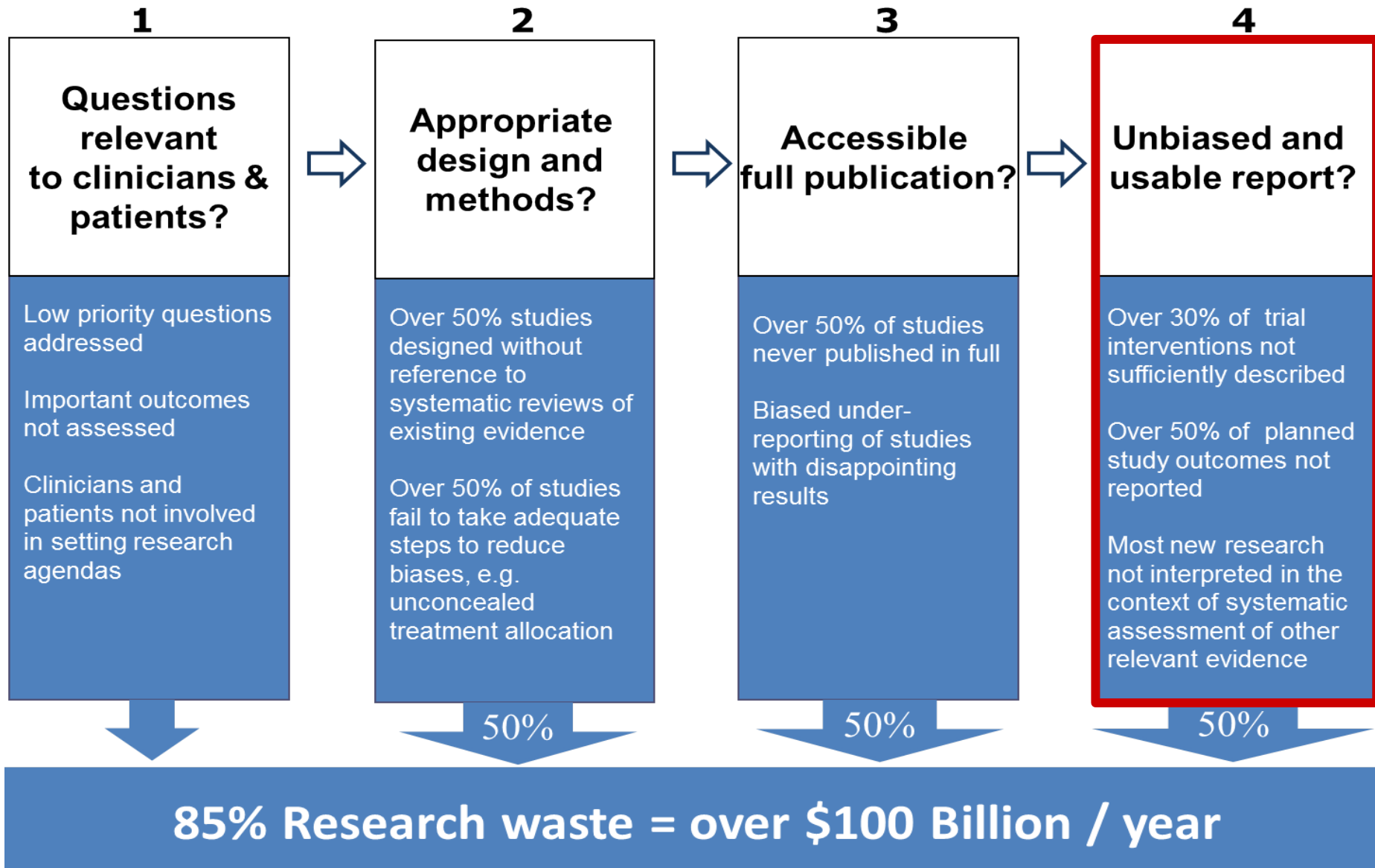
Elements of publications ethics

- **Redundant publication**
 - Two or more close papers, without full cross reference
- **Plagiarism**
 - From the unreferenced use of others' published and unpublished ideas, including research grant applications
 - Occurs at any stage of planning, research, writing, or publication

Responsibilities as a research author

- Proper training for research
- Research question / priority topic
- Rationale of the study / systematic review
- Methods: design, analytic plan, preparation
- Trial registration, detailed protocol
- Rigorous study conduct and analysis
- Reporting results: writing skills, full and detailed reporting (guidelines), data availability

Waste at four stages of research



Reporting of study methods (1): interventions

- Assessed descriptions of treatments in 80 published articles: 55 randomised trials & 25 systematic reviews published in *Evidence-Based Medicine*
- In 41 articles essential elements of interventions were missing
- Only 3 / 25 systematic reviews provided intervention description sufficient for implementation

Glasziou P BMJ 2008

Reporting of study methods (2): trial methodology

- 519 randomised trials published in Dec 2000 & indexed in PubMed
- **Failure** to report key aspects of trial conduct:
 - 73% Sample size calculation
 - 55% Defined primary outcome(s)
 - 60% Whether blinded or not
 - 79% Method of random sequence generation
 - 82% Method of allocation concealment

Chan & Altman Lancet 2005

Reporting of other study types

- Most evidence on reporting problems is from randomised trials
- But similar concerns apply to other types of studies:
 - Observational studies (e.g. case-control / cohort / cross-sectional studies)
 - Diagnostic accuracy studies
 - Prognostic studies
 - Qualitative studies
 - Systematic reviews
 - etc.

What are reporting guidelines ?

- Established by international collaborative groups incl. researchers and editors
- RG specify a minimum set of items required for a clear and transparent account of **what was done** and **what was found** in a study
- Usually checklist, flow diagram, explicit text
- They focus on issues that might introduce bias into health research
- Should be based on evidence if available.
If not, consensus opinion.

Key aspects of reporting guidelines

- **Guidance** - not requirements
 - Some journals enforce adherence of RGs, most only recommend their use
- Helpful for authors, editors, reviewers and readers
- **Not about methodological quality**
- Adherence to RGs does not guarantee a high-quality study but more transparency about study conduct

Reporting guidelines initiatives

1996	CONSORT	RCTs (revised 2001 & 2010)
2000	MOOSE	Meta-analyses of obs. studies
2003	STARD	Diagnostic studies
2004	TREND	Non-randomised studies
2007	STROBE	Case-control / Cross-sectional / Cohort studies
2007	COREQ	Qualitative studies
2008	SQUIRE	Quality improvement studies
2009	PRISMA	Syst. reviews & meta-analyses (replacing QUOROM)
2013	SPIRIT	Protocols of RCTs

See: EQUATOR Library for Health Research Reporting

Table 1 | CONSORT 2010 checklist of information to include when reporting a randomised trial*

Section/Topic	Item No	Checklist item
Title and abstract		
	1a	Identification as a randomised trial in the title
	1b	Structured summary of trial design, methods, results, and conclusions (for specific guidance see CONSORT for abstracts ^{45,65})
Introduction		
Background and objectives	2a	Scientific background and explanation of rationale
	2b	Specific objectives or hypotheses
Methods		
Trial design	3a	Description of trial design (such as parallel, factorial) including allocation ratio
	3b	Important changes to methods after trial commencement (such as eligibility criteria), with reasons
Participants	4a	Eligibility criteria for participants
	4b	Settings and locations where the data were collected
Interventions	5	The interventions for each group with sufficient details to allow replication, including how and when they were actually administered
Outcomes	6a	Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed
	6b	Any changes to trial outcomes after the trial commenced, with reasons
Sample size	7a	How sample size was determined
	7b	When applicable, explanation of any interim analyses and stopping guidelines
Randomisation:		
Sequence generation	8a	Method used to generate the random allocation sequence
	8b	Type of randomisation; details of any restriction (such as blocking and block size)
Allocation concealment mechanism	9	Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps taken to conceal the sequence until interventions were assigned
Implementation	10	Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions
Blinding	11a	If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how
	11b	If relevant, description of the similarity of interventions

CONSORT flow diagram

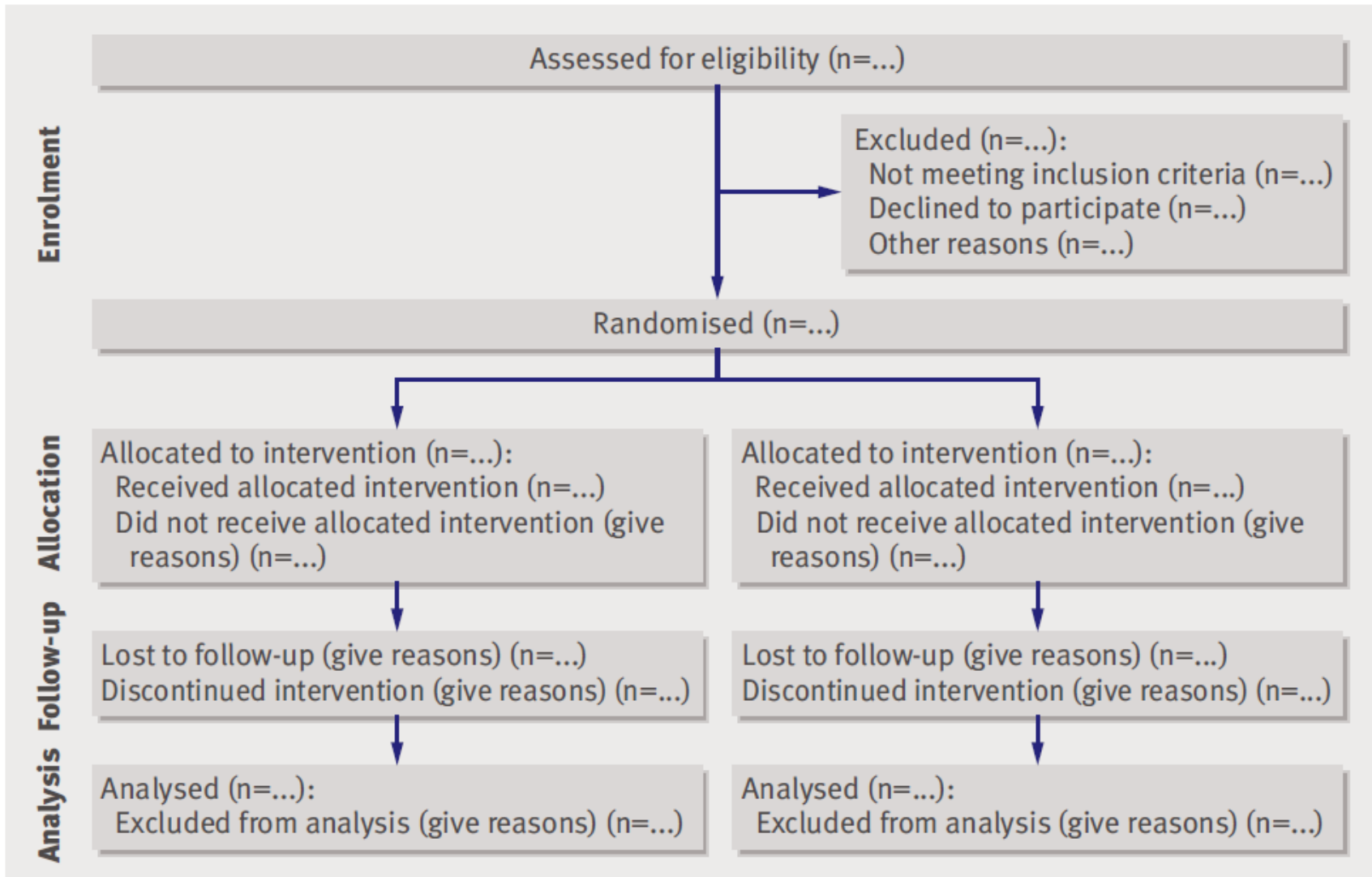


Fig 1 | Flow diagram of the progress through the phases of a parallel randomised trial of two groups (that is, enrolment, intervention allocation, follow-up, and data analysis)⁵²⁻⁵⁴

STROBE Statement

www.strobe-statement.org

- “Strengthening the Reporting of Observational Studies in Epidemiology”
- Set of 22 essential items that are essential for reporting of
 - **cohort studies,**
 - **case-control studies**
 - **cross-sectional studies**
- Published in 2007 in several journals
- Comprehensive explanatory paper with examples of good reporting

Knowledge generation cycle



EQUATOR

- **EQUATOR Network**

- international initiative
- to enhance reliability and value of medical research literature
- promoting transparent and accurate reporting of research studies
- comprehensive lists of the available reporting guidelines

www.equator-network.org

Summary

« a proper research author »

- Appropriate research skills and practice
- Communication and early discussion about authorship in research team
- Writing skills, reporting guidelines
- Authorship recommendations (ICMJE)
- Detailed list of contributions
- Declared potential conflicts of interest
- **Appropriate and balanced institutions' incentives for publication**

References

- Committee on Publication Ethics (COPE), « Code of conduct », and other resources (<http://publicationethics.org>)
- International Committee of Medical Journal Editors, « Ethical Considerations ». (<http://www.icmje.org>)
- Farthing MJG, « Ethics of Publication », in *How to Write a Paper*, BMJ Books, 2008
- www.equator-network.org

References

- Albert T. Winning the publications game
Radcliffe Med Press. Abingdon; 2000 2nd ed ISBN 1
85775 471 9
- Albert T. a-z of medical writing. BMJ books, London.
2000 ISBN 0-7279-1487-1
- Hall GM. How to write a paper. 4th edition (BMJ book
– Blackwell publication, 2009)
- Vandenbroucke JP. J Clin Epi 2009 (Editorial)
- « Writing Tips Series » Kotz D & Cals JWL,
J Clin Epi 2013-14

Merci – Thank you

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