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2017



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Promoting Excellence in Health Services Research

How to make clinical research more useful

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TRIAL FORGE

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The scandal of poor medical research



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The scandal of poor medical research

BMJ 1994 ; 308 doi: <https://doi.org/10.1136/bmj.308.6924.283> (Published 29 January 1994)

Cite this as: BMJ 1994;308:283

Linked Opinion

Richard Smith: Medical research—still a scandal

Article

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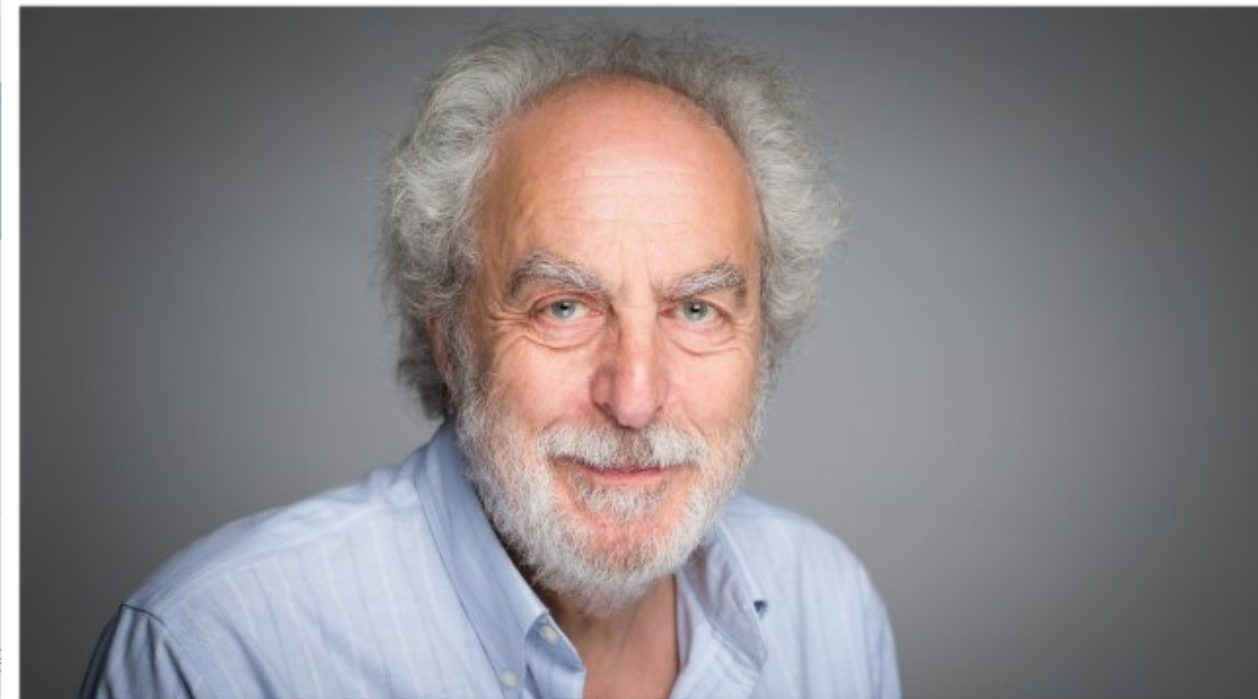
D G Altman

We need less research, better research, and research done for the right reasons

What should we think about a doctor who uses the wrong treatment, either wilfully or through ignorance? What if the doctor uses the right treatment wrongly (such as by giving the wrong dose of a drug)? Most people would agree that such behaviour was unprofessional, arguably unethical, and certainly unacceptable.

What, then, should we think about researchers who use the wrong techniques (either wilfully or in ignorance), use the right techniques wrongly, misinterpret their results, report their results selectively, cite the literature selectively, and draw unjustified conclusions? We should be appalled. Yet numerous studies of the medical literature, in both general and specialist journals, have shown that all of the above phenomena are common.^{1 2 3 4 5 6 7} This is surely a scandal.

When I tell friends outside medicine that many papers published in medical journals are misleading because of



Doug Altman

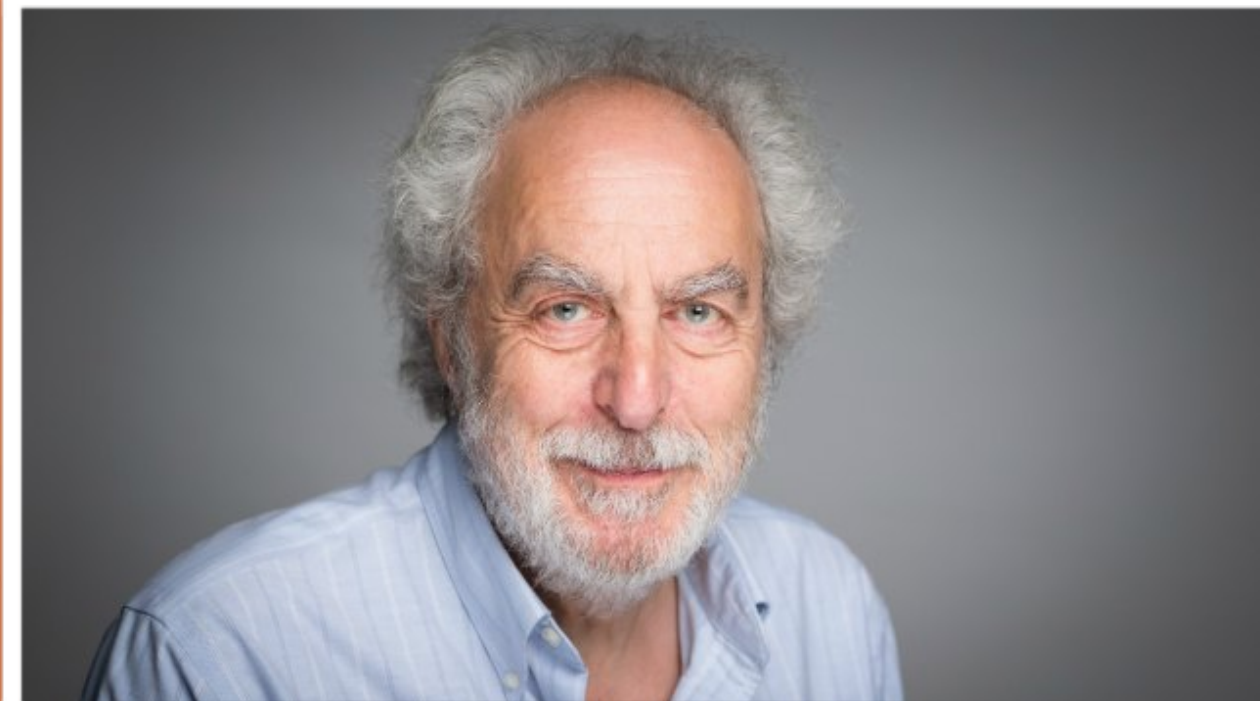
Do better research, not more



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WE NEED LESS RESEARCH,
BETTER RESEARCH,
AND RESEARCH DONE
FOR THE RIGHT REASONS.

— DOUG ALTMAN



Doug Altman

Cochrane– reviewing bodies of research



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The screenshot shows the Cochrane website with a purple navigation bar at the top containing links: 'Our evidence', 'About us', 'Get involved', 'News and events', and 'Cochrane Library' with a play button icon. Below the navigation bar is a large banner for 'International Clinical Trials' Day 2017' featuring a blue-tinted image of a hand holding a petri dish. To the right of the banner is a section titled 'What is Cochrane evidence and how can it help you?' followed by a 'Latest Cochrane evidence' section with a 'Top 10' tab. This section lists several evidence updates, including 'Feeding support in hospitalised adults at risk of undernourishment' and 'Antiepileptic drugs for the treatment of infants with severe myoclonic epilepsy'. Below the banner is a 'Latest News and Events' section with a grid of news items, each with a title, date, and a small image. The items include 'The Cochrane Library - iPad edition', 'Join Cochrane Crowd and contribute to health evidence', 'Cochrane launches Cochrane Sweden', 'Defining Cochrane's success', and 'Branched-chain amino acids improve symptoms of hepatic encephalopathy'. The bottom right of the page shows the beginning of another evidence update: 'Topical non-steroidal anti-inflammatory drugs (NSAIDs) for the treatment of pain in traumatic'.

cochrane.org

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International Clinical Trials' Day 2017
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What is Cochrane evidence and how can it help you?

Latest Cochrane evidence Top 10

Feeding support in hospitalised adults at risk of undernourishment
Published: 19 May 2017

Antiepileptic drugs for the treatment of infants with severe myoclonic epilepsy
Updated: 18 May 2017

Branched-chain amino acids improve symptoms of hepatic encephalopathy
Updated: 18 May 2017

Drugs to help reduce anxiety in people nearing the end of life due to illness
Updated: 18 May 2017

Micronutrient supplements for non-pregnant adults with HIV infection
Updated: 18 May 2017

Topical non-steroidal anti-inflammatory drugs (NSAIDs) for the treatment of pain in traumatic

Latest News and Events

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16 May 2017
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Defining Cochrane's success
15 May 2017
Cochrane news

Rapid point of care test for detecting urogenital *Chlamydia trachomatis* infection in nonpregnant women and men at reproductive age

Carlos F. Grillo-Ardila, Marcela Torres, Hernando G Gaitán

29 January 2020

Studies pretty
good (19)**Hormone replacement therapy after surgery for epithelial ovarian cancer**

Nungrutai Saeaib, Krantarat Peeyananjarassri, Tippawan Liabsuetrakul, Rakchai Buhachat, Eva Myriokefalitaki

28 January 2020

Studies bad (3)

Pharmacological, psychological, and non-invasive brain stimulation interventions for treating depression after stroke

Sabine Allida, Katherine Laura Cox, Cheng-Fang Hsieh, Helen Lang, Allan House, Maree L Hackett

28 January 2020

Studies bad (49)

Electrical stimulation for treating pressure ulcers

Mohit Arora, Lisa A Harvey, Joanne V Glinsky, Lianne Nier, Lucija Lavrencic, Annette Kifley, Ian D Cameron

22 January 2020

Studies pretty
bad (20)**Interventions for chronic palmoplantar pustulosis**

Grace Obeid, Giao Do, Lisa Kirby, Carolyn Hughes, Emilie Sbidian, Laurence Le Cleach

20 January 2020

Studies pretty
bad (37)

The billion dollar question–



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Why is so much health research bad?

Doug Altman's 1994 answer..



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‘Put simply, much poor research arises because researchers feel compelled for career reasons to carry out research that they are ill equipped to perform, and nobody stops them.’

Ok, what should we start doing?



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1. Know what's a priority



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- Has a formal priority setting process been completed?
- Have guideline groups highlighted gaps?
- Funders can commission work and say exactly what they want. The UK's National Institute for Health Research (NIHR) does this often.

Knowing front-line priorities



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James
Lind
Alliance

Priority Setting Partnerships

These influence UK funding decisions.

Knowing front-line priorities



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Research areas of interest

Research may involve any aspect of the promotion of good oral and dental health and the improvement of the prevention, detection and treatment of diseases and disorders of the teeth, gums, oral cavity or jaw across the whole life course. Both primary and secondary research are welcome.

The NIHR is particularly interested in applications that address the research needs identified by

- The [James Lind Alliance](#) (JLA) Oral and Dental Health Priority Setting Partnership
- The National Institute for Health and Care Excellence ([NICE](#)) Oral and Dental Health guidance, and
- [Public Health England](#)

Special consideration may be given to individuals and populations at increased risk of poor oral and dental health, including, but not limited to, children, older people, people living in care homes or other institutions (including prisons), people with disabilities or special needs, and to other economically or socially disadvantaged or vulnerable populations and communities.

2. Know what's been done already HSRU

- We all need high quality systematic reviews.
- Funders should require them to be part of the rationale behind research proposals. Some big UK funders do this.

2. Know what's been done already HSRU

Table 1 – Funding agencies used in the survey and samples of data from the project (further details available in S5 and S6)					
Funding agency	Country	Are patients and the public involved?	New research requires systematic reviews of existing evidence?	Public access to full protocols for completed or ongoing research?	Funding to undertake “research on research”?
National Institute for Health Research (NIHR)	UK				
Medical Research Council (MRC)	UK				
National Health and Medical Research Council (NHMRC)	Australia				
Canadian Institutes of Health Research (CIHR)	Canada				
National Institutes of Health (NIH)	USA				
Deutsche Forschungsgemeinschaft (German Research Foundation) (DFG)	Germany				
French Ministry of Health (S-11)	France				

3. Design for your users



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-
- Who am I designing my research for & what do they need?
 - What have you done to make sure the intended users of your results don't have to dismiss your work as irrelevant?

Not designing for users..



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BMJ 2014;349:g5219 doi: 10.1136/bmj.g5219

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RESEARCH

Ability of a meta-analysis to prevent redundant research: systematic review of studies on pain from propofol injection

 OPEN ACCESS

Céline Habre *research fellow*¹, Martin R Tramèr *professor in anaesthesia*^{2,3}, Daniel M Pöpping *anaesthetist*⁴, Nadia Elia *public health epidemiologist*^{2,5}

¹Department of Radiology, Geneva University Hospitals, 4 rue Gabrielle-Perret-Gentil, CH-1211 Geneva 14, Switzerland; ²Division of Anaesthesiology, Geneva University Hospitals, Geneva, Switzerland; ³Faculty of Medicine, University of Geneva, Geneva, Switzerland; ⁴Department of Anaesthesiology and Intensive Care, University Hospital Münster, Münster, Germany; ⁵Institute of Global Health, Faculty of Medicine, University of Geneva, Geneva, Switzerland

Number of
clinically
irrelevant trials:

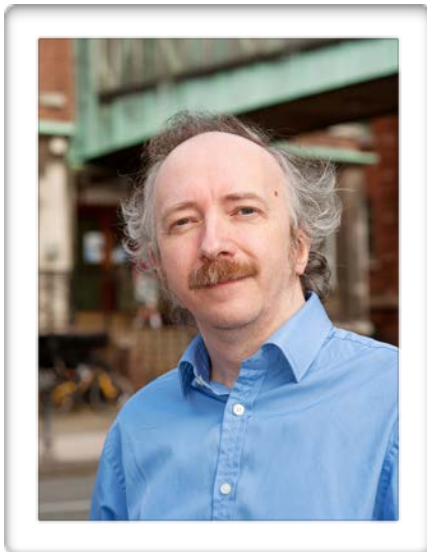
87 of 136 (64%)

4. Think about process



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How do we know that the way we propose to do something is the most effective way of doing it?



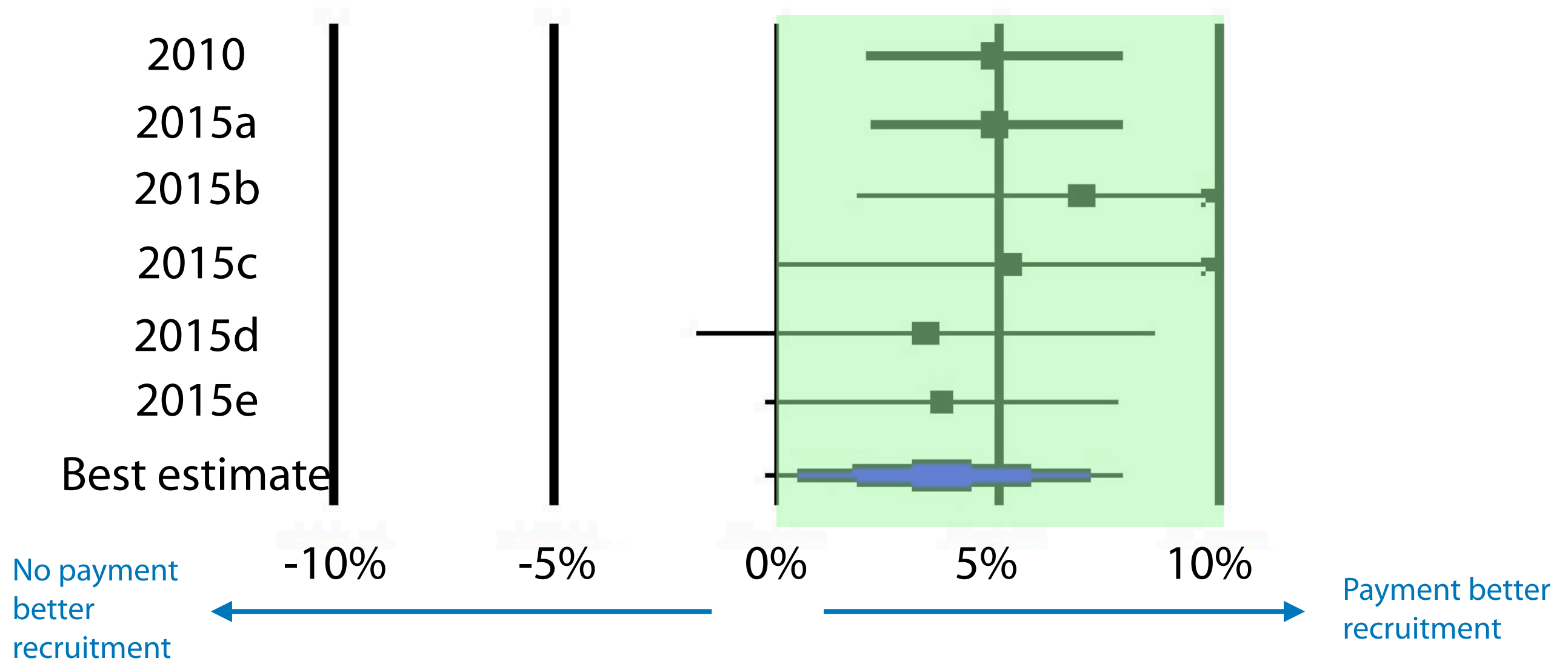
Mike Clarke,
Belfast, UK

Studies Within
A Trial (SWATs)

For example, a SWAT of financial incentives for recruitment



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GRADE

LOW

MODERATE

HIGH

5. Research is a team exercise



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-
- We are all experts on something. Few are experts on everything.
 - Patients with a condition are experts in that condition. Your research design needs their help.
 - Find a statistician. Love him or her.

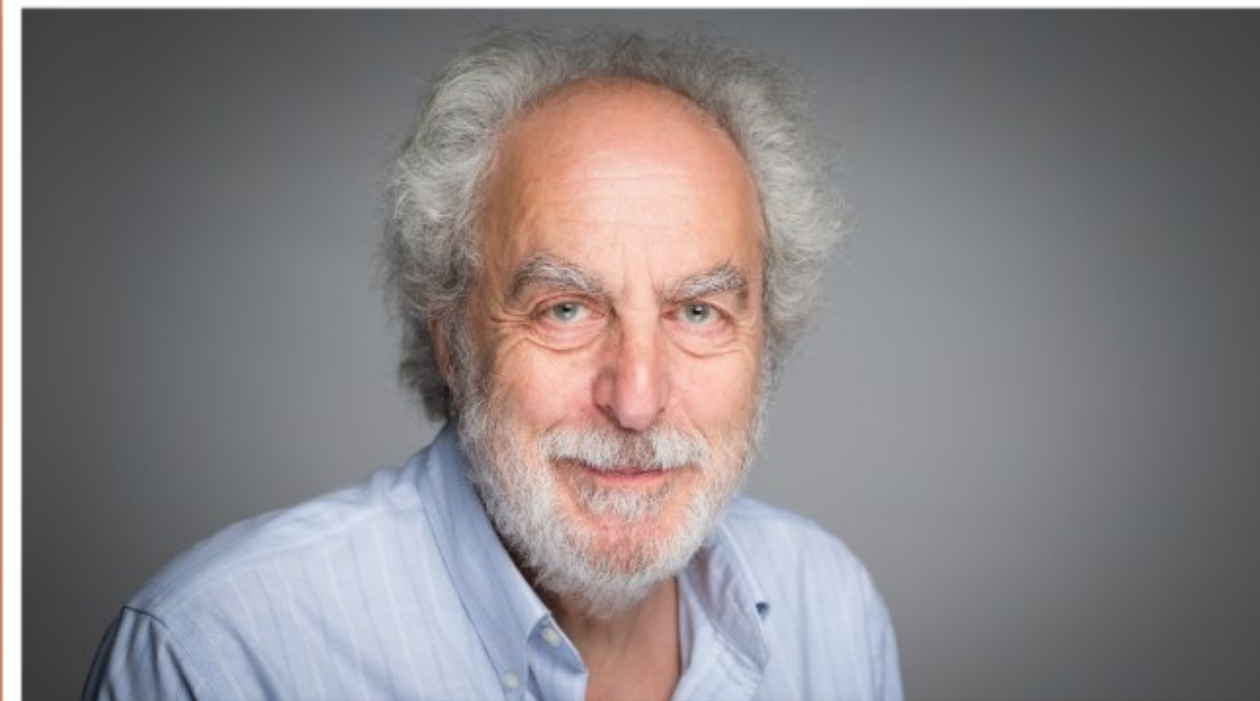
Summary—do better research, not more



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BETTER RESEARCH,
AND RESEARCH DONE
FOR THE RIGHT REASONS.

— DOUG ALTMAN



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TRIAL FORGE

www.trialforge.org

If you have any further questions please contact:

Shaun Treweek, HSRU, University of Aberdeen, UK

Email: streweek@mac.com

Twitter: [@shauntreweek](https://twitter.com/shauntreweek); [@Trial_Forge](https://twitter.com/Trial_Forge)

