REWARD
Academic Institutions

What are they doing? What could they do?

Patrick M Bossuyt
Daniel Korevaar

AMC – University of Amsterdam
The Reward Alliance
Increasing Research, Reducing Waste

It has been estimated that 85% of research is wasted, usually because it asks the wrong questions, is badly designed, not published or poorly reported. This diminishes the value of research and also represents a significant financial loss. However, many causes of this waste are simple problems that could easily be fixed, such as appropriate randomisation or blinding of a clinical trial. A first step towards increasing the value of research and reducing waste is to monitor the problems and develop solutions that aim to fix them.
Waste at four stages of research

1. Questions relevant to clinicians & patients?
   - Low priority questions addressed
   - Important outcomes not assessed
   - Clinicians and patients not involved in setting research agendas

2. Appropriate design and methods?
   - Over 50% studies designed without reference to systematic reviews of existing evidence
   - Over 50% of studies fail to take adequate steps to reduce biases, e.g., un concealed treatment allocation

3. Accessible full publication?
   - Over 50% of studies never published in full
   - Biased under-reporting of studies with disappointing results

4. Unbiased and usable report?
   - Over 30% of trial interventions not sufficiently described
   - Over 50% of planned study outcomes not reported
   - Most new research not interpreted in the context of systematic assessment of other relevant evidence

85% Research waste = over $100 Billion / year
# Recommendations

**Reporting**

15. Funders and research institutions must shift research regulations and rewards to align with better and more complete reporting

16. Research funders should take responsibility for reporting infrastructure that supports good reporting and archiving

17. Funders, institutions, and publishers should improve for authors and reviewers the capability and capacity for high-quality and complete reporting

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
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<tbody>
<tr>
<td>Funders and research institutions should assess research (or researchers) and consider the accessibility and use of research protocols, study materials, study data.</td>
</tr>
<tr>
<td>HIRO and individual funding agencies</td>
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<tr>
<td>Funders and research institutions should regularly report expenditures for reporting infrastructure and archiving.</td>
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<tr>
<td>Researchers should use reporting guidelines, registries, archives, and take up training opportunities on these topics.</td>
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**Table 1:** The *Lancet* Series recommendations by number and examples of groups who can take action to discuss, endorse, and implement the recommendations and monitor progress.
Survey Academic Institutions

October - November 2014
Subject Ranking 2013-14: Clinical, Pre-clinical & Health

The 2013-2014 Times Higher Education World University Rankings' Clinical, Pre-Clinical and Health table judges world class universities across all of their core missions - teaching, research, knowledge transfer and international outlook. The ranking of the world’s top 100 universities for clinical and health subjects employs 18 carefully calibrated performance indicators to provide the most comprehensive and balanced comparisons available, which are trusted by students, academics, university leaders, industry and governments. View methodology here.

Show me universities best for overall in any country offering any subject

Or, find specific universities by name

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Scores</th>
<th>探索</th>
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<td>University of Oxford</td>
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<tr>
<td>2</td>
<td>Harvard University</td>
<td>19,890</td>
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<td>3</td>
<td>University of Cambridge</td>
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<td>Imperial College London</td>
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<td></td>
<td>Stanford University</td>
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Read more about the Subject Ranking 2013-14: Clinical, Pre-Clinical & Health

Featured Jobs

- **PHD in Analysis of Computational Models and Tools for CO2 Capture Processes**
  - Norwegian University of Science & Technology (NTNU)
- **Programme Leader in Centre for Languages and Skills**
  - Copenhagen University (Copenhagen)
- **Student Affairs Tutor - Residential College**
  - University of Nottingham (Nottingham, UK)
- **Assistant Professor in Theology And Ministry**
  - Durham University
- **Professor in Toxicology**
  - Karolinska Institute
Dear [NAME],

Last January, The Lancet published the series “Research: increasing value, reducing waste” [available at http://www.thelancet.com/series/research]. The series made explicit recommendations on how to reduce waste in research. The authors of the series are currently evaluating to which extent these recommendations have been implemented by authors, funders, journals and academic institutions.

Below, you will find XX questions about research at [INSTITUTION]. We hope you are willing to respond to these questions by replying this email, or forward this email to someone at your institution better positioned to answer these questions.

1. Does your institution have a policy to make the following items from biomedical studies publically available?
   - Study titles [Yes/No]
   - Study protocols [Yes/No]
   - Raw data [Yes/No]
   - Analytical algorithms [Yes/No]
   - Full publications [Yes/No]

2. Does your institution have a policy to promote pre-registration of clinical trials in a publically accessible trial registry? [Yes/No]

3. Does your institution require researchers to refer to systematic reviews of existing evidence showing why the proposed research is justified when applying for ethical approval for additional primary research? [Yes/No]

4. Does your institution have a policy to promote the use of relevant reporting guidelines (e.g. CONSORT, STROBE, PRISMA, STARD) when preparing articles? [Yes/No]

5. Does your institution have a policy to promote independent replication and reproducibility checks of primary research findings? [Yes/No]

Please feel free to add comments.

With kind regards,

Patrick M.M. Bossuyt*
Doug G. Altman
Isabelle Boutron
Iain Chalmers
Paul Glasziou
David Moher
Philippe Ravaud

*Department of Clinical Epidemiology, Biostatistics and Bioinformatics (KEBB) and Dutch Cochrane Centre (DCC), Academic Medical Center (AMC), Amsterdam, the Netherlands.
Does your institution have a policy to make the following items publicly available?

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<thead>
<tr>
<th>Item</th>
<th>Total</th>
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<tr>
<td>Full protocol</td>
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<tr>
<td>Prospective registration trials</td>
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<td>Raw data</td>
<td>5</td>
</tr>
<tr>
<td>Analytical algorithm</td>
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</tr>
<tr>
<td>Full publication</td>
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</table>
Does your institution have a policy to make the following items publicly available?

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<tr>
<th>Item</th>
<th>Total</th>
<th>University rank 1-50</th>
<th>University rank 51-100</th>
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<td>Full protocol</td>
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<td>4</td>
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<tr>
<td>Prospective registration trials</td>
<td>20</td>
<td>12</td>
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<td>19</td>
<td>10</td>
<td>9</td>
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</table>
Example: Protocols

• “All IRB approved study protocols are available through the School of Medicine electronic IRB pathway”

Duke University
Example: Trial registration

• “Any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions in order to evaluate the effects on health outcomes should be registered in a public protocol registry”

University of Amsterdam
Example: Raw data

• “Researchers should make data sets available unless this is prevented by the requirements of legislation or University policy, or ethical, contractual or confidentiality obligations. If open access is not possible due to legal or policy reasons, researchers should make metadata available”

University of Sydney
Example: Analytical algorithms

• “Once results have been published, the university expects researchers to make available relevant data and materials to other researchers, on request”

Cambridge University
Example: Full publication

• “Full publications are typically published in its near final version in the University Repository and thus largely publicly available”

University of Groningen

Kaplan–Meier plot for the time from completion to publication for test accuracy studies registered in ClinicalTrials.gov (excluding those registered after completion).
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Avoidable waste in the production and reporting of research evidence

Lancet 2009; 374:86-89
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