

Who should be involved in improving research publications?

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Q: Who should be involved in improving research publications?
 A: EVERYBODY!



Publication dystopia

- Research is poorly reported
- Methods cannot be repeated
- Important elements are missing
- Negative results are excluded
- Reports are unusable
- Data is lost / cannot be shared



Pointless!

Much published research is unusable

- Of 102 journal articles reporting clinical trials, 62% had a change to the primary outcome stated in the protocol
- Of 88 studies using novel questionnaires only 8% of questionnaire could be accessed
- Of 141 studies of test accuracy, 40% did not report participants' age and sex
- Of 49 AIDS trials, only 33% reported all adverse events

All refs in Glasziou et al *Lancet*, 2014

Much research is never published

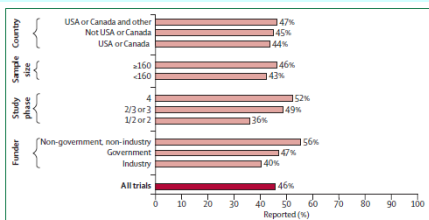


Figure 2. Reporting of completed trials, by study characteristic. Data taken from Ross and colleagues' analysis²¹ of a random sample of 677 completed trials registered with ClinicalTrials.gov between 2000 and 2007.

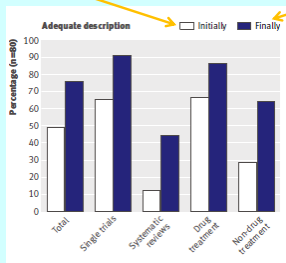
Until recently, 50% of clinical trials were unpublished

Of EU-funded health research 1998-2006

Galsworthy et al *Lancet* 2012;380:971

- 50% unpublished
- 570 million Euros of research had "no detectable academic output"
- Situation may be improving but evidence-base for most prescribed medicines is badly affected by non-publication

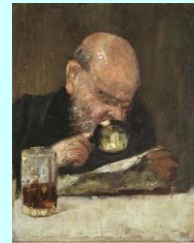
Inadequate treatment descriptions in 80 studies of medical therapies from journal article and supplementary info



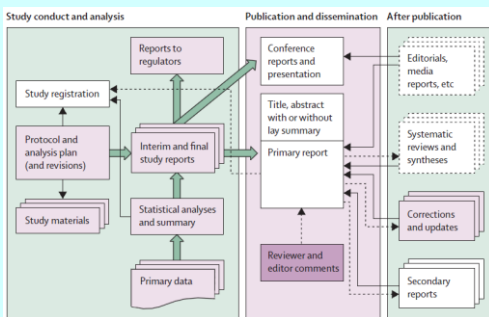
Glasziou et al *BMJ*, 2008;336:1472

Who might be involved in improving research publications?

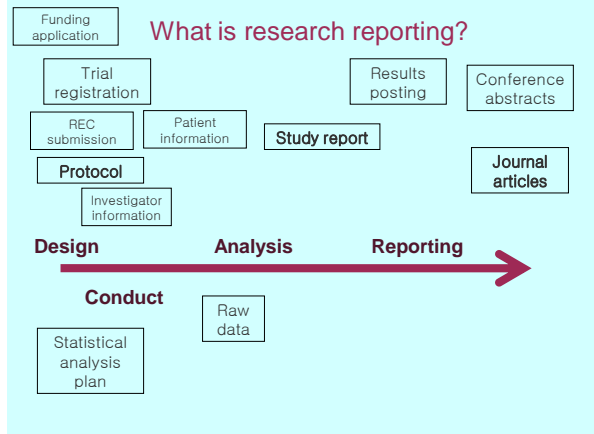
- Researchers
- Institutions
- Funders
- Regulators
- Editors
- Peer reviewers
- Publishers
- Communications experts
- Users



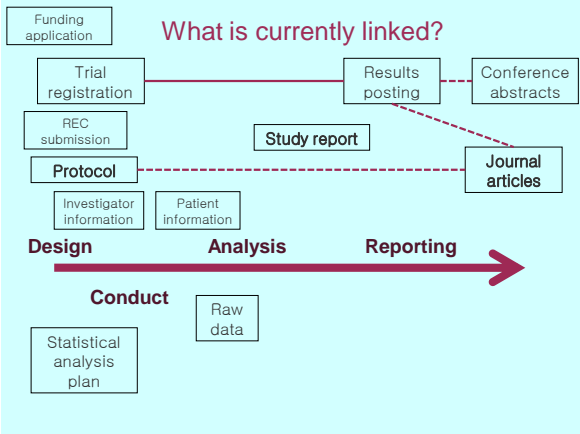
Reporting = article + protocol + materials + data + ... + links



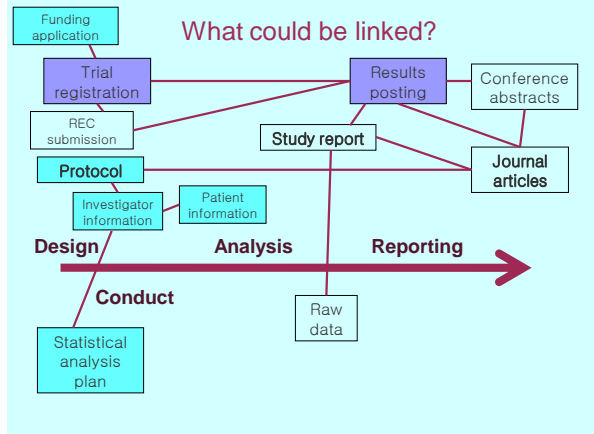
What is research reporting?



What is currently linked?



What could be linked?



PROTOCOL SUMMARY LOCATIONS RESULT SUMMARY LAST UPDATED
FIRST RECEIVED July 10, 2014
Title: An exploratory study to investigate the inflammatory response

APPLICABILITY FOR HERPES INFECTIONS INVOLVING THE CENTRAL NERVOUS SYSTEM IN NEONATES
This study has been completed.
Sponsor: National Institute of Allergy and Infectious Diseases (NIAID)
Information provided by the sponsor (Public): National Institute of Allergy and Infectious Diseases (NIAID)

Statistical Analysis Plan (SAP)
Version: <1.2.3 >
Author: <><(Title, Institution)>
Date: DD-MM-YYYY

Lung Cancer Clinical Trials Fact Sheet
What is a clinical trial?
A clinical trial is a research study that is planned and conducted in a systematic way to evaluate the safety and effectiveness of a new drug, device, or treatment. Clinical trials are conducted in several phases, including:
• Phase I: Testing the safety and side effects of a new drug or treatment in a small group of people.
• Phase II: Testing the effectiveness and side effects of a new drug or treatment in a larger group of people.
• Phase III: Testing the effectiveness and side effects of a new drug or treatment in a large group of people.
• Phase IV: Monitoring the safety and effectiveness of a new drug or treatment after it has been approved for use.

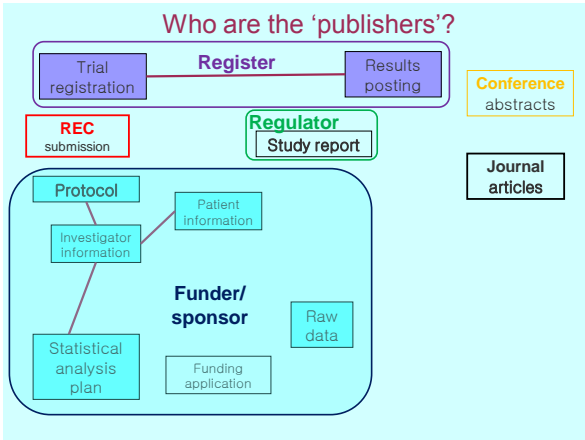
It won't fit!

Threaded publications (not a new idea!)

- “Electronic publication of a protocol could be simply the first element in a sequence of “threaded” electronic publications, which continues with reports of the resulting research ... followed by deposition of the complete data set”




Chalmers & Altman, *Lancet* 1999; 353:490-3

- ### Potential 'disseminators' (and quality controllers)
- Ethics committees
 - Funders
 - Regulators
 - Trial registers
 - Institutions
 - Researchers
 - Conferences
 - Journals

Power vs responsibility

<ul style="list-style-type: none"> Ethics committees Funders Regulators Trial registers Institutions Researchers Conferences Journals 	<ul style="list-style-type: none"> Ethics committees Funders Regulators Trial registers Institutions Researchers Conferences Journals 	<p>Current situation for publications</p>
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Conclusions



- Improving research reporting is **everybody's responsibility**
- Reporting is about more than just journal articles
- Focusing on author responsibility (eg reporting guidelines) can only produce small improvements
- We need more fundamental change to the whole reporting system