

# REWARD Recommendations 5 years later: promises and results in reducing research waste

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[www.crebp.net.au](http://www.crebp.net.au)



Enhancing the **QUALity** and  
**Transparency Of health Research**



The Reward Alliance

EBHC, Sicily November 2019

# A very brief history of waste in research

1994 - *“huge sums of money are spent annually on research that is seriously flawed through the use of inappropriate designs, unrepresentative samples, small samples, incorrect methods of analysis, and faulty interpretation”*  
Doug Altman, *The Scandal of Poor Medical Research, BMJ.*

2009 – Chalmers & Glasziou, *Lancet* calculated that ~85% research is avoidably wasted

2012 - Begley & Ellis - Amgen not able to reproduce the seminal findings from 47 of 53 “top tier” publications (reproducibility crisis)

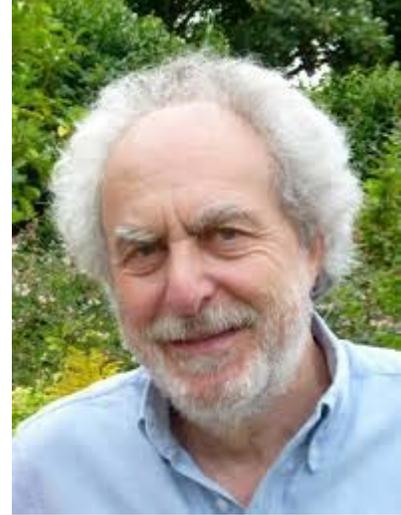
2014 - *Lancet* 5-part series on *Adding Value, Avoiding Waste*

2015 – REWARD-EQUATOR Conference, Edinburgh

2015 - Ensuring Value in Research (EVIR) funders forum initiated

2016 - Cochrane-REWARD Prize established

2020 - REWARD-EQUATOR Conference, Berlin (QUEST Centre)



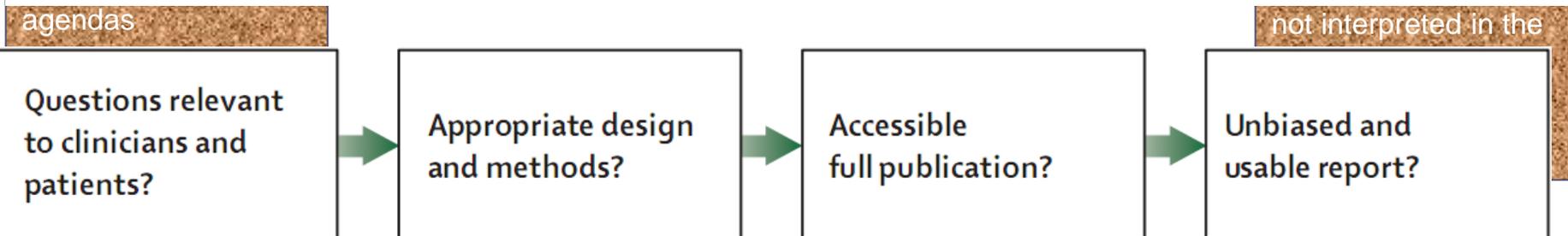
# Problems from research questions to patient benefits?



## Avoidable waste in the production and reporting of research evidence

*Iain Chalmers, Paul Glasziou*

www.thelancet.com Published online June 15, 2009



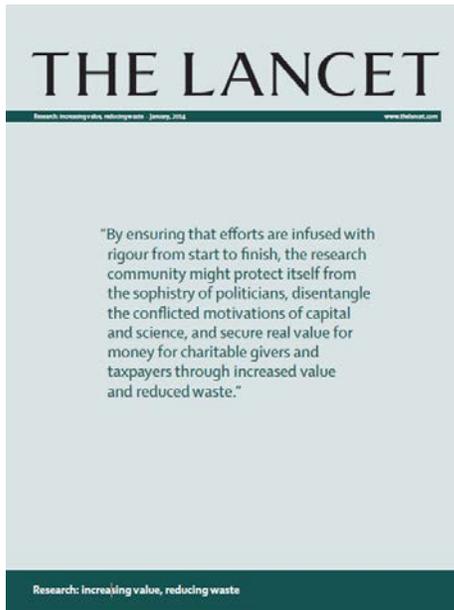
**85% Research waste = over \$100 Billion / year**

# Annual avoidable waste in research estimated to be 85% from:

2. avoidable design flaws (50%),
4. non-publication (50%) and
5. unusable reports (50%)

– for a global total of over \$140 Billion/year.

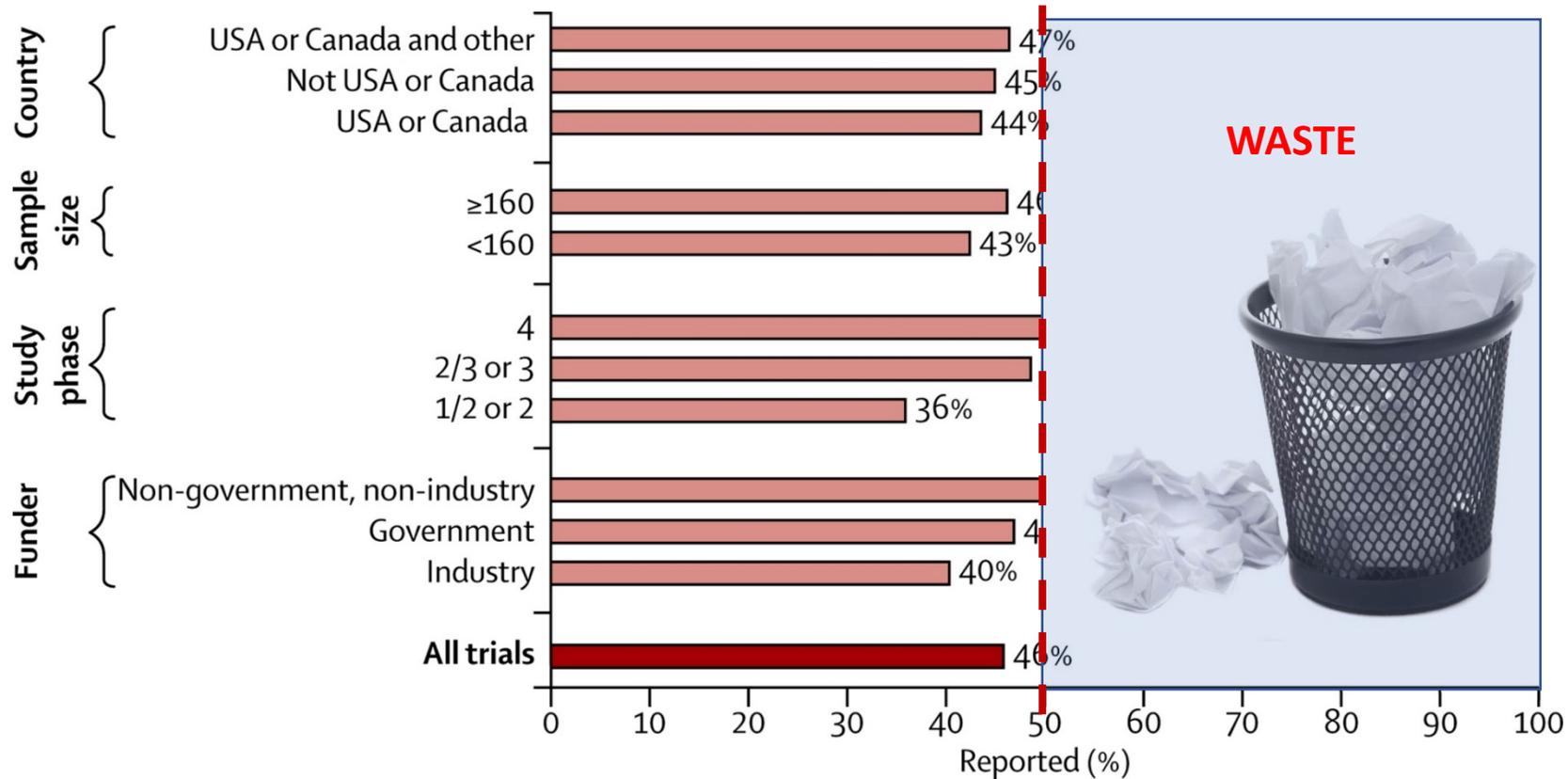
Calculation at: <http://blogs.bmj.com/bmj/2016/01/14/paul-glasziou-and-iain-chalmers-is-85-of-health-research-really-wasted/>



Adding Value, Reducing Waste;  
Lancet Series 2014 (42 authors)  
[www.researchwaste.net](http://www.researchwaste.net)



# 50% of research is not published



*Lancet* 2014; 383: 257–66



# Non-Publication: a solution All Studies Registered; All Results Reported

**AllTrials**

All Trials Registered | All Results Reported  
[www.alltrials.net/](http://www.alltrials.net/)

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Around half of clinical trials have never been reported. This is the story of the campaign to find them—and to fix medicine.

Read the AllTrials story



Cochrane-REWARD Prize 2018

**PRECLINICALTRIALS.EU**  
International register of preclinical trial protocols

Home About Help with registration Login Contact News Twitter

Join to create a user account

**Preclinicaltrials** aims to provide a comprehensive listing of preclinical animal study protocols.

Preferably registered at inception in order to **increase transparency**, help **avoid duplication**, and **reduce the risk of reporting bias** by enabling comparison of the completed study with what was planned in the protocol.

**Registration** of your study requires you to create an account that is

- Anonymous
- Free of charge
- Has an optional embargo period

This register is web-based, open to all types of animal studies and freely accessible and searchable to all with a preclinicaltrials.eu account.

The [registration form](#) is designed by experts on preclinical animal studies and preclinical evidence synthesis.

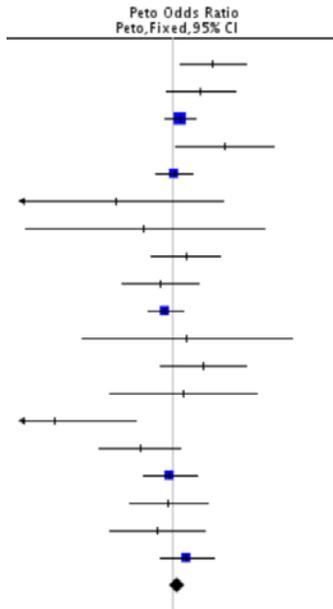
Please [join](#) us and create a user account, this will provide access to the database and enables you to register your preclinical trial.

Contact us at [info@preclinicaltrials.eu](mailto:info@preclinicaltrials.eu).

Promoting transparency in preclinical research

Cochrane-REWARD Prize 2019

# New research should build on previous research



Horn J et al. Very Early Nimodipine Use in Stroke (VENUS): a randomized, double-blind, placebo-controlled **TRIAL**. Stroke. 2001  
RESULTS: At trial termination, (225 nimodipine, 229 placebo), **no effect** of nimodipine was found.

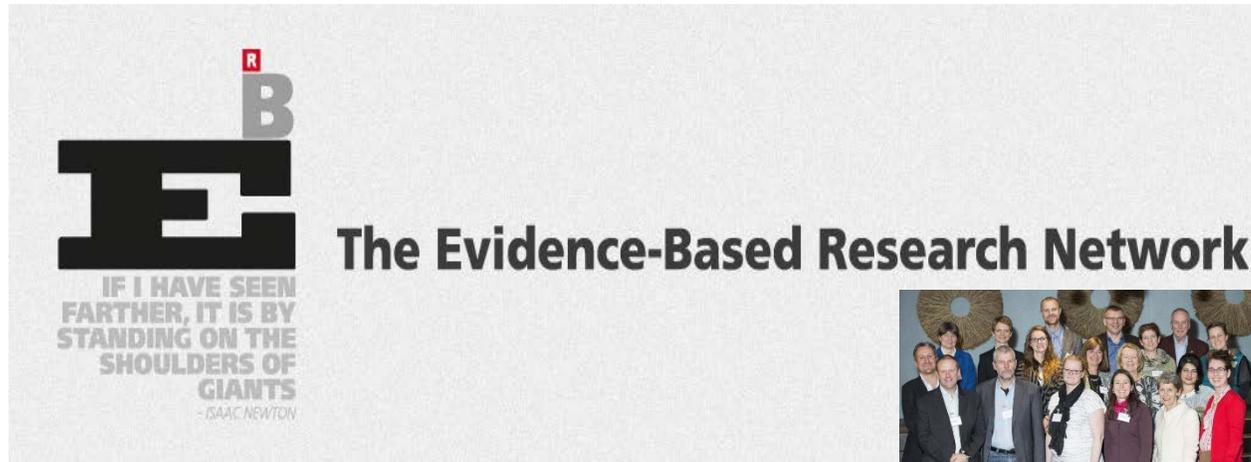
Horn J, et al. Calcium antagonists for acute ischemic stroke. The Cochrane Database of **SYSTEMATIC REVIEWS**. 2001.  
RESULTS “28 trials were included (7521 patients).  
**No effect** on poor outcome (OR 1.07), or on death at end of follow-up (OR 1.10)”



Horn J et al. Nimodipine in **ANIMAL** model experiments of focal cerebral ischemia: a **SYSTEMATIC REVIEW** Stroke. 2001 Oct.  
“20 studies ... **review did not show convincing evidence** to substantiate the decision to perform trials with nimodipine in large numbers of patients.”

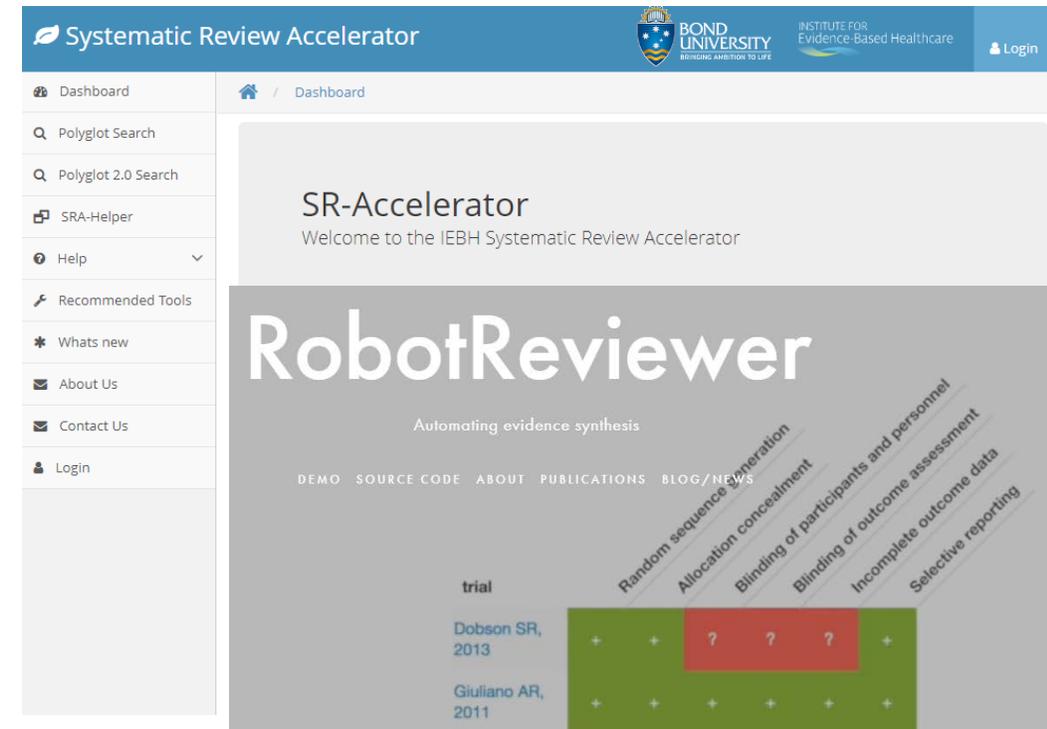


# No new studies without prior systematic review of existing evidence



- The aims of the EBRNetwork is to reduce waste in research by promoting:
1. No new studies without prior systematic review of existing evidence
  2. Efficient production, updating and dissemination of systematic reviews

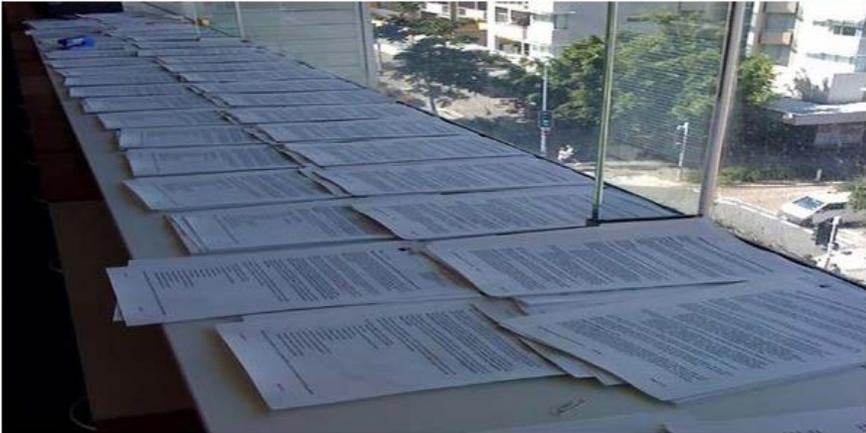
**ICASR** 5<sup>th</sup> Meeting hosted by EBRN, Bergen, 2019  
4<sup>th</sup> Meeting hosted by ZonMw, the Hague, 2018  
International Collaboration for the Automation of Systematic Reviews



- Systematic review time reduced from 1-2 years to 2 weeks (Clarke, submitted)
- Using combination of:
- automated tools +
  - 'agile' project management.

# Reducing over-regulation of research

care2 PETITIONS



We need a national inquiry to streamline/improve research ethics and governance in Australia

by: [Adrian Barnett](#)

recipient: Australian House of Representatives

830 SUPPORTERS

1,000 GOAL

*Streamlined process for low risk research (based on other country models) – possible **\$160M/year** saving*

## Some Quotes:

“We run trials in SA and have in fact had to **give grant money back** as it took over two years to get approval for a trial in which time the funding time period had lapsed.”

“There is a huge burden of unnecessary tasks associated with ethics committees in australia. I work internationally and **I avoid dealing with Australian ethics committees** at all costs, thus research money and jobs go internationally because of the horrific duplication of efforts that occurs.”

Adrian Barnett, Queensland University of Technology

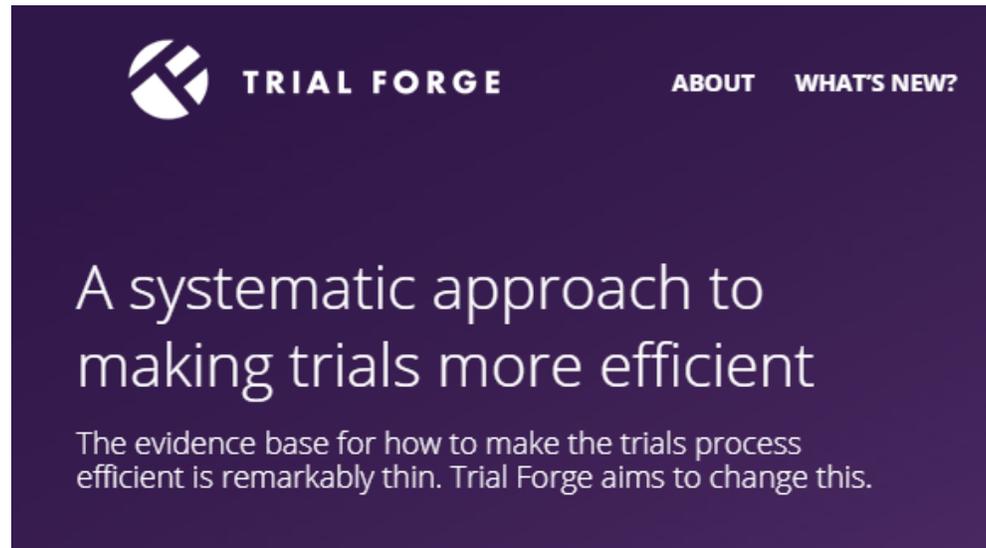
Jennifer Byrne, Amanda Rush, Natalie Taylor University of Sydney

Anna Scott, Bond University



# Research on Research Efficiency

What is known about efficient trials?



Cochrane-REWARD Prize 2019

Funding Research on Research Efficiency

Home / Resources / Studies Within a Trial

## Studies Within a Trial (SWAT)

Our colleagues at Queen's University Belfast host the Studies Within a Trial (SWAT) and Studies Within a Review (SWAR) initiative ([site](#)).

It is being developed by the Northern Ireland Network for Trials Methodology Research in collaboration with the Medical Research Council's Network of Hubs for Trials Methodology Research in the UK (HTMR Network), the Health Research Board's Trials Methodology Research Network in Ireland (HRB-TMRN), and others.

More information, and a repository of existing SWATs can be found at the [site](#). If you are interested in embedding methodology research into an ongoing trial and other prospective study, have a look at the SWAT (Studies Within A Trial) collection [online](#) to see examples, or to [register](#) a new SWAT.

[www.qub.ac.uk/sites/TheNorthernIrelandNetworkforTrialsMethodologyResearch/SWATSWARInformation/](http://www.qub.ac.uk/sites/TheNorthernIrelandNetworkforTrialsMethodologyResearch/SWATSWARInformation/)



# Improving reporting of research



Enhancing the **QUALITY** and **Transparency** Of health **Research**

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[Home](#) > [Equator Highlights](#) > EQUATOR Network awarded for reducing waste in research

## EQUATOR Network awarded for reducing waste in research

24/09/2018



### Cochrane-REWARD Prize 2018 for GoodReports



## Reporting checklists for medical researchers

Checklists will help you report your research clearly and fully.

For most study types there are specific checklists that medical journals will expect you to upload alongside your manuscript.

Using a checklist can help you get published faster and maximise the impact of your work.

This tool was made by the [EQUATOR Network](#) in collaboration with [Penelope.ai](#).

Case-control study (STROBE case-control)

[Need some help choosing?](#)

Questions relevant to users of research

Appropriate design, conduct & analysis

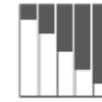
Efficient regulation and delivery

Accessible full research reports

Accessible full research reports

# Lancet Adding Value, Reducing Waste 2014

<http://rewardalliance.net>



The Reward Alliance

## RECOMMENDATIONS (key 7 of 17)

1. Research funders should make information available about how they decide what research to support, and fund investigations of the effects of initiatives to engage potential users of research in research prioritisation
2. Research funders and regulators should demand that proposals for additional primary research are justified by systematic reviews showing what is already known, and increase funding for the required syntheses of existing evidence
3. Make publicly available the full protocols, analysis plans or sequence of analytical choices, and raw data for all designed and undertaken biomedical research
4. Reward (with funding, and academic or other recognition) reproducibility practices and reproducible research, and enable an efficient culture for replication of research
5. Regulators and policy makers should work with researchers, patients, and health professionals to streamline and harmonise the laws, regulations, guidelines, and processes that govern whether and how research can be done, and ensure that they are proportionate to the plausible risks associated with the research”
6. Funders, sponsors, regulators, research ethics committees, journals, and legislators should endorse and enforce study registration policies, wide availability of full study information, and sharing of participant-level data for all health research
7. Research funders should take responsibility for reporting infrastructure that supports good reporting and archiving

THE LANCET

“By ensuring that efforts are infused with rigour from start to finish, the research community might protect itself from the sophistry of politicians, disentangle the conflicted motivations of capital and science, and secure real value for money for charitable givers and taxpayers through increased value and reduced waste.”

Research: increasing value, reducing waste

# Funder activities

## Cochrane-REWARD prize – 2017 Award Winner: Adding Value in Research, NIHR



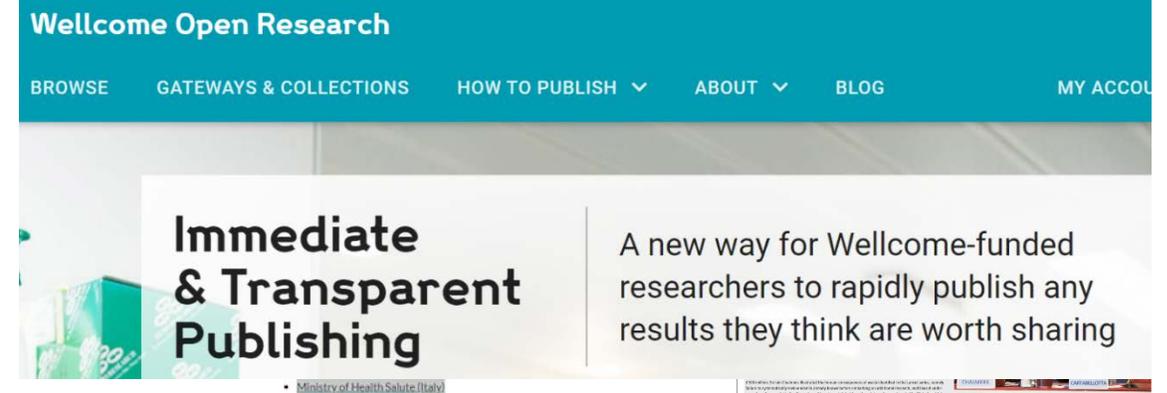
The UK National Institute for Health Research receive the first Cochrane-REWARD prize in 2017 for its Adding Value in Research programme, which promoted a range of activities tackling waste at every stage of research. We asked Matt Westmore, NIHR lead for this work and Operations Director at NIHR's Evaluation, Trials and Studies Coordinating Centre about how things have developed receiving the prize.

*Could you introduce NIHR's Adding Value in Research framework?*

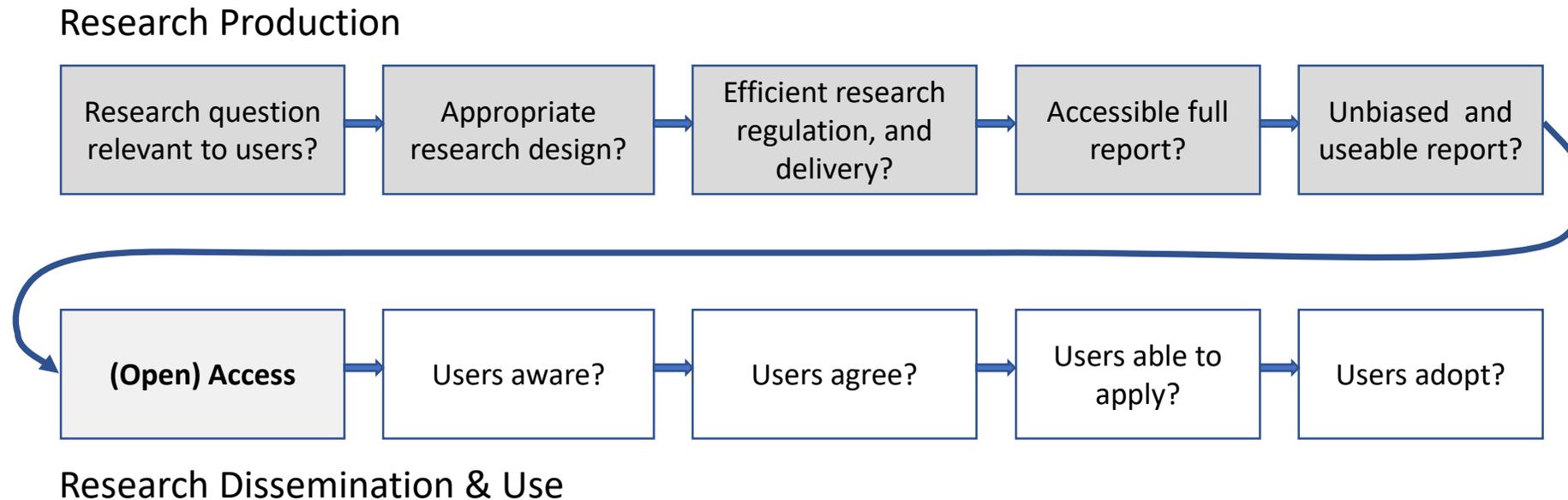
[Adding Value in Research \(AViR\)](#) has been a long-running initiative for us. It goes back to 2009, with [the Lancet paper on research waste by Iain Chalmers and Paul Glasziou](#). We started talking about our role in reducing research waste as a funder and have been working on it since.



The next EViR Forum meeting will be held in Washington D.C., USA (hosted by the Patient Centered



# Why is research waste important to EBM?



- EBM is not “in crisis”, but ...
- EBM has been uncovering problems in the production of research
- Many changes occurring, but are likely to require decades

