Improving Research Integrity:
# A funders' perspective

@Matt_Westmore

Conflicts and bias

- I work for the National Institute for Health Research

- I am the NIHR's lead for Adding Value in Research

- I am on the REWARD and EBRN Steering Committees

- I co-chair the Ensuring Value in Research Funders' Collaboration and Development Forum

- I work for the University of Southampton in a business development role

Why do funders care?

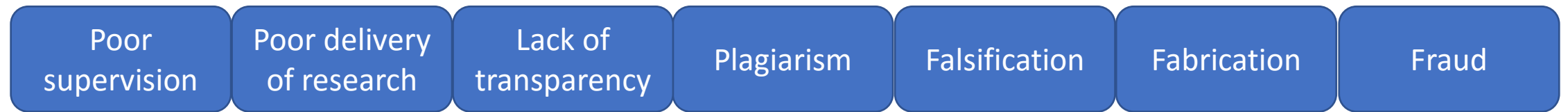Dogan, 1959, Between 11 and 12, Galwerija Umjetnina, Split
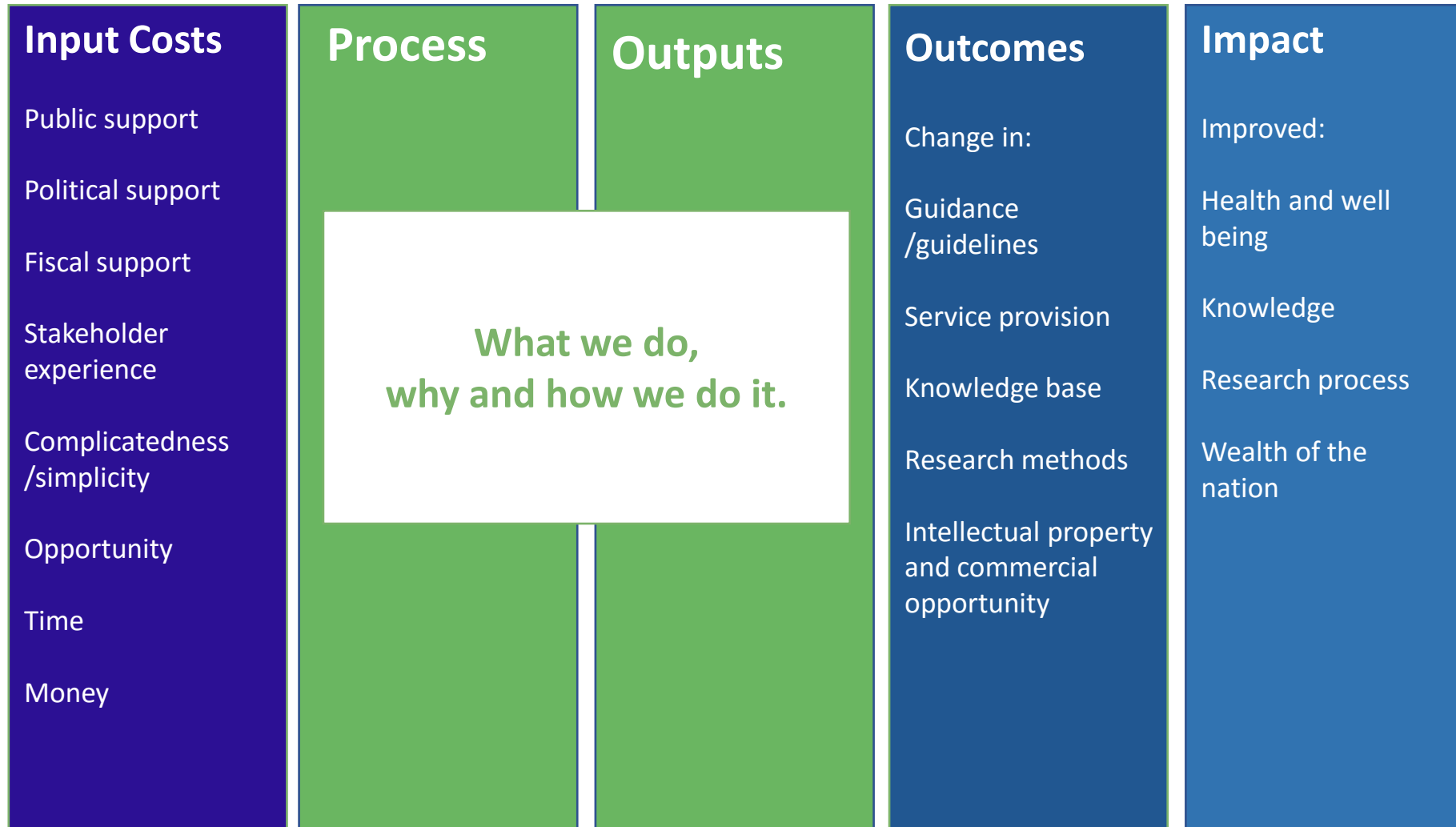
What is Research Integrity?

Sunset on approach to Split International Airport, @matt_westmore
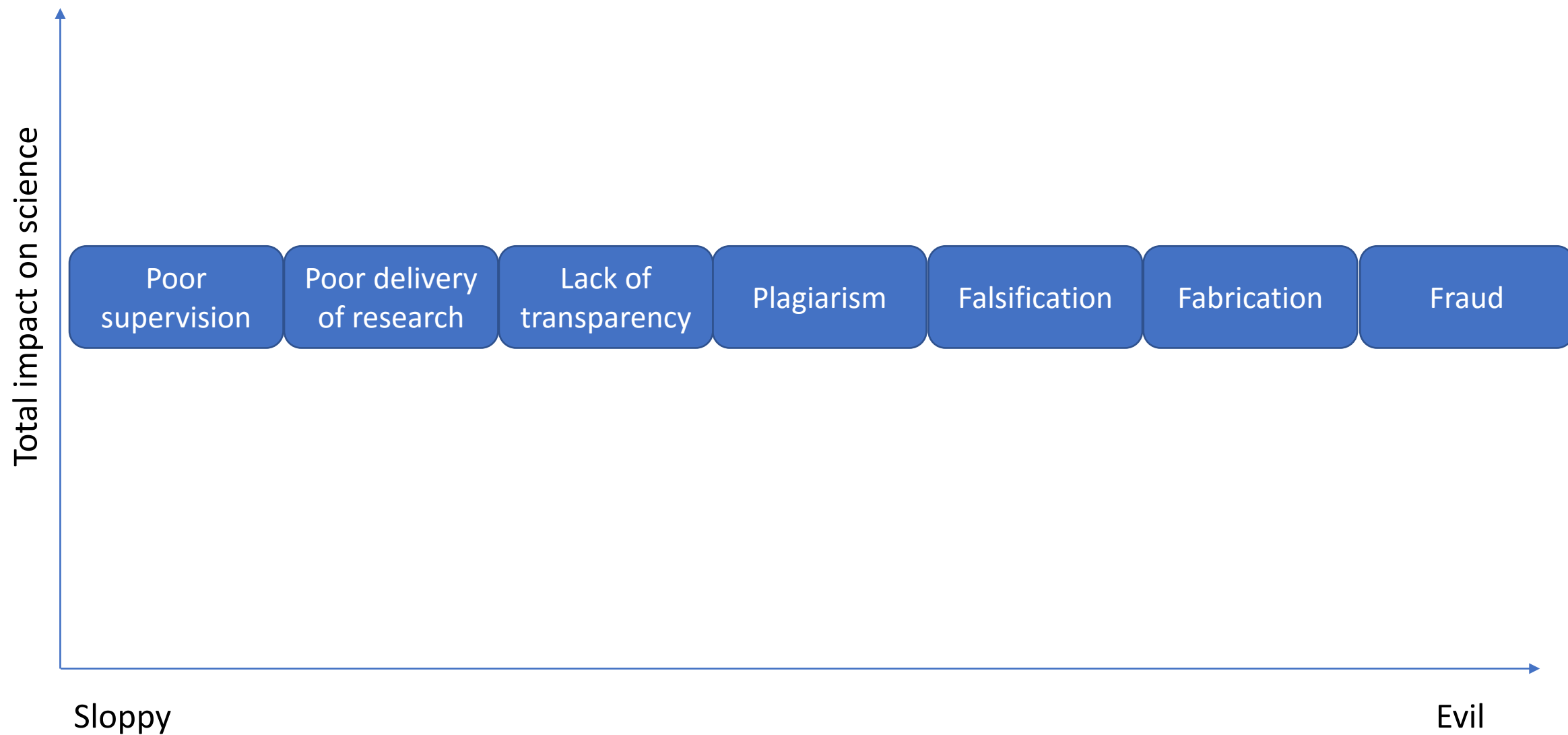
The concordat to support research integrity

- o …highest standards of rigour and integrity in all aspects of research

- o …research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards

- o supporting a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers

- o using transparent, robust and fair processes to deal with allegations of research misconduct…

- o working together to strengthen the integrity of research and to reviewing progress regularly and openly

Signatories RESEARCH COUNCILS UK wellcometrust

Scottish Funding Council Promoting further and higher education

NHS National Institute for Health Research

Department for Employment and Learning www.delni.gov.uk

HIGHER EDUCATION **hefce** FUNDING COUNCIL FOR ENGLAND

Universities UK

Cyngor Cyllido Addysg Uwch Cymru Higher Education Funding Council for Wales **hefcw**

Universities UK

85% of Health Research Funding is wasted avoidably

| Poor supervision | Poor delivery of research | Lack of transparency | Plagiarism | Falsification | Fabrication | Fraud |

Mis-behavior
Wasteful practice

Misconduct
Illegal practice

Research misbehaviour

Rank   **Product of frequency and impact on TRUTH**

1   Insufficiently supervise or mentor junior coworkers

2   Insufficiently report study flaws and limitations

3   Keep inadequate notes of the research process

4   Turn a blind eye to putative breaches of research integrity by others

5   Ignore basic principles of quality assurance

Bouter et al, Research Integrity and Peer Review2016**1**:17

What can we do to improve research integrity?

Relevance and expressed need
Ensuring we set justifiable research priorities.

Excellence
Ensuring robust research design, analysis and management

Openness
Ensuring methods and findings are accessible, complete and usable

Academic culture

Should you involve patents and the public in every stage?

■ Yes   ■ Yes but in orange

Questions relevant to users of research

1. Priorities are set involving those who use and are affected by health research

2. New research should be set in the context of a systematic review or rigorously determined evidence gap
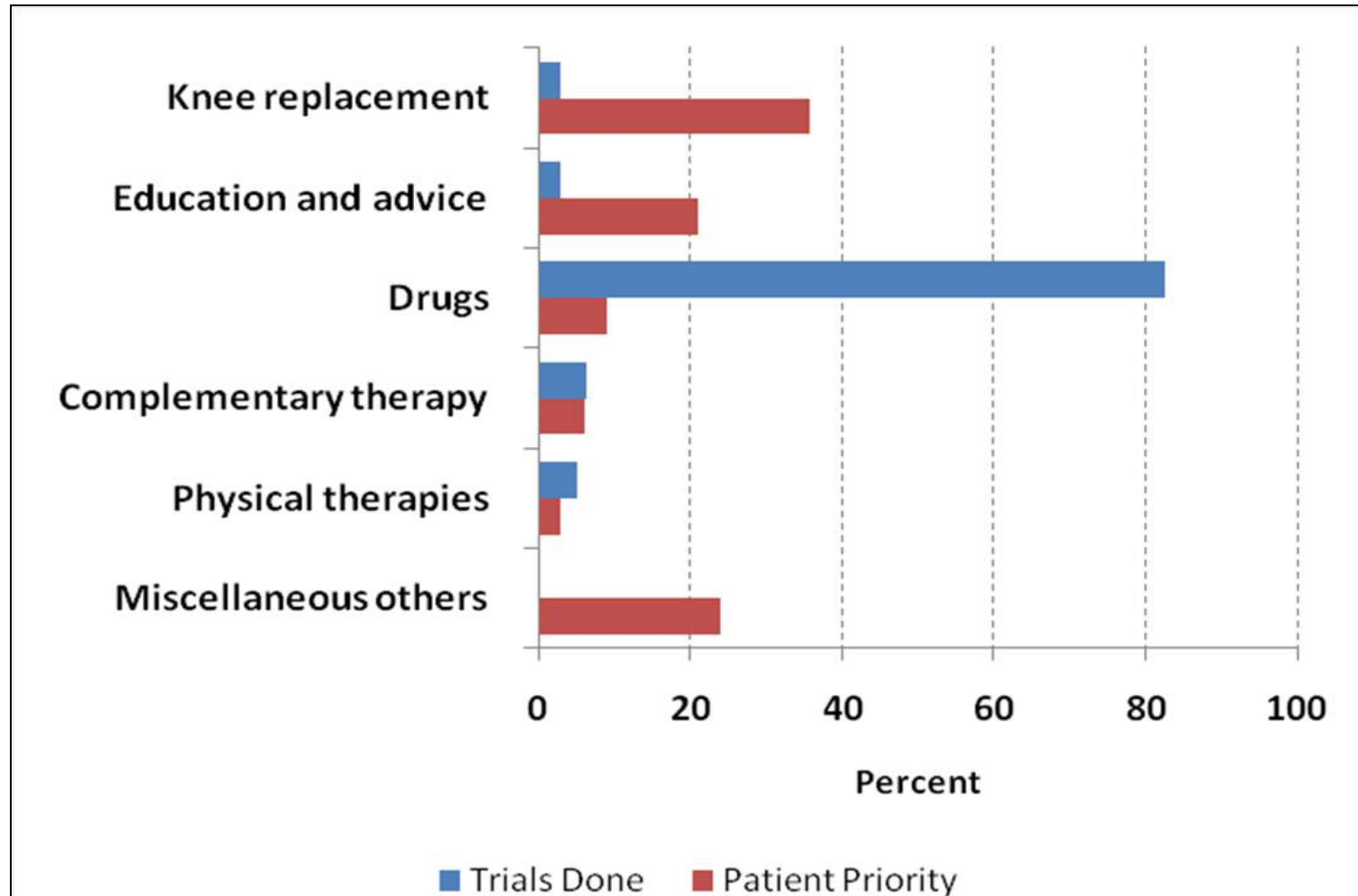
Tallon, D. et al. (2000) 'Relation between agendas of the research community and the research consumer', The Lancet, Vol. 355. pp. 2037-40

Habre 2014
Lidocain before propofol

136 NEW studies since 2000
49 clinically relevant
87 REDUNDANT STUDIES

56 studies
SR from 2000 questioning the necessity of performing further trials.

No of published trials

Year of publication

Reproduced by kind permission of Hans Lund, Evidence Based Research Network
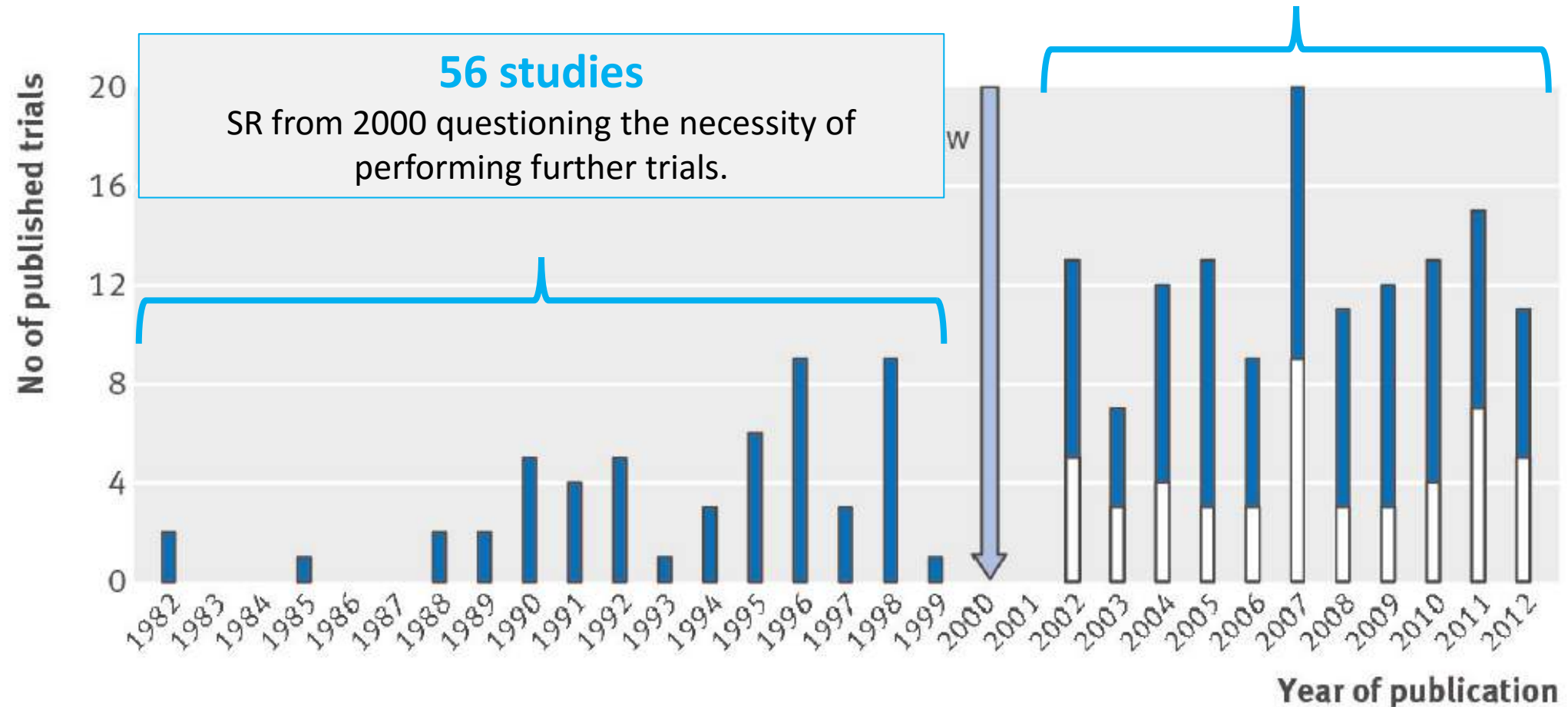
Appropriate research design, conduct and analysis

3. Designed using advances in research methods and taking steps to reduce bias

5. Studies registered at inception

3

Efficient research regulation and delivery

4. Actively manage research in a risk proportionate way

6. Protocols, methods and materials should be made available early

4

Unbiased, usable and accessible full research reports

7. Methods, interventions and findings reported in full

8. Support replication and reuse of data

What % of clinical trials ever publish?

Table 4 | Sponsors with highest proportion of trials reported

Sponsor	Total trials on EUCTR	Due trials	Due trials with results	% reported
Gilead Sciences	213	31	31	100.0
Chiesi Farmaceutici	94	37	37	100.0
CSL Behring	72	25	25	100.0
Alcon	71	20	20	100.0
Genentech	63	18	18	100.0
Vertex Pharmaceuticals	62	19	19	100.0
Daiichi Sankyo	62	12	12	100.0
Almirall	53	37	37	100.0
Ferring Pharmaceuticals	53	19	19	100.0
Sanofi	573	111	110	99.1

Table 5 | Sponsors with highest proportion of trials unreported

Sponsor	Total trials on EUCTR	Due trials with results	Due trials	% reported
Hospitals of Paris	194	0	7	0.0
Karolinska Institutet	189	0	21	0.0
Radboud University	178	0	3	0.0
Charité-Universitätsmedizin Berlin	177	0	63	0.0
Erasmus University	161	0	3	0.0
University of Amsterdam	153	0	4	0.0
Agostino Gemelli University Polyclinic	142	0	11	0.0
Ghent University	126	0	19	0.0
VU University Medical Centre	126	0	3	0.0
Utrecht University	122	0	6	0.0

Compliance with requirement to report results on the EU Clinical Trials Register: cohort study and web resource, Ben Goldacre et al, BMJ 2018

5

Findings disseminated effectively

9. Findings should be set in the context of previous evidence and systematic reviews.

10. Disseminate knowledge to end users

Is cancer fundraising fuelling quackery?, Newman, 2018, BMJ

The role of Research-on-Research

Who will fund RoR?

Funder	Eligibilty	Type of funding
Chief Scientist Office	Scotland	Within standard research programmes
Cochrane	Global	Number of routes. For example through the Methods Innovation Fund, and one off projects such as Project Transform
European Union	EU	Within standard research programmes (Horizon 2020)
FORTE	Sweden	Not explicitly out of remit but not asked for either
Graham Boeckh Foundation		Specific project for International Alliance of Mental health Research Funders and RAND Europe
Health Research Board	Ireland	Specific scheme through HRB Trial Methodology Research Network
Laura and John Arnold Foundation	Global	?
Macmillan Cancer	UK	?
Medical Research Council (MRC)	UK	Through Methodology Hubs
National Institute for Health Research (NIHR)	UK	As part of a wider study. E.g. Studies Within A Trial
National Science Centre	Poland	?
NIHR-MRC	UK	Specific scheme: Methodology Research Programme
Patient Centered Outcomes Research Institute (PCORI)	USA	Specific programme. Improving Methods for Conducting Patient-Centered Outcomes Research (PCOR)
Research Council of Norway (RCN)	Norway	Specific programme. Research for research- and innovation policy (FORINNPOL)
Wellcome Trust	UK and LMICS	Specific scheme.
William T Grant Foundation	USA	Specifc scheme - Improving the Use of Research Evidence
ZonMW	Netherlands	Specific schemes – Fostering Responsible Research Practices and More Knowledge with Fewer Animals

Link to this sheet: http://bit.ly/2N9n4sR

Key questions funders are interested in

How to change academic culture to improve research integrity

How to change incentives to improve research integrity

Impact and effectiveness of patient/public involvement

Effectiveness of different approaches to peer review

Effectiveness of different approaches to setting research priorities

When is enough enough

Effectiveness of different approaches to trial recruitment or retention

Effectiveness of different publishing models to reduce bias

Effectiveness of different approaches to dissemination

How to enable/facilitate research implementation

How to enable/facilitate replication and reuse of data

What/how is routine and/or BIG data useful

How to evaluate the impact of research projects, programmes and researchers

Do the Ensuring Value in Research guiding principles raise the probability of impact/cost?

Take home messages

- Not being evil is not enough
- Yes and Yes but in Orange
- Coffee enema anyone?

Relevance and expressed need	Excellence	Openness
Ensuring we set justifiable research priorities.	Ensuring robust research design, analysis and management	Ensuring methods and findings are accessible, complete and usable

Academic culture

Questions relevant to users of research	Appropriate research design, conduct and analysis	Efficient research regulation and delivery	Unbiased, usable and accessible full research reports	Findings disseminated effectively
1. Priorities are set involving those who use and are affected by health research 2. New research should be set in the context of a systematic review or rigorously determined evidence gap	3. Designed using advances in research methods and taking steps to reduce bias 5. Studies registered at inception	4. Actively manage research in a risk proportionate way 6. Protocols, methods and materials should be made available early	7. Methods, interventions and findings reported in full 8. Support replication and reuse of data	9. Findings should be set in the context of previous evidence and systematic reviews. 10. Disseminate knowledge to end users