



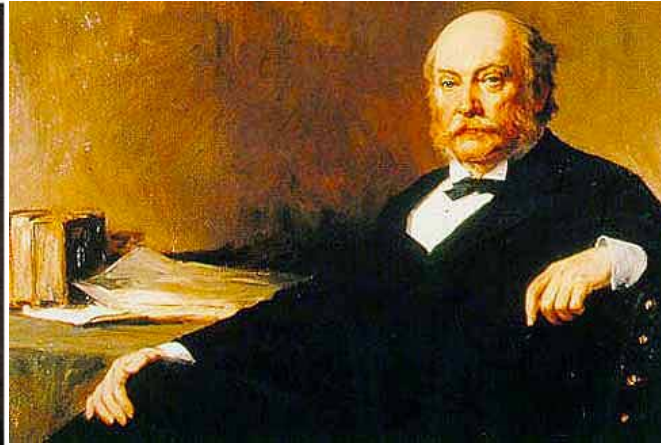
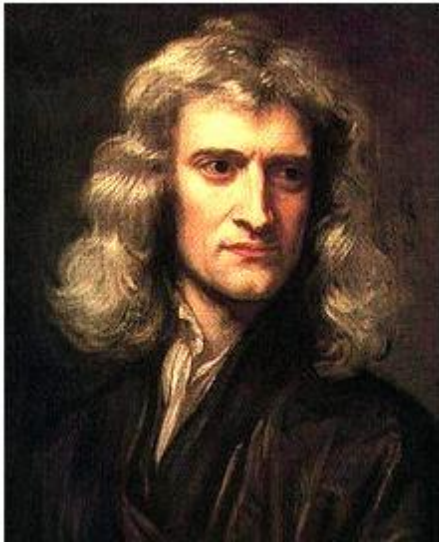
# The Evidence-Based Research Network

## A call to action for more (efficient) systematic reviews

Klara Brunnhuber  
on behalf of the  
EBRNetwork

# Declaration of potential conflicts of interest

- Employed by BMJ as Product Manager for BMJ Clinical Evidence (a summary resource of systematic overviews) and for BMJ Best Practice (which incorporates BMJ Clinical Evidence)
- Member of the Steering Group of the EBR Network



The scientific ideal...

The assumption... “Strictly speaking it seems hard to imagine any research not evidence-based. At least it seems impossible to imagine that articles published in journals with a high impact factor do not relate to earlier research...  
(Norwegian Agency for Quality Assurance in Education, 2014)





# Using SRs to justify research and set results in context

Subset of RCTs included in meta-analyses published in 2004

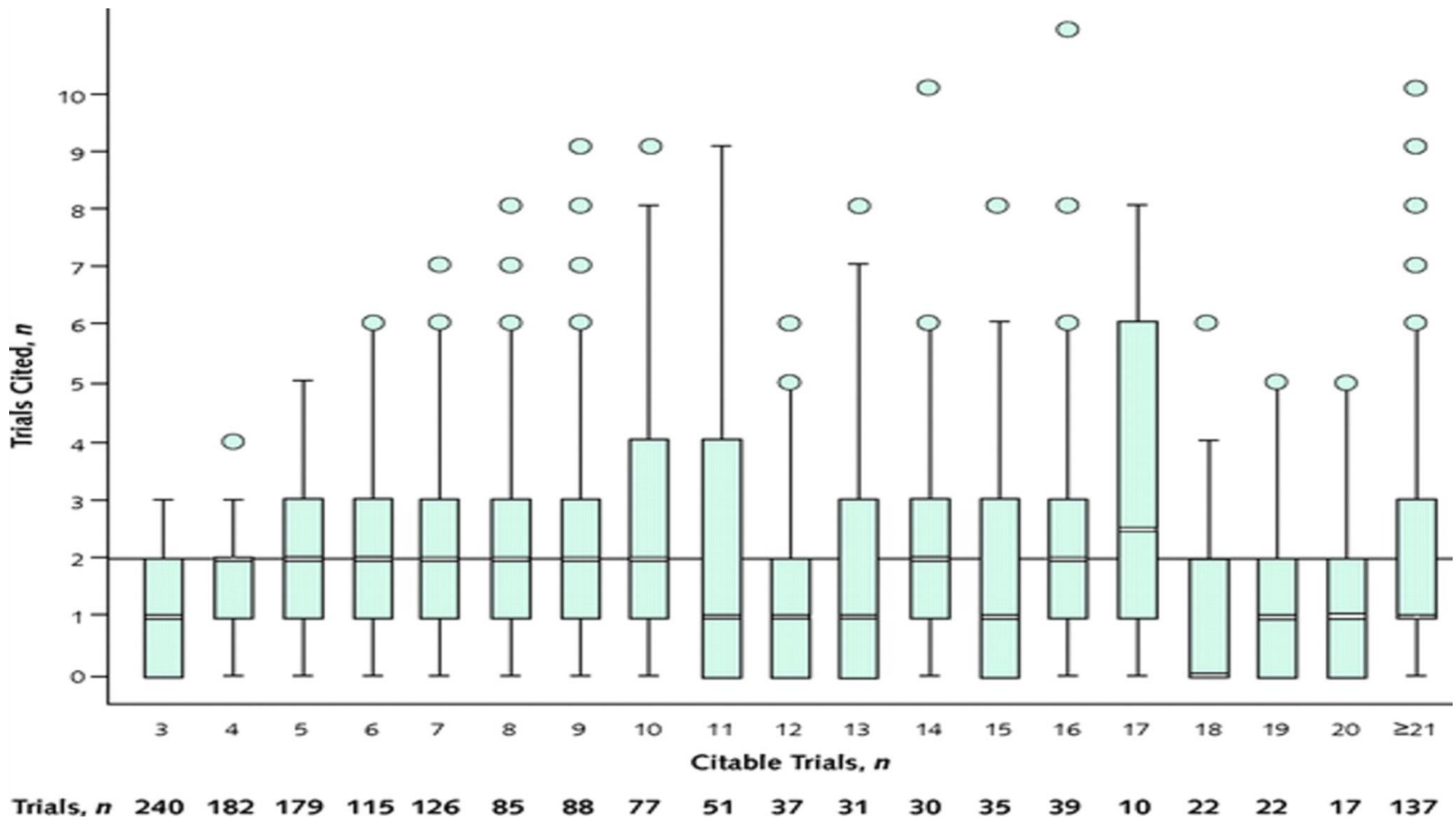
Papers from 5 high-impact medical journals

*Table 3. Summary of Results From Qualitative Review of Selected Randomized, Controlled Trials*

Variable	Current Study			Results from Clarke et al*			
	Lower Quintile PRCI (n = 15)	Upper Quintile PRCI (n = 15)	Total (n = 30)	1997 (n = 26)	2001 (n = 33)	2005 (n = 18)	2009 (n = 29)
Claimed to be the first trial assessing the question	4	1	5	6	4	5	5
Actually the first trial to assess the question	0	0	0	1	3	3	5
Contained an updated systematic review integrating new results	0	0	0	2	0	0	1
Discussed a previous review but did not attempt to integrate new results	0	1	1	4	3	5	10
No apparent systematic attempt to set new results in context of other trials	15	14	29 97%	19 73%	27 82%	10 56%	13 49%

PRCI = prior research citation index.  
\* References 1-4.

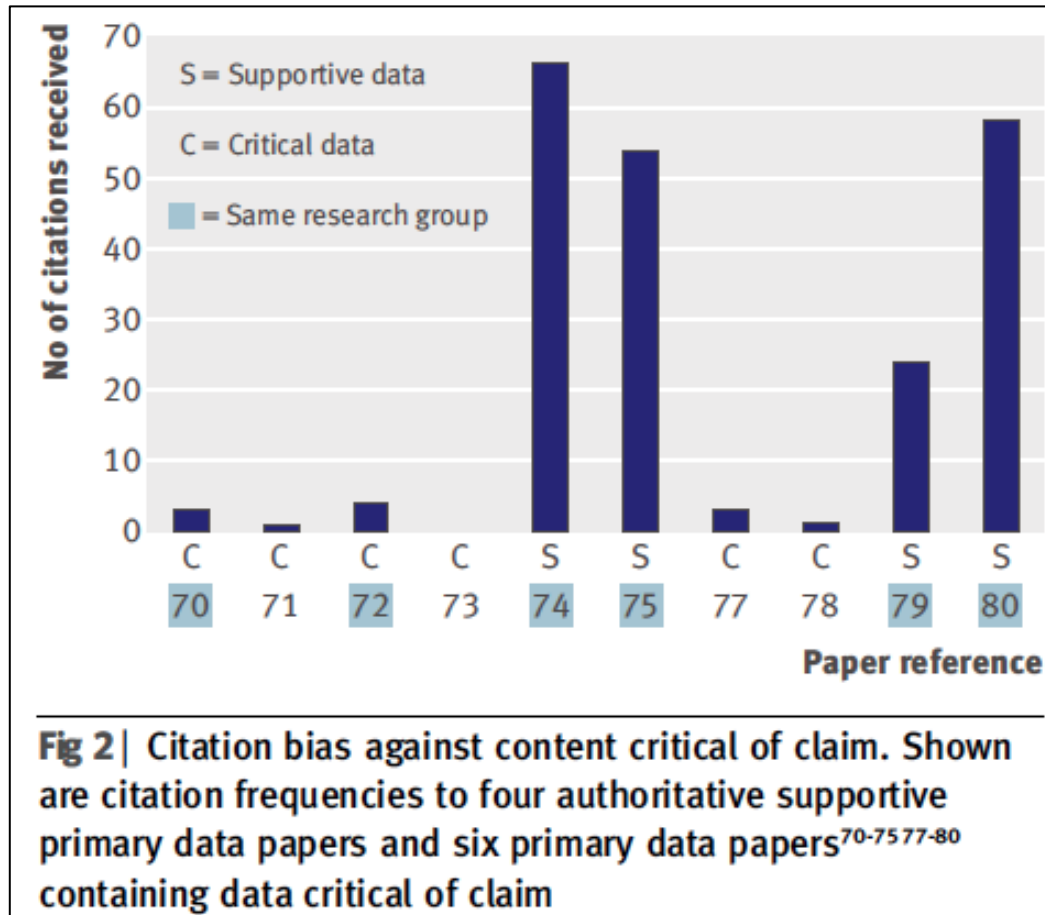
Citation of prior research in RCT reports  
(Robinson et al. 2011)



# Citation of prior research in RCT reports

(Robinson et al. 2011)

# Risk of bias from selective referencing

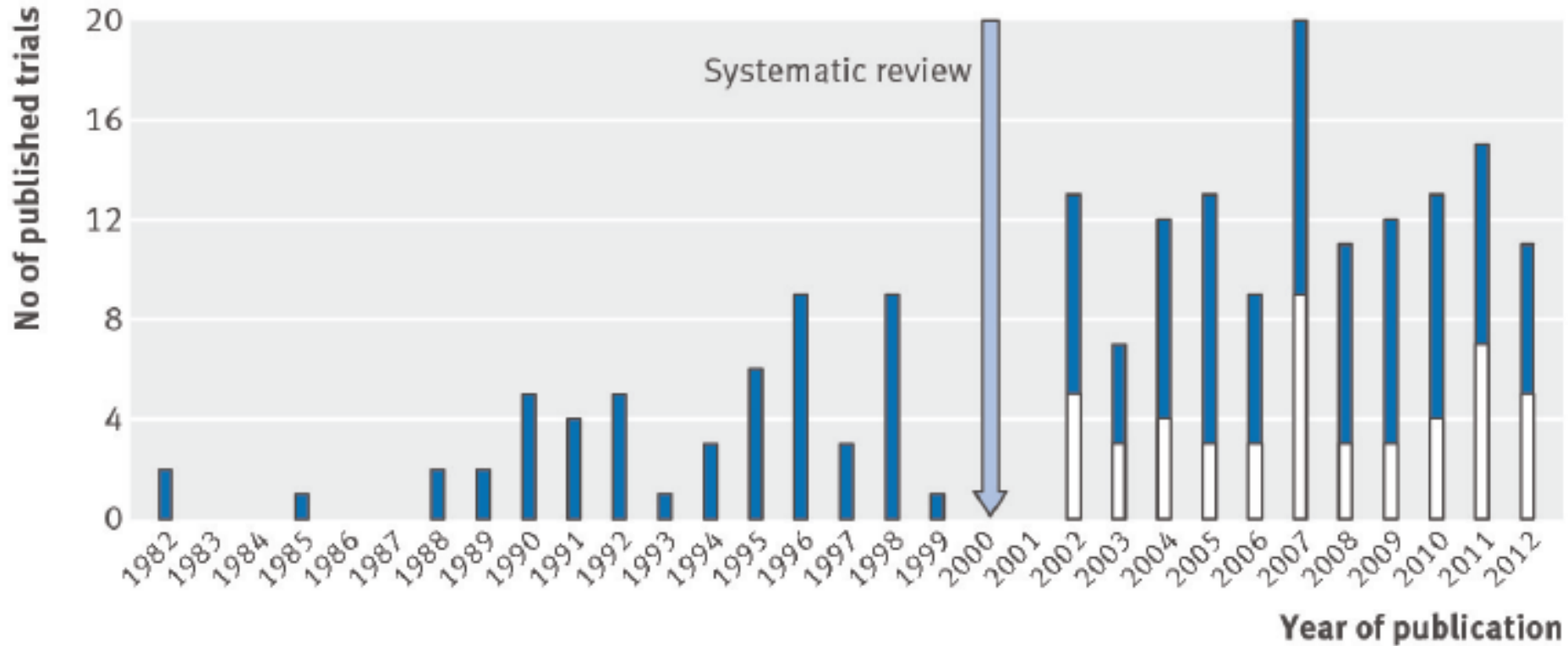


## Citation network analysis

(Greenberg et al. 2009)



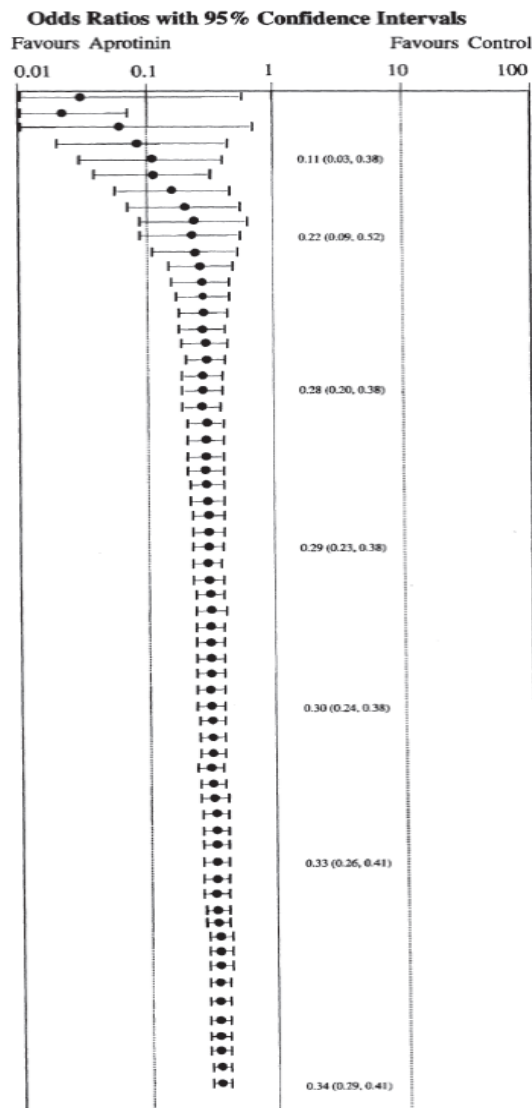
# SRs used to plan new research



Habré et al. 2014

# Risk of harm to patients from unnecessary research (and potentially from underuse of an effective treatment)

Ref #	Year of Publication	# Pts
6	Dec-87	22
7	Mar-89	99
8	Apr-89	175
9	Sep-90	219
10	Oct-90	257
11	Dec-90	296
12	Jun-91	376
13	Sep-91	396
14	Dec-91	455
15	Apr-92	486
16	Jun-92	601
17	Jun-92	2385
18	Jun-92	2445
19	Nov-92	2495
20	Dec-92	2664
21	Jan-93	2754
22	Jul-93	2795
23	Aug-93	3005
24	Dec-93	3044
25	Jan-94	3146
26a	Feb-94	3201
26b	Feb-94	3342
27	Feb-94	3396
28	Apr-94	3475
29	Jul-94	3575
30	Aug-94	3668
31	Aug-94	3724
32	Oct-94	3822
33	Oct-94	3854
34	Dec-94	3882
35	Dec-94	4047
36	Feb-95	4147
37	Feb-95	4210
38	Feb-95	4240
39	Apr-95	4338
40	Jun-95	4382
41	Jun-95	4420
42	Sep-95	4450
43	Oct-95	4548
44	Oct-95	4578
45	Oct-95	4832
46	May-96	4882
47	Jul-96	4975
48	Aug-96	5023
49	Aug-96	5135
50	Oct-96	5326
51	Dec-96	5970
52	Jan-97	6008
53	Jan-97	6060
54	Aug-97	6227
55	Sep-97	6333
56	Dec-97	6376
57a	Oct-98	6442
57b	Oct-98	6507
58	Nov-98	7303
59	Aug-99	7360
60	Sep-99	7510
61	Mar-00	7593
62	Dec-00	7677
63	Dec-00	7697
64	Jan-01	7897
65	Sep-01	7952
66	Sep-01	8011
67	Jun-02	8040



Trials testing aprotinin in cardiac surgery (Fergusson et al. 2005)



**After 1994:**  
 >2,500 patients included in new trials on aprotinin

# Issues raised include

- Size and reach of the problem
- Impact on patients and health systems from research waste and over/underused interventions and resources
- Role of research funders, regulators, publishers
- Effective and efficient solutions for all stakeholder groups
- Appropriate methods of EBR
- Awareness building and communication
- Dissemination of information and materials
- Etc etc etc

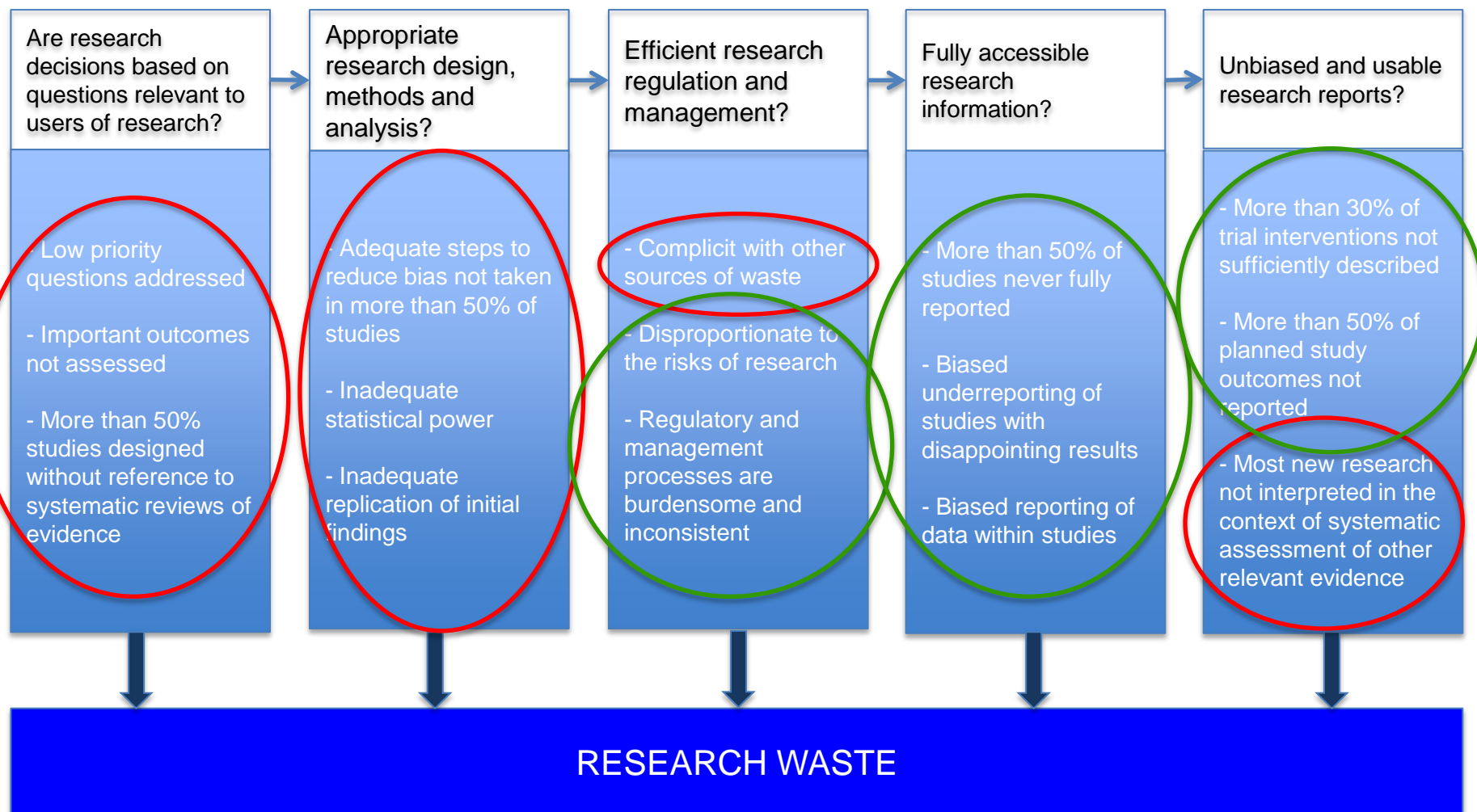
# **Evidence-Based Research**

(Robinson 2009)

Using evidence to inform research so that it is addressing questions that matter in a valid, efficient and accessible manner.

# Avoidable waste or inefficiency in biomedical research

(Macleod 2014)





## The Evidence-Based Research Network

[ebrnetwork.org](http://ebrnetwork.org)



Launched  
1-2 December 2014  
in Bergen, Norway



## The Evidence-Based Research Network

# Principles:

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**

# Actions

1. Clarifying and promoting the concept of EBR
2. Reviewing the evidence for current penetration, effects of EBR and impact from its absence
3. Creating a multidisciplinary forum for discussion and sharing of experiences
4. Developing resources including a website, social media presence, publications
5. Promoting efficient production/updating of systematic reviews, such as through facilitation of efforts to automate specific phases of the process





Sign up at [ebrnetwork.org](http://ebrnetwork.org)

Contribute to the research – call for appraisers!

Help us secure funding



# The Evidence-Based Research Network

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