Towards PRISMA 2019 Updating a list of essential reporting items for systematic reviews and meta-analyses

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Declarations

I have no actual or potential conflict of interest in relation to this presentation



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PLOS MEDICINE

Epidemiology and Reporting Characteristics of Systematic Reviews

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ABSTRACT

Background

Systematic reviews (SRs) have become increasingly popular to a wide range of stakeholders. We set out to capture a representative cross-sectional sample of published SRs and examine them in terms of a broad range of epidemiological, descriptive, and reporting characteristics, including emerging aspects not previously examined.

Methods and Findings

We searched Medline for SRs indexed during November 2004 and written in English. Citations were screened and those meeting our inclusion criteria were retained. Data were collected using a 51-item data collection form designed to assess the epidemiological and reporting details and the bias-related aspects of the reviews. The data were analyzed descriptively. In total 300 SRs were identified, suggesting a current annual publication rate of about 2,500, involving more than 33,700 separate studies including one-third of a million participants. The majority (272 [90.7%]) of SRs were reported in specialty journals. Most reviews

History of PRISMA statement

3-day meeting held in Ottawa, Canada, in June 2005

PRISMA statement and E&E published in 2009

Cited >38,000 times

Endorsed by >400 journals





Rationale for updating PRISMA

Many advances in SR methodology in last 10 years

- increasing access to new data sources
- semi-automation of SR processes
- new non-standard synthesis approaches

Opportunity to rearrange layout and rephrase items to increase clarity



Methods

Review of literature

Survey of methodologists and editors

Consensus meeting

Piloting by authors, editors and other end users

Dissemination



Reporting quality of SRs

Evaluation of 300 SRs indexed in MEDLINE in Feb 2014



RESEARCH ARTICLE

Epidemiology and Reporting Characteristics of Systematic Reviews of Biomedical Research: A Cross-Sectional Study

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							2014	2004	
Item							n/N	n/N	Risk ratio (95% CI)
				1					
SR or meta-analysis in title/abstract					-	_	254/300	150/300	1.69 (1.50, 1.91)
Eligible publication status reported				•			197/300	191/300	1.03 (0.92, 1.16)
Eligible languages reported					-		252/300	166/300	1.52 (1.36, 1.70)
Eligible study designs reported				-			237/300	211/293	1.10 (1.00, 1.20)
Both start and end years of search reported			-	 			196/300	208/300	0.94 (0.84, 1.05)
Full Boolean search strategy reported				*			134/300	127/300	1.06 (0.88, 1.27)
Risk of bias/quality of studies assessed			_	•			206/296	197/295	1.04 (0.93, 1.16)
Review flow fully reported							226/300	126/300	1.79 (1.55, 2.08)
Excluded studies fully reported					-		211/300	144/300	1.47 (1.28, 1.68)
Primary outcome specified			-	<u> </u>			136/288	143/280	0.92 (0.78, 1.09)
Meta-analysis performed					_		189/300	161/300	1.17 (1.02, 1.35)
Statistical heterogeneity assessed				-			207/300	198/290	1.01 (0.91, 1.13)
Publication bias assessed (or intent to assess)						*	130/300	68/294	1.87 (1.47, 2.39)
Harms assessed (or intent to assess)			-	 			113/164	149/199	0.92 (0.81, 1.05)
Source of funding of SR reported			_	•			191/300	178/300	1.07 (0.95, 1.22)
					<u> </u>	1			
	.5			1	1.5	2			
		Favours 2004			Favours 2014				



Reporting guidance for SRs

Selective review of 54 guidance documents

- PRISMA and its extensions
- Other reporting guidelines for SRs (e.g. MECIR)
- Tools for assessing SRs (e.g. ROBIS)
- Other methods papers

Collated 213 unique reporting items



Survey

Online survey about current and potential new PRISMA items Invited 220 individuals:

- Members of PRISMA 2009 and PRISMA-P 2015 Groups
- Leads of all PRISMA extensions
- EiCs and AEs of BMC Systematic Reviews and Research Synthesis Methodology
- Cochrane Methods Group convenors
- Cochrane Scientific Committee members
- Others



Survey

110 respondents

>66% recommended:

- Keeping 6 existing items as they are
- Modifying 15 existing items
- Including 5 of 12 potential new items

Total of 150 pages of free-text comments





PRISMA Update Group contributors

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Consensus meeting summary

Anticipate that:

- Many checklist items will undergo some tweaking
 - Use of more inclusive wording re different methods
 - Re-ordering of some items for better flow
 - Splitting of some current long items
- A small number of new items will be introduced
- Checklist will still focus on minimum to report in a SR



Next steps

Drafting/revision of updated PRISMA statement

Piloting checklist with review authors, peer reviewers, journal editors and other end users (email matthew.page@monash.edu if interested in piloting)

Dissemination in 2019 (journal publication, website updated, integration with SR software)

Development of online tools to facilitate use of the updated statement

