Delays in network meta-analysis publication: a systematic review and statistical analysis

Tonin FS[1]; Borba HH[2]; Wiens A[2]; Fernandez-Llimos F[3,4]; Pontarolo R[2]

[1]*PhD Student, Pharmaceutical Sciences, Federal University of Paraná (UFPR), Brazil*
[2]*PhD Professor, Department of Pharmacy, Federal University of Paraná (UFPR), Brazil*
[3]*PhD Professor, Department of Social Pharmacy, University of Lisboa (FFUL), Portugal*
[4]*Institute for Medicines Research, University of Lisboa, Lisbon, Portugal*

Introduction and aims

➢ Systematic reviews with network meta-analyses (NMAs) are complex techniques able to gather more evidence than pairwise meta-analyses. [1-3]

➢ The conduction, report, and publication of the most up-to-date and accurate information is paramount for evidence-based practices. [4-5]

➢ We aimed to evaluate the proportion of NMAs following recommendations for the conduction and report of results, and assess the publications delays.
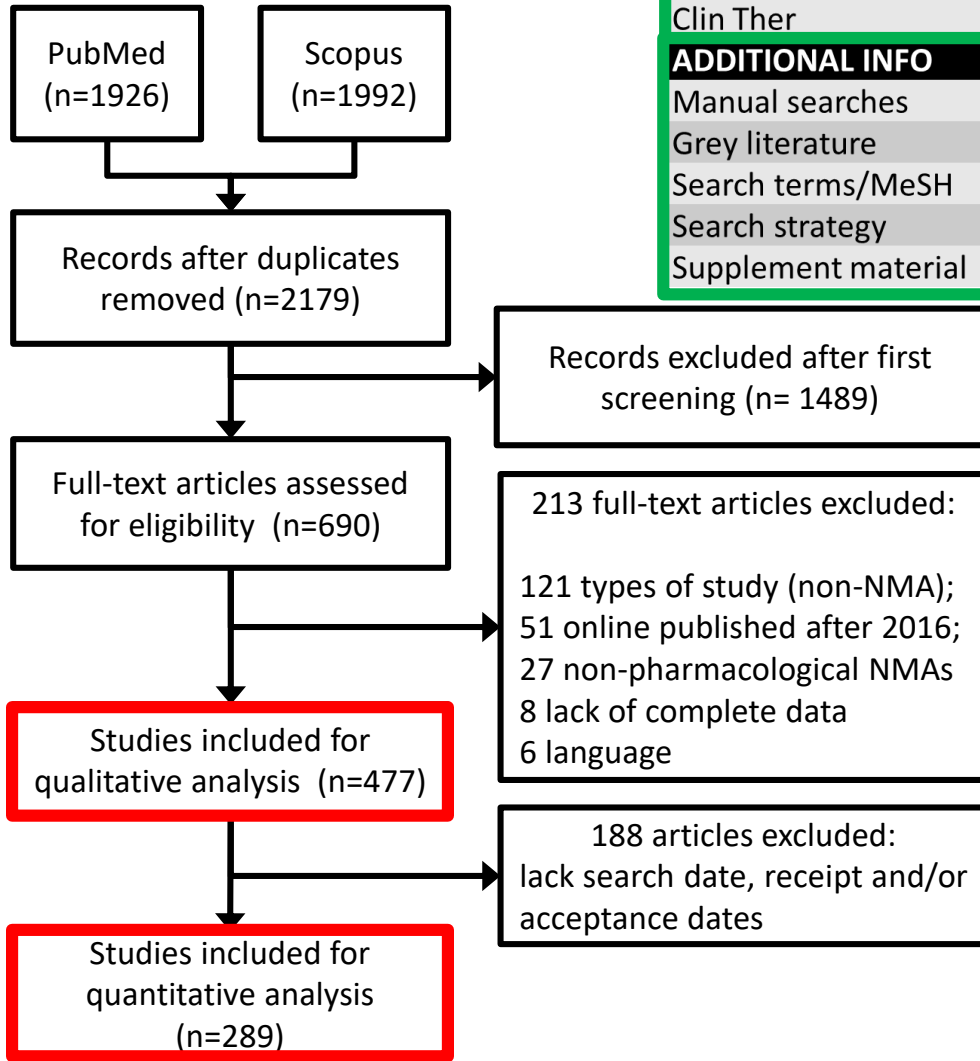
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Methods

➤ Systematic review of NMAs on drug interventions

➤ PubMed and Scopus + manual searches (25th April 2017)

➤ The characteristics of NMAs were collected by two independent reviewers:

- Details of the systematic review process

- Time from the last systematic search was compared to article's dates of:

(i) submission

(ii) acceptance

(iii) first online publication

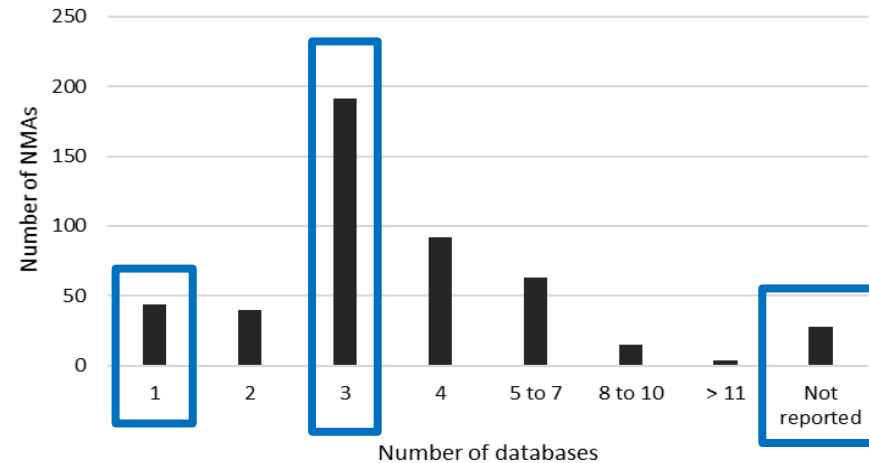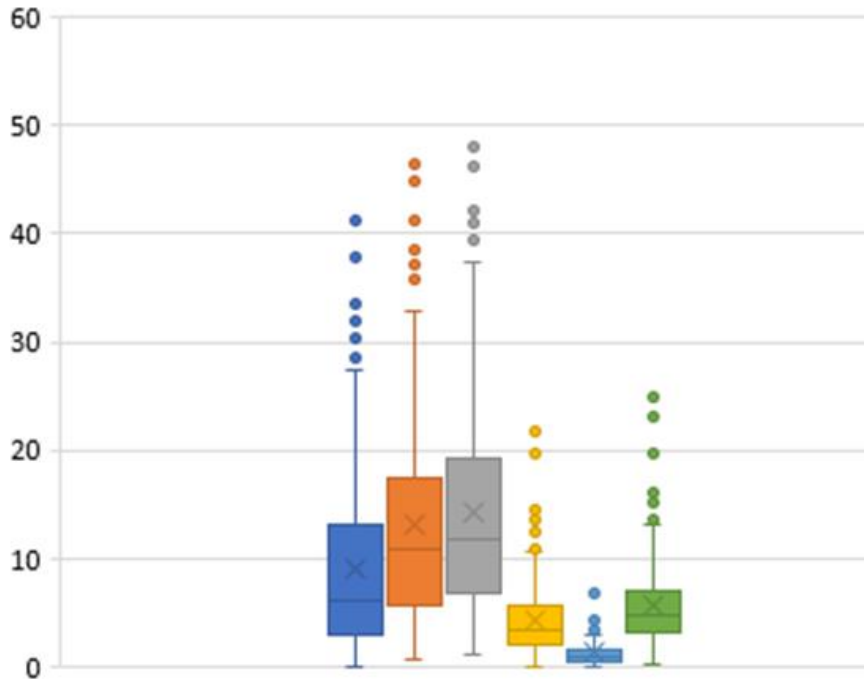- Delays in submission and publication were measured in months

Results

CHARACTERISTICS	STUDIES (%)
TOP 5 JOURNALS	
PLoS ONE	29 (6.2%)
Curr Med Res Opin	15 (3.1%)
Medicine (Baltimore)	11 (2.3%)
Oncotarget	11 (2.3%)
Clin Ther	10 (2.1%)
ADDITIONAL INFO	
Manual searches	338 (70.8%)
Grey literature	231 (48.4%)
Search terms/MeSH	268 (56.2%)
Search strategy	155 (32.5%)
Supplement material	282 (59.1%)

SYSTEMATIC SEARCH	
PubMed/MEDLINE	443 (92.9%)
Cochrane Library	375 (78.6%)
Scopus/EMBASE	372 (77.9%)
Clinicaltrials.gov	82 (17.2%)
Web of Science	54 (11.3%)
FOLLOWED GUIDELINE	
PRISMA statement	172 (36.1%)
Cochrane	59 (12.4%)
GRADE	22 (4.6%)
QUORUM	6 (1.3%)
Others	5 (1.0%)

PubMed (n=1926)

Scopus (n=1992)

Records after duplicates removed (n=2179)

Records excluded after first screening (n= 1489)

Full-text articles assessed for eligibility (n=690)

213 full-text articles excluded:

121 types of study (non-NMA);
51 online published after 2016;
27 non-pharmacological NMAs
8 lack of complete data
6 language

Studies included for qualitative analysis (n=477)

188 articles excluded:
lack search date, receipt and/or acceptance dates

Studies included for quantitative analysis (n=289)

Results

- Statistical analyses: 289 NMAs
- Least search to submission: **6 months**
- Last search to acceptance: **11 months**
- Online publication after search: **1 year**

Legend:
- Search - submission
- Search - acceptance
- Search - publication
- Submission - acceptance
- Acceptance - publication
- Submission - publication

Only 11 NMAs performed updates of the systematic search before publication

Months	Search-Submiss	Search-Accept	Search-Publicat	Submiss-Accept	Accept-Publicat	Submiss-Publicat
Median	6.1	10.9	11.8	3.5	1.0	4.7
Minim	0	0.7	1.1	0	0	0.3
Maxim	41.1	46.9	48.0	21.7	7.2	24.9
IQR	2.9 – 13.0	5.8 – 17.0	6.8 – 19.0	2.0 – 5.6	0.5 – 1.5	3.0 – 7.0

Conclusions

➢ Efforts from authors in updating the systematic search before submission are needed to reduce the time of evidence production

➢ Editors and producing agencies should ensure that guidelines and recommendations for NMAs conduction and report are strictly followed before publication

Contact:
Msc. Fernanda S. Tonin
stumpf.tonin@ufpr.br