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Appendix 1. Eligibility criteria, screening, study selection, and data abstraction

We searched MEDLINE, EMBASE and the Cochrane Database of Systematic Reviews from inception until July, 2018 for network meta-analyses (NMAs) of randomized controlled trials (RCTs). An expert librarian compiled the literature search, which was peer-reviewed by a second librarian using the Peer Review of Electronic Search Strategies (PRESS) checklist [40]. The final search strategy for the MEDLINE database can be found in our previously published reviews.(1-3)

We included NMAs that compared at least four interventions (i.e., different drugs or other medical treatments, or different schedules, doses or formulations of the same treatment) including placebo, no treatment, waiting list or other control interventions. NMAs were eligible if they had conducted a valid statistical method for indirect comparisons (e.g., adjusted indirect comparison method (4)) or NMAs (e.g., hierarchical models). Published NMAs written in English were included. We excluded studies that applied an unadjusted indirect comparison,(5) a diagnostic test accuracy NMA, a NMA in animals, a NMA of non-randomized studies. We also excluded NMAs in which the number of trials was smaller than the number of interventions. In the present study, we restricted to articles published between 2013 and 2018, for an equal timeframe before and after the PRISMA-NMA publication.(6)

After a pilot-test of the eligibility criteria on a random sample of 30 articles, two reviewers (ST, SZ, IP) independently screened titles and abstracts, and similarly for relevant full-text

(ST, SZ, IP) independently screened titles and abstracts, and similarly for relevant full-text papers. Conflicts were resolved by a third reviewer (AAV). Screening was performed using the online tool Synthesi.SR.(7)

A predefined data abstraction form was developed in REDCap.(8) Data abstraction was performed by a single reviewer (ST, SZ, IP, KMK, PA, NP, CL), and then data were checked by a second reviewer.

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Appendix Table 1. *Original* and *Modified* PRISMA-NMA items * Sub-items were not included in the *original* or *modified* PRISMA-NMA score

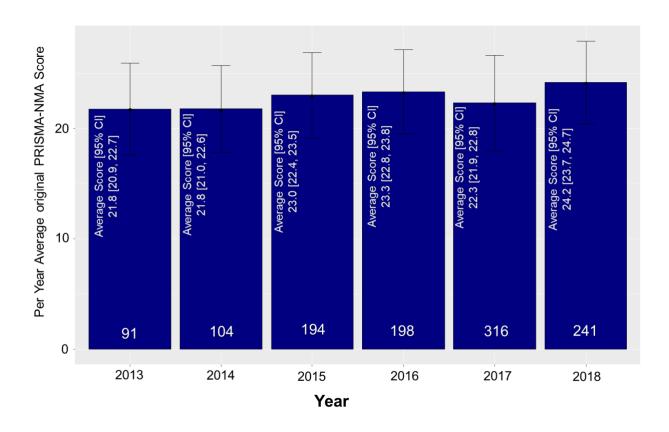
PRISMA STATEMENT Domains	not included Original PRISMA-NMA (Scored 1,if item reported-Max score 32)		Modified PRISMA- NMA (Scored 1, if ite reported-Max score 49)	
	1, if both terms	TITLE Systematic review (MP1)	1	
Title (OP1)	reported	NMA/related form of MA (MP2)	1	
		ABSTRACT		
		Structured summary (MP3)	1	
		Main objectives (MP4) Data sources (MP5)	1	
		PICO (MP6)	1	
	1, if there is a	Study appraisal (e.g., risk of bias) (MP7)	1	
	structured summary,	Synthesis methods e.g. NMA (MP8)	1	
Structured summary (OP2)	regardless the items	Number of studies and participants (MP9)	1	
	included in the	Summary estimates and their Cls/Crls (MP10)	1	
	summary	Treatment ranking (MP11)	1	
		Limitations (MP12) Conclusions and implications of findings (MP13)	1	
		Funding (MP14)	1	
		Protocol registration number with registry name (e.g., PROSPERO) (MP15)	1	
		INTRODUCTION		
Rationale (OP3)	1	Rationale for systematic review and NMA (MP16)	1	
Objectives (OP4)	1	Explicit statement of the questions being addressed (PICOS) (MP17)	1	
	4 16 16 1-1	METHODS		
Protocol and registration (OP5)	1, if the existence of protocol is reported	Existence of review protocol (MP18) Protocol can be accessed (e.g., web address or registration number available) (MP19)	1	
	protocor is reported	Protocol can be accessed (e.g., web address or registration number available) (MP19) Rationale for eligibility criteria (e.g., PICOS, length of follow-up, years considered, language,		
	1, if the eligibility	publication status) (MP20)	1	
Eligibility criteria (OP6)	criteria are reported	Description of eligible treatments used in the NMA (with justification for clustering, if any)	4	
		(MP21)	1	
Information sources (OP7)	1	Description of information sources with search dates (MP22)	1	
Search (OP8)	1	A full electronic search strategy available (MP23)	1	
Study selection (OP9)	1	Description of the study selection process (MP24)	1	
Data collection process (OP10) Data items (OP11)	1	Description of the data collection process (method) (MP25) Description of collected items (MP26)	1	
		Description of conected items (MP20) Description of methods used to explore network geometry (e.g., network plot, other methods		
Geometry of the network (OPS1)	1	to describe the evidence base) (MP27) - S1	1	
Risk of bias within individual studies (OP12)	1	Description of methods used to assess study risk of bias (MP28)	1	
	1, II the summary	Description of summary measures to be used (e.g., OR, RR, MD, SMD) (MP29)	1	
Summary measures (OP13)	measures used are	Description of treatment rankings to be used (e.g., SUCRA, P-scores) (MP30)	1	
Planned methods of analysis (OP14)	1	Description of analysis e.g., NMA method (MP31)	1	
Assessment of inconsistency (OPS2)	1	Description of method used to assess inconsistency (MP32) - S2	1	
Risk of bias across studies (OP15)	1	Description of methods used to assess bias across studies (e.g., publication bias, selective reporting, small study effects) (MP33)	1	
Additional analyses (OP16)	1	Description of additional analyses (e.g., sensitivity analysis) (MP34)	1	
		Description of analysis e.g. NMA method (Handling of multi-arm trials)		
	Subitems for item	Description of analysis e.g. NMA method (Selection of variance structure)	Subitems for "Planned	
	"Planned methods of	Description of analysis e.g. NMA method (If Bayesian analysis, selection of prior distributions	methods of analysis"*	
	analysis"*	in Bayesian analyses) Description of analysis e.g. NMA method (If Bayesian analysis, assessment of model fit)	-	
		Description of additional analyses (e.g., sensitivity analysis (Sensitivity or subgroup analyses)		
			Subitems for item	
	Subitems for item	Description of additional analyses (e.g., sensitivity analysis (Meta-regression analyses) Description of additional analyses (e.g., sensitivity analysis (Alternative formulations of the		
	Subitems for item "Additional Analyses"*	Description of additional analyses (e.g., sensitivity analysis (Alternative formulations of the treatment network). Description of additional analyses (e.g., sensitivity analysis (If Bayesian analysis, use of	Subitems for item "Additional Analyses"*	
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Appendix Table 2. List of included studies

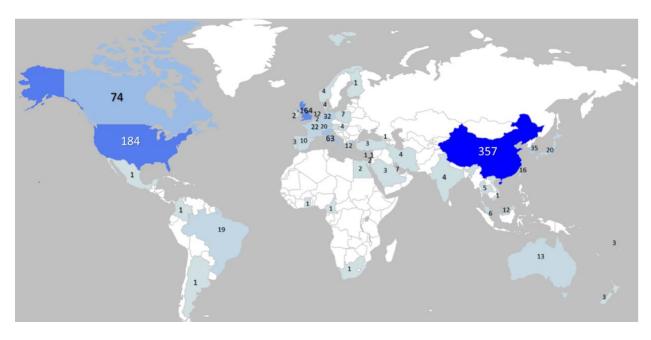
See Supplementary file 2

Appendix Figure 1. Number of systematic reviews and network meta-analyses, and perpaper average *original PRISMA-NMA* score published between 2013 and 2018.

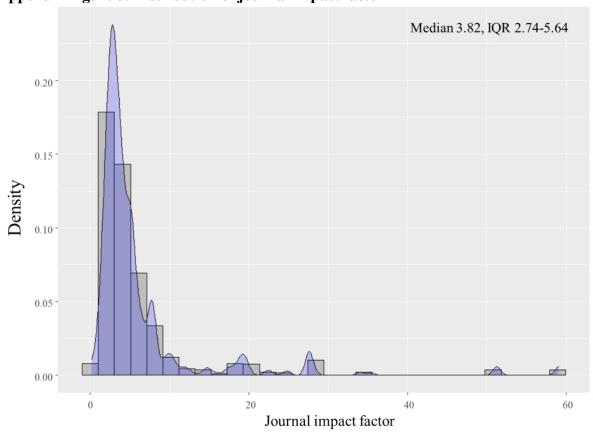
'*' denotes that the search was performed up to July 2018, and thus only 7 months of that year are reflected in this graph. Error bars parallel to the y-axis represent the uncertainty of the *original* PRISMA-NMA score.



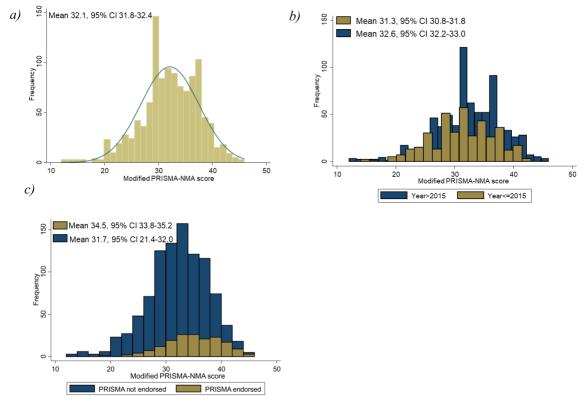
Appendix Figure 2. Geographic heat map with published NMAs between 2013 and 2018



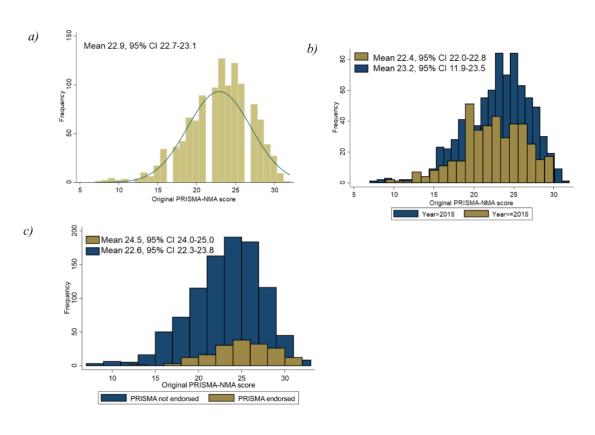
Appendix Figure 3. Distribution of journal impact factor



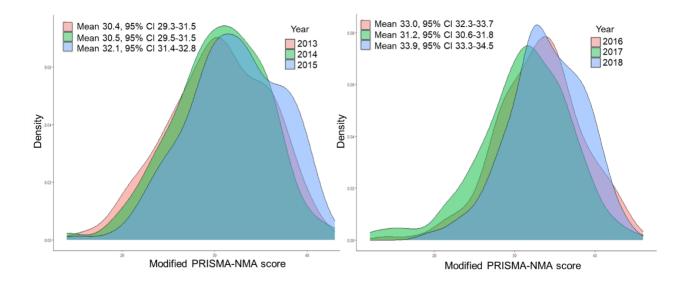
Appendix Figure 4. Distribution of *modified* PRISMA-NMA score: a) overall, b) before and after 2015, and c) per journals endorsing or not the PRISMA guidelines.



Appendix Figure 5. Distribution of *original* PRISMA-NMA score: a) overall, b) before and after 2015, and c) per journals endorsing or not the PRISMA guidelines



${\bf Appendix\ Figure\ 6.\ Distribution\ of\ } {\it modified\ PRISMA-NMA\ score\ per\ year\ of\ publication}$



Appendix Table 3. Univariable and multivariable regression using the *original* PRISMA-NMA score

I KIŞIVIA-INIVIA	Interpretation of	Coefficien							
Covariates	the coefficient	Original PRISMA- NMA Score	S1-S5 Score	Sample size					
Univariable analyses and subgroups									
Published after 2015 vs until 2015	Average increase in the score after 2015	0.69 (0.21, 1.18)	0.32 (0.14, 0.49)						
Year of publication, subgroup: only NMAs published before 2015	Average increase in the score per year	0.48 (0.10, 0.86)	0.22 (0.11, 0.33)	Before 2015: 389 After 2015: 755					
Year of publication, subgroup: only NMAs published after 2015	Average increase in the score per year	0.77 (0.28, 1.28)	0.48 (0.32, 0.64)						
	Multivariable ar	nalyses with year as a	continuous variable						
Year of publication	Average increase in the score per year	0.23 (0.09, 0.37)	0.18 (0.13, 0.23)	Year 2013 (reference group): 91 Year 2014: 104 Year 2015: 194 Year 2016: 198 Year 2017: 316 Year 2018: 241					
Treatment type	Average increase in the score if network includes pharmacological treatments	-0.49 (-1.02, 0.04)	-0.16 (-0.34, 0.02)	Pharmacological treatments: 907 Non-pharmacological treatments (reference group): 237					
Funding type	Average increase in the score if non- sponsored/publicly- sponsored	0.99 (0.38, 1.59)	0.49 (0.28, 0.7)	Non-sponsored/publicly-sponsored/Not reported: 974 Industry/Mixed sponsored (reference group): 170					
Review type	Average increase in the score if protocol is not available/reported	-3.44 (-3.92, -2.95)	-0.28 (-0.45, -0.11)	With protocol (reference group): 313 Without protocol: 831					
Impact factor	Average increase in the score per	0.06 (0.04, 0.09)	0.02 (0.01, 0.03)						

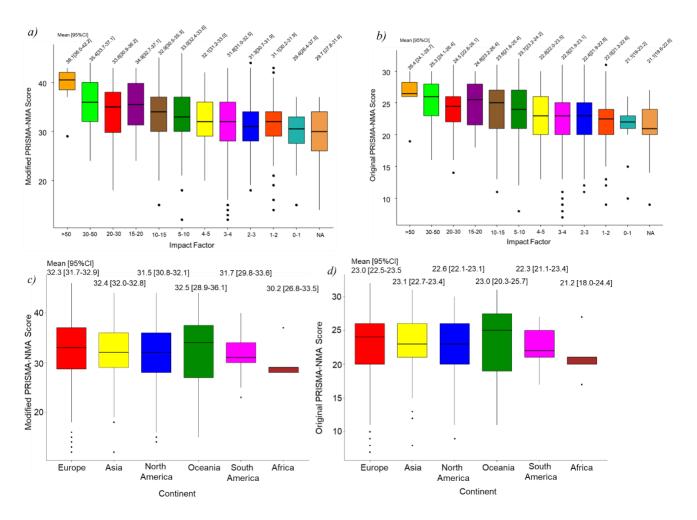
	impact factor							
	increase (1 unit)							
Multivariable analyses with year as a dichotomous variable								
Year of publication	Average increase in the score after 2015	0.46 (0.01, 0.92)	0.44 (0.28, 0.60)	Before 2015(reference group):389 After 2015:755				
Treatment type	Average increase in the score if network includes pharmacological treatments	-0.52 (-1.06, 0.00)	-0.19 (-0.37, 0.00)	Pharmacological treatments: 907 Non-pharmacological treatments (reference group): 237				
Funding type	Average increase in the score if non- sponsored/publicly- sponsored	1.01 (0.40, 1.62)	0.50 (0.29, 0.71)	Non-sponsored/publicly-sponsored/Not reported: 974 Industry/Mixed sponsored (reference group): 170				
Review type	Average increase in the score if protocol is not available/reported	-3.49 (-3.97, -3.00)	-0.31 (-0.48, -0.14)	With protocol (reference group): 313 Without protocol: 831				
Impact factor	Average increase in the score per impact factor increase (1 unit)	0.06 (0.03, 0.09)	0.02 (0.01, 0.03)					

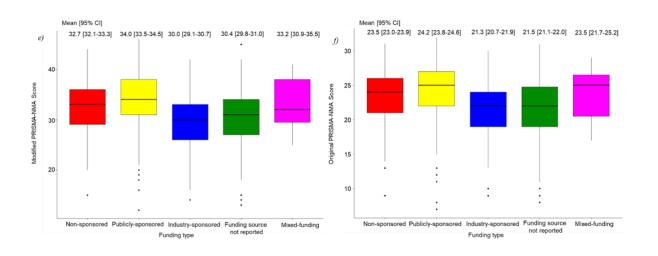
Appendix Table 4. Assessment of reporting quality per journal with impact factor >10 In bold we highlight journals that endorse the PRISMA checklist

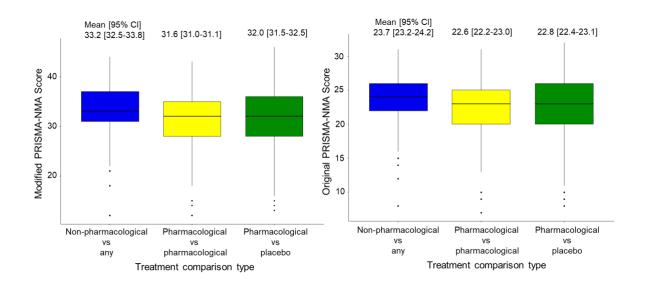
in bold we nightight journa	is mai	chaorse the	TRIBIVIT	CHECKIIST				
Journal (Impact Factor >10)	Total # of NMAs	Percentage of reported items in NMAs published <=2015 (mean)	Percentage of reported items in NMAs published >2015 (mean)	Mean Percentage Difference (95% CI)		Percentage of reported items in NMAs published >2015 (mean)	Mean Percentage Difference (95% CI)	
		Original P	RISMA-NMA	score	Modified PRISMA-NMA score			
Lancet (60.392)	8	78%	87%	9% (-5%, 23%)	76%	84%	8% (-3%, 21%)	
Jama-Journal Of The American Medical Association (45.54)	8	73%	85%	12% (6%, 19%)	67%	80%	13% (8%, 17%)	
World Psychiatry (40.595)	3	72%	83%	11%*	65%	77%	12%*	
Lancet Oncology (33.752)	2	81%	NA	NA	72%	NA	NA	
Journal of Clinical Oncology (32.956)	1	NA	56%	NA	NA	55%	NA	
Bmj (30.223)	21	79%	88%	9% (1%, 15%)	71%	82%	11% (4%, 19%)	
Lancet Diabetes & Endocrinology (25.34)	1	78%	NA	NA	76%	NA	NA	
Jama Oncology (24.799)	4	72%	66%	-6%*	65%	62%	-3%*	
Circulation (23.603)	1	75%	NA	NA	67%	NA	NA	
European Heart Journal (22.673)	3	NA	57%	NA	NA	50%	NA	
Annals Of Internal Medicine (21.317)	11	81%	85%	4% (-6%, 15%)	79%	80%	1% (-6%,8%)	
Journal Of The American College Of Cardiology (20.589)	4	64%	69%	5%*	56%	59%	3%*	
Gut (19.819)	3	NA	84%	NA	NA	76%	NA	
Annals Of Oncology (18.274)	1	NA	65%	NA	NA	67%	NA	
European Urology (17.947)	5	69%	72%	3% (-19%, 25%)	63%	64%	1% (-15%, 17%)	
Intensive Care Medicine (17.679)	4	66%	70%	4%*	61%	65%	4%*	
Jama Psychiatry (17.471)	2	NA	77%	NA	NA	74%	NA	
Gastroenterology (17.373)	5	86%	86%	0% (-12%, 11%)	76	78%	2% (-8%, 12%)	
Lancet Psychiatry (16.209)	2	NA	84%	NA	NA	85%	NA	
Lancet Hiv (14.813)	3	78%	81%	3%*	69%	76%	7%*	
Lancet Gastroenterology & Hepatology (14.789)	1	NA	75%	NA	NA	69%	NA	
Hepatology (14.679)	2	81%	84%	3%*	73%	73%	0%*	
Jama Surgery (13.625)	1	NA	91%	NA	NA	82%	NA	
Jama Neurology (13.608)	1	75%	NA	NA	65%	NA	NA	
Journal Of Thoracic Oncology (13.357)	2	50%	34%	-16%*	45%	31%	-14%*	
Jama Cardiology (12.794)	1	NA	88%	NA	NA	78%	NA	
British Journal Of Sports Medicine (12.022)	4	59%	85%	26%*	55%	78%	23%*	
European Journal Of Heart Failure (11.627)	1	53%	NA	NA	53%	NA	NA	
Jnci-Journal Of The National Cancer Institute (11.577)	4	75%	80%%	5%*	69%	71%	2%*	
Ageing Research Reviews (10.616) Plos Medicine (10.5)	1 2	NA 72%	8% 97%	NA 25*	NA 69%	78% 92%	NA 23%*	
Journal Of Allergy And Clinical Immunology (10.228)	1	66%	NA	NA	57%	NA	NA	
American Journal Of Gastroenterology (10.171)	2	NA	77%	NA	NA	67%	NA	
Annals Of Surgery (10.13)	2	66%	56%	-1%*	61%	53%	-8%*	
Clinical Cancer Research (10.107)	1	41%	NA	NA	41%	NA	NA	

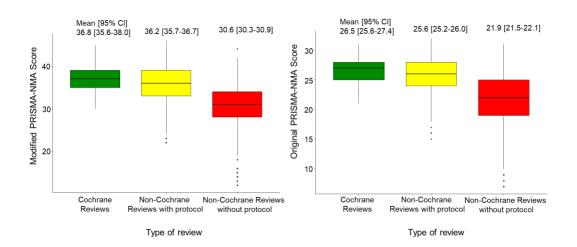
^{*} Inadequate number of studies per group to calculate a 95% confidence interval

Appendix Figure 7. PRISMA-NMA score per study characteristics

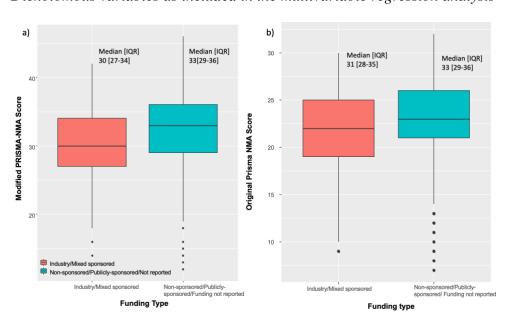


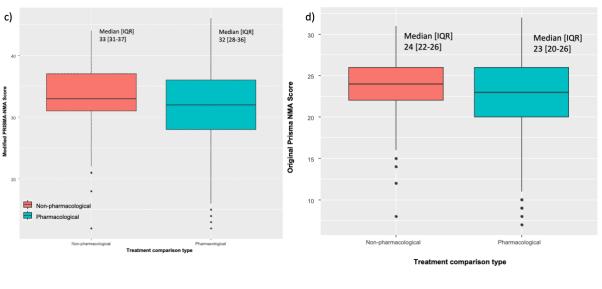


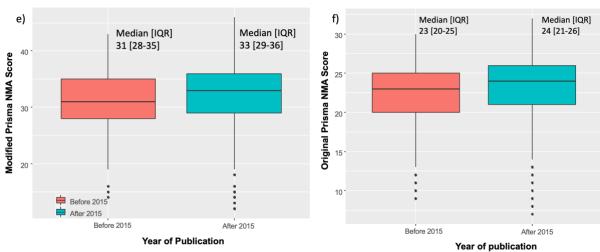


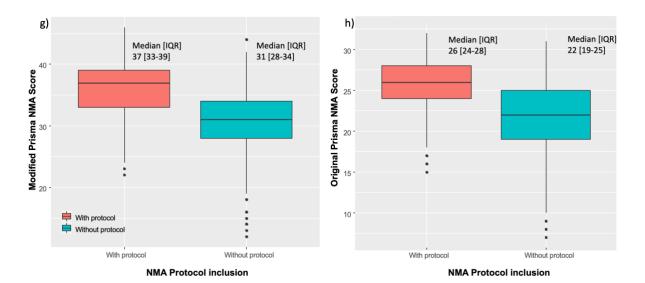


Dichotomous variables as included in the multivariable regression analysis









Appendix Table 5. Assessment of reporting of NMAs using the *modified* PRISMA-NMA per year of publication

Year of publication	2013	2014	2015	2016	2017	2018
PRISMA ITEMS	# articles (%)	# articles (%)	# articles (%)	# articles (%)	# articles (%)	# articles (%)
TITLE						
Systematic review	25 (27%)	29 (28%)	85 (44%)	83 (42%)	113 (36%)	99 (41%)
NMA/related form of MA	73 (80%)	84 (81%)	165 (85%)	174 (88%)	291 (92%)	222 (92%)
ABSTRACT						
Structured summary	83 (91%)	95 (91%)	156 (80%)	165 (83%)	247 (78%)	186 (77%)
Main objectives	89 (98%)	101 (97%)	190 (98%)	192 (97%)	299 (95%)	236 (98%)
Data sources	50 (55%)	57 (55%)	114 (59%)	120 (61%)	159 (50%)	148 (61%)
PICO	65 (71%)	93 (89%)	174 (90%)	175 (88%)	204 (65%)	215 (89%)
study appraisal (e.g., risk of bias)	12 (13%)	10 (10%)	29 (15%)	15 (8%)	31 (10%)	35 (15%)
synthesis methods (e.g. NMA)	84 (92%)	100 (96%)	182 (94%)	186 (94%)	288 (91%)	235 (98%)
Number of studies and participants	78 (86%)	90 (87%)	158 (81%)	158 (80%)	265 (84%)	214 (89%)
summary estimates and their CIs/CrIs	65 (71%)	72 (69%)	117 (60%)	122 (62%)	186 (59%)	136 (56%)
treatment ranking	22 (24%)	19 (18%)	51 (26%)	104 (53%)	115 (36%)	117 (49%)
limitations	7 (8%)	11 (11%)	32 (16%)	23 (12%)	26 (8%)	26 (11%)
conclusions and implications of findings	84 (92%)	104 (100%)	186 (96%)	192 (97%)	308 (97%)	233 (97%)
funding	9 (10%)	9 (9%)	19 (10%)	20 (10%)	9 (3%)	6 (2%)
registration number with registry name (e.g. PROSPERO)	3 (3%)	4 (4%)	12 (6%)	26 (13%)	28 (9%)	22 (9%)
INTRODUCTION						
Rationale for systematic review and NMA	85 (93%)	100 (96%)	192 (99%)	180 (91%)	297 (94%)	234 (97%)
Explicit statement of the questions being addressed (PICOS)	70 (77%)	94 (90%)	179 (92%)	185 (93%)	229 (72%)	238 (99%)
METHODS						
Existence of review protocol	15 (16%)	16 (15%)	45 (23%)	57 (29%)	68 (22%)	93 (39%)
Protocol can be accessed (e.g., Web address or registration number available)	11 (12%)	8 (8%)	30 (15%)	49 (25%)	60 (19%)	71 (29%)
rationale for eligibility criteria (e.g., PICOS, length of follow- up, years considered, language, publication status)	82 (90%)	96 (92%)	179 (92%)	187 (94%)	293 (93%)	231 (96%)
Description of eligible treatments used in the NMA (with justification for clustering, if any)	74 (81%)	82 (79%)	150 (77%)	176 (89%)	272 (86%)	199 (83%)
Description of information sources with search dates)	88 (97%)	97 (93%)	187 (96%)	191 (96%)	299 (95%)	225 (93%)
A full electronic search strategy available	36 (40%)	47 (45%)	92 (47%)	117 (59%)	150 (47%)	116 (48%)

		1			1	
Description of the study selection process	72 (79%)	79 (76%)	170 (88%)	180 (91%)	259 (82%)	200 (83%)
Description of the data	61 (67%)	68 (65%)	111 (57%)	181 (91%)	231 (73%)	183 (76%)
collection process (method)			111 (3770)	101 (9170)	231 (7370)	183 (70%)
Description of collected items)	57 (63%)	66 (63%)	136 (70%)	174 (88%)	230 (73%)	185 (77%)
Description of methods used to						
explore network geometry (e.g.,	12 (13%)	10 (10%)	41 (21%)	45 (23%)	76 (24%)	71 (29%)
network plot, other methods to describe the evidence base)					, ,	, ,
Description of methods used to						
assess study risk of bias	67 (74%)	79 (76%)	152 (78%)	160 (81%)	249 (79%)	208 (86%)
Description of summary						
measures to be used (e.g., OR,	85 (93%)	98 (94%)	183 (94%)	181 (91%)	285 (90%)	212 (88%)
RR, MD, SMD)						
Description of treatment	22 (260()	26 (250)	05 (400/)	129 (700/)	222 (70%)	105 (770/)
rankings to be used (e.g., SUCRA, P-scores)	33 (36%)	36 (35%)	95 (49%)	138 (70%)	222 (70%)	185 (77%)
Description of analysis methods						
(e.g., NMA method)	85 (93%)	99 (95%)	187 (96%)	185 (93%)	307 (97%)	235 (98%)
Description of method used to	47 (52%)	54 (52%)	133 (69%)	126 (64%)	214 (68%)	188 (78%)
assess inconsistency	47 (32%)	34 (32%)	133 (09%)	120 (04%)	214 (08%)	188 (78%)
Description of methods used to						
assess bias across studies (e.g., publication bias, selective	27 (30%)	26 (25%)	72 (37%)	59 (30%)	104 (33%)	124 (51%)
reporting, small study effects)						
Description of additional						
analyses (e.g., sensitivity	51 (56%)	61 (59%)	113 (58%)	111 (56%)	123 (39%)	138 (57%)
analysis)						
RESULTS				_		_
# of studies screened and						
included in the review, and	86 (95%)	95 (91%)	178 (92%)	183 (92%)	288 (91%)	229 (95%)
reasons for exclusion (e.g., flow diagram)					, ,	
Network plot	68 (75%)	69 (66%)	161 (83%)	168 (85%)	284 (90%)	221 (92%)
Brief overview of network	72 (79%)	73 (70%)	166 (86%)	168 (85%)		
characteristics	12 (19%)	73 (70%)	100 (80%)	108 (83%)	258 (82%)	221 (92%)
Presentation of characteristics	80 (88%)	95 (91%)	170 (88%)	185 (93%)	282 (89%)	229 (95%)
per study with citations (e.g., in		(, , , , ,			_== (== ,= ,	(,,,,,
a table)						
Presentation of risk of bias per	51 (56%)	56 (54%)	134 (69%)	134 (68%)	193 (61%)	166 (69%)
study	52 (570)	(2)((00))	101 (520)	50 (200()	125 (400/)	112 (460/)
Presentation of individual study data	52 (57%)	62 (60%)	101 (52%)	59 (30%)	125 (40%)	112 (46%)
Presentation of NMA results	88 (97%)	99 (95%)	188 (97%)	194 (98%)	301 (95%)	238 (99%)
(summary estimates and	(/-/	(22.0)	(2.7%)	(23/0)		(/)
CIs/CrIs, ranking statistics)						
Description of results from	40 (44%)	44 (42%)	111 (57%)	112 (57%)	192 (61%)	156 (65%)
Investigations of inconsistency	20 (220()	26 (250/)	62 (220/)	55 (200/)	106 (240/)	00 (410/)
Presentation of results of bias assessment across studies (e.g.,	20 (22%)	26 (25%)	63 (32%)	55 (28%)	106 (34%)	98 (41%)
funnel plot)						
Presentation of results of	44 (48%)	56 (54%)	108 (56%)	106 (54%)	126 (40%)	142 (59%)
additional analyses (e.g.,	, ,					
sensitivity analysis)						
DISCUSSION						
Summary of key findings, including strength of evidence	91 (100%)	104 (100%)	192 (99%)	196 (99%)	314 (99%)	238 (99%)
	1	I	1	I	I	1

Discussion of study limitations	85 (93%)	93 (89%)	182 (94%)	186 (94%)	301 (95%)	233 (97%)
General interpretation of results, comparison to other evidence, and implications for future research	90 (99%)	103 (99%)	169 (87%)	182 (92%)	301 (95%)	220 (91%)
FUNDING						
Sources of funding for the systematic review	71 (78%)	84 (81%)	141 (73%)	139 (70%)	216 (68%)	169 (70%)
Role of funders for the systematic review	21 (23%)	23 (22%)	57 (29%)	39 (20%)	39 (12%)	38 (16%)
Total # of articles	91	104	194	198	316	241

Abbreviations: CI, confidence interval; CrI, credible interval NMA, network meta-analysis

Appendix Figure 8. Distribution of journal impact factor in NMAs published in 2016 and 2017

