Reporting of Financial Conflicts of Interest of Pharmacological Treatment Trials in Cochrane and non-Cochrane Meta-analyses: A Cross-sectional Study

Kimberly A Turner

Department of Psychiatry

McGill University, Montreal

Submitted July 2019

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of: Master of Science – Psychiatry

TABLE OF CONTENTS

Abstract 5

Acknowledgements 11

Contributions 13

1. Introduction 14

2. Literature Review 14

2.1 Financial Conflicts of Interest in Drug Trials 14

2.2 Reporting of FCOIs in Meta-Analyses 15

3. Methods 17

3.1 Selection of Meta-analyses 17

3.1.1 Inclusion Criteria 17

3.1.2 Search Strategy 18

3.1.3 Meta-Analysis Review 18

3.2 Data Extraction 19

3.3 Statistical Analyses 21

3.3.1 Power Analysis 21

3.3.2 Analyses of Association of Meta-analysis Characteristics and Outcomes 22

4. Results ***24***

4.1 Selection of Eligible Meta-analyses **24**

4.2 Objective 1: Extent to which meta-analyses of pharmacological treatments report FCOIs from included trials **25**

4.3 Objective 2: Factors associated with reporting FCOIs from included trials in multivariable analysis **25**

4.4 Objective 3: Comparison of Cochrane Meta-Analyses published in 2017-2018 versus 2010 **26**

4.5 Tables and Figures **27**

4.5.1 Figure 1. Flow Chart of Included Meta-Analyses 27

4.5.2 Table 1. Characteristics of included meta-analyses 28

4.5.3 Tables 2. Meta-analyses reporting of declared FCOIs from included RCTs 29

5. Discussion ***30***

6. Final Conclusions and Summary ***33***

8. References ***34***

7. Appendix ***37***

7.1 Appendix A: Data Extraction Form **37**

7.2 Appendix B: Power Analysis **44**

7.3 Appendix C: Detailed Characteristics of Included Meta-Analyses **46**

7.4 Appendix D: Detailed Reporting of FCOI from included RCTs **71**

References – Appendix B and C **81**

Abstract

Background: Previous studies have found that meta-analyses often fail to report financial conflicts of interest (FCOIs) from included randomized controlled trials (RCTs). A 2011 study of 29 meta-analyses published in high-impact journals found that only 2 (7%) reported the funding sources of included trials, and none reported RCT author FCOI or industry employment. A 2012 study found that only 30% of Cochrane reviews of drug effects published in 2010 reported the funding source of some or all included randomized controlled trials (RCTs), 7% reported trial author financial conflicts of interest (FCOIs), and 7% reported trial author-industry employment. It is not known if reporting has improved since Cochrane implemented a policy to require reporting in 2012 or how Cochrane meta-analyses compare to meta-analyses published in other journals.

Objectives: The objectives were to (1) investigate the extent to which recently published meta-analyses report FCOIs from included RCTs, comparing Cochrane and non-Cochrane meta-analyses; (2) examine characteristics of meta-analyses independently associated with reporting versus not reporting; and (3) compare reporting among recently published Cochrane meta-analyses to Cochrane reviews published in 2010.

Methods: We searched the MEDLINE database via PubMed on October 19, 2018 with keywords related to meta-analyses of drug RCTs. Meta-analyses of RCTs on the efficacy/effectiveness or harm of a drug or a class of drugs were eligible for inclusion. The 250 most recently published eligible meta-analyses were included. Two reviewers extracted descriptive information about meta-analyses including funding sources, author FCOI, and whether the meta-analyses reported FCOIs from included trials, including trial funding sources, trial author-industry financial ties, and trial author-industry employment. To assess meta-analysis

characteristics associated with reporting funding sources of included trials, a multivariable regression analysis evaluated factors associated with reporting of funding of included trials.

Results: Overall, 111 (44%) of the 250 included meta-analyses published in 2017-2018 reported funding sources for some or all included trials, including 90 of 107 (84%) Cochrane meta-analyses and 21 of 143 (15%) non-Cochrane meta-analyses, a difference of 69% (95% confidence interval [CI], 59% to 77%). In total, 49 meta-analyses (20%) reported author-industry financial ties for some or all included trials, including 47 of 107 (44%) Cochrane meta-analyses versus 2 of 143 (1%) non-Cochrane meta-analyses, a difference of 43% (95% CI, 33% to 52%). For author-industry employment from included RCTs, only 19 (8%) of included meta-analyses fully or partially reported, including 18 (17%) Cochrane reviews and 1 (1%) non-Cochrane meta-analysis, a difference of 16% (95% CI, 9% to 24%). Reporting of funding sources of included RCTs among Cochrane reviews has improved by 54% (95% CI, 42% to 63%) since 2010. Reporting among Cochrane reviews has also improved since 2010 by 37% (95% CI, 26% to 47%) for author-industry financial ties of included RCTs and by 10% (95% CI, 2% to 19%) for author industry-employment of included RCTs. In the multivariable analysis, the odds ratios for reporting trial funding for all classifications of journal type and impact factor were $\leq$ 0.11 compared to Cochrane meta-analyses.

Conclusions: In 2012, Cochrane implemented a policy that required reporting of trial funding sources and FCOIs of authors for all RCTs included in Cochrane reviews. Since then, there has been a substantial improvement in the reporting of FCOIs of included RCTs among Cochrane meta-analyses. Reporting in non-Cochrane meta-analyses is substantially lower. Implementation and enforcement of reporting policies can influence reporting, and journals

should adopt and enforce requirements to report funding of included trials in meta-analyses that will be included in the forthcoming updated PRISMA statement.

Résumé

Contexte : Des études antérieures ont révélé que les méta-analyses omettent souvent de signaler les conflits d'intérêts (CI) financiers dans les essais contrôlés randomisés (ECR). Une étude de 2011 portant sur 29 méta-analyses publiées dans des revues à fort impact a indiqué que seulement 2 (7%) d'entre-elles ont déclaré les sources de financement des essais inclus, et qu'aucune n'a déclaré les CI financiers ou l'emploi des auteurs dans l'industrie des ECR inclus. Une étude réalisée en 2012 a révélé que seulement 30 % des synthèses Cochrane publiées en 2010 sur les effets des médicaments ont indiqué les sources de financement d'une partie ou de la totalité des ECR inclus, 7 % ont indiqué les liens entre auteur(s) et industrie, et 7 % ont indiqué l'emploi des auteurs dans l'industrie. On ignore si la déclaration des CI financiers s'est améliorée depuis que Cochrane a mis en œuvre une politique exigeant la déclaration de ceux-ci en 2012, et comment les méta-analyses Cochrane se comparent aux méta-analyses publiées dans d'autres revues.

Objectifs : Les objectifs étaient (1) d'examiner dans quelle mesure les méta-analyses publiées récemment indiquent les CI financiers dans les ECR inclus, en comparant les méta-analyses Cochrane et les méta-analyses non-Cochrane ; (2) d'examiner les caractéristiques des méta-analyses associées de façon indépendante à la déclaration ou à l'absence de déclaration des CI financiers ; et (3) de comparer la déclaration des CI financiers dans les méta-analyses Cochrane publiées récemment à la déclaration des CI financiers dans les synthèses Cochrane publiées en 2010.

Méthodes : Nous avons effectué une recherche le 19 octobre 2018 dans la base de données MEDLINE via PubMed à l'aide de mots clés liés aux méta-analyses d'ECR sur des médicaments. Les méta-analyses d'ECR sur l'efficacité, l'efficience ou les effets nocifs d'un médicament ou d'une

classe de médicaments étaient admissibles. Les 250 plus récentes méta-analyses admissibles publiées ont été incluses. Deux examinateurs ont extrait des renseignements descriptifs sur les méta-analyses, y compris les sources de financement et les CI liés aux auteurs, et ont cherché si les méta-analyses indiquaient les CI liés aux essais inclus, y compris les sources de financement, les liens financiers entre auteur(s) et industrie, et l'emploi des auteurs dans l'industrie. Pour évaluer les caractéristiques des méta-analyses associées à la déclaration des sources de financement des essais inclus, une analyse de régression multivariée a évalué les facteurs associés à la déclaration du financement des essais inclus.

Résultats : Dans l'ensemble, 111 (44 %) des 250 méta-analyses incluses publiées entre 2017 et 2018 ont déclaré les sources de financement pour une partie ou la totalité des essais inclus, y compris 90 des 107 (84 %) méta-analyses Cochrane et 21 des 143 (15 %) méta-analyses non-Cochrane, une différence de 69 % (intervalle de confiance [IC] de 95 %, 59 % à 77 %). Au total, 49 méta-analyses (20 %) ont indiqué les liens financiers entre auteur(s) et industrie pour une partie ou la totalité des essais inclus, y compris 47 des 107 (44 %) méta-analyses Cochrane contre 2 des 143 (1 %) méta-analyses non-Cochrane, soit une différence de 43 % (IC 95 %, 33 % à 52 %). Seulement 19 (8 %) des méta-analyses incluses ont indiqué l'emploi des auteurs dans l'industrie pour une partie ou la totalité des ECR inclus, y compris 18 (17 %) synthèses Cochrane et une (1 %) méta-analyse non-Cochrane, une différence de 16 % (IC 95 %, 9 % à 24 %). La déclaration des sources de financement des ECR inclus dans les synthèses Cochrane s'est améliorée de 54 % (IC 95 %, 42 % à 63 %) depuis 2010. La déclaration des liens financiers entre auteur(s) et industrie des ECR inclus dans les synthèses Cochrane s’est également améliorée depuis 2010 de 37 % (IC 95 %, 26 % à 47 %) et de 10 % (IC 95 %, 2 % à 19 %) pour l'emploi des auteurs dans l'industrie. Dans l'analyse multivariée, le rapport des cotes (odds ratio) pour la déclaration du financement des

essais cliniques pour toutes les classifications du type de revue et du facteur d'impact étaient ≤ 0.11 comparativement aux méta-analyses Cochrane.

Conclusions : En 2012, Cochrane a mise en œuvre une politique qui exige la déclaration des sources de financement et des CI des auteurs dans tous les ECR inclus dans les synthèses Cochrane. Depuis, il y a eu une amélioration substantielle dans la déclaration des CI financiers des ECR inclus dans les méta-analyses Cochrane. La déclaration dans les méta-analyses non-Cochrane est considérablement plus faible. La mise en œuvre et l'imposition des politiques de déclaration peuvent influer sur la déclaration, et les revues devraient adopter et imposer les requis de déclaration des sources de financement des essais inclus dans les méta-analyses qui seront compris dans la prochaine mise à jour des lignes directrices PRISMA.

Acknowledgements

First, I would like to extend my gratitude to my supervisor, Dr. Brett Thombs. Dr. Thombs has provided me with invaluable mentorship over the past three years, both during my time working for him as research assistant and as a master's student. Working with him has been a truly extraordinary experience. He has instilled in me the highest standards for scientific inquiry and has emphasized the importance of transparency and integrity in research. I would like to thank him for the countless learning opportunities that he has provided me. I would not be where I am without his guidance and mentorship, which I believe directly contributed to my acceptance to a clinical psychology doctoral program.

I would like to thank the members of my thesis advisory committee, Dr. Ian Shrier, Dr. Jonathan Kimmelman, and Dr. Andrea Benedetti, who provided me with valuable new perspectives and insight throughout this project. In particular, I would like to thank Dr. Benedetti for her contributions to developing the plan for our statistical analyses

I would like to thank my co-authors Andrea Carboni-Jiménez, Carla Benea, Katharine Elder, Brooke Levis, Jill Boruff, and Drs. Michelle Roseman, Lisa A. Bero, Joel Lexchin, Erick H. Turner, Andrea Benedetti and Brett D. Thombs for their collaboration and contributions to the manuscripts Additionally, I would like to further acknowledge the work of Brooke Levis in assisting with planning and conducting the statistical analyses, and the work of Katharine Elder and Carla Benea in assisting with title/abstract and full-text review. Finally, I want to extend my sincerest gratitude to Andrea Carboni Jiménez who assisted me in meticulously extracting and validating data from all 250 included meta-analyses.

I want to acknowledge funding support from a Fonds de recherche de Québec - Santé (FRQS) Master's Training Award. I would like to thank the rest of the members of our research

team for promoting an open and positive learning environment and Marie-Eve Carrier and Dr. Linda Kwakkenbos for their mentorship. Lastly, I would also like to thank the external reviewer who has kindly agreed to take the time to provide me with feedback.

Contributions

Kimberly A. Turner (Primary author): Study concept and design; acquisition of data; analysis and interpretation of data; statistical analysis; drafting of manuscript and critical revision.

Andrea Carboni Jiménez: Acquisition of data.

Carla Benea: Acquisition of data

Katharine Elder: Acquisition of data

Brooke Levis: Analysis and interpretation of data.

Jill Boruff: Design of search strategy.

Michelle Roseman: Study concept and design; critical revision of protocol.

Lisa A. Bero: Study concept and design; critical revision of protocol.

Joel Lexchin: Study concept and design; critical revision of protocol.

Erick H. Turner: Study concept and design; critical revision of protocol.

Andrea Benedetti: Study concept and design; analysis and interpretation of data.

Brett D. Thombs (Corresponding author): Study concept and design; acquisition of data; analysis and interpretation of data; statistical analysis; drafting of manuscript and critical revision; final approval of manuscript; study supervision.

1. Introduction

Financial conflicts of interest (FCOIs) are an important source of bias in health research.[1-7] FCOIs are present in any situation where a secondary financial interest has the potential to influence or bias input or decisions on a stated primary interest, such as the evaluation of the effectiveness of a drug.[8] In clinical trials, FCOIs have the potential to bias findings by influencing the questions investigated, the trial design, the way analyses are conducted, whether results are published,[2, 3, 5] and the outcomes that are included in trial reports.[1, 4, 9]

Previous studies have shown that systematic reviews and meta-analyses on the effects of pharmacological interventions often fail to report FCOIs from included randomized controlled trials (RCTs).[10, 11] The present study examined current reporting practices in a large sample of recently published meta-analyses, including factors associated with whether meta-analysis authors report financial FCOIs for included RCTs. The objectives were (1) to investigate the extent to which meta-analyses of pharmacological treatments report FCOIs from funding sources, author-industry financial ties, and author-industry employment from included trials, comparing Cochrane reviews and non-Cochrane reviews (2) to examine characteristics of meta-analyses that are independently associated with reporting versus not reporting FCOIs from included RCTs, including Cochrane versus non-Cochrane status; and (3) to compare reporting among recently published Cochrane reviews to reporting from Cochrane reviews published in 2010, as documented in a previous study.[11]

2. Literature Review

2.1 Financial Conflicts of Interest in Drug Trials

FCOIs are present in most drug trials[10] and can introduce bias by influencing the choice of specific research questions, how a trial is designed, the choice of drug dosages and comparators, how analyses are conducted, the interpretation of findings, which outcomes are reported, and whether trial results are published at all.[1-5,9] Drug trials funded by industry are approximately 30% more likely to report favourable efficacy findings than drug trials not funded by industry.[7] Furthermore, drug trials with principal investigators who have FCOIs have higher odds of reporting favourable outcomes than trials with principal investigators with no FCOI, even controlling for trial funding sources.[6]

2.2 Reporting of FCOIs in Meta-Analyses

Systematic reviews and meta-analyses are cited more than any other study design[12] and are prioritized in the development of clinical practice guidelines and in setting future research directions.[8, 13, 14] Because of this, it is particularly important that potential sources of bias in these types of studies are reported as completely and transparently as possible.

A 2011 study examined 29 meta-analyses on the effects of drug interventions, all published in 2009 in high-impact medical journals, and found that only 2 reported the funding sources of included drug trials and that none of the meta-analyses reported author-industry financial ties or industry employment by authors of included RCTs.[10] A second study, published in 2012, found that only 46 of 151 (30%) Cochrane reviews of drug trials published in 2010 reported information on the funding of some or all included trials, with 30 (20%) reporting information for each included trial and an additional 16 (11%) reporting for some, but not all, included trials.[11] Only 11 (7%) Cochrane reviews reported information on author-industry financial ties from at least some included trials, and only 2 (1%) fully reported the information for each

included trial. Ten reviews (7%) reported partial information on author-industry employment from included trials, and none reported it fully.

A recent study replicated the methods of the earlier study of meta-analyses published in high-impact journals, using meta-analyses published in 2017-2018, and found that of 29 meta-analyses, 13 (45%) reported funding sources for some or all included RCTs, suggesting substantial improvement since 2009-2010.[15] Funding sources for some or all included RCTs were reported in all 3 (100%) Cochrane meta-analyses that were examined and 7 of 11 (64%) meta-analyses from high-impact general medicine journals, but only 3 of 15 (20%) meta-analyses published in high-impact specialty medicine journals.[15] Author-industry financial ties or industry employment by authors of included RCTs were only reported in 2 of the 29 meta-analyses (7%).[15]

In 2012, following the 2011 publication of the Roseman et al. study on Cochrane reviews,[11] the Cochrane Collaboration began to require that funding sources of each included trial and FCOIs of the primary researchers of included trials be provided in the 'Characteristics of Included Studies' table.[16-18] The Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement, however, which guides authors in reporting systematic reviews and meta-analyses, has not been updated since its publication in 2010,[19, 20] and it does not address the reporting of trial funding and author-industry financial ties from included trials.

Both previous studies on the reporting of FCOIs from included trials in meta-analyses of drug effects included publications from only high-impact journals or from Cochrane reviews, which are known for their rigor.[21-23] It is not known to what extent FCOIs from drug trials included in meta-analyses are reported in meta-analyses more generally. Furthermore, previous

studies did not examine characteristics of meta-analyses that may be associated with reporting FCOIs of included trials.

3. Methods

The methods for the present study, including inclusion criteria, were based on a previous study of reporting of FCOIs from trials included in Cochrane reviews.[11] A study protocol was developed prior to initiating the study and was published on the Open Science Framework (https://osf.io/njk5w/).

3.1 Selection of Meta-analyses

3.1.1 Inclusion Criteria

Meta-analyses in any language were eligible if they (1) included a documented search of at least one database, (2) statistically combined results from ≥ 2 RCTs, and (3) evaluated the efficacy/effectiveness or harm of a drug or class of drug against an alternative treatment (e.g., placebo, alternative drug, usual care, non-pharmacological treatments) or no treatment. Meta-analyses that only assessed different methods of administration, dosages, or dosage schedules of the same drug were excluded. Drugs were defined broadly to include biologics and vaccines, but not nutritional supplements (e.g., vitamins) or medical devices without a drug component. Meta-analyses that investigated a combination of pharmacological and non-pharmacological interventions (e.g., psychotherapy) or interventions which may or may not involve a drug (e.g., amnioinfusion) were included if a study group was exclusively given a drug intervention or if the meta-analysis assessed the addition of a drug to a treatment received by both intervention and control groups. Interventions were classified as having a drug component if any form of the

active ingredient (e.g., dosage, route, strength, compound) was listed as an approved or discontinued brand name, generic drug or therapeutic biological product by the US Food and Drug Administration (FDA) as listed in the Drugs@FDA database.[24] If an agent was not listed in the Drugs@FDA database but was classified by the FDA as a non-drug (e.g. food additive, supplement) then it was not considered a drug. However, if the agent was not regulated as a drug or listed as a non-drug by the FDA, drug status was determined based on consensus among investigators using publicly available sources that provided information on a particular agent.

3.1.2 Search Strategy

To obtain our sample, we searched the MEDLINE database via PubMed on October 19, 2018 using the following search strategy:

((((("Randomized Controlled Trials as Topic"[Mesh] or randomized control trial [tiab] or randomized controled trial [tiab] OR randomized controlled trial [tiab] or randomized control trials [tiab] OR randomized controled trials [tiab] OR Randomized controlled trials [tiab] or randomised control trial [tiab] or randomised controled trial [tiab] OR randomised controlled trial [tiab] or randomised control trials [tiab] OR randomised controled trials [tiab] OR Randomised controlled trials [tiab]) AND ("Therapeutic Uses"[Mesh] OR "Vaccines"[Mesh]) AND ("Meta-Analysis" [Publication Type] or meta analysis [tiab]) AND (systematic review [tiab] OR search [tiab] or searched [tiab] or MEDLINE [tiab] OR PubMed [tiab]))))

3.1.3 Meta-Analysis Review

Citations were uploaded into the systematic review software DistillerSR, which was used to code and track results. A liberal accelerated approach was used to screen for eligibility.[25] First,

two investigators independently evaluated titles and abstracts for potential eligibility. Articles deemed potentially eligible by either investigator were included in the full-text review. Next, two investigators independently conducted full-text reviews. Disagreements between investigators were resolved through consensus, with a third investigator consulted as necessary. We sought to identify the most recently published meta-analyses in order to reflect current reporting practices. Thus, prior to reviewing, citations were organized by PubMed reference identification numbers with the most recent first, and the title and abstract and full-text reviews were conducted until we obtained our desired number of included meta-analyses based on our power analysis.

3.2 Data Extraction

For each eligible meta-analysis, using DistillerSR, one reviewer initially extracted all data, and a second reviewer validated all extracted data using the DistillerSR Quality Control function. Discrepancies were resolved by consensus and consultation with a third investigator, if needed.

For each included meta-analysis, reviewers extracted first author last name; year of publication; journal name; Clarivate Analytics 2017 journal impact factor; journal speciality area based on Clarivate Analytics classification; whether it was a Cochrane review; and whether the meta-analysis referenced a published protocol or contained a PROSPERO registration number. For registration, if there was not a registration number, we searched the PROSPERO website (https://www.crd.york.ac.uk/PROSPERO/) using key terms from the published article, then attempted to match the principal investigator, funding source, intervention, non-intervention comparator group, and design from the article to the registrations obtained in the search.

To (1) extract meta-analysis funding source, meta-analysis author-industry financial ties, and meta-analysis author-industry employment and (2) determine whether or not FCOIs from included trials, including trial funding sources, trial author-industry financial ties, and trial

author-industry employment, were reported and, if so, where they were reported, reviewers examined all text, tables, figures, appendices, disclosure statements, and acknowledgements from each meta-analysis and any online supplemental material, published with the manuscript or linked to the manuscript. Funding sources for meta-analyses were classified as (1) non-industry (e.g. public granting agency, private not-for-profit granting agency), (2) pharmaceutical industry, (3) combined pharmaceutical industry and non-industry, (4) no funding or (5) not reported. Funding by not-for-profit organizations sponsored entirely by industry were coded as industry. Financial ties of meta-analysis authors to industry were defined per the International Committee of Medical Journal Editors Uniform Disclosure Form for Potential Conflicts of Interest[26] and included current or former board membership, current or former consultancy, current or former industry employment, expert testimony, industry grants (issued or pending), payment for lectures including service on speakers bureaus, payment for manuscript preparation, patents (planned, pending, or issued), royalties, payment for development of educational presentations, stock or stock options, travel reimbursement, or other relationships with industry, as disclosed in the review. Of these, we specifically coded if industry employees were part of the author group. If a meta-analysis did not contain a disclosure statement, meta-analysis author-industry financial ties were coded as not reported.

For each meta-analysis, we also recorded whether information regarding FCOIs from included trials were reported, including: (1) trial funding sources, (2) trial author-industry financial ties, and (3) trial author-industry employment. For each of these types of FCOIs from included trials, separately, reviews were coded as reporting (1) fully, if information was reported for all included trials; (2) partially, if information was reported for some, but not all, included trials; or (3) not reporting, if FCOI information was not reported for any included trials. Meta-

analyses that may have included data from pharmaceutical industry databases or noted that trial drugs were supplied by the manufacturers for certain trials, but that did not make any explicit statement of trial funding sources, were coded as not reporting. For meta-analyses that reported information on FCOIs from included trials, either fully or partially, we recorded where in the meta-analysis the information was reported. Specifically, we recorded whether the information was reported in the main text or an online appendix, in the context of a risk of bias assessment (text, figure or table) or outside of the context of a risk of bias assessment, including the main text, other in the main document (e.g., characteristics of studies table, other table, footnote of a table), the abstract, or a lay summary. See Appendix A for the full data extraction form.

3.3 Statistical Analyses

3.3.1 Power Analysis

To determine the number of meta-analyses to target and, thus, the search period for our study, we first calculated the number of included meta-analyses that would be needed for 80% power to find a statistically significant difference if there were a 20% difference in reporting or not reporting FCOI based on meta-analysis characteristics, with $\alpha = 0.05$. We varied the rates of reporting from 10% versus 30% to 70% versus 90% and considered scenarios where the proportions of the meta-analysis characteristic (e.g., high impact journals versus low impact journals) were 30% versus 70%, 40% versus 60% or 50% versus 50%. For a two-tailed binomial test with $\alpha = 0.05$, the maximum number of included meta-analyses needed in any of these scenarios was 239. Because the consequence of overpowering the study was additional labour and not risk to human participants, we rounded this number up slightly to 250 meta-analyses. See Appendix B.

3.3.2 Analyses of Association of Meta-analysis Characteristics and Outcomes

We presented characteristics of included meta-analyses descriptively, including funding and FCOIs. We determined the proportion of meta-analyses that reported trial funding source, author financial ties, and author-industry employment of included trials for (1) all included trials, (2) some, but not all, included trials, and (3) no included trials, along with 95% confidence intervals (CIs). We compared the difference between the proportion of Cochrane reviews published in 2017-2018 that reported study funding, author financial ties, and author employment from included RCTs to non-Cochrane meta-analyses and to Cochrane reviews published in 2010 and calculated 95% CIs for these differences.[27]

To assess the relationship between meta-analysis characteristics and any reporting of funding sources for some or all included studies, we fit unadjusted and adjusted logistic regressions using the glm function in R (R version 3.2.3; RStudio Version 1.0.136). The predictor variables that were considered in the analyses were: (1) category of journal that published the meta-analysis (Cochrane, medical specialty, general medicine, multidisciplinary), (2) impact factor of the journal in which the meta-analysis was published; and (3) whether any FCOI was reported by the meta-analysis authors. Based on the distribution of data, we included the following variables in our analyses: (1) meta-analysis industry funding or FCOI and (2) journal type and impact factor category combined.

In the logistic regression model, FCOIs for each meta-analysis were coded as “any”, “unknown,” or “none” (reference category). Meta-analyses were considered to have “any” FCOI if they reported receiving industry funding or if they reported that at least one author had financial-ties to industry or industry employment. If a meta-analysis did not report study funding sources or author FCOI, or if FCOI could not be ruled out because the meta-analysis reported

only no author FCOI but did not report funding sources or vice versa, then the presence of FCOI was considered "unknown". If it was clearly reported that there was no industry study funding and that no authors had FCOI, the meta-analysis was considered free of FCOI ("none").

Journal type and impact factor category

Meta-analyses were categorized for the logistic regression model according to both journal type and impact factor. Our groups were (1) low-impact specialty medicine journals, (2) low-impact general medicine or multidisciplinary journals, (3) medium-impact specialty medicine journals, (4) high-impact specialty medicine or general medicine journals, and (5) Cochrane reviews (reference category). Journals were considered low impact if they had an IF of ≤ 3, medium impact if they had an IF ranging from 3.1-6.7, and high impact if they had an IF > 6.8. All Cochrane reviews had an impact factor of 6.8. There were no meta analyses published in medium-impact multidisciplinary science or general medicine journals. As only 8 meta-analyses were published in high-impact specialty medicine journals and 2 in high-impact general medicine journals, these meta-analyses were grouped together. Of note, 28 of 33 meta-analyses in general medicine journals were from a single journal (*Medicine*) and not necessarily representative of general medicine as a category. Similarly, 9 of the 10 meta-analyses published in multidisciplinary science journals were published in a single journal (*PLOS ONE*).

Deviations from our original protocol

Our initial protocol indicated that, if possible, we would include year of publication; whether the journal had policies for reporting of FCOIs of trials included in systematic reviews and meta-analyses; and whether there was meta-analysis funding by industry and author financial ties and employment as predictor variables. However, all included meta-analyses were published in 2017 or 2018, thus year was not included. In addition, we did not identify any non-Cochrane journals

with a reporting policy; therefore reporting policies were not included. Furthermore, few meta-analyses reported having industry funding of the meta-analysis; thus, we grouped meta-analysis funding source and author FCOIs into a single variable (No FCOI versus any FCOI) rather than examining them individually. Finally, we only conducted a multivariable analysis for the reporting of funding sources of included RCTs and not the reporting of author-industry financial ties and employment of included RCTs because there were not enough examples of meta-analyses that reported these outcomes, particularly among non-Cochrane meta-analyses, to conduct the multivariable analysis.

4. Results

4.1 Selection of Eligible Meta-analyses

Our initial search of PubMed without date restrictions retrieved 9,725 unique citations. To select 250 eligible meta-analyses, working backwards from the most recent, a total of 401 records were screened for eligibility at the title abstract stage, of which 64 were excluded. An additional 76 articles were excluded after full-text review. Once we obtained the 250 most recent eligible meta-analyses based on PubMed listing, we did not screen the remaining 9,335 articles. See Figure 1.

Of the 250 included meta-analyses, 107 were Cochrane reviews, 33 were published in general medicine journals, 100 in specialty medicine journals, and 10 in multidisciplinary journals. Twenty eight of the 33 meta-analyses published in general medicine journals were published in the journal *Medicine*; of the 10 meta-analyses published in multidisciplinary science journals, 9 were published in *PLOS ONE*. The mean number of included RCTs for both Cochrane and non-Cochrane meta-analyses was approximately 20. Among the 143 non-

Cochrane meta-analyses, 25 (17%) referenced a published protocol or were registered in PROSPERO, and 106 (74%) were published in a journal with an IF of ≤ 3. Overall, 3 (1%) meta-analyses reported being funded by industry, 148 (59%) reported funding from non-industry sources, 56 (22%) reported that there was no study funding, and 43 (17%) did not report funding source. Three meta-analyses had at least 1 author who reported current industry employment, 51 had at least 1 author that reported other financial ties with industry, 187 reported that there were no authors with FCOI, and 12 did not report any information about author FCOIs. See Table 1 for characteristics of included meta-analyses.

4.2 Objective 1: Extent to which meta-analyses of pharmacological treatments report FCOIs from included trials

Overall, 111 (44%) of the 250 included meta-analyses reported funding sources for some or all included trials, 49 (20%) reported author-industry financial ties for some or all included trials, and 19 (8%) reported author-industry employment for some or all included trials. Of the 107 Cochrane meta-analyses, 90 (84%) reported funding sources for some or all included trials compared to 21 of 143 (15% non-Cochrane meta-analyses, a difference of 69% (95% CI, 59% to 77%). Among the Cochrane reviews, 47 (44%) reported author-industry financial ties for some or all included trials compared to 2 (1%) non-Cochrane meta-analyses, a difference of 43% (95% CI, 33% to 52%). For author-industry employment 18 (17%) Cochrane meta-analyses reported, fully or partially reported, compared with 1 (1%) non-Cochrane meta-analysis, a difference of 16% (95% CI, 9% to 24%) See Table 2.

4.3 Objective 2: Factors associated with reporting FCOIs from included trials in multivariable analysis

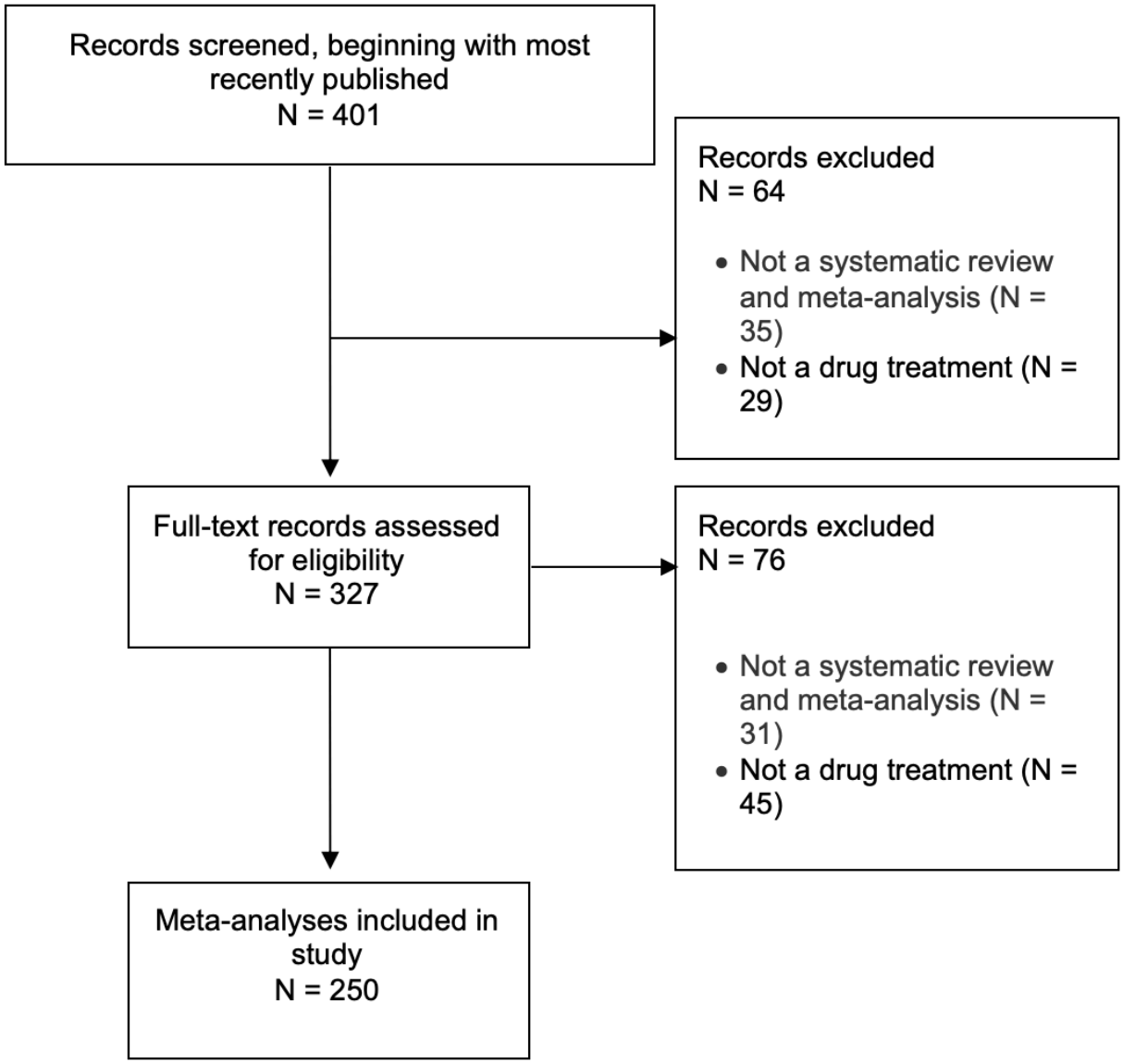
The odds ratio for reporting funding sources for some or all included RCTs among non-Cochrane meta-analyses was ≤ 0.11 compared to Cochrane reviews for all journals and impact factor combinations. The lowest odds ratios were for meta-analyses published in specialty medicine journals with an IF of ≤ 3 (OR 0.01, 95% CI < 0.01 to 0.04) and meta-analyses published in general medicine or multidisciplinary science journals with an IF of ≤ 3 (OR 0.02, 95% CI < 0.01to 0.06). Even among non-Cochrane meta-analyses with impact factor greater than that of Cochrane (> 6.8), the odds ratio was low (OR 0.08, 95% CI 0.02 to 0.32), although there were only 10 meta-analyses in this category. Meta-analyses with any declared FCOI did not differ significantly in reporting compared to those with no declared FCOI after controlling for journal type and impact factor (OR 1.29, 95% CI 0.53 to 3.19), nor did meta-analyses for which the presence of FCOI was unknown (OR 1.18, 95% CI 0.40 to 3.44). See Table 3.

4.4 Objective 3: Comparison of Cochrane Meta-Analyses published in 2017-2018 versus 2010

Previously, Roseman et al.[11] reported that, among 151 Cochrane reviews published in 2010, 46 (30%) reported funding sources for all or some included trials. The 84% observed in Cochrane reviews from 2017-2018 represents an improvement of 54% (95% CI, 42% to 63%). Author-industry financial ties were reported fully or partially for 11 (7%) in Cochrane reviews published in 2010 compared to 44% in the present study, a 37% improvement (95% CI, 26% to 47%). Author-industry employment was reported fully or partially for 10 (7%) of 2010 Cochrane reviews compared to 17% in the present study, a 10% (95% CI, 2% to 19%) improvement in reporting.

4.5 Tables and Figures

4.5.1 Figure 1. Flow Chart of Included Meta-Analyses



4.5.2 Table 1. Characteristics of included meta-analyses

Table 1. Characteristics of included meta-analyses

	Cochrane Meta-Analyses (N = 107)	Non-Cochrane Meta-Analyses (N = 143)
Number of Included RCTs, *mean ± SD*	21.4 ± 24.4	19.6 ± 46.4
Registered in PROSPERO or Published Protocol, *N (%)*	107 (100%)	25 (17%)[a]
Impact Factor, *mean ± SD*	6.8 ± 0	3.6± 5.4
≤3	0	106 (74.1%)
3.1-6.7	0	27 (19%)
6.8	107 (100%)	0
> 6.8	0	10 (7.0%)
Meta-Analysis Funding Sources		
Not reported	4 (4%)[b]	39 (27%)
Industry	0	3 (2%)
Non-Industry	93 (86.9%)	55 (38%)
No funding	10 (9.3%)	46 (32%)
Meta-Analysis Author Financial Ties to Industry (Including Employment)[c]		
Not reported, *N (%)*	1 (1%)	11 (8%)
No authors with reported financial ties, *N (%)*	70 (65%)	117 (81%)
≥ 1 author with reported financial ties, *N (%)*	36 (34%)	15 (10%)
Proportion of authors with financial ties, *mean ± SD*[d]	11% ± 17%	4% ± 15%
Journal Category		
Cochrane review, *N (%)*	107 (100%)	0
Specialty medicine *N (%)*	0	100 (70%)
General medicine (non-Cochrane),[f] *N (%)*	0	33 (23%)
Multidisciplinary,[g] *N (%)*	0	10 (7%)

[a]One meta-analysis reported that they registered in PROSPERO but did not provide a registration number and one could not be found. We contacted the authors and they did not povid us with further information, [b]Only 3 included meta-analyses reported author-industry employment and these were grouped with author-industry financial ties for this table [c]Cochrane reviews typically have a "Sources of Support" section with funding information. These reviews did not include that section. [d]Proportion of authors with financial ties or employment of those that reported. [e]Classifications for specialty medicine journals (note that some journals had more than one classification): Anesthesiology, N = 3; Biochemistry & Molecular Biology, N =1; Biotechnology & Applied Microbiology, N =2; Cardiac & Cardiovascular Systems, N = 7; Cell Biology, N = 1; Chemistry, Medicinal, N = 4; Chemistry, Multidisciplinary, N =2; Clinical Neurology, N = 6; Critical Care Medicine, N =2; Dermatology, N = 3; Emergency Medicine, N = 2; Endocrinology & Metabolism, N = 2; Gastroenterology & Hepatology, N = 6; Genetics & Heredity, N = 1; Hematology, N = 2; Immunology, N = 6; Infectious Diseases, N =3; Integrative & Complementary Medicine, N =1; Medicine, Research & Experimental, N = 3; Microbiology, N = 2; Neurosciences, N =3; No classification, N = 2; Obstetrics & Gynecology, N = 4; Oncology, N = 11; Ophthalmology, N = 3; Orthopedics, N = 6; Parasitology, N = 1; Peripheral Vascular Disease, N =5; Pharmacology & Pharmacy, N = 13; Physiology, N =1; Psychiatry, N = 4; Psychology, N = 1; Reproductive Biology, N = 1; Respiratory System, N = 6; Rheumatology, N = 3; Sport Sciences, N = 1; Surgery, N =11; Toxicology, N = 2; Tropical Medicine, N = 1; Urology & Nephrology, N =1. [f]Of the 33 included general medicine journals, 28 were published in the journal "Medicine". [g]Of the 10 journals classified as multidisciplinary, 9 were published in the journal "PLOS ONE".

4.5.3 Tables 2. Meta-analyses reporting of declared FCOIs from included RCTs

Table 2. Summary of reporting patterns of disclosed FCOI from Included RCTs

	Number of Meta-Analyses Reporting Funding Sources of Included RCTs			Number of Meta-Analyses Reporting Author Financial Ties of Included RCTs			Number of Meta-Analyses Reporting Author-Industry Employment of Included RCTs		
	Full	**Partial**	**Full or Partial**	**Full**	**Partial**	**Full or Partial**	**Full**	**Partial**	**Full or Partial**
2017-2018: Cochrane (N = 107), N (%)	70 (65%)	20 (19%)	90 (84%)	24 (22%)	23 (21%)	47 (44%)	1 (1%)	17 (16%)	18 (17%)
Non-Cochrane (N = 143), N (%)	14 (10%)	7 (5%)	21 (15%)	1 (1%)	1 (1%)	2 (1%)	0	1 (1%)	1 (1%)
Difference in Reporting Between Cochrane and Non-Cochrane Meta-Analyses, % (95% CI)	56% (44% to 65%)	14% (6% to 23%)	69% (59% to 77%)	22% (14% to 31%)	21% (13% to 30%)	43% (33% to 52 %)	1% (-2% to 5%)	15% (9% to 23%)	16% (9% to 24%)
2010 Cochrane (N = 151), N (%)[a]	30 (20%)	16 (11%)	46 (30%)	2 (1%)	9 (6%)	11 (7%)	0	10 (7%)	10 (7%)
Difference in Reporting Between Cochrane Meta-Analyses published in 2017-2018 versus 2010, % (95% CI)	46% (34% to 56%)	8% (-1% to 18%)	54% (42% to 63%)	21% (13% to 30%)	16% (7% to 25%)	37% (26% to 47%)	1% (-2% to 5%)	9% (2% to 18%)	10% (2% to 19%)

[a] Results from Roseman et al., 2012.

4.5.4 Table 3. Factors associated with reporting declared FCOIs from included RCTs

Table 3. Factors associated with reporting declared FCOI from included RCTs

	Proportion that reported some or all declared funding sources from included RCTs	**Unadjusted odds ratio (95% CI)**	**Adjusted odds ratio (95% CI)**
Financial COI			
reference = no FCOI	67/151 (44%)		
Any Declared FCOI	35/51 (69%)	2.74 (1.42 to 5.49)	1.29 (0.53 to 3.19)
Unknown	9/48 (19%)	0.29 (0.12 to 0.62)	1.18 (0.40 to 3.44)
Impact Factor and Journal Type			
reference = Cochrane	90/107 (84%)		
Specialty IF ≤ 3	4/65 (6%)	0.01 (< 0.01 to 0.03)	0.01 (< 0.01 to 0.04)
General (N=31) or Multidisciplinary (N=10) IF ≤ 3	4/41 (10%)	0.02 (< 0.01 to 0.06)	0.02 (< 0.01to 0.06)
Specialty[b] IF 3.1 - 6.7	10/27 (37%)	0.11 (0.04 to 0.28)	0.11 (0.04 to 0.28)
Specialty (N=8) General (N=2) IF > 6.8	3/10 (30%)	0.08 (0.02 to 0.32)	0.08 (0.02 to 0.32)

[a] Two meta-analyses were from journals that did not have an impact factor, and these were coded as having an impact factor of 0.5 for our analyses.
[b] There were no multidisciplinary or general medicine journals with an IF of 3.1-6.7.

5. Discussion

The main finding of the study was that 90 of 107 (84%) included Cochrane meta-analyses compared to 21 of 143 (15%) non-Cochrane meta-analyses reported funding sources for some or all included RCTs, a difference of 69% (95% CI, 59% to 77%). The differences between Cochrane and non-Cochrane meta-analyses for reporting FCOIs and industry employment of authors of included RCTs were similarly robust. In multivariable analysis, we found that, compared to meta-analyses published in other journals, Cochrane reviews reported funding sources of included trials significantly more frequently, even when controlling for impact factor. There was also an association between the impact factor where the meta-analyses were published and reporting study funding sources of included trials, but it was not nearly as strong as the association we observed between Cochrane status and reporting.

A previous study published in 2012 found that, out of 151 included Cochrane reviews of drugs, only 46 (30%) reported information on the funding information for some or all included trials, only 11 (7%) reported information on author-industry financial for some or all included trials, and 10 (7%) partially reported information on author-industry employment from included trials.[11] Compared to this, our study found an improvement in the overall percentage of Cochrane reviews reporting FCOI from included trials of 54% (95% CI, 42% to 63%) for reporting funding sources, of 37% (95% CI, 26% to 47%) for reporting author-industry financial ties, and of 10% (95% CI, 2% to 19%) for reporting author-industry employment.

Among our findings, in bivariate analysis, we observed a positive association between meta-analysis author FCOI and reporting of funding sources of included RCTs. However, this association was not statistically significant when controlling for journal type, including Cochrane status. Surprisingly, authors of Cochrane meta-analyses disclosed more FCOIs that authors of

non-Cochrane meta-analyses (34% of meta-analyses versus 10%). Thus, it seems possible that the positive bivariate association between meta-analysis author FCOI and reporting may reflect a greater tendency to disclose rather than actual FCOI. Indeed, it is possible that meta-analysis authors who are more likely to transparently report their own FCOI may also be more likely to report FCOI of included RCTs.

The recent study that examined 29 meta-analyses published in 2017-2018 in high-impact medical journals and the Cochrane Database of Systematic Reviews found that funding sources for some or all included RCTs were reported in 3 of 3 (100%) Cochrane reviews, 7 of 11 (64%) meta-analyses published in high-impact general medicine journals, but only 3 of 15 (20%) meta-analyses from specialty journals (oncology, cardiology, respiratory medicine, endocrinology, gastroenterology).[15] These results, although based on only 3 Cochrane reviews, are generally consistent with the marked improvement in reporting of funding and author FCOI from included RCTs in Cochrane reviews relative to 2010 that we observed. They are also consistent with the significantly higher percentage of Cochrane reviews reporting FCOI from included RCTs compared to meta-analyses published in other journal types observed in the present study and, in particular, the much lower reporting among specialty medicine journals. Since 28 of 33 meta-analyses from general medicine journals in the present study were published in the journal *Medicine*, we were not able to compare reporting between general medicine and specialty medicine journals.

Reporting of the funding sources of included RCTs in Cochrane meta-analyses improved from 30% to 84% between 2010 and 2017-2018 and was substantially greater than reporting in other journals published in 2017-2018 (15%). In 2012, following soon after the publication of Roseman et al.'s study on Cochrane reviews,[11] the Cochrane Collaboration began to require that

trial funding sources and FCOIs of trial authors be provided for every included RCT in the 'Characteristics of Included Studies' table.[16-18] Although reporting among Cochrane meta-analyses has not reached 100% and is much lower for author-industry financial ties and employment than for trial funding sources, the improvements documented are substantial, both compared to previous Cochrane reviews and to meta-analyses published in other types of journals. This is particularly the case because Cochrane is a global organization consisting of various review groups and methods groups that span numerous fields of health research across the world, suggesting that changes that occurred likely resulted from coherent policy change and widespread adoption. This suggests that other journals could successfully implement similar regulations on the reporting of FCOI from trials included in systematic reviews and meta-analyses.

There are tools currently under development that could help improve reporting of FCOIs from trials included in systematic reviews and meta-analyses. The Tool for Addressing Conflicts of Interest in Trials (TACIT)[28] will specifically address risk of bias from industry sponsorship of trials and author-industry financial ties in Cochrane reviews. Additionally, an updated PRISMA statement that will require that information on trial funding be reported is forthcoming. However, it will not include a requirement to report information on trial author FCOI (personal communication, David Moher, May 22, 2019). We strongly recommend that journals be proactive in promoting the use of these tools.

A strength of the present study is that we included a large number of recently published meta-analyses and, of these, 107 were Cochrane reviews, allowing us to compare reporting practices among Cochrane reviews and non-Cochrane meta-analyses. However, there are several limitations that should be considered when interpreting the results of this study. First, the focus

of the study was on reporting of trial funding and trial author FCOIs from included RCTs, and it was not designed to assess whether these were associated with meta-analysis quality or with the results of meta-analyses. Second, a previous study found that, among high-impact journals, there were differences in reporting between general medicine and specialty medicine journals,[15] but we found that the majority of meta-analyses of drug trials are published in Cochrane reviews or relatively low-impact specialty medicine journals. Thus, were unable to include sufficient meta-analyses published in general medicine and high-impact journals to robustly assess these factors. Third, our study only looked at disclosed FCOI, therefore some of the results may be influenced by more rigorous investigators being more likely to report transparently.

6. Final Conclusions and Summary

In summary, there has been a substantial improvement in the reporting of FCOI from included RCTs in Cochrane reviews since the implementation of policies requiring the reporting of trial funding sources and conflicts of interest of authors for every included RCT. Additionally, reporting is much higher in Cochrane reviews than for meta-analyses in other journals. These results indicate that it is possible to promote more transparent reporting of FCOI from trials included in systematic reviews and meta-analyses. We strongly encourage the uptake of the forthcoming updated PRISMA statement and Cochrane's new TACTIC tools by journals and authors to improve transparency in reporting so that the potential influence of industry funding and author FCOIs can be considered by users of systematic reviews and meta-analyses.

8. **References**

1. Bero LA, Rennie D. Influences on the quality of published drug studies. *Int J Technol Assess Health Care*. 1996;12(2):209-37.
2. Melander H, Ahlqvist-Rastad J, Meijer G, Beermann B. Evidence b (i) ased medicine selective reporting from studies sponsored by pharmaceutical industry: review of studies in new drug applications. *BMJ.* 2003;326(7400):1171-3.
3. Rising K, Bacchetti P, Bero L. Reporting bias in drug trials submitted to the Food and Drug Administration: review of publication and presentation. PLoS Med. 2008;5(11):e217.
4. Sismondo S. How pharmaceutical industry funding affects trial outcomes: causal structures and responses. *Soc Sci Med*. 2008;66(9):1909-14.
5. Turner EH, Matthews AM, Linardatos E, Tell RA, Rosenthal R. Selective publication of antidepressant trials and its influence on apparent efficacy. *N Engl J Med*. 2008;358(3):252-60.
6. Ahn R, Woodbridge A, Abraham A, Saba S, Korenstein D, Madden E, et al. Financial ties of principal investigators and randomized controlled trial outcomes: cross sectional study. BMJ 2017;356:i6770.
7. Lundh A, Lexchin J, Mintzes B, Schroll JB, Bero L. Industry sponsorship and research outcome. *Cochrane Database of Syst Rev*. 2017;2:MR000033.
8. Guidelines IoMCoSfDTCP, Graham R, Mancher M. *Clinical practice guidelines we can trust*. Washington, DC: National Academies Press; 2011.
9. Lexchin J. Those who have the gold make the evidence: how the pharmaceutical industry biases the outcomes of clinical trials of medications. *Sci Eng Ethics*. 2012;18(2):247-61.

10.Roseman M, Milette K, Bero LA, Coyne JC, Lexchin J, Turner EH, et al. Reporting of conflicts of interest in meta-analyses of trials of pharmacological treatments. *JAMA*. 2011;305(10):1008-17.

11.Roseman M, Turner EH, Lexchin J, Coyne JC, Bero LA, Thombs BD. Reporting of conflicts of interest from drug trials in Cochrane reviews: cross sectional study. *BMJ*. 2012;345:e5155.

12.Patsopoulos NA, Analatos AA, Ioannidis JP. Relative citation impact of various study designs in the health sciences. *JAMA*. 2005;293(19):2362-6.

13. R, Miller J. A new system for grading recommendations in evidence based guidelines. *BMJ*. 2001;323(7308):334-6.

14.Chalmers I, Bracken MB, Djulbegovic B, Garattini S, Grant J, Gülmezoglu AM, et al. How to increase value and reduce waste when research priorities are set. *Lancet*. 2014;383(9912):156-65.

15.Benea C, Turner KA, Roseman M, Bero LA, Lexchin J, Turner EH, et al. Reporting of Financial Conflicts of Interest in Meta-Analyses of Drug Trials Published in High-Impact Medical Journals: Comparison of Results from 2017-2018 and 2009. 2019 (Unpublished).

16.Bero LA. Why the Cochrane risk of bias tool should include funding source as a standard item. *Cochrane Database of Syst Rev*. 2013;12:ED000075.

17.Collaboration TC. Standards for the reporting of new Cochrane Intervention Reviews Version 1.1 [updated 17 December 2012]. Available from: https://wounds.cochrane.org/sites/wounds.cochrane.org/files/public/uploads/MECIR%20Reporting%20standards%201.1_17122012_2.pdf. Accessed July10, 2019.

18. The Cochrane Collaboration. MECIR Manual [updated 5 April 2019]. Avaialble from: https://community.cochrane.org/mecir-manual. Accessed July 10, 2019

19. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ*. 2009;339:b2535.

20. Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JPA, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *BMJ*. 2009;339:b2700.

21. Moher D, Tetzlaff J, Tricco AC, Sampson M, Altman DG. Epidemiology and reporting characteristics of systematic reviews. *PLoS Med*. 2007;4(3):e78.

22. Moja LP, Telaro E, D'Amico R, Moschetti I, Coe L, Liberati A. Assessment of methodological quality of primary studies by systematic reviews: results of the metaquality cross sectional study. *BMJ*. 2005;330(7499):1053.

23. Wen J, Ren Y, Wang L, Li Y, Liu Y, Zhou M, et al. The reporting quality of meta-analyses improves: a random sampling study. *J Clin Epidemiol*. 2008;61(8):770-5.

24. Administration USFaD. Drugs@FDA: FDA Approved Drug Products Database. Available from: https://www.accessdata.fda.gov/scripts/cder/daf/. Accessed July 10, 2019.

25. Khangura S, Konnyu K, Cushman R, Grimshaw J, Moher D. Evidence summaries: the evolution of a rapid review approach. *Syst Rev*. 2012;1(1):10.

26. Drazen JM, Van Der Weyden MB, Sahni P, Rosenberg J, Marusic A, Laine C, et al. Uniform format for disclosure of competing interests in ICMJE journals. *JAMA*. 2010;303(1):75-6.

27. Newcombe RG. Interval estimation for the difference between independent proportions: comparison of eleven methods. *Stat Med.* 1998;17(8):873-90.

28. Lundh A. Tool for Addressing Conflicts of Interest in Trials (TACIT) in Cochrane Reviews [PowerPoint slides]. 2018.

7. Appendix

7.1 Appendix A: Data Extraction Form

First Author, last name: Last name of first author of meta-analysis

Year of publication (or in press): Year of publication of meta-analysis

Journal: Name of journal in which meta-analysis was published

Journal Impact factor: Where meta-analysis published (low-high split or continuous based on data distribution)

Specialty area of Journal: Where meta-analysis published (per Thomson Reuters Journal Science Citation Index - Expanded categories)

Cochrane Review (Y/N): Is the meta-analysis a Cochrane Review? Select "Yes" even if the Cochrane Review is being published in another journal

Response from radio options:

- Y (Yes)
- N (No)

Journal policies for reporting COI of Included Trials: Presence or absence of instructions for reporting in the author instructions

- Y (Yes)
- N (No)

# of RCTs synthesized in Meta-Analysis (total RCTs in included meta-analysis related to drugs)

Date Range of Included Trials: Date range in years of publication of studies (RCTs) included related to drugs in the meta-analysis (XXXX - XXXX). Use "In press" for end date if there are in press trials. Use “Unpublished” if a trial is in progress or has never been published.

Study population: Characteristics of study population of included trials (e.g. condition/disorder, adult/child)

Pharmacological agent: Pharmacologic treatment evaluated in the meta-analysis

- Name(s) of treatment if specific drug(s) investigated
- Class of treatment if broader category of drugs investigated, and number of drugs evaluated (e.g. SSRIs – 5 included)

Control/comparison arms: Other treatment arms (control/comparison) included in the meta-analysis (e.g. placebo, name of comparison pharmacologic treatment, name of behavioral intervention)

Meta-Analysis Author Financial Ties / Funding Sources Reported: Does the meta-analysis report meta-analysis author financial ties (including former and current industry employment) and/or the funding source? Note that reporting “no funding” is different from not reporting. Response from radio options:

- Meta-analysis author financial ties
- Meta-analysis funding sources
- Both financial ties and funding sources
- Neither reported

Funding Source of Meta-Analysis (if applicable – only shown if above item indicates meta-analysis funding sources reported or both financial ties and meta-analysis funding sources reported) Source of financial support for the meta-analysis:

Response from radio options:

- Industry
- Combined industry and non-industry

- Non-industry (e.g. public granting agency, private not-for-profit granting agency)
- No study funding

Type of Industry Funding (if applicable – only shown if above item indicates industry funding or combined industry and non-industry present): If the meta-analysis is industry funded, what is the type of support provided by industry? Response from radio options:

- Financial support
- Resources (e.g. statistical analyses)
- Both financial support and resources

# of Meta-Analysis Authors: Number of authors of the meta-analysis (count authors named in byline or in an author group)

# of Meta-Analysis Authors with Financial Ties to Industry (if applicable – only shown if meta-analysis author financial ties or both financial ties and meta-analysis funding sources are reported): Number of authors of the meta-analysis who have financial ties such as industry board member, consultant, investments, patents, research funding, royalties (including former, and excluding current industry employment):

- Numbers 0 - ≥10

 # Meta-Analysis Authors with Current Industry Employment (if applicable – only shown if meta-analysis author financial ties or both financial ties and meta-analysis funding sources are reported): Number of authors of the meta-analysis who are current industry employees.

Response from radio options:

Numbers 0 - ≥10

Quality or Risk Assessment of Included RCTs (Y/N): Was quality or risk assessment of included RCTs, by methods from Cochrane, Jadad, etc., reported in the meta-analysis.

Response from radio options:

- Y (Yes)

- N (No)

Quality or Risk Assessment Method of Included RCTs (if applicable – only shown if answer to previous item is yes- quality or risk assessment of included RCTs is reported): If the meta-analysis authors report a quality or risk assessment method of included RCTs, what is the reported method of quality assessment?

Meta-analysis Authors Report Funding Sources of Included Studies: Response from radio options:

- Reported for each included study
- Reported in summary statement or for some, but not all, trials
- Included study funding sources not reported

Placement in publication of Included RCTs' Funding Source (if applicable – only shown if the response to Meta-analysis Authors Report Funding Sources of Included Studies is (1) Reported for Each included Study or (2) Reported in summary statement or for some, but not all, trials):

- Abstract
- Main text, other than risk of bias or quality section
- In risk of bias or quality assessment
- Other in main document (e.g., a characteristics of studies table, other table, in a footnote of a table
- Online appendix
- Lay Summary

Placement in risk of bias or quality assessment of Included RCTs' Funding Source (if applicable – only shown if placement in publication of included RCT's Funding Source is risk of bias or quality assessment):

- Text
- Figure/table
- Both text and figure/table

Meta-analysis Authors Report Author Financial Ties of Included Studies: Response from radio options:

- Reported for each included study
- Reported in summary statement or for some, but not all, trials
- Included study author financial ties not reported

Placement in publication of Included RCTs' Author Financial Ties (if applicable – only shown if the response Meta-analysis Authors Report Author Financial Ties of Included Studies is (1) Reported for Each included Study or (2) Reported in summary statement or for some, but not all, trials):

- Abstract
- Main text, other than risk of bias or quality section
- In risk of bias or quality assessment
- Other in main document (e.g., a characteristics of studies table, other table, in a footnote of a table
- Online appendix
- Lay Summary

Placement in risk of bias or quality assessment of Included RCTs' Author Financial Ties (if applicable – only shown if placement in publication of included RCT's Author Financial ties is risk of bias or quality assessment):

- Text
- Figure/table
- Both text and figure/table

Meta-analysis Authors Report Author Industry Employment of Included Studies: Do the authors of the meta-analysis report current author industry affiliation (employment) for the included studies? Response from radio options:

- Reported for each included study
- Reported in summary statement or for some, but not all, trials

- Included study author industry employment not reported

Placement in publication of Included RCTs' Author Industry Employment (if applicable – only shown if the response to Meta-analysis Authors Report Author Industry Affiliation (Employment) of Included Studies is (1) Reported for Each included Study or (2) Reported in summary statement or for some, but not all, trials):

- Abstract
- Main text, other than risk of bias or quality section
- In risk of bias or quality assessment
- Other in main document (e.g., a characteristics of studies table, other table, in a footnote of a table)
- Online appendix
- Lay Summary

Placement in risk of bias or quality assessment of Included RCTs' Author Industry Employment (only shown if placement in publication of included RCT's Author Industry Affiliation is risk of bias or quality assessment):

- Text
- Figure/table
- Both text and figure/table

Do the authors report a PROSPERO registration number in the text?

- Yes
- No

What is the registration number (e.g., CRD42017062454)? (if applicable – only shown if the response to Do the authors report a PROSPERO registration number in the text? Is yes)

What stages were completed (ignore started) at the time of registration. Make sure to select the earliest registration version at the bottom of the page. Please check all stages that were completed. (if applicable – only shown if the response to Do the authors report a PROSPERO registration number in the text? Is yes)

- Preliminary searches
- Piloting of the study selection process
- Formal screening of search results against eligibility criteria
- Data extraction
- Risk of bias (quality) assessment
- Data analysis
- None completed

Was a registration found in PROSPERO? (if applicable – only shown if the response to Do the authors report a PROSPERO registration number in the text? Is no)

What is the registration number (e.g., CRD42017062454)? (if applicable – only shown if the response to Was a registration found in PROSPERO? Is yes)

What stages were completed (ignore started) at the time of registration. Make sure to select the earliest registration version at the bottom of the page. Please check all stages that were completed. (if applicable – only shown if the response to Was a registration found in PROSPERO? Is yes)

- Preliminary searches
- Piloting of the study selection process
- Formal screening of search results against eligibility criteria
- Data extraction
- Risk of bias (quality) assessment
- Data analysis
- None completed

7.2 Appendix B: Power Analysis

Table 1. Allocation ratio: 50% and 50% (1:1)

20% difference						
Proportion reporting COI		Sample size group 1	Sample size group 2	Sample size total	Actual power	Actual alpha
Low impact	High impact					
10%	30%	69	69	138	.8072678	.0334242
20%	40%	90	90	180	.8016800	.0367503
30%	50%	102	102	204	.8061479	.0420514
40%	60%	102	102	204	.8008054	.0380842
50%	70%	102	102	204	.8061479	.0355626
60%	80%	90	90	180	.8016800	.0324635
70%	90%	69	69	138	.8072678	.0250081

Table 2. Allocation ratio: 30% and 70% (3:7)

20% difference						
Proportion reporting COI		Sample size group 1	Sample size group 2	Sample size total	Actual power	Actual alpha
Low impact	High impact					
10%	30%	105	44	149	.8154205	.0379349
20%	40%	141	59	200	.8067868	.0402428
30%	50%	165	69	234	.8012404	.0445931
40%	60%	168	71	239	.8054961	.0431314
50%	70%	166	70	236	.864397	.0416672
60%	80%	148	62	210	.8020840	.0399341
70%	90%	133	47	160	.8024374	.0348132

Table 3. Allocation ratio: 40% and 60% (2:3)

20% difference						
Proportion reporting COI		Sample size group 1	Sample size group 2	Sample size total	Actual power	Actual alpha
Low impact	High impact					
10%	30%	79	53	132	.8047171	.0404578
20%	40%	106	71	177	.8021294	.0419963
30%	50%	124	83	207	.8064041	.0469648
40%	60%	124	83	207	.8028056	.0427997
50%	70%	123	82	205	.8113106	.0420794
60%	80%	108	72	180	.8040270	.0406643
70%	90%	84	56	140	.8189094	.0356324

7.3 Appendix C: Detailed Characteristics of Included Meta-Analyses

First Author	Year	Journal	2017 Impact Factor	Specialty Area	Meta-analysis Funding source(s)	Number of Meta-analysis Authors with Industry Financial Ties / Number of Meta-analysis Authors[a]	Number of drug RCTs Included	Publication Dates of included drug RCTs	Population	Drug Intervention(s)	Comparison Arm(s)
Cochrane Reviews (n = 107)											
Abdel-Rahman[1]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	7	2004-2016	Adults (19 years and over) with advanced biliary tract carcinomas	Gemcitabine, vandetanib, S-1 (tegafur + gimeracil + oteracil), gemcitabine + oxaliplatin, 5-fluorouracil + folinic acid, capecitabine	Best supportive care, 5-fluorouracil + cisplatin + radiotherapy
Adams[2]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	36	1994-2012	Participants with or without evidence of cardiovascular disease	Fluvastatin	Placebo
Agabio[3]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	27	1969-2015	People with co-occurring depression and alcohol dependence	Antidepressants - 16 types, diazepam, memantine	Placebo, psychotherapy
Al-Shahi Salman[4]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Not reported	0/5	11[b]	1999-2015	Adults (16 years and over) with acute spontaneous intracerebral haemorrhage	Blood clotting factors, antifibrinolytic drugs	Placebo, open control, fresh frozen plasma
Alabed[5]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	11	1976-2008	Patients with antipsychotic-induced tardive dyskinesia (TD)	Gamma-aminobutyric acid agonists - 6 types	Placebo
Allegretti[6]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	3/8	8	1998-2016	Patients with hepatorenal syndrome	Terlipressin, terlipressin + albumin	Placebo, no intervention, albumin

Arechabala[7]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/7	37	1998-2017	Patients undergoing haemodialysis using a central venous catheter	Antibiotic antimicrobial lock solutions - 11 types, non-antibiotic antimicrobial lock solutions - 10 types, antibiotic + non-antibiotic antimicrobial lock solutions - 3 types	Heparin, saline
Baandrup[8]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	1/6	33[c]	1981-2016	Adult (18 years and over) chronic benzodiazepine users	Valproate, carbamazepine, lithium, pregabalin, captodiame, paroxetine, tricyclic antidepressants - 4 types, alpidem, buspirone, flumazenil, propranolol, progesterone, magnesium aspartate, bromazepam, cyamemazine, zopiclone, flunitrazepam	Placebo, no intervention
Bala[9]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/6	9	1997-2016	Individuals with antiphospholipid antibodies and no history of thrombosis	Aspirin + anticoagulants, aspirin, aspirin + low molecular weight heparin	Placebo, immunoglobulin, unfractionated heparin
Barbato[10]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	4[d]	2000-2012	Heterosexual adult couples (18 years or more) with a partner having a clinical diagnosis of depressive disorder	Antidepressants - 9 types	Couples therapy
Bergman[11]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	4	1981-1997	Psychiatric patients with antipsychotic-induced tardive dyskinesia	Benzodiazepines - 3 types	Placebo, usual care
Bighelli[12]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/9	41	1989-2011	Adults (18 years and over) with panic disorder	Tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), serotonin–norepinephrine reuptake inhibitors (SNRIs), norepinephrine reuptake inhibitors (NRIs), nefazodone, ritanserin	Placebo
Birks[13]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/2	30	1996-2017	People with Alzheimer's disease	Donepezil	Placebo

Boyapati[14]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/8	6	1978-2017	Adults (18 years and over) with quiescent Crohn's disease	Azathioprine, infliximab	No treatment, usual care (azathioprine + infliximab)
Brown[15]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	5	1993-2017	Women of reproductive age with endometriosis	Combined oral contractive pill - 3 types	Placebo, leuprolide, goserelin
Bruins Slot[16]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/2[e]	13	2008-2014	Adults with atrial fibrillation	Factor Xa inhibitors - 7 types	Warfarin
Bryan[17]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	0/3	20	1968-2007	People with schizophrenia and schizophrenia-like disorders such as schizophreniform disorder, delusional disorder, or schizoaffective disorder	Zuclopenthixol dihydrochloride	Placebo, other drugs - 11 types
Bryant-Smith[18]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	1/4	13	1970-2016	Women of reproductive age with heavy menstrual bleeding	Antifibrinolytic agents - 2 types, non-steroidal anti-inflammatory drugs (NSAIDs), progestogens, ethamsylate	Placebo, herbal medicines, levonorgestrel intrauterine system
Burry[19]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/9	9	1996-2016	Adults (17 years and over) in non-ICU acute care settings diagnosed with delirium	Antipsychotics - 5 types	Nonantipsychotics, placebo
Campschroer[20]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	67	2002-2017	Adult patients (18 years and older) with ureteral stone disease	Alpha-blockers - 6 types	Placebo, usual care
Candy[21]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5	8	1996-2017	Adults with cancer and adults receiving palliative care with opioid-induced bowel dysfunction	Mu-opioid antagonists - 3 types	Placebo
Chiew[22]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	9[f]	1976-2014	Patients with paracetamol (acetaminophen) overdose	Methionine, cysteamine, dimercaprol, acetylcysteine	Placebo, no treatment
Das[23]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Not reported	0/3	7	2010-2017	Children aged up to five years with a clinical diagnosis of community-acquired pneumonia (CAP)	Vitamin D	Placebo, antibiotics alone

Demicheli[24]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/5	71[g]	1969-2014	Healthy individuals (16 to 65 years) and pregnant women and their newborns	Inactivated parenteral influenza vaccine	Placebo, no treatment
Demicheli[25]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/7	8	1969-2004	Elderly participants (65 years and over)	Influenza vaccines	Placebo
Di Nisio[26]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/3	32	1970-2017	Patients with superficial thrombophlebitis of the leg or diagnosis of a thrombus in a superficial vein	Fondaparinux, rivaroxaban, low molecular weight heparin, non-steroidal anti-inflammatory drugs, vasotonin, sulodexide, heparansulphate, vitamin K antagonists, enzyme therapy, unfractionated heparin, heparin calcium, defibrotide	Placebo, elastic stockings
El-Sayeh[27]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	10	1973-2010	Patients with antipsychotic-induced tardive dyskinesia	Noradrenergic drugs - 2 types, dopaminergic drugs - 7 types	Placebo
Engelen[28]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5	3	1989-2015	People of all ages on continuous vitamin K antagonist (VKA) or direct oral anticoagulant (DOAC) treatment undergoing an oral or dental procedure	Antifibrinolytic agents - 2 types	Usual care (surgical treatment), usual care (surgical treatment) + placebo
Eshun-Wilson[29]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/6	10	1994-2014	Adults (18 years and over) living with HIV and depression	Selective serotonin reuptake inhibitors (SSRIs) - 4 types, tricyclic antidepressants (TCAs) - 2 types	Placebo, mirtazapine
Essali[30]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	3	1992-1997	People with antipsychotic-induced tardive dyskinesia	Calcium channel blockers - 3 types	Placebo
Everitt[31]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/8	23	1978-2013	Adults (18 years and over) with insomnia	Selective serotonin reuptake inhibitors - 4 types; tricyclic antidepressants - 3 types; other antidepressants - 6 types	Placebo, insomnia medication - 2 types
Fanshawe[32]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	4	2004-2014	Regular tobacco smokers (20 years and under)	Nicotine replacement therapy, bupropion	Placebo

Franik[33]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5	42	2004-2017	Subfertile women of reproductive age with polycystic ovary syndrome	Letrozole	Placebo, selective estrogen receptor modulators, clomiphene citrate followed by intrauterine insemination, laparoscopic ovarian drilling, follicle-stimulating hormone, anastrozole
González[34]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	6	1994-2014	Pregnant women living in malaria-endemic areas	Mefloquine	Sulfadoxine-pyrimethamine, cotrimoxazole, placebo
Grabosch[35]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	3	2006-2017	Adult women with moderate or severe cervical intraepithelial neoplasia (CIN)	Non-steroidal anti-inflammatory agents (NSAIDs) - 2 types	Placebo
Graves[36]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	24[h]	1981-2017	Adults and children being treated for falciparum malaria	Primaquine	Usual treatment, bulaquine
Haas[37]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	11	1997-2017	Pregnant women who were about to receive a cesarean delivery	Antiseptic solutions - 3 types	Placebo, no treatment
Hakoum[38]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/10	15	1991-2009	People with cancer and venous thromboembolism	Low molecular weight heparin, unfractioned heparin	Fondaparinux
Heras-Mosteiro[39]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/10	89	1990-2015	Immunocompetent patients with localised Old World cutaneous leishmaniasis	Antimonials – 2 types, non-antimonials – 22 types	Placebo, no treatment, alternative therapies - 7 types, other drug comparators - 6 types, other non-drug comparators - 4 types
Janmaat[40]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/8	41	1980-2015	People with esophageal or gastroesophageal junction cancer	Chemotherapy, targeted therapy, EGFR-targeting agents, cetuximab, ramucirumab	Best supportive care, unspecified control
Jefferson[41]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/4	41	1971-2016	Healthy children (15 years and under)	Influenza vaccine - 2 types	Placebo, no intervention
Jung[42]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	19	2006-Unpublished	Middle-aged and older men (40 or over) with lower urinary tract	Silodosin, tamsulosin, naftopidil, and alfuzosin	Placebo

									symptoms as a result of benign prostatic hyperplasia		
Kaempfen[43]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	3	2013-2017	Preterm infants	Propranolol	Placebo, no treatment
Kahale[44]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/10	7	1979-2012	Ambulatory people with cancer	Warfarin, apixaban	Placebo, no treatment
Kahale[45]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/10	13	1990-2013	People with cancer and central venous catheters	Anticoagulant - 6 types	Placebo, no treatment
Kahale[46]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/11	16	2001-2018	People with cancer and venous thromboembolism	Vitamin K antagonist - 2 types, direct oral anticoagulant - 4 types; low molecular weight heparin - 4 types	Anticoagulants
Kapur[47]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/5	7	1992-2012	Children and adults with bronchiectasis	Corticosteroids - 3 types	Placebo, no treatment
Kelly[48]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/8	15	1997-2014	Adults and children with bronchiectasis	Macrolide antibiotics - 4 types	Placebo, no intervention
Knightly[49]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/7	25	1996-2017	Adults and children with acute exacerbation of asthma	Magnesium sulfate	β2 -agonist, β2 -agonist + ipratropium, placebo
Kopsaftis[50]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	11	1961-2004	People with chronic obstructive pulmonary disease	Inactivated influenza vaccine	Placebo
Lawrie[51]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/9	38	1978-2016	Adults (18 years and over) undergoing radiotherapy for pelvic cancers	Aminosalicylates - 4 types, corticosteroids, superoxide dismutase, amifostine, bile acid sequestrants, magnesium oxide, misoprostol, octreotide, selenium, sodium butyrate, sucralfate, ibuprofen, famotidine, smectite, simethicone, tropisetron	Placebo, no treatment
Leathersich[52]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	8	1987-2007	Women with signs of fetal distress	Tocolytic agents – 7 types	Usual care, emergency delivery, cessation of oxytocic infusion

Lethaby[53]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/3	38	1989-2012	Women with uterine fibroids	Gonadotropin-hormone releasing analogue, selective progesterone-receptor modulators	Placebo, no treatment
López-Briz[54]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	11	2002-2015	Adults with central venous catheters	Heparin	0.9% sodium chloride (normal saline solution)
Marchant[55]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/4	3	1993-2012	Children (18 years and under) with prolonged wet cough (longer than 10 days)	Antibiotics - 2 types	Placebo, no treatment
Matar[56]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	7	1963-1999	Patients with schizophrenia	Fluphenazine	Placebo
Matar[57]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/11	20	1986-2018	People with solid or hematologic cancer undergoing surgery	Low-molecular weight heparin (LMWH) - 10 types	Unfractionated heparin (UFH), fondaparinux
McNicol[58]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/3	13	1992-2016	Postoperative paediatric patients (17 years and under)	Ketorolac	Placebo, opioid
McTague[59]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	18	1995-2014	Children (16 years and under) presenting to a hospital or emergency department in an acute tonic-clonic convulsion	Lorazepam	Diazepam + phenytoin, diazepam, paraldehyde, midazolam
Mhaskar[60]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	24	1982-2015	Patients with multiple myeloma (MM)	Bisphosphonates - 5 types	Placebo, no treatment - Network meta-analysis
Milligan[61]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	18	1980-2016	Adults and children	Typhoid fever vaccines - 4 types	No treatment, placebo, typhoid-inactive agents
Monk[62]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	32	1993-2016	People undergoing orthodontic treatment	Tramadol, non-steroidal anti-inflammatory drugs, paracetamol, local anaesthetic	Placebo, no treatment
Montero[63]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding[i]	1/7	10	1991-2012	Patients with hepatitis C virus-associated mixed cryoglobulinaemia	Rituximab, interferon, immunosuppressive drug therapy	Usual care, immunoadsorption apheresis

Mücke[64]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/5	16	2004-2017	Adults (18 years and over) with chronic neuropathic pain	Cannabis-based medicines - 5 types	Placebo, dihydrocodeine
Narula[65]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/7	10[j]	1990-2014	Adults and children with Crohn's disease	Corticosteroids - 5 types	Enteral nutrition
Nevitt[66]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/5	76	1981-2015	Adults or children with partial onset seizures or generalised onset tonic-clonic seizures	Antiepileptic drugs - 10 types	Network meta-analysis
Nevitt[67]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/4	14	1995-2015	Adults and children with focal onset or generalised onset seizures	Lamotrigine	Carbamazepine
Norman[68]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/6	78	1985-2016	Adults (18 years and over) with venous leg ulcers	Topical agents - 10 types	Dressings - 12 types; Network meta-analysis
Normansell[69]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	6	1974-2016	Children and adults with acute asthma exacerbation	Antibiotics - 4 types	Placebo
Novoa[70]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/7	24	1977-2016	Children (17 years and under) with single or multiple haemangiomas located on the skin	Propranolol, timolol maleate, bleomycin, atenolol, prednisolone, captopril, ibuprofen + paracetamol, methylene blue, triamcinolone, methylprednisolone	Placebo, radiation, lasers
Ohlsson[71]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	0/2	34	1991-2017	Preterm (< 37 weeks' gestation) and low birth weight (< 2500 grams) infants less than eight days of age	Erythropoiesis-stimulating agents (ESAs) - 2 types	Placebo, no treatment
Ostinelli[72]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	1/5	3	2005-2016	Adults exhibiting aggression or agitation (or both) due to psychosis	Aripiprazole	Placebo, other anti-psychotic medications - 2 types
Ostinelli[73]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	9	2010-2014	Patients with psychosis-induced aggression or agitation	Risperidone	Haloperidol, olanzapine, quetiapine, oxcarbazepine, valproic acid
Ostuzzi[74]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/5	7	1985-Unpublished	Adults (18 years and over) with cancer and depression	Antidepressants - 6 types	Placebo

Parker[75]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/5	2	2011-2013	Children and adults with active Crohn's disease	Naltrexone	Placebo
Pasquali[76]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5	122	1972-2015	Patients with unresectable lymph node metastasis and distant metastatic cutaneous melanoma	Single agent chemotherapy, polychemotherapy, temozolomide, dacarbazine, anti-CTLA4 monoclonal antibodies, other immunostimulating agents, MEK inhibitors	Tamoxifen, interferon-alpha, interleukin-2, interferon-alpha + interleukin-2, Bacille Calmette-Guérin (BCG), corynebacterium parvum, anti-PD1 monoclonal antibodies, sorafenib, elesclomo, anti-angiogenic drugs
Pike[77]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	4	2007-2017	Children (18 years and under) with asthma	Omalizumab, leukotriene receptor antagonists - 2 types, corticosteroids	Placebo
Rirash[78]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Not reported	Not reported/8	38	1982-2000	Patients with Raynaud's phenomenon	Calcium channel blockers	Placebo
Robertson[79]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	6	1995-2016	Adults (18 years and over) with unprovoked venous thromboembolism	Warfarin, aspirin, rivaroxaban	Placebo
Romero[80]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	7	1983-1999	Sexually active adults (16 years and over) with genital ulcers compatible with chancroid	Macrolide antibiotics - 3 types	Other antibiotics - 4 types
Rosumeck[81]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	15	1996-2016	People with scabies of all ages and either sex	Ivermectin	Permethrin
Rüschen[82]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	7	1995-2012	Adults (18 years and over) undergoing intraocular surgery	Hyaluronidase	Local anaesthetic mixture (standard treatment)
Ruthirakuhan[83]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/5	21	1998-2017	People with Alzheimer's Disease	Methylphenidate, modafinil, cholinesterase inhibitors (ChEIs), atypical antipsychotics, antidepressants, mibampator, valproate, semagacestat	Placebo

Sankar[84]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	0/3	6	2011-2016	Preterm infants with retinopathy	Anti-vascular endothelial growth factor agents - 2 types	Cryo/laser therapy
Schumann[85]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/9	13	1990-2013	Adults (18 years and over) with cardiogenic shock or acute low cardiac output syndrome	Levosimendan, dobutamine, enoximone, epinephrine, norepinephrine-dobutamine, amrinone, dopexamine, dopamine, nitric oxid	Placebo, no treatment
Simancas-Racines[86]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	13[k]	1992-1994	People suffering from high altitude illness	Acetazolamide, ibuprofen, dexamethasone, oxygen, nitric oxide, gabapentin, magnesium sulphate, sumatriptan	Placebo, normal air, unspecified control, paracetamol
Smith[87]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/2	4	1998-2015	Adults and children with cystic fibrosis	Salmeterol, tiotropium	No treatment, placebo
Smith[88]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	70	1958-2017	Women in labour	Intramuscular or intravenous opioids - 16 types	Placebo, no treatment, intramuscular or intravenous opioids - 16 types
Soares-Weiser[89]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5[l]	24[m]	1971-2014	Adults with chronic psychiatric disorders	Alkaloids - 3 types, antidepressants - 3 types, levetiracetam, cyproheptadin, promethazine, buspiron, cognitive enhancers - 2 types, VMAT2 inhibitors, ethyleicosapentaenoic acid (ethyl-EPA), hormones - 3 types, lithium, ceruletide	Placebo
Squizzato[90]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/5	15	2001-2017	People with coronary disease, ischaemic cerebrovascular disease, peripheral arterial disease, or at high risk of atherothrombotic disease	Clopidrogel	Placebo, usual care (aspirin)
St George[91]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/7	123	1954-2017	Individuals undergoing dental procedures and volunteers who took part in simulated scenario studies	Articaine, articaine + epinephrine, lidocaine + epinephrine, bupivacaine + epinephrine, mepivacaine + epinephrine, mepivacaine + levonordefrin,	Local anaesthetics

										mepivacaine, prilocaine, prilocaine + felypressin, prilocaine + epinephrine	
Stern[92]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	17	1972-2015	Adults and children with pneumonia	Corticosteroids - 7 types	Placebo, usual care
Sturman[93]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	0/3	4	1995-2013	Children and adolescents (18 years or under) with autism spectrum disorder (ASD) or pervasive developmental disorder (PDD)	Methylphenidate	Placebo
Tammenmaa-Aho[94]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	14	1976-2014	Psychiatric patients with antipsychotic-induced tardive dyskinesia	Cholinergic drugs - 6 types	Placebo
Temmingh[95]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	2/4	8	2006-2014	Adults (17 years and over) with severe mental illness and co-occurring substance use disorder	Risperidone	Other antipsychotics - 5 types
Tenforde[96]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/7	13	1997-2018	Adults with HIV-associated cryptococcal meningitis	Antifungal induction therapies - 6 types	Network meta-analysis
Toews[97]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/7	103[n]	1977-2016	People admitted to intensive care units	H2 receptor antagonists, proton pump inhibitors, prostaglandin analogues, anticholinergics, antacids, sucralfate, teprenone, naloxone, bioflavonoids	H2 receptor antagonists, proton pump inhibitors, prostaglandin analogues, anticholinergics, antacids, sucralfate, teprenone, naloxone, bioflavonoids, placebo, no treatment, other medication (not defined)
Venekamp[98]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	1/4	3[o]	1992-1996	Children (16 years and under) with recurrent acute otitis media	Antibiotics - 3 types	Grommets
Vermeij[99]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	8	1998-2016	Individuals who had an ischemic or hemorrhagic stroke	Preventive antibiotics	Placebo, standard care

Vietto[100]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	33	1983-Unpublished	Patients with critical limb ischaemia unsuitable for rescue or reconstructive intervention	Prostanoids - 7 types	Placebo, other active drugs - 4 types
Wall[101]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/5	5	1995-2014	Patients with acute bacterial meningitis	Glycerol	Treatment as usual
Weibel[102]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	3/10	68	1985-2017	Adult patients (over 18 years) undergoing any elective or urgent surgical procedure under general anaesthesia	Lidocaine	Placebo, no treatment, thoracic epidural analgesia - 3 types
Wright[103]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/3	24	1966-2008	Adult patients with primary hypertension	Thiazides, beta-blockers, angiotensin-converting-enzyme inhibitors, calcium channel blockers	Placebo
Xiao[104]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/4	2	2001-2003	Patients with focal epilepsy that failed to respond to one or more antiepileptic drugs	Losigamone	Placebo
Zhang[105]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	No funding	0/5	3	2009-2015	Adult and elder patients with solid tumours	Thrombopoietin receptor agonists (TPO-RAs)	Placebo
Zhou[106]	2017	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Non-industry	0/6	5	2004-2014	Adults (18 years and over) with neuropathic pain	Oxcarbazepine	Placebo
Zonneveld[107]	2018	Cochrane Database of Systematic Reviews	6.8	Medicine, General & Internal	Not reported	0/7	11	1970-2017	Adult patients with an ischaemic stroke, haemorrhagic stroke or transient ischaemic attack	Blood pressure-lowering drugs (BPLDs) - 5 types	Placebo, no treatment
General Medicine (n = 33)											
López-López[108]	2017	BMJ	23.6	Medicine, General & Internal	Non-industry	018	23	1989-2014	Adults with non-valvular atrial fibrillation	Direct acting oral anticoagulants - 5 types, vitamin K antagonists, antiplatelet agents	Network Meta-analysis
Wang[109]	2018	BMJ Open	2.4	Medicine, General & Internal	Non-industry	0/8	14	1977-2017	Children and adults with uncomplicated skin abscesses	Antibiotics - 10 types	No treatment, other antibiotics - Network meta-analysis
Cipriani[110]	2018	Lancet	53.3	Medicine, General & Internal	Non-industry	4/18	522	1979-Unpublished	Adults (18 years and over) with major depressive disorder	Antidepressants - 21 types	Placebo - Network meta-analysis

Chen[111]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/3	9	2009-2017	Patients with sepsis	Statins - 3 types	Placebo
Ding[112]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/6	6	2014-2017	Patients with hormone receptor-positive or human epidermal growth factor receptor 2 negative advanced breast cancer	Cyclin-dependent kinases 4/6 inhibitors - 3 types	Placebo
Guo[113]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/8	5	2004-2017	Adults undergoing total knee arthroplasty (TKA)	Tranexamic acid (TXA)	Placebo, no treatment
Han[114]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/7	18	2007-2016	Patients with myocardial infarction	Statins - 3 types	Placebo
Hu[115]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/5	4	2010-2016	Patients with acute coronary syndrome, percutaneous coronary intervention, or coronary stents given combination therapy with aspirin and clopidogrel	Proton pump inhibitors	Placebo
Huang[116]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/5	18	2010-2015	Patients with pterygium or glaucoma	Antivascular endothelial growth factor agents - 3 included	Placebo, sham
Jiang[117]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/5	13	2010-2017	Patients with diabetic peripheral neuropathy	Fasudil + methylcobalamin or lipoic acid	Methylcobalamin or lipoic acid alone
Jiang[118]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/4	15	2011-2016	Adult women with pathologically confirmed epithelial ovarian cancer	Antiangiogenic therapy (7 included) alone or combined with chemotherapy	Placebo or chemotherapy alone
Khan[119]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/8	7	2015-2017	Patients with advanced non-small cell lung cancer	Immune checkpoint inhibitors: anti-PD1/PD-L1 therapies - 3 types	Chemotherapy - 6 regimens
Liang[120]	2017	Medicine	2.0	Medicine, General & Internal	No funding	0/4	3	2016-2017	Patients undergoing total knee or hip arthroplasty	Acetaminophen	Normal saline or placebo
Liu[121]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/7	5	1999-2007	Adults with social anxiety disorder	Fluvoxamine	Placebo
Lor[122]	2017	Medicine	2.0	Medicine, General & Internal	No funding	0/8	10	1999-2015	Children and adults requiring nasogastric intubation	Lidocaine	Normal saline, K-Y lubricant gel, or no treatment
Wang[123]	2017	Medicine	2.0	Medicine, General & Internal	No funding	0/2	4	2015-2017	Adults with intertrochanteric fractures preparing for internal fixation	Tranexamic acid	Placebo, no treatment

									(dynamic hip screws, proximal femoral nail antirotations)		
Wang[124]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/5	18	2001-2016	Patients with hepatorenal syndrome	Terlipressin	Placebo, octreotide, norepinephrine, dopamine + furosemide, octreotide + midodrine
Wang[125]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/3	4	1993-2011	Patients undergoing bronchoscopy	Propofol	Midazolam
Wei[126]	2017	Medicine	2.0	Medicine, General & Internal	Not reported	0/2	14	2015-2017	Cancer patients	PD-1 inhibitors - 2 types	Chemotherapy, everolimus, ipilimumab
Woo[127]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/7	34[p]	1998-2017	Women of reproductive age with primary dysmenorrhea	Non-steroidal anti-inflammatory drugs, analgesics, oral contraceptives	Acupuncture
Xia[128]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/6	13	2004-2012	Patients who were administered xenon versus propofol as a general anesthetic	Xenon	Propofol
Yang[129]	2017	Medicine	2.0	Medicine, General & Internal	Not reported	0/4	7	2008-2016	Patients prepared for primary total hip arthroplasty (THA)	Glucocorticoids - 3 types	Placebo, no treatment
Ye[130]	2017	Medicine	2.0	Medicine, General & Internal	Not reported	0/3	5	2004-2016	Patients undergoing laparoscopic cholecystectomy	Ketamine	Placebo
Yu[131]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/6	8	2009-2017	Adults with acute heart failure	Serelaxin	Placebo
Yuan[132]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/9	31	1995-2016	Patients with locoregionally advanced nasopharyngeal carcinoma	Neoadjuvant chemotherapy regimens - 16 included	Network meta-analysis
Zhang[133]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/2	13	2001-2014	Adults with cerebral infarction	Aspirin, aspirin + dipyridamole, aspirin + clopidogrel, aspirin + warfarin, cilostazol, warfarin, and ticlopidine	Network meta-analysis
Zhang[134]	2018	Medicine	2.0	Medicine, General & Internal	Non-industry	0/8	10	1989-2006	Healthy volunteers and people with congestive heart failure	Histamine H2 antagonists - 5 types	Placebo, other conventional therapy medicines - 3 types
Zhao[135]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/7	5	2008-2017	Adult patients prepared to undergo laparoscopic cholecystectomy	Lidocaine	Placebo, saline
Zhao[136]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/3	4	2013-2017	Patients with a diagnosis of	Nefopam	Saline or usual care

Zhou[137]	2018	Medicine	2.0	Medicine, General & Internal	No funding	0/4	6	2013-2017	symptomatic cholelithiasis and acute cholecystitis who prepared for laparoscopic cholecystectomy Adults with end-staged knee osteoarthritis undergoing total knee arthroplasty	Dexamethasone	Placebo, no treatment
Zhu[138]	2018	Medicine	2.0	Medicine, General & Internal	Not reported	0/3	8	2002-2016	Patients who underwent total hip arthroplasty	Selective non-steroidal anti-inflammatory drugs (selective COX-2 inhibitors) - 4 types	Non-selective non-steroidal anti-inflammatory drugs (non-selective COX-2 inhibitors) - 4 types
Zhou[139]	2018	Postgraduate Medicine	2.1	Medicine, General & Internal	No funding	0/5	10	2007-2017	Patients with dyslipidemia	Anacetrapib	Placebo, placebo + usual care
Zhang[140]	2018	Revista da Associação Médica Brasileira	0.7	Medicine, General & Internal	Non-industry	Not reported/6	6	2012-2016	Patients with complicated intra-abdominal infections and complicated urinary tract infections	Ceftazidime-avibactam	Other antibiotics - 3 types, usual care
Specialty medicine (n = 100)											
Li[141]	2018	Acta Ophthalmologica	3.3	Ophthalmology	Non-industry	Not reported/3	72	1995-2015	Patients with primary open-angle glaucoma or ocular hypertension	Prostaglandin analogues, alpha-2 adrenergic agonists, beta-blockers, carbonic anhydrase inhibitors, miotics	Placebo - Network meta-analysis
Tarantini[142]	2018	American Heart Journal	4.2	Cardiac & Cardiovascular Systems	No funding	0/7	5	2007-2016	Patients with acute coronary syndrome	P2Y12 receptor inhibitors - 2 types	Clopidogrel
Wang[143]	2018	American Journal of Cardiovascular Drugs	2.7	Cardiac & Cardiovascular Systems; Pharmacology & Pharmacy	Non-industry	0/3	5	2014-2017	Adults aged 18–65 years with hyperlipidemia	Inclisiran	Placebo, other lipid-lowering agents - Network meta-analysis
Aman[144]	2018	Anaesthesia and Intensive Care	1.7	Anesthesiology; Critical Care Medicine	Non-industry	Not reported/5	10	1995-2015	Patients undergoing caesarean section under general anaesthesia	Opioid analgesics - 3 types, non-opioid analgesics - 5 types	Placebo
Li[145]	2018	Autoimmunity Reviews	8.7	Immunology	Non-industry	0/7	15	2004-2017	Patients with rheumatoid arthritis	Statins - 2 types	Conventional treatment, placebo + conventional treatment
Wang[146]	2018	Biomed Research International	2.6	Biotechnology & Applied Microbiology; Medicine, Research & Experimental	Non-industry	0/4	15	2006-2017	Patients with left ventricular dysfunction undergoing cardiac surgery	Levosimendan	Placebo, milrinone, dopamine, intra-aortic balloon pump (IABP), and standard inotropic agents

Veettil[147]	2017	BMC Cancer	3.3	Oncology	No funding	0/6	8	2003-2014	Adults with history of colorectal cancer or adenoma	Aspirin, non-aspirin nonsteroidal anti-inflammatory drugs (NSAIDs)	Placebo, no treatment
Bredemeier[148]	2018	BMC Cardiovascular Disorders	1.8	Cardiac & Cardiovascular Systems	No funding	0/9	91	1973-2017	Adults under treatment for any clinical condition	Purine-like xanthine oxidase inhibitors - 2 types, non-purine-like xanthine oxidase inhibitors - 2 types	Placebo, no treatment
Lyu[149]	2018	BMC Gastroenterology	2.7	Gastroenterology & Hepatology	Non-industry	0/5	22	2003-2017	Patients with post-endoscopic retrograde cholangiopancreatography pancreatitis (PEP)	Nonsteroidal anti-inflammatory drugs (NSAIDs) - 6 types	Placebo
Xing[150]	2017	BMC Infectious Diseases	2.6	Infectious Diseases	Non-industry	0/6	16	2001-2016	Patients with invasive fungal infections	Voriconazole	Other antifungal agents - 7 types
Kuo[151]	2018	BMC Musculoskeletal Disorders	2.0	Orthopedics; Rheumatology	No funding	0/4	3	2015-2017	Patients undergoing total shoulder arthroplasty or reverse shoulder arthroplasty	Tranexamic acid	Placebo
Beez[152]	2017	BMC Neurology	2.2	Clinical Neurology	No funding	0/3	110[q]	1983-2015	Patients with ischemic or hemorrhagic stroke, traumatic brain injury, or bacterial meningitis	Pharmacological agents for traumatic brain injury – 14 types, pharmacological agents for stroke – 23 types, pharmacological agents for bacterial meningitis – 1 type, pharmacological agents for intracerebral haemorrhage – 6 types, pharmacological agents for aneurysmal subarachnoid hemorrhage – 19 types	Unspecified control
Zeng[153]	2017	BMC Ophthalmology	1.8	Ophtamology	No funding	0/7	32	1990-2016	Patients with primary or recurrent pterygium undergoing surgical removal combined with toxic agents	Anti-fibrotic and anti-VEGF (vascular endothelial growth factor) medications - 3 types	Placebo - Network meta-analysis
Bundhun[154]	2017	BMC Pharmacology & Toxicology	1.9	Pharmacology & Pharmacy; Toxicology	Non-industry	0/3	4	2013-2016	Patients with acute coronary syndrome and patients who underwent percutaneous coronary intervention	Prasugrel	Ticagrelor

Zhang[155]	2017	BMC Psychiatry	2.4	Psychiatry	No funding	0/11	47	2003-2015	People with schizophrenia or related disorders that had a duration of treatment that was no more than 1 year	Antipsychotic drugs - 12 types	Placebo - Network meta-analysis
Zhang[156]	2017	BMC Pulmonary Medicine	2.7	Respiratory System	No funding	0/5	19	1996-2016	Patients with acute exacerbations of chronic obstructive pulmonary disease (COPD)	Antibiotics - 17 types	Placebo - Network meta-analysis
Zhang[157]	2017b	BMC Pulmonary Medicine	2.7	Respiratory System	Non-industry	0/4	25	1993-2016	Preterm infants	Corticosteroids	Placebo
Ramos-Esquivel[158]	2018	Breast Cancer	1.8	Oncology; Obstetrics & Gynecology	No funding	0/4	3	2016-2017	Post-menopausal women with metastatic HR-positive, HER2-negative breast cancer	Cyclin-dependent kinase 4/6 inhibitors - 3 types + aromatase inhibitor - 2 types	Aromatase inhibitors - 2 types
Zeng[159]	2018	British Journal of Sports Medicine	7.9	Sport Sciences	Non-industry	0/12	36	1979-2016	Patients with osteoarthritis in any joint	Non-steroidal anti-inflammatory drugs - 9 types	Network meta-analysis
Shui[160]	2018	Cellular Physiology and Biochemistry	5.5	Cell Biology; Physiology	Not reported	0/6	4	2015-2017	Patients with metastatic colorectal cancer	FOLFOXIRI (leucovorin + fluorouracil + oxaliplatin + irinotecan) + bevacizumab	FOLFOX (leucovorin + fluorouracil + oxaliplatin) + bevacizumab, FOLFIRI (leucovorin + fluorouracil + irinotecan) + bevacizumab
Rodrigo[161]	2018	Clinical Microbiology and Infection	5.4	Infectious Diseases; Microbiology	No funding	0/4	28	1996-2017	Patients with visceral leishmaniasis	Amphotericin B	Miltefosine, paromomycin, antimonial compounds - 2 types, pentamidine, sitamaquine
Wang[162]	2018	Clinical Rheumatology	2.1	Rheumatology	Non-industry	0/3	25	2002-2014	Patients with ankylosing spondylitis and non-radiographic axial spondyloarthritis	Tumor necrosis factor (TNF) inhibitors - 5 types, non-tumor necrosis factor (TNF) inhibitors - 2 types	Placebo, nonsteroidal anti-inflammatory drugs (NSAIDs), disease modifying antirheumatic drugs (DMARDs)
Hong[163]	2018	Critical Reviews in Oncology / Hematology	4.5	Oncology; Hematology	No funding	1/5	13	1996-2015	Adults with acute venous thromboembolism	Low molecular-weight heparin (LMWH) – 5 types, enoxaparin + vitamin K antagonists (VKA)	Rivaroxaban, unfractionated heparin (UFH)
de Carvalho[164]	2018	Diabetes Care	13.4	Endocrinology & Metabolism	Not reported[r]	0/3	20	2012-2017	Patients with familial or nonfamilial	Proprotein convertase subtilisin/kexin type 9 gene inhibitors (PCSK9i)	Placebo, placebo + other lipid-lowering therapy

									hypercholesterolemia		
Jaafar[165]	2018	Digestive Diseases and Sciences	2.8	Gastroenterology & Hepatology	Not reported	0/5	17	2000-2016	Adults (18 and over) with organic or functional dyspepsia	Rebamipide	Placebo, standard treatment, no treatment
Liu[166]	2018	Drug Delivery	3.1	Pharmacology & Pharmacy	Not reported	0/2	9	2002-2015	Patients with neurodegenerative movement disorders	Riluzole	Placebo
Liu[167]	2018	Drug Design, Development and Therapy	2.9	Chemistry, Medicinal; Pharmacology & Pharmacy	Not reported	0/5	9	2010-2016	Patients undergoing coronary angiography (CAG) or percutaneous coronary intervention (PCI)	Atorvastatin	Placebo
Sun[168]	2017	Drug Design, Development and Therapy	2.9	Chemistry, Medicinal; Pharmocology & Pharmacy	Not reported	0/5	9	2009-2016	Adults (≥ 18 years) undergoing spinal anesthesia	Dexmedetomidine	Fentanyl
Paraschakis[169]	2017	East Asian Archives of Psychiatry	None	Not applicable	Not reported	0/2	4	2005-2010	Adults with traumatic brain injuries and depressive disorders	Antidepressants - 2 types	Placebo
D'Souza[170]	2018	Emergency Medicine Journal	2.0	Emergency Medicine	No funding	0/8	4	2001-2016	Patients taking acute antiemetic drugs	Diphenhydramine	Placebo
Mei[171]	2016	European Journal of Gynecological Oncology	0.6	Oncology; Obstetrics & Gynecology	Not reported	Not reported/4	4	2004-2013	Adult women with epithelial ovarian cancer, fallopian tube cancer, or primary peritoneal cancer who have achieved complete clinical remission after debulking surgery and first-line chemotherapy	CA125-targeted antibody – 2 types	Placebo
Verberkt[172]	2017	European Respiratory Journal	12.2	Respiratory System	Non-industry	3/9[s]	35	1982-2015	Patients with chronic breathlessness	Opioids - 8 types	Placebo
Sridharan[173]	2018	Expert Opinion on Pharmacotherapy	3.5	Pharmacology & Pharmacy	No funding	0/3	51	1980-2016	Critically ill patients receiving stress ulcer prophylaxis (SUP)	Antacids, proton pump inhibitors (PPI), histamine-2 receptor antagonists (H2RA), and sucralfate	Placebo - Network meta-analysis
Habibi[174]	2018	Expert Review of Clinical Pharmacology	2.8	Pharmacology & Pharmacy	No funding	0/4	5	1999-2012	Patients undergoing coronary artery bypass surgery	Lidocaine	Placebo
Li[175]	2018	Expert Review of Clinical Pharmacology	2.8	Pharmacology & Pharmacy	Non-industry	0/4	14	2002-2017	Patients with stable angina pectoris requiring elective percutaneous	Nicorandil	Placebo (saline, isosorbide dinitrate), no treatment

									coronary intervention (PCI)		
Sangroongruangsri[176]	2018	Expert Review of Clinical Pharmacology	2.8	Pharmacology & Pharmacy	Non-industry	0/5	11	2010-2017	Patients diagnosed with retinal vein occlusion	Anti-vascular endothelial growth factor (VEGF) drugs - 3 types	Sham injection - Network meta-analysis
Hickey[177]	2018	Foot and Ankle Surgery	1.5	Orthopedics	Not reported	0/7	7	1993-2015	Adult patients with foot or ankle trauma treated with below knee cast or splint immobilization	Low molecular weight heparin - 5 types	Placebo, no treatment
Zhao[178]	2018	Gastric Cancer	5.0	Oncology; Gastroenterology & Hepatology	Non-industry	0/9	16	2002-2017	Patients with advanced gastric cancer	Targeted agents - 11 types, targeted agents + chemotherapy	Placebo - Network meta-analysis
Khera[179]	2018	Gastroenterology	20.8	Gastroenterology & Hepatology	No funding	0/9	29	1998-2015	Obese and overweight adults (18 years and over)	Orlistat, loracaserin, naltrexone-bupropion, phentermine-topiramate, liraglutide	Placebo - Network meta-analysis
Li[180]	2018	Gynecologic Oncology	4.5	Oncology; Obstetrics & Gynecology	Non-industry	0/6	7	2005-2016	Patients with low-risk gestational trophoblastic neoplasia (LRGTN)	Methotrexate (MEX) based chemotherapy regimens, actinomycin-d (Act-D) based chemotherapy regimens	Network meta-analysis
Zhuge[181]	2018	Helicobacter	4.1	Gastroenterology & Hepatology; Microbiology	Non-industry	0/6	18	1999-2016	Patients with helicobacter pylori infection	Furazolidone	Other antibiotics - 7 types
Kim[182]	2017	Indian Journal of Cancer	0.7	Oncology	No funding	0/4	21	1993-2011	Adults at risk of developing cancer	Statins - 7 types	Placebo
Garg[183]	2018	Indian Journal of Gastroenterology	None	Not applicable	Not reported	0/4	6	2007-2016	Patients undergoing endoscopic retrograde cholangiopancreatography	Indomethacin	Placebo
Rosanova[184]	2017	Infectious Diseases	1.9	Infectious Diseases	Not reported	0/5	7	2002-2011	Immunosuppressed haematology-oncology patients	Voriconazole	Other antifungal agents or placebo
Yu[185]	2018	Inflammopharmacology	3.3	Immunology; Toxicology	Non-industry	0/6	3	2007-2016	Adults (17 years and over) diagnosed with acute gout	Prednisolone	Non-steroidal anti-infammatory drugs (NSAIDs) - 2 types
Kakkos[186]	2018	International Angiology	1.2	Peripheral Vascular Disease	Not reported	2/2	7	1982-2015	Patients with chronic venous disorders (CVD) or venous edema	Micronized purified flavonoid faction (Daflon)	Placebo
Ou[187]	2018	International Immunopharmacology	3.1	Immunology; Pharmacology & Pharmacy	No funding	Not reported/5	8	2014-2017	Adults with moderate-to-severe atopic dermatitis	Dupilumab	Placebo
Yin[188]	2018	International Immunopharmacology	3.1	Immunology; Pharmacology & Pharmacy	No funding	0/4	53	1984-2017	Children diagnosed with recurrent respiratory tract infections (RRTIs)	Broncho-Vaxom	Placebo, routine therapies

Zhu[189]	2018	International Journal of Clinical Oncology	2.6	Oncology	Non-industry	0/7	35	2005-2016	Cancer patients	Anti-EGFR monoclonal antibodies (EGFR-MoAbs)	Placebo, usual care
Liu[190]	2018	International Journal of Neuroscience	1.8	Neurosciences	Not reported	0/2	4	2007-2016	Patients with seizures	Lacosamide	Placebo
Coccolini[191]	2018	International Journal of Surgery	2.7	Surgery	No funding	0/12	15	1993-2014	Patients with advanced gastric and esophago-gastric cancer	Neoadjuvant chemotherapy (with surgery)	No neoadjuvant chemotherapy (only surgery)
Fan[192]	2018	International Journal of Surgery	2.7	Surgery	Non-industry	0/8	7	2005-2016	Patients with scheduled total knee arthroplasty	Dexamethasone	Placebo, no treatment ("nothing controlled multimodal analgesia method")
Li[193]	2018	International Journal of Surgery	2.7	Surgery	No funding	0/5	6	2008-2017	Patients with a diagnosis of symptomatic cholelithiasis and acute cholecystitis who prepared for laparoscopic cholecystectomy	Lidocaine	Placebo, saline
Li[194]	2018	International Journal of Surgery	2.7	Surgery	No funding	0/4	17	1998-2017	Patients undergoing anaesthesia as part of endoscopic retrograde cholangiopancreatography	Anaesthetic medications - 12 types	No drug - Network meta-analysis
Liu[195]	2018	International Journal of Surgery	2.7	Surgery	Non-industry	0/5	3[t]	2005-2017	Patients undergoing total knee arthroplasty or total hip arthroplasty	Tranexamic acid	Aminocaproic acid
Ran[196]	2018	International Journal of Surgery	2.7	Surgery	No funding	0/5	5	2002-2016	Patients with symptomatic knee osteoarthritis	Hyaluronic acid	Methylprednisolone
Zhao[197]	2018	International Journal of Surgery	2.7	Surgery	No funding	0/3	4[u]	2010-2017	Patients with hepatocellular carcinoma	Anthracyclines	Platinum
Zhu[198]	2018	International Journal of Surgery	2.7	Surgery	Non-industry	0/5	6	2004-2017	Adult patients prepared for laparoscopic cholecystectomy	Ketamine	Saline
Wagner[199]	2018	Journal of Affective Disorders	3.8	Clinical Neurology; Psychiatry	Non-industry	Not reported/6	119	1990-Unpublished	Adults with major depressive disorder	Second generation antidepressants - 16 types	Placebo - Network meta-analysis
Hickman[200]	2018	Journal of Assisted Reproduction and Genetics	2.8	Genetics & Heredity; Obstetrics & Gynecology;	Not reported	0/5	10	2007-2016	Women with lymphoma, ovarian cancer, or breast	Gonadotropin-releasing hormone agonists (GnRHa) - 7 types	Standard treatment (chemotherapy only)

				Reproductive Biology					cancer undergoing chemotherapy		
Luo[201]	2018	Journal of Cancer Research and Clinical Oncology	3.3	Oncology	Non-industry	0/4	8	2015-2017	Patients with non-small-cell lung carcinoma	Programmed death 1 (PD-1)/programmed death ligand 1 (PD-L1) inhibitors - 3 types	Chemotherapy - 2 types
Wang[202]	2018	Journal of Cancer Research and Clinical Oncology	3.3	Oncology	Non-industry	0/5	26	2010-2017	Patients with metastatic castration-resistant prostate cancer	Targeted agents - 16 types	Placebo - Network meta-analysis
Wang[203]	2018	Journal of Cancer Research and Therapeutics	0.8	Oncology	No funding	0/4	35	1997-2011	Cancer patients with moderate to severe pain	Fentanyl	Morphine
Aboul-Hassan[204]	2017	Journal of Cardiac Surgery	1.2	Cardiac & Cardiovascular Systems; Surgery	No funding	0/8	12	1985-2016	Adults (18 years and over) undergoing any type of cardiac surgery	Aspirin	Placebo, discontinuation of aspirin greater than 7 days before surgery
Wang[205]	2018	Journal of Cardiovascular Surgery	1.2	Cardiac & Cardiovascular Systems; Surgery; Peripheral Vascular Disease	Not reported	0/6	5	1999-2010	Patients undergoing isolated coronary artery bypass graft (CABG) surgery	Statins - 3 types	No preoperative statin
Barrionuevo[206]	2018	Journal of Clinical Endocrinology and Metabolism	5.8	Endocrinology & Metabolism	Non-industry	0/8	32	1989-2016	Women with hirsutism	Antiandrogens, insulin sensitizers, estrogen-progestin oral contraceptives pills (OCPs), OCPs + antiandrogen, OCPs + insulin sensitizer, antiandrogen + insulin sensitizer	Placebo - Network meta-analysis
Cui[207]	2018	Journal of Clinical Pharmacy and Therapeutics	1.7	Pharmacology & Pharmacy	Not reported	0/6	23	1993-2014	Patients with type 2 diabetes	Statins - 6 types	Placebo - Network meta-analysis
Sawyer[208]	2018	Journal of Dermatological Treatment	2.1	Dermatology	Industry	6/6[v]	54	2001-2016	Adults with moderate-to-severe chronic plaque-type psoriasis	Apremilast, biological therapies - 7 types	Placebo - Network meta-analysis
Markey[209]	2018	Journal of Emergency Medicine	1.2	Emergency Medicine	Not reported	Not reported/3	11	1989-2004	Patients with onset of atrial fibrillation (AF) within 48 h, who were hemodynamically stable and without evidence of acute coronary syndrome,	Flecainide	Placebo, verapamil, and other active anti-dysrhythmics

									congestive heart failure, or structural heart disease		
Szabó[210]	2017	Journal of Gastrointestinal and Liver Diseases	2.0	Gastroenterology & Hepatology	Not reported	0/15	10[w]	2009-2016	Adult patients (18 years and over) taking low-dose aspirin for a minimum of 2 weeks	Proton-pump inhibitors (PPIs) - 5 types	Histamine-2 receptor antagonists (H2RAs) - 2 types
Su[211]	2018	Journal of Immunology Research	3.3	Immunology	Non-industry	0/6	15	2011-2017	Patients with histologically confirmed solid cancer	Immune checkpoint inhibitors (ICIs) - 5 types	Placebo or chemotherapy
Chen[212]	2018	Journal of Interventional Cardiac Electrophysiology	1.5	Cardiac & Cardiovascular Systems	Non-industry	0/9	8	2006-2017	Patients with persistent atrial fibrillation	Antiarrhythmic drugs	Catheter ablation
Chen[213]	2017	Journal of Orthopaedic Surgery and Research	1.6	Orthopedics	No funding	0/4	6	2008-2014	Patients undergoing knee arthroscopy	Midazolam	Placebo
Li[214]	2018	Journal of Orthopaedic Surgery and Research	1.6	Orthopedics	Not reported	0/5	3[x]	2002-2017	Patients undergoing a primary total hip or knee arthroplasty	Aminocaproic acid	Placebo or no treatment
Luo[215]	2018	Journal of Orthopaedic Surgery and Research	1.6	Orthopedics	Not reported	0/4	3[y]	2002-2017	Patients treated with spine surgery	Tranexamic acid	Control (not specified)
Ma[216]	2018	Journal of Orthopaedic Surgery and Research	1.6	Orthopedics	No funding	0/4	4	1991-2015	Patients who underwent hip surgery	Naproxen	Placebo
He[217]	2018	Journal of Psychiatric Research	4.0	Psychiatry	Non-industry	0/8	22	2009-2015	Patients with a primary diagnosis of major depressive disorder (MDD)	Vortioxetine, levomilnacipran, vilazodone	Placebo
Wang[218]	2018	Journal of Stroke & Cerebrovascular Diseases	1.6	Neurosciences; Peripheral Vascular Disease	Non-industry	4/8	6	2003-2013	Asian patients with non-valvular atrial fibrillation (AF)	Warfarin, direct oral anticoagulants (DOACs) - 5 types	Network meta-analysis
Dhana[219]	2018	Journal of the American Academy of Dermatology	6.9	Dermatology	No funding	0/6	15	2000-2016	People with scabies	Permethrin	Ivermectin
Karatasakis[220]	2017	Journal of the American Heart Association	4.5	Cardiac & Cardiovascular Systems	Not reported	3/12[z]	35	2012-2017	Adults with hypercholesterolemia	Proprotein convertase subtilisin/kexin type 9 (PCSK9) inhibitors - 2 types	Placebo, ezetimibe, standard therapy

Kuo[221]	2018	Journal of the European Academy of Dermatology and Venereology	4.3	Dermatology	Non-industry	2/4	4	2012-2016	Adult patients (≥ 18) with moderate-to-severe plaque psoriasis	Tofacitinib	Placebo
Liu[222]	2016	Journal of Traditional Chinese Medicine	0.9	Integrative & Complementary Medicine	Non-industry	Not reported/6	16	2005-2015	Patients with rheumatoid arthritis	Methotrexate	Sinomenine
Zheng[223]	2017	Journal of Zhejiang University-SCIENCE B	1.8	Biochemistry & Molecular Biology; Biotechnology & Applied Microbiology; Medicine, Research & Experimental	Not reported	0/7	8	1990-2014	Adult patients undergoing cardiac surgery requiring aortic cross-clamp	Amiodarone, lidocaine	Placebo
Fregonese[224]	2018	Lancet Respiratory Medicine	21.5	Critical Care Medicine; Respiratory System	Non-industry	0/57	2	2010-2014	Patients with isoniazid-resistant, rifampicin-susceptible tuberculosis	Fluoroquinolone, streptomycin	Usual care (REZ = rifampicin, ethambutol, pyrazinamide)
Bornstein[225]	2018	Neurological Sciences	2.3	Clinical Neurology; Neurosciences	Not reported	Not reported/10	9	2010-Unpublished	Patients during early post-stroke period	Cerebrolysin	Placebo
Chen[226]	2018	Ophthalmic Research	1.8	Ophthalmology		0/4	3	2013-2015	Patients arranged for primary trabeculectomy	Bevacizumab, bevacizumab + antimetabolite - 2 types	Placebo, antimetabolite - 2 types
Han[227]	2017	Pain Physician	2.6	Anesthesiology; Clinical Neurology	No funding	0/4	10	2004-2016	Patients undergoing spinal surgery	Gabapentin	Placebo
Peng[228]	2017	Pain Physician	2.6	Anesthesiology; Clinical Neurology	No funding	0/5	18	2004-2016	Adult patients undergoing surgical procedures	Dexmedetomidine + opioids	Opioids
Feng[229]	2016	Pharmazie	1.0	Chemistry, Medicinal; Chemistry, Multidisciplinary; Pharmacology & Pharmacy	Not reported	0/7	2[aa]	2011-2012	Patients with tuberculosis	V-5 immunitor	Usual care (chemotherapy), usual care + placebo
Xu[230]	2016	Pharmazie	1.0	Chemistry, Medicinal; Chemistry, Multidisciplinary; Pharmacology & Pharmacy	Not reported	Not reported/8	12	1999-2014	Patients with non-cystic fibrosis bronchiectasis	Antibiotics - 7 types	Placebo, symptomatic treatment only
Palmeirim[231]	2018	PLOS Neglected Tropical Diseases	4.4	Parasitology; Tropical Medicine	Non-industry	0/9	14[bb]	1997-2015	Patients infected with soil transmitted helminths	Albendazole + ivermectin	Albendazole, ivermectin

Furukawa[232]	2018	Psychotherapy and Psychosomatics	13.1	Psychiatry; Psychology	Non-industry	2/11	3	2000-2015	Adults with persistent depressive disorder (DSM-5), chronic major depression, recurrent major depression with incomplete interepisode recovery or dysthymia (DSM-IV), or any corresponding conditions	Antidepressants - 6 types, cognitive-behavioral analysis system of psychotherapy, combination of antidepressants and cognitive-behavioral analysis system of psychotherapy	Network meta-analysis
Liu[233]	2018	Renal Failure	1.4	Urology & Nephrology	Not reported	0/6	12	2006-2015	Adult patients with chronic kidney disease	Uric acid-lowering therapy - 2 types	Placebo, usual therapy, no treatment
Miravitlles[234]	2017	Respiratory Research	3.8	Respiratory System	Industry	3/4	10	2014-2016	Adults with a history of chronic obstructive pulmonary disease (COPD)	Tiotropium + olodaterol	Tiotropium or olodaterol as monotherapy, salmeterol + fluticasone
Wang[235]	2017	Respiratory Research	3.8	Respiratory System	Non-industry	1/7	6	2006-2016	Patients with intermittent or mild persistent asthma	Corticosteroids, fast-onset-acting β2-agonists	Corticosteroid + fast-onset-acting β2-agonist
Kawalec[236]	2018	Rheumatology International	2.0	Rheumatology	No funding	0/4	8	2011-2016	Adults (18 years and over) with moderate to severe psoriatic arthritis (PsA)	Tumor necrosis factor (antiTNF)-α inhibitors - 4 types	Placebo - Network meta-analysis
Malhotra[237]	2018	Stroke	6.2	Clinical Neurology; Peripheral Vascular Disease	Not reported	0/6	12	2009-2016	Adult patients (18 years and over) treated for the secondary prevention of cardiovascular, peripheral vascular, and cerebrovascular disease	Proton pump inhibitors (PPI) + thienopyridines	Thienopyridines - 2 types
Zhang[238]	2018	Surgical Laparoscopy Endoscopy & Percutaneous Techniques	1.0	Surgery	Not reported	0/3	5	1995-2018	Adults (18 and over) undergoing gastrointestinal endoscopy	Midazolam	Propofol
Yamashita[239]	2018	Thrombosis Research	2.8	Hematology; Peripheral Vascular Disease	No funding	3/7	6	2009-2014	Asian and non-Asian adults (18 years and older) with acute venous thromboembolism	Direct oral anticoagulants (DOACs) - 4 types	Vitamin K antagonists (VKAs), heparin
Zhang[240]	2018	Vaccine	3.3	Immunology; Medicine, Research & Experimental	No funding	1/6	13	1999-2014	HIV-positive people	Influenza vaccine, Placebo	Network meta-analysis

Multidisciplinary sciences (n = 10)											
Chen[241]	2018	Medical Science Monitor	1.9	Medicine, Research & Experimental	Non-industry	0/5	20[cc]	2000-2016	Patients with essential hypertension	Anti-hypertensive drugs - 8 types	Acupuncture
Arteagoitia[242]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	No funding	0/3	8	1989-2015	Adult patients (over 18 years old) that underwent the extraction of any tooth	Chlorhexidine	Placebo, standard treatment
Feng[243]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	No funding	0/4	9	2002-2009	Adults with osteoarthritis or rheumatoid arthritis of the knee or hip	Etoricoxib	Placebo, other non-steroidal anti-inflammatory drugs (NSAIDs) - 2 included
Kawakami[244]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	Non-industry	0/5	6	2007-2017	Pediatric surgical patients	Magnesium	Placebo, no treatment
Li[245]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	Non-industry	0/7	8	2007-2014	Adults (18 years and over) diagnosed with generalized anxiety disorder (GAD)	Duloxetine	Placebo
Lin[246]	2017	PLOS ONE	2.8	Multidisciplinary Sciences	Non-industry	0/6	21	1992-2012	Patients with hypertension and chronic kidney disease stage 3 to 5 and dialysis	Calcium channel blockers	Angiotensin-converting enzyme inhibitors, angiotensin receptor blockers
Ling[247]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	Non-industry	Not reported/6	9	2003-2017	Adults (19 years and over) undergoing cardiac surgery	Dexmedetomidine	Propofol, morphine, placebo
Rohner[248]	2017	PLOS ONE	2.8	Multidisciplinary Sciences	Non-industry	2/7	94	1993-2014	Cancer patients	Erythropoiesis-stimulating agents	Usual care
Sethi[249]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	No funding	0/6	28	1986-2017	Patients with atrial fibrillation or atrial flutter	Digoxin	Placebo, no intervention, beta blockers, calcium antagonists, amiodarone
Wolf[250]	2018	PLOS ONE	2.8	Multidisciplinary Sciences	Industry	1/9	13	2002-2016	Post renal transplant patients	mTOR-inhibitors - 2 types	Calcineurin-inhibitors

[a]Only 3 studies reported that authors were employed by industry and therefore we included them as ties for the purposes of this table; [b]11/12 included RCTs had a drug arm; [c]33/38 included RCTs had a drug arm; [d]4/14 included RCTs had a drug arm; [e]One author reported pharmaceutical company employment; [f]9/11 included RCTs had a drug arm; [g]71/120 included studies were RCTs; [h]24/25 included studies were RCTs; [i]Meta-analysis funding sources reported as 'None, Other" we coded as no study funding; [j]10/27 included RCTs had a drug arm; [k]Flow chart indicates that 0 RCTs were included in the quantitative synthesis, but 2 RCTs were quantitatively synthesized and 13 were included; [l]Declarations of interest were provided for only 3 out of 5 meta-analysis authors; [m]24/31 included RCTs had a drug arm; [n]103/106 included RCTs had a drug arm; [o]3/5 included RCTs had a drug arm; [p]34/60 included RCTs had a drug arm; [q]110/123 included RCTs had an eligible drug arm; [r]Salary was reported under 'funding' but they did not specify whether there was any funding for the study itself; [s]ICMJE forms only provided for 5/9 authors; [t]3/4 included studies were RCTs; [u]4/11 included studies were RCTs; [v]Four authors reported financial ties with a pharmaceutical company and employment by Symmetron, a company that provides health economic research services to pharmaceutical companies, and two authors reported employment by a pharmaceutical company; [w]10/12 included studies were RCTs; [x]3/7 included studies were RCTs; [y]3/4 included studies were RCTs; [z] Of the 3 authors that reported financial ties, one also reported industry employment; [aa]2/4 included studies were RCTs; [bb]14/30 included studies were RCTs; [cc]20/30 included studies were RCTs with a drug arm

7.4 Appendix D: Detailed Reporting of FCOI from included RCTs

eTable2. – Detailed reporting of study funding sources (F), author-industry financial ties (T), and author-industry employment (E) form included RCTs

First Author	Year	Journal	Funding Sources of Included Trials Reported in Meta-analysis?	Author-Industry Financial Ties of Included Trials Reported in Meta-analysis?	Author-Industry Employment of Included Trials Reported in Meta-analysis?	Location Reported						
						Risk of Bias Text	Risk of Bias Figure or Table	Main Text, Other than Risk of Bias	Other in Main Document (Characteristics of Included Studies Table, other table, footnote)	Abstract	Lay summary	Online appendix
Cochrane Reviews (n = 107)												
Abdel-Rahman[1]	2018	Cochrane Database of Systematic Reviews	Full	No	No	F	F		F	F	F	
Adams[2]	2018	Cochrane Database of Systematic Reviews	Full	No	No	F		F	F			
Agabio[3]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No			F, T	F, T		F	
Al-Shahi Salman[4]	2018	Cochrane Database of Systematic Reviews	Partial	No	No			F	F			
Alabed[5]	2018	Cochrane Database of Systematic Reviews	Partial	No	Partial				F, E			
Allegretti[6]	2017	Cochrane Database of Systematic Reviews	Full	No	No	F	F			F	F	
Arechabala[7]	2018	Cochrane Database of Systematic Reviews	Full	Partial	Partial	F	F, E	F, T	F, T, E		F	
Baandrup[8]	2018	Cochrane Database of Systematic Reviews	Full	Full	Partial	F	F	F	F, T, E		F	
Bala[9]	2018	Cochrane Database of Systematic Reviews	Full	No	No	F			F			
Barbato[10]	2018	Cochrane Database of Systematic Reviews	No	No	No							
Bergman[11]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No				F, T			
Bighelli[12]	2018	Cochrane Database of Systematic Reviews	Full	Full	Partial	F	F, T, E	F	F, T, E	F	F	
Birks[13]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No			F	F, T	F		
Boyapati[14]	2018	Cochrane Database of Systematic Reviews	No	No	No							

Brown[15]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No	F	F	F	F, T	F	F
Bruins Slot[16]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		
Bryan[17]	2017	Cochrane Database of Systematic Reviews	Partial	No	No				F		
Bryant-Smith[18]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		
Burry[19]	2018	Cochrane Database of Systematic Reviews	Full	No	No		F	F	F		
Campschroer[20]	2018	Cochrane Database of Systematic Reviews	Full	Full	No				F, T		
Candy[21]	2018	Cochrane Database of Systematic Reviews	Full	No	No			F	F		
Chiew[22]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Das[23]	2018	Cochrane Database of Systematic Reviews	Full	No	No			F	F	F	
Demicheli[24]	2018	Cochrane Database of Systematic Reviews	Full[a]	Partial	Partial				F, T, E		
Demicheli[25]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Di Nisio[26]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No				F, T		
El-Sayeh[27]	2018	Cochrane Database of Systematic Reviews	Full	No	No	F			F		
Engelen[28]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Eshun-Wilson[29]	2018	Cochrane Database of Systematic Reviews	Full	Full	No				F, T		
Essali[30]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		
Everitt[31]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No	F, T	F, T	F	F, T		
Fanshawe[32]	2017	Cochrane Database of Systematic Reviews	No	No	No						
Franik[33]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No				F, T		
González[34]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		
Grabosch[35]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Graves[36]	2018	Cochrane Database of Systematic Reviews	Partial[b]	No	No				F		
Haas[37]	2018	Cochrane Database of Systematic Reviews	Full	Full	No			F, T	F, T		
Hakoum[38]	2018	Cochrane Database of Systematic Reviews	Full	Full	No				F, T		
Heras-Mosteiro[39]	2017	Cochrane Database of Systematic Reviews	Partial[c]	Partial[d]	Partial				F, T, E		

Janmaat[40]	2017	Cochrane Database of Systematic Reviews	No	No	No					
Jefferson[41]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F	
Jung[42]	2017	Cochrane Database of Systematic Reviews	Full	Full	Partial			F, T	F, T, E	
Kaempfen[43]	2018	Cochrane Database of Systematic Reviews	No	No	No					
Kahale[44]	2017	Cochrane Database of Systematic Reviews	Full	Full	Partial[e]				F, T, E	
Kahale[45]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No				F, T	
Kahale[46]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No				F, T	
Kapur[47]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F	
Kelly[48]	2018	Cochrane Database of Systematic Reviews	Partial[f]	Partial	No		F		F, T	
Knightly[49]	2017	Cochrane Database of Systematic Reviews	Full	No	No				F	
Kopsaftis[50]	2018	Cochrane Database of Systematic Reviews	No	No	No					
Lawrie[51]	2018	Cochrane Database of Systematic Reviews	Full	Partial	Partial				F, T, E	
Leathersich[52]	2018	Cochrane Database of Systematic Reviews	Full	Full	No	F, T	F, T	F, T	F, T	
Lethaby[53]	2017	Cochrane Database of Systematic Reviews	Full	No	No			F	F	F
López-Briz[54]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F	
Marchant[55]	2018	Cochrane Database of Systematic Reviews	Partial	No	No				F	
Matar[56]	2018	Cochrane Database of Systematic Reviews	Full	No	No		F			
Matar[57]	2018	Cochrane Database of Systematic Reviews	Full	Full	No				F, T	
McNicol[58]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F	
McTague[59]	2018	Cochrane Database of Systematic Reviews	No	No	No					
Mhaskar[60]	2017	Cochrane Database of Systematic Reviews	Full	Full	Partial				F, T, E	
Milligan[61]	2018	Cochrane Database of Systematic Reviews	Partial[g]	No	No	F	F			
Monk[62]	2017	Cochrane Database of Systematic Reviews	Full	Full	No			F, T	F, T	
Montero[63]	2018	Cochrane Database of Systematic Reviews	Partial	No	No		F			
Mücke[64]	2018	Cochrane Database of Systematic Reviews	Full	Full	Partial			F, T	F, T, E	

Narula[65]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Nevitt[66]	2017	Cochrane Database of Systematic Reviews	Partial	No	No			F	F		
Nevitt[67]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		
Norman[68]	2018	Cochrane Database of Systematic Reviews	Full	No	Partial			F	F, E		
Normansell[69]	2018	Cochrane Database of Systematic Reviews	Full	No[h]	No			F	F		
Novoa[70]	2018	Cochrane Database of Systematic Reviews	Full	Partial[h]	No	F	F		F, T	F	F
Ohlsson[71]	2017	Cochrane Database of Systematic Reviews	Partial	No	No		F		F		
Ostinelli[72]	2018	Cochrane Database of Systematic Reviews	Full	No	No		F	F			
Ostinelli[73]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No	F	F, T	F			
Ostuzzi[74]	2018	Cochrane Database of Systematic Reviews	Full	Partial	No	F	F, T	F			
Parker[75]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Pasquali[76]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No	F, T	F, T	F		F	F
Pike[77]	2018	Cochrane Database of Systematic Reviews	Full	No	No			F	F		
Rirash[78]	2017	Cochrane Database of Systematic Reviews	No	No	No						
Robertson[79]	2017	Cochrane Database of Systematic Reviews	No	No	No						
Romero[80]	2017	Cochrane Database of Systematic Reviews	Full	No	No	F	F	F	F	F	F
Rosumeck[81]	2018	Cochrane Database of Systematic Reviews	Full	Full	No				F, T		
Rüschen[82]	2018	Cochrane Database of Systematic Reviews	Full	Full	No			F, T	F, T		
Ruthirakuhan[83]	2018	Cochrane Database of Systematic Reviews	Full	No	Partial			F	F, E		
Sankar[84]	2018	Cochrane Database of Systematic Reviews	No	No	No						
Schumann[85]	2018	Cochrane Database of Systematic Reviews	Full	Partial	Partial	F, T		F	F, T, E	F, T	F
Simancas-Racines[86]	2018	Cochrane Database of Systematic Reviews	Full	Full	No	F	F	F	F, T		
Smith[87]	2017	Cochrane Database of Systematic Reviews	Full	Full	Full	F, T, E	F, T, E				
Smith[88]	2018	Cochrane Database of Systematic Reviews	Full	Full	No			F, T	F, T		
Soares-Weiser[89]	2018	Cochrane Database of Systematic Reviews	Partial	No	No				F		

Squizzato[90]	2017	Cochrane Database of Systematic Reviews	Full	Partial[i]	No	F	F, T	F		F		
St George[91]	2018	Cochrane Database of Systematic Reviews	Full	Partial	Partial	F, T	F, T, E	F	F, T, E			
Stern[92]	2017	Cochrane Database of Systematic Reviews	Full	No	No			F	F		F	
Sturman[93]	2017	Cochrane Database of Systematic Reviews	Full	Full	No	F, T	F, T	F, T				
Tammenmaa-Aho[94]	2018	Cochrane Database of Systematic Reviews	Partial	No	No				F			
Temmingh[95]	2018	Cochrane Database of Systematic Reviews	Full	Partial	Partial	F, T	F, T, E	F, T, E	F, T			
Tenforde[96]	2018	Cochrane Database of Systematic Reviews	Full	Full	No	F, T	F, T		F, T			
Toews[97]	2018	Cochrane Database of Systematic Reviews	Full	Full	Partial		F, E	F	F, T			
Venekamp[98]	2018	Cochrane Database of Systematic Reviews	Full	Full	No			F	F, T			
Vermeij[99]	2018	Cochrane Database of Systematic Reviews	No	No	No							
Vietto[100]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F		F	
Wall[101]	2018	Cochrane Database of Systematic Reviews	Full	Full	No	F, T	F	F	F			
Weibel[102]	2018	Cochrane Database of Systematic Reviews	Full	No	No			F	F			
Wright[103]	2018	Cochrane Database of Systematic Reviews	Partial	Partial	No	F	F, T					
Xiao[104]	2018	Cochrane Database of Systematic Reviews	Full	No	No				F			
Zhang[105]	2017	Cochrane Database of Systematic Reviews	Full	No	No	F	F	F	F		F	
Zhou[106]	2017	Cochrane Database of Systematic Reviews	Full	Full	No			F	F, T		F	
Zonneveld[107]	2018	Cochrane Database of Systematic Reviews	Partial[j]	No	No		F					
General Medicine (n = 33)												
López-López[108]	2017	BMJ	Full	No	No			F				F
Wang[109]	2018	BMJ Open	No	No	No							
Cipriani[110]	2018	Lancet	Full[k]	No	No			F				F
Chen[111]	2018	Medicine	No	No	No							
Ding[112]	2018	Medicine	No	No	No							
Guo[113]	2018	Medicine	No	No	No							
Han[114]	2018	Medicine	No	No	No							
Hu[115]	2018	Medicine	No	No	No							
Huang[116]	2018	Medicine	Full	Partial	No	F, T						
Jiang[117]	2018	Medicine	No	No	No							
Jiang[118]	2018	Medicine	No	No	No							
Khan[119]	2018	Medicine	No	No	No							
Liang[120]	2017	Medicine	No	No	No							

Liu[121]	2018	Medicine	Partial[l]	No	No	F	
Lor[122]	2017	Medicine	No	No	No		
Wang[123]	2017	Medicine	No	No	No		
Wang[124]	2018	Medicine	No	No	No		
Wang[125]	2018	Medicine	No	No	No		
Wei[126]	2017	Medicine	No	No	No		
Woo[127]	2018	Medicine	No	No	No		
Xia[128]	2018	Medicine	No	No	No		
Yang[129]	2017	Medicine	No	No	No		
Ye[130]	2017	Medicine	No	No	No		
Yu[131]	2018	Medicine	No	No	No		
Yuan[132]	2018	Medicine	No	No	No		
Zhang[133]	2018	Medicine	No	No	No		
Zhang[134]	2018	Medicine	No	No	No		
Zhao[135]	2018	Medicine	No	No	No		
Zhao[136]	2018	Medicine	No	No	No		
Zhou[137]	2018	Medicine	No	No	No		
Zhu[138]	2018	Medicine	No	No	No		
Zhou[139]	2018	Postgraduate Medicine	No	No	No		
Zhang[140]	2018	Revista da Associação Médica Brasileira	Full	Full[m]	No	F, T	
Specialty medicine (n = 100)							
Li[141]	2018	Acta Ophthalmologica	Full[n]	No	No	F	F
Tarantini[142]	2018	American Heart Journal	No	No	No		
Wang[143]	2018	American Journal of Cardiovascular Drugs	No	No	No		
Aman[144]	2018	Anaesthesia and Intensive Care	No	No	No		
Li[145]	2018	Autoimmunity Reviews	No	No	No		
Wang[146]	2018	Biomed Research International	No	No	No		
Veettil[147]	2017	BMC Cancer	No	No	No		
Bredemeier[148]	2018	BMC Cardiovascular Disorders	Full	No	No		F
Lyu[149]	2018	BMC Gastroenterology	No	No	No		
Xing[150]	2017	BMC Infectious Diseases	No	No	No		
Kuo[151]	2018	BMC Musculoskeletal Disorders	No	No	No		
Beez[152]	2017	BMC Neurology	No	No	No		
Zeng[153]	2017	BMC Ophthalmology	No	No	No		
Bundhun[154]	2017	BMC Pharmacology & Toxicology	No	No	No		
Zhang[155]	2017	BMC Psychiatry	No	No	No		
Zhang[156]	2017	BMC Pulmonary Medicine	No	No	No		

Zhang[157]	2017	BMC Pulmonary Medicine	Full	No	No				
Ramos-Esquivel[158]	2018	Breast Cancer	No	No	No				
Zeng[159]	2018	British Journal of Sports Medicine	Partial[o]	No	No		F		F
Shui[160]	2018	Cellular Physiology and Biochemistry	No	No	No				
Rodrigo[161]	2018	Clinical Microbiology and Infection	Partial	No	No				F
Wang[162]	2018	Clinical Rheumatology	No	No	No				
Hong[163]	2018	Critical Reviews in Oncology / Hematology	No	No	No				
de Carvalho[164]	2018	Diabetes Care	No	No	No				
Jaafar[165]	2018	Digestive Diseases and Sciences	No	No	No				
Liu[166]	2018	Drug Delivery	No	No	No				
Liu[167]	2018	Drug Design, Development and Therapy	No	No	No				
Sun[168]	2017	Drug Design, Development and Therapy	No	No	No				
Paraschakis[169]	2017	East Asian Archives of Psychiatry	No	No	No				
D'Souza[170]	2018	Emergency Medicine Journal	No	No	No				
Mei[171]	2016	European Journal of Gynecological Oncology	No	No	No				
Verberkt[172]	2017	European Respiratory Journal	No	No	No				
Sridharan[173]	2018	Expert Opinion on Pharmacotherapy	No	No	No				
Habibi[174]	2018	Expert Review of Clinical Pharmacology	No	No	No				
Li[175]	2018	Expert Review of Clinical Pharmacology	No	No	No				
Sangroongruangsri[176]	2018	Expert Review of Clinical Pharmacology	Full	No	No		F		
Hickey[177]	2018	Foot and Ankle Surgery	No	No	No				
Zhao[178]	2018	Gastric Cancer	Partial[p]	No	No	F	F		F
Khera[179]	2018	Gastroenterology	No	No	No				
Li[180]	2018	Gynecologic Oncology	No	No	No				
Zhuge[181]	2018	Helicobacter	No	No	No				

Kim[182]	2017	Indian Journal of Cancer	No	No	No			
Garg[183]	2018	Indian Journal of Gastroenterology	No	No	No			
Rosanova[184]	2017	Infectious Diseases	No	No	No			
Yu[185]	2018	Inflammopharmacology	No	No	No			
Kakkos[186]	2018	International Angiology	No	No	No			
Ou[187]	2018	International Immunopharmacology	Full	No	No		F	
Yin[188]	2018	International Immunopharmacology	No	No	No			
Zhu[189]	2018	International Journal of Clinical Oncology	No	No	No			
Liu[190]	2018	International Journal of Neuroscience	No	No	No			
Coccolini[191]	2018	International Journal of Surgery	No	No	No			
Fan[192]	2018	International Journal of Surgery	No	No	No			
Li[193]	2018	International Journal of Surgery	No	No	No			
Li[194]	2018	International Journal of Surgery	No	No	No			
Liu[195]	2018	International Journal of Surgery	No	No	No			
Ran[196]	2018	International Journal of Surgery	No[q]	No	No			
Zhao[197]	2018	International Journal of Surgery	No	No	No			
Zhu[198]	2018	International Journal of Surgery	No	No	No			
Wagner[199]	2018	Journal of Affective Disorders	Partial	No	No		F	
Hickman[200]	2018	Journal of Assisted Reproduction and Genetics	No	No	No			
Luo[201]	2018	Journal of Cancer Research and Clinical Oncology	No	No	No			
Wang[202]	2018	Journal of Cancer Research and Clinical Oncology	Partial[r]	No	No	F	F	
Wang[203]	2018	Journal of Cancer Research and Therapeutics	No	No	No			
Aboul-Hassan[204]	2017	Journal of Cardiac Surgery	No	No	No			

Wang[205]	2018	Journal of Cardiovascular Surgery	No	No	No							
Barrionuevo[206]	2018	Journal of Clinical Endocrinology and Metabolism	Full	No	No			F				F
Cui[207]	2018	Journal of Clinical Pharmacy and Therapeutics	Full[s]	No	No	F						
Sawyer[208]	2018	Journal of Dermatological Treatment	No	No	No							
Markey[209]	2018	Journal of Emergency Medicine	No	No	No							
Szabó[210]	2017	Journal of Gastrointestinal and Liver Diseases	No	No	No							
Su[211]	2018	Journal of Immunology Research	No	No	No							
Chen[212]	2018	Journal of Interventional Cardiac Electrophysiology	No	No	No							
Chen[213]	2017	Journal of Orthopaedic Surgery and Research	No	No	No							
Li[214]	2018	Journal of Orthopaedic Surgery and Research	No	No	No							
Luo[215]	2018	Journal of Orthopaedic Surgery and Research	No	No	No							
Ma[216]	2018	Journal of Orthopaedic Surgery and Research	No	No	No							
He[217]	2018	Journal of Psychiatric Research	Full	No	No					F		
Wang[218]	2018	Journal of Stroke & Cerebrovascular Diseases	No	No	No							
Dhana[219]	2018	Journal of the American Academy of Dermatology	No	No	No							
Karatasakis[220]	2017	Journal of the American Heart Association	No	No	No							
Kuo[221]	2018	Journal of the European Academy of Dermatology and Venereology	Full	No	No							
Liu[222]	2016	Journal of Traditional Chinese Medicine	No	No	No							
Zheng[223]	2017	Journal of Zhejiang University-SCIENCE B	No	No	No							

Fregonese[224]	2018	Lancet Respiratory Medicine	No	No	No		
Bornstein[225]	2018	Neurological Sciences	No	No	No		
Chen[226]	2018	Ophthalmic Research	No	No	No		
Han[227]	2017	Pain Physician	No	No	No		
Peng[228]	2017	Pain Physician	No	No	No		
Feng[229]	2016	Pharmazie	No	No	No		
Xu[230]	2016	Pharmazie	No	No	No		
Palmeirim[231]	2018	PLOS Neglected Tropical Diseases	No	No	No		
Furukawa[232]	2018	Psychotherapy and Psychosomatics	No	No	No		
Liu[233]	2018	Renal Failure	No	No	No		
Miravitlles[234]	2017	Respiratory Research	Full	No	No		F
Wang[235]	2017	Respiratory Research	No	No	No		
Kawalec[236]	2018	Rheumatology International	No	No	No		
Malhotra[237]	2018	Stroke	No	No	No		
Zhang[238]	2018	Surgical Laparoscopy Endoscopy & Percutaneous Techniques	No	No	No		
Yamashita[239]	2018	Thrombosis Research	No	No	Partial	E	
Zhang[240]	2018	Vaccine	No	No	No		
Other (n = 10)							
Chen[241]	2018	Medical Science Monitor	No	No	No		
Arteagoitia[242]	2018	PLOS ONE	No	No	No		
Feng[243]	2018	PLOS ONE	No	No	No		
Kawakami[244]	2018	PLOS ONE	No	No	No		
Li[245]	2018	PLOS ONE	No	No	No		
Lin[246]	2017	PLOS ONE	No	No	No		
Ling[247]	2018	PLOS ONE	No	No	No		
Rohner[248]	2017	PLOS ONE	No	No	No		
Sethi[249]	2018	PLOS ONE	Partial	No	No	F	
Wolf[250]	2018	PLOS ONE	No	No	No		

[a]Funding sources categorized as government funded, industry funded, or mixed for most trials. Specific details about funding were reported for 2 trials and details on author ties and employment were reported for a single trial; [b]Authors reported extracting funding sources from included RCTs but funding sources are only reported for a single study; [c]Reported funding sources for all included studies except for one; [d]Reported author financial ties for all included studies except for 2; [e]Non-industry author employment reported for some included RCTs; [f]Funding sources and author ties reported for all included RCTs except one that was a conference abstract; [g]Funding sources only reported for a single RCT; [h]Authors reported whether or not included RCTs had decaled COI (yes, no) and, if yes, indicated the page of the original study the declaration could be found on. This was coded as partially reporting because the nature of these COI was not reported within the meta-analysis publication itself and it was unclear whether these were financial ties and whether they were with industry; [i]Non-industry author financial ties reported for some included RCTs; [j]A single RCT was reported as 'industry sponsored' with no specifics about the sponsor; [k]Authors coded studies as sponsored by industry or not, and any of author industry affiliation, industry funding, or data obtained from pharmaceutical company qualified an RCT as 'sponsored'; [l]Authors report that 'some trials had a high risk of reporting bias because they were sponsored by pharmaceutical companies' but do not specify which or even how many trials; [m]Authors reported that all included RCTs had authors with financial ties to industry but provided no further information; [n]Reported whether each included RCT was industry funded (yes or no) but provided no further information; [o]For some analyses the authors reported how many included RCTs were non-commercially funded and present results including only non-commercially funded trials, but do not provide further information on which trials were commercially funded; [p]Authors state 14 trials were industry-sponsored and reference figure 1 in the supplementary material where 14 studies were marked as high risk for other bias, but it is not explicitly specified what was considered as 'other bias'; [q]Authors considered RCT funding sources within 'other bias'. In their risk of bias assessment but did not report any specific information; [r]Authors report that most studies were funded by the pharmaceutical industry and refer readers to figure 2 (risk of bias figure), but the figure does not give any information about which RCTs; [s]Included RCTs were coded as having company funding (Yes/No).

References – Appendix B and C

1. Abdel-Rahman O, Elsayed Z, Elhalawani H. Gemcitabine-based chemotherapy for advanced biliary tract carcinomas. *Cochrane Database of Syst Rev*. 2018;4.
2. Adams SP, Sekhon SS, Tsang M, Wright JM. Fluvastatin for lowering lipids. *Cochrane Database of Syst Rev*. 2018;3.
3. Agabio R, Trogu E, Pani PP. Antidepressants for the treatment of people with co-occurring depression and alcohol dependence. *Cochrane Database of Syst Rev*. 2018;4.
4. Al-Shahi Salman, Law ZK, Bath PM, Steiner T, Sprigg N. Haemostatic therapies for acute spontaneous intracerebral haemorrhage. *Cochrane Database of Syst Rev*. 2018;4.
5. Alabed S, Latifeh Y, Mohammad HA, Bergman H. Gamma-aminobutyric acid agonists for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;4.
6. Allegretti AS, Israelsen M, Krag A, Jovani M, Goldin AH, Schulman AR, et al. Terlipressin versus placebo or no intervention for people with cirrhosis and hepatorenal syndrome. *Cochrane Database of Syst Rev*. 2017;6.
7. Arechabala MC, Catoni MI, Claro JC, Rojas NP, Rubio ME, Calvo MA, et al. Antimicrobial lock solutions for preventing catheter-related infections in haemodialysis. *Cochrane Database of Syst Rev*. 2018;4.
8. Baandrup L, Ebdrup BH, JØ R, Lindschou J, Gluud C, Glenthøj BY. Pharmacological interventions for benzodiazepine discontinuation in chronic benzodiazepine users. *Cochrane Database of Syst Rev*. 2018;3.
9. Bala MM, Paszek E, Lesniak W, Wloch-Kopec D, Jasinska K, Undas A. Antiplatelet and anticoagulant agents for primary prevention of thrombosis in individuals with antiphospholipid antibodies. *Cochrane Database of Syst Rev*. 2018;7.
10. Barbato A, Avanzo BD, Parabiaghi A. Couple therapy for depression. *Cochrane Database of Syst Rev*. 2018;6.
11. Bergman H, Bhoopathi PS, Soares-Weiser K. Benzodiazepines for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;1.

12. Bighelli I, Castellazzi M, Cipriani A, Girlanda F, Guaiana G, Koesters M, et al. Antidepressants versus placebo for panic disorder in adults. *Cochrane Database of Syst Rev*. 2018;4.
13. Birks JS, Harvey RJ. Donepezil for dementia due to Alzheimer's disease. *Cochrane Database of Syst Rev*. 2018;6.
14. Boyapati RK, Torres J, Palmela C, Parker CE, Silverberg OM, Upadhyaya SD, et al. Withdrawal of immunosuppressant or biologic therapy for patients with quiescent Crohn's disease. *Cochrane Database of Syst Rev*. 2018;5.
15. Brown J, Crawford TJ, Datta S, Prentice A. Oral contraceptives for pain associated with endometriosis. *Cochrane Database of Syst Rev*. 2018;5.
16. Bruins Slot KMH, Berge E. Factor Xa inhibitors versus vitamin K antagonists for preventing cerebral or systemic embolism in patients with atrial fibrillation. *Cochrane Database of Syst Rev*. 2018;3.
17. Bryan EJ, Purcell MA, Kumar A. Zuclopenthixol dihydrochloride for schizophrenia. *Cochrane Database of Syst Rev*. 2017;11.
18. Bryant-Smith AC, Lethaby A, Farquhar C, Hickey M. Antifibrinolytics for heavy menstrual bleeding. *Cochrane Database of Syst Rev*. 2018;4.
19. Burry L, Mehta S, Perreault MM, Luxenberg JS, Siddiqi N, Hutton B, et al. Antipsychotics for treatment of delirium in hospitalised non-ICU patients. *Cochrane Database of Syst Rev*. 2018;6.
20. Campschroer T, Zhu X, Vernooij RW, Lock MT. Alpha-blockers as medical expulsive therapy for ureteral stones. *Cochrane Database of Syst Rev*. 2018;4.
21. Candy B, Jones L, Vickerstaff V, Larkin PJ, Stone P. Mu-opioid antagonists for opioid-induced bowel dysfunction in people with cancer and people receiving palliative care. *Cochrane Database of Syst Rev*. 2018;6.
22. Chiew AL, Gluud C, Brok J, Buckley NA. Interventions for paracetamol (acetaminophen) overdose. *Cochrane Database of Syst Rev*. 2018;2.
23. Das RR, Singh M, Naik SS. Vitamin D as an adjunct to antibiotics for the treatment of acute childhood pneumonia. *Cochrane Database of Syst Rev*. 2018;7.
24. Demicheli V, Jefferson T, Ferroni E, Rivetti A, Pietrantonj CD. Vaccines for preventing influenza in healthy adults. *Cochrane Database of Syst Rev*. 2018;2.

25. Demicheli V, Jefferson T, Pietrantonj CD, Ferroni E, Thorning S, Thomas RE, et al. Vaccines for preventing influenza in the elderly. *Cochrane Database of Syst Rev*. 2018;2.
26. Di Nisio M, Wichers IM, Middeldorp S. Treatment for superficial thrombophlebitis of the leg. *Cochrane Database of Syst Rev*. 2018;2.
27. El-Sayeh HG, Rathbone J, Soares-Weiser K, Bergman H. Non-antipsychotic catecholaminergic drugs for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;1.
28. Engelen ET, Schutgens RE, Mauser-Bunschoten EP, Es RJv, Galen KPv. Antifibrinolytic therapy for preventing oral bleeding in people on anticoagulants undergoing minor oral surgery or dental extractions. *Cochrane Database of Syst Rev*. 2018;7.
29. Eshun-Wilson I, Siegfried N, Akena DH, Stein DJ, Obuku EA, Joska JA. Antidepressants for depression in adults with HIV infection. *Cochrane Database of Syst Rev*. 2018;1.
30. Essali A, Soares-Weiser K, Bergman H, Adams CE. Calcium channel blockers for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;3.
31. Everitt H, Baldwin DS, Stuart B, Lipinska G, Mayers A, Malizia AL, et al. Antidepressants for insomnia in adults. *Cochrane Database of Syst Rev*. 2018;5.
32. Fanshawe TR, Halliwell W, Lindson N, Aveyard P, Livingstone-Banks J, Hartmann-Boyce J. Tobacco cessation interventions for young people. *Cochrane Database of Syst Rev*. 2017;11.
33. Franik S, Eltrop SM, Kremer JA, Kiesel L, Farquhar C. Aromatase inhibitors (letrozole) for subfertile women with polycystic ovary syndrome. *Cochrane Database of Syst Rev*. 2018;5.
34. González R, Pons-Duran C, Piqueras M, Aponte JJ, Kuile FOT, Menéndez C. Mefloquine for preventing malaria in pregnant women. *Cochrane Database of Syst Rev*. 2018;3.
35. Grabosch SM, Shariff OM, Helm CW. Non-steroidal anti-inflammatory agents to induce regression and prevent the progression of cervical intraepithelial neoplasia. *Cochrane Database of Syst Rev*. 2018;2.
36. Graves PM, Choi L, Gelband H, Garner P. Primaquine or other 8-aminoquinolines for reducing Plasmodium falciparum transmission. *Cochrane Database of Syst Rev*. 2018;2.

37. Haas DM, Morgan S, Contreras K, Enders S. Vaginal preparation with antiseptic solution before cesarean section for preventing postoperative infections. *Cochrane Database of Syst Rev*. 2018;7.
38. Hakoum MB, Kahale LA, Tsolakian IG, Matar CF, Yosuico VE, Terrenato I, et al. Anticoagulation for the initial treatment of venous thromboembolism in people with cancer. *Cochrane Database of Syst Rev*. 2018;1.
39. Heras-Mosteiro J, Monge-Maillo B, Pinart M, Pereira PL, Reveiz L, Garcia-Carrasco E, et al. Interventions for Old World cutaneous leishmaniasis. *Cochrane Database of Syst Rev*. 2017;12.
40. Janmaat VT, Steyerberg EW, Gaast Avd, Mathijssen RH, Bruno MJ, Peppelenbosch MP, et al. Palliative chemotherapy and targeted therapies for esophageal and gastroesophageal junction cancer. *Cochrane Database of Syst Rev*. 2017;11.
41. Jefferson T, Rivetti A, Pietrantonj CD, Demicheli V. Vaccines for preventing influenza in healthy children. *Cochrane Database of Syst Rev*. 2018;2.
42. Jung JH, Kim J, MacDonald R, Reddy B, Kim MH, Dahm P. Silodosin for the treatment of lower urinary tract symptoms in men with benign prostatic hyperplasia. *Cochrane Database of Syst Rev*. 2017;11.
43. Kaempfen S, Neumann RP, Jost K, Schulzke SM. Beta-blockers for prevention and treatment of retinopathy of prematurity in preterm infants. *Cochrane Database of Syst Rev*. 2018;3.
44. Kahale LA, Hakoum MB, Tsolakian IG, Matar CF, Barba M, Yosuico VED, et al. Oral anticoagulation in people with cancer who have no therapeutic or prophylactic indication for anticoagulation. *Cochrane Database of Syst Rev*. 2017;12.
45. Kahale LA, Tsolakian IG, Hakoum MB, Matar CF, Barba M, Yosuico VE, et al. Anticoagulation for people with cancer and central venous catheters. *Cochrane Database of Syst Rev*. 2018;6.
46. Kahale LA, Hakoum MB, Tsolakian IG, Matar CF, Terrenato I, Sperati F, et al. Anticoagulation for the long-term treatment of venous thromboembolism in people with cancer. *Cochrane Database of Syst Rev*. 2018;6.
47. Kapur N, Petsky HL, Bell S, Kolbe J, Chang AB. Inhaled corticosteroids for bronchiectasis. *Cochrane Database of Syst Rev*. 2018;5.

48. Kelly C, Chalmers JD, Crossingham I, Relph N, Felix LM, Evans DJ, et al. Macrolide antibiotics for bronchiectasis. *Cochrane Database of Syst Rev*. 2018;3.
49. Knightly R, Milan SJ, Hughes R, Knopp-Sihota JA, Rowe BH, Normansell R, et al. Inhaled magnesium sulfate in the treatment of acute asthma. *Cochrane Database of Syst Rev*. 2017;11.
50. Kopsaftis Z, Wood-Baker R, Poole P. Influenza vaccine for chronic obstructive pulmonary disease (COPD). *Cochrane Database of Syst Rev*. 2018;6.
51. Lawrie TA, Green JT, Beresford M, Wedlake L, Burden S, Davidson SE, et al. Interventions to reduce acute and late adverse gastrointestinal effects of pelvic radiotherapy for primary pelvic cancers. *Cochrane Database of Syst Rev*. 2018;1.
52. Leathersich SJ, Vogel JP, Tran TS, Hofmeyr GJ. Acute tocolysis for uterine tachysystole or suspected fetal distress. *Cochrane Database of Syst Rev*. 2018;7.
53. Lethaby A, Puscasiu L, Vollenhoven B. Preoperative medical therapy before surgery for uterine fibroids. *Cochrane Database of Syst Rev*. 2017;11.
54. López-Briz E, Garcia VR, Cabello JB, Bort-Martí S, Sanchis RC, Burls A. Heparin versus 0.9% sodium chloride locking for prevention of occlusion in central venous catheters in adults. *Cochrane Database of Syst Rev*. 2018;7.
55. Marchant JM, Petsky HL, Morris PS, Chang AB. Antibiotics for prolonged wet cough in children. *Cochrane Database of Syst Rev*. 2018;7.
56. Matar HE, Almerie MQ, Sampson SJ. Fluphenazine (oral) versus placebo for schizophrenia. *Cochrane Database of Syst Rev*. 2018;6.
57. Matar CF, Kahale LA, Hakoum MB, Tsolakian IG, Etxeandia-Ikobaltzeta I, Yosuico VE, et al. Anticoagulation for perioperative thromboprophylaxis in people with cancer. *Cochrane Database of Syst Rev*. 2018;7.
58. McNicol ED, Rowe E, Cooper TE. Ketorolac for postoperative pain in children. *Cochrane Database of Syst Rev*. 2018;7.
59. McTague A, Martland T, Appleton R. Drug management for acute tonic-clonic convulsions including convulsive status epilepticus in children. *Cochrane Database of Syst Rev*. 2018;1.
60. Mhaskar R, Kumar A, Miladinovic B, Djulbegovic B. Bisphosphonates in multiple myeloma: an updated network meta-analysis. *Cochrane Database of Syst Rev*. 2017;12.

61. Milligan R, Paul M, Richardson M, Neuberger A. Vaccines for preventing typhoid fever. *Cochrane Database of Syst Rev*. 2018;5.
62. Monk AB, Harrison JE, Worthington HV, Teague A. Pharmacological interventions for pain relief during orthodontic treatment. *Cochrane Database of Syst Rev*. 2017;11.
63. Montero N, Favà A, Rodriguez E, Barrios C, Cruzado JM, Pascual J, et al. Treatment for hepatitis C virus-associated mixed cryoglobulinaemia. *Cochrane Database of Syst Rev*. 2018;5.
64. Mücke M, Phillips T, Radbruch L, Petzke F, Häuser W. Cannabis-based medicines for chronic neuropathic pain in adults. *Cochrane Database of Syst Rev*. 2018;3.
65. Narula N, Dhillon A, Zhang D, Sherlock ME, Tondeur M, Zachos M. Enteral nutritional therapy for induction of remission in Crohn's disease. *Cochrane Database of Syst Rev*. 2018;4.
66. Nevitt SJ, Sudell M, Weston J, Smith CT, Marson AG. Antiepileptic drug monotherapy for epilepsy: a network meta-analysis of individual participant data. *Cochrane Database of Syst Rev*. 2017;12.
67. Nevitt SJ, Smith CT, Weston J, Marson AG. Lamotrigine versus carbamazepine monotherapy for epilepsy: an individual participant data review. *Cochrane Database of Syst Rev*. 2018;6.
68. Norman G, Westby MJ, Rithalia AD, Stubbs N, Soares MO, Dumville JC. Dressings and topical agents for treating venous leg ulcers. *Cochrane Database of Syst Rev*. 2018;6.
69. Normansell R, Sayer B, Waterson S, Dennett EJ, Forno MD, Dunleavy A. Antibiotics for exacerbations of asthma. *Cochrane Database of Syst Rev*. 2018;6.
70. Novoa M, Baselga E, Beltran S, Giraldo L, Shahbaz A, Pardo-Hernandez H, et al. Interventions for infantile haemangiomas of the skin. *Cochrane Database of Syst Rev*. 2018;4.
71. Ohlsson A, Aher SM. Early erythropoiesis-stimulating agents in preterm or low birth weight infants. *Cochrane Database of Syst Rev*. 2017;11.
72. Ostinelli EG, Jajawi S, Spyridi S, Sayal K, Jayaram MB. Aripiprazole (intramuscular) for psychosis-induced aggression or agitation (rapid tranquillisation). *Cochrane Database of Syst Rev*. 2018;1.

73. Ostinelli EG, Hussein M, Ahmed U, Rehman FU, Miramontes K, Adams CE. Risperidone for psychosis-induced aggression or agitation (rapid tranquillisation). *Cochrane Database of Syst Rev*. 2018;4.
74. Ostuzzi G, Matcham F, Dauchy S, Barbui C, Hotopf M. Antidepressants for the treatment of depression in people with cancer. *Cochrane Database of Syst Rev*. 2018;4.
75. Parker CE, Nguyen TM, Segal D, MacDonald JK, Chande N. Low dose naltrexone for induction of remission in Crohn's disease. *Cochrane Database of Syst Rev*. 2018;4.
76. Pasquali S, Hadjinicolaou AV, Sileni VC, Rossi CR, Mocellin S. Systemic treatments for metastatic cutaneous melanoma. *Cochrane Database of Syst Rev*. 2018;2.
77. Pike KC, Akhbari M, Kneale D, Harris KM. Interventions for autumn exacerbations of asthma in children. *Cochrane Database of Syst Rev*. 2018;3.
78. Rirash F, Tingey PC, Harding SE, Maxwell LJ, Ghogomu ET, Wells GA, et al. Calcium channel blockers for primary and secondary Raynaud's phenomenon. *Cochrane Database of Syst Rev*. 2017;12.
79. Robertson L, Yeoh SE, Ramli A. Secondary prevention of recurrent venous thromboembolism after initial oral anticoagulation therapy in patients with unprovoked venous thromboembolism. *Cochrane Database of Syst Rev*. 2017;12.
80. Romero L, Huerfano C, Grillo-Ardila CF. Macrolides for treatment of Haemophilus ducreyi infection in sexually active adults. *Cochrane Database of Syst Rev*. 2017;12.
81. Rosumeck S, Nast A, Dressler C. Ivermectin and permethrin for treating scabies. *Cochrane Database of Syst Rev*. 2018;4.
82. Rüschen H, Aravinth K, Bunce C, Bokre D. Use of hyaluronidase as an adjunct to local anaesthetic eye blocks to reduce intraoperative pain in adults. *Cochrane Database of Syst Rev*. 2018;3.
83. Ruthirakuhan MT, Herrmann N, Abraham EH, Chan S, Lanctôt KL. Pharmacological interventions for apathy in Alzheimer's disease. *Cochrane Database of Syst Rev*. 2018;5.
84. Sankar MJ, Sankar J, Chandra P. Anti-vascular endothelial growth factor (VEGF) drugs for treatment of retinopathy of prematurity. *Cochrane Database of Syst Rev*. 2018;1.
85. Schumann J, Henrich EC, Strobl H, Prondzinsky R, Weiche S, Thiele H, et al. Inotropic agents and vasodilator strategies for the treatment of cardiogenic shock or low cardiac output syndrome. *Cochrane Database of Syst Rev*. 2018;1.

86. Simancas-Racines D, Arevalo-Rodriguez I, Osorio D, Franco JV, Xu Y, Hidalgo R. Interventions for treating acute high altitude illness. *Cochrane Database of Syst Rev*. 2018;6.
87. Smith S, Edwards CT. Long-acting inhaled bronchodilators for cystic fibrosis. *Cochrane Database of Syst Rev*. 2017;12.
88. Smith LA, Burns E, Cuthbert A. Parenteral opioids for maternal pain management in labour. *Cochrane Database of Syst Rev*. 2018;6.
89. Soares-Weiser K, Rathbone J, Ogawa Y, Shinohara K, Bergman H. Miscellaneous treatments for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;3.
90. Squizzato A, Bellesini M, Takeda A, Middeldorp S, Donadini MP. Clopidogrel plus aspirin versus aspirin alone for preventing cardiovascular events. *Cochrane Database of Syst Rev*. 2017;12.
91. St George G, Morgan A, Meechan J, Moles DR, Needleman I, Ng YL, et al. Injectable local anaesthetic agents for dental anaesthesia. *Cochrane Database of Syst Rev*. 2018;7.
92. Stern A, Skalsky K, Avni T, Carrara E, Leibovici L, Paul M. Corticosteroids for pneumonia. *Cochrane Database of Syst Rev*. 2017;12.
93. Sturman N, Deckx L, Driel MLv. Methylphenidate for children and adolescents with autism spectrum disorder. *Cochrane Database of Syst Rev*. 2017;11.
94. Tammenmaa-Aho I, Asher R, Soares-Weiser K, Bergman H. Cholinergic medication for antipsychotic-induced tardive dyskinesia. *Cochrane Database of Syst Rev*. 2018;3.
95. Temmingh HS, Williams T, Siegfried N, Stein DJ. Risperidone versus other antipsychotics for people with severe mental illness and co-occurring substance misuse. *Cochrane Database of Syst Rev*. 2018;1.
96. Tenforde MW, Shapiro AE, Rouse B, Jarvis JN, Li T, Eshun-Wilson I, et al. Treatment for HIV-associated cryptococcal meningitis. *Cochrane Database of Syst Rev*. 2018;7.
97. Toews I, George AT, Peter JV, Kirubakaran R, Fontes LES, Ezekiel JPB, et al. Interventions for preventing upper gastrointestinal bleeding in people admitted to intensive care units. *Cochrane Database of Syst Rev*. 2018;6.
98. Venekamp RP, Mick P, Schilder AG, Nunez DA. Grommets (ventilation tubes) for recurrent acute otitis media in children. *Cochrane Database of Syst Rev*. 2018;5.

99. Vermeij JD, Westendorp WF, Dippel DW, Beek Dvd, Nederkoorn PJ. Antibiotic therapy for preventing infections in people with acute stroke. *Cochrane Database of Syst Rev*. 2018;1.
100. Vietto V, Franco JV, Saenz V, Cytryn D, Chas J, Ciapponi A. Prostanoids for critical limb ischaemia. *Cochrane Database of Syst Rev*. 2018;1.
101. Wall EC, Ajdukiewicz KM, Bergman H, Heyderman RS, Garner P. Osmotic therapies added to antibiotics for acute bacterial meningitis. *Cochrane Database of Syst Rev*. 2018;2.
102. Weibel S, Jelting Y, Pace NL, Helf A, Eberhart LH, Hahnenkamp K, et al. Continuous intravenous perioperative lidocaine infusion for postoperative pain and recovery in adults. *Cochrane Database of Syst Rev*. 2018;6.
103. Wright JM, Musini VM, Gill R. First-line drugs for hypertension. *Cochrane Database of Syst Rev*. 2018;4.
104. Xiao Y, Luo M, Wang J, Luo H. Losigamone add-on therapy for focal epilepsy. *Cochrane Database of Syst Rev*. 2018;1.
105. Zhang X, Chuai Y, Nie W, Wang A, Dai G. Thrombopoietin receptor agonists for prevention and treatment of chemotherapy-induced thrombocytopenia in patients with solid tumours. *Cochrane Database of Syst Rev*. 2017;11.
106. Zhou M, Chen N, He L, Yang M, Zhu C, Wu F. Oxcarbazepine for neuropathic pain. *Cochrane Database of Syst Rev*. 2017;12.
107. Zonneveld TP, Richard E, Vergouwen MD, Nederkoorn PJ, Haan Rd, Roos YB, et al. Blood pressure-lowering treatment for preventing recurrent stroke, major vascular events, and dementia in patients with a history of stroke or transient ischaemic attack. *Cochrane Database of Syst Rev*. 2018;7.
108. López - López JA, Sterne JAC, Thom HHZ, Higgins JPT, Hingorani AD, Okoli GN, et al. Oral anticoagulants for prevention of stroke in atrial fibrillation: systematic review, network meta-analysis, and cost effectiveness analysis. *BMJ (Clinical research ed)*. 2017;359.
109. Wang W, Chen W, Liu Y, Siemieniuk RAC, Li L, Martínez JPD, et al. Antibiotics for uncomplicated skin abscesses: systematic review and network meta-analysis. *BMJ Open*. 2018;8(2).

110. Cipriani A, Furukawa TA, Salanti G, Chaimani A, Atkinson LZ, Ogawa Y, et al. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. *Lancet*. 2018;391(10128)1357-66.
111. Chen M, Ji M, Si X. The effects of statin therapy on mortality in patients with sepsis: A meta-analysis of randomized trials. *Medicine*. 2018;97(31).
112. Ding W, Li Z, Wang C, Ruan G, Chen L, Tu C. The CDK4/6 inhibitor in HR-positive advanced breast cancer: A systematic review and meta-analysis. *Medicine*. 2018;97(20).
113. Guo P, He Z, Wang Y, Gao F, Sun W, Guo W, et al. Efficacy and safety of oral tranexamic acid in total knee arthroplasty: A systematic review and meta-analysis. *Medicine*. 2018;97(18).
114. Han X, Zhang Y, Yin L, Zhang L, Wang Y, Zhang H, et al. Statin in the treatment of patients with myocardial infarction: A meta-analysis. *Medicine*. 2018;97(12).
115. Hu W, Tong J, Kuang X, Chen W, Liu Z. Influence of proton pump inhibitors on clinical outcomes in coronary heart disease patients receiving aspirin and clopidogrel: A meta-analysis. *Medicine*. 2018;97(3).
116. Huang ST, Tian BS, Xiao O, Yang YJ, Zhou SY. Safety of antivascular endothelial growth factor administration in the ocular anterior segment in pterygium and neovascular glaucoma treatment: Systematic review and meta-analysis. *Medicine*. 2018;97(34).
117. Jiang DQ, Xu LC, Jiang LL, Li MX, Wang Y. Fasudil combined with methylcobalamin or lipoic acid can improve the nerve conduction velocity in patients with diabetic peripheral neuropathy: A meta-analysis. *Medicine*. 2018;97(27).
118. Jiang Y, Sun X, Kong B, Jiang J. Antiangiogenesis therapy in ovarian cancer patients: An updated meta-analysis for 15 randomized controlled trials. *Medicine*. 2018;97(34).
119. Khan M, Lin J, Liao G, Tian Y, Liang Y, Li R, et al. Comparative analysis of immune checkpoint inhibitors and chemotherapy in the treatment of advanced non-small cell lung cancer: A meta-analysis of randomized controlled trials. *Medicine*. 2018;97(33).
120. Liang L, Cai Y, Li A, Ma C. The efficiency of intravenous acetaminophen for pain control following total knee and hip arthroplasty: A systematic review and meta-analysis. *Medicine*. 2017;96(46).

121. Liu X, Li X, Zhang C, Sun M, Sun Z, Xu Y, et al. Efficacy and tolerability of fluvoxamine in adults with social anxiety disorder: A meta-analysis. *Medicine*. 2018;97(28).
122. Lor YC, Shih PC, Chen HH, Liu SJ, Chao HC, Hwang LC, et al. The application of lidocaine to alleviate the discomfort of nasogastric tube insertion: A systematic review and meta-analysis. *Medicine*. 2018;97(5).
123. Wang W, Yu J. Tranexamic acid reduces blood loss in intertrochanteric fractures: A meta-analysis from randomized controlled trials. *Medicine*. 2017;96(52).
124. Wang H, Liu A, Bo W, Feng X, Hu Y. Terlipressin in the treatment of hepatorenal syndrome: A systematic review and meta-analysis. *Medicine*. 2018;97(16).
125. Wang Z, Hu Z, Dai T. The comparison of propofol and midazolam for bronchoscopy: A meta-analysis of randomized controlled studies. *Medicine*. 2018;97(36).
126. Wei W, Luo Z. Risk of gastrointestinal toxicities with PD-1 inhibitors in cancer patients: A meta-analysis of randomized clinical trials. *Medicine*. 2017;96(48).
127. Woo HL, Ji HR, Pak YK, Lee H, Heo SJ, Lee JM, et al. The efficacy and safety of acupuncture in women with primary dysmenorrhea: A systematic review and meta-analysis. *Medicine*. 2018;97(23).
128. Xia Y, Fang H, Xu J, Jia C, Tao G, Yu B. Clinical efficacy of xenon versus propofol: A systematic review and meta-analysis. *Medicine*. 2018;97(20).
129. Yang Q, Zhang Z, Xin W, Li A. Preoperative intravenous glucocorticoids can decrease acute pain and postoperative nausea and vomiting after total hip arthroplasty: A PRISMA-compliant meta-analysis. *Medicine*. 2017;96(47).
130. Ye F, Wu Y, Zhou C. Effect of intravenous ketamine for postoperative analgesia in patients undergoing laparoscopic cholecystectomy: A meta-analysis. *Medicine*. 2017;96(51).
131. Yu L, Cao L, Sun J, Li Z, Yao F, Zhou Y. Serelaxin, recombinant human relaxin-2, for heart failure patients: A systematic review and meta-analysis. *Medicine*. 2018;97(25).
132. Yuan C, Xu XH, Luo SW, Wang L, Sun M, Ni LH, et al. Which neoadjuvant chemotherapy regimen should be recommended for patients with advanced nasopharyngeal carcinoma?: A network meta-analysis. *Medicine*. 2018;97(34).

133. Zhang JJ, Liu X. Aspirin plus dipyridamole has the highest surface under the cumulative ranking curves (SUCRA) values in terms of mortality, intracranial hemorrhage, and adverse event rate among 7 drug therapies in the treatment of cerebral infarction. *Medicine*. 2018;97(13).
134. Zhang J, Cai WK, Zhang Z, Wang P, Lin XQ, Feng J, et al. Cardioprotective effect of histamine H2 antagonists in congestive heart failure: A systematic review and meta-analysis. *Medicine*. 2018;97(15).
135. Zhao JB, Li YL, Wang YM, Teng JL, Xia DY, Zhao JS, et al. Intravenous lidocaine infusion for pain control after laparoscopic cholecystectomy: A meta-analysis of randomized controlled trials. *Medicine*. 2018;97(5).
136. Zhao T, Shen Z, Sheng S. The efficacy and safety of nefopam for pain relief during laparoscopic cholecystectomy: A meta-analysis. *Medicine*. 2018;97(10).
137. Zhou G, Ma L, Jing J, Jiang H. A meta-analysis of dexamethasone for pain management in patients with total knee arthroplasty. *Medicine*. 2018;97(35).
138. Zhu XT, Chen L, Lin JH. Selective COX-2 inhibitor versus non-selective COX-2 inhibitor for the prevention of heterotopic ossification after total hip arthroplasty: A meta-analysis. *Medicine*. 2018;97(31).
139. Zhou J, Zhang Q, Wang Y, Gao P, Chen D. The effect and safety of anacetrapib in the treatment of dyslipidemia: a systematic review and meta-analysis. *Postgrad Med*. 2018;130(1):129-36.
140. Zhang Y, Tao LN, Qu XY, Niu JQ, Ding YH, Zhang SX. Efficacy and safety of ceftazidime-avibactam in the treatment of complicated intra-abdominal infections (CIAIs) and complicated urinary tract infections (CUTIs): A meta-analysis of randomized controlled trials. *Rev Assoc Med Bras*. 2018;64(3):253-63.
141. Li F, Huang W, Zhang X. Efficacy and safety of different regimens for primary open-angle glaucoma or ocular hypertension: a systematic review and network meta-analysis. *Acta Ophthalmol*. 2018;96(3):e277-84.
142. Tarantini G, Ueshima D, Amico GD, Masiero G, Musumeci G, Stone GW, et al. Efficacy and safety of potent platelet P2Y12 receptor inhibitors in elderly versus nonelderly patients with acute coronary syndrome: A systematic review and meta-analysis. *Am Heart J.* 2018;195:78-85.

143. Wang Y, Wang J, Wang S. Comparative Effectiveness of Inclisiran 100, 300, and 500 mg in a Population with Hyperlipidemia: A Network Meta-Analysis of Randomized Controlled Trials. *Am J Cardiovasc Drugs*. 2018;18(4):271-82.
144. Aman A, Salim B, Munshi K, Raza SA, Khan FA. Effect on neonatal outcome of pharmacological interventions for attenuation of the maternal haemodynamic response to tracheal intubation: a systematic review. *Anaesth Intensive Care*. 2018;46(3):258-71.
145. Li GM, Zhao J, Li B, Zhang XF, Ma JX, Ma XL, et al. The anti-inflammatory effects of statins on patients with rheumatoid arthritis: A systemic review and meta-analysis of 15 randomized controlled trials. *Autoimmun Rev*. 2018;17(3):215-25.
146. Wang B, He X, Gong Y, Cheng B. Levosimendan in Patients with Left Ventricular Dysfunction Undergoing Cardiac Surgery: An Update Meta-Analysis and Trial Sequential Analysis. *BioMed Res Int*. 2018;2018:1-10.
147. Veettil SK, Lim KG, Ching SM, Saokaew S, Phisalprapa P, Chaiyakunapruk N. Effects of aspirin and non-aspirin nonsteroidal anti-inflammatory drugs on the incidence of recurrent colorectal adenomas: a systematic review with meta-analysis and trial sequential analysis of randomized clinical trials. *BMC Cancer*. 2017;17(1):763.
148. Bredemeier M, Lopes LM, Eisenreich MA, Hickmann S, Bongiorno GK, d'Avila R, et al. Xanthine oxidase inhibitors for prevention of cardiovascular events: a systematic review and meta-analysis of randomized controlled trials. *BMC Cardiovasc Disord*. 2018;18(1):24.
149. Lyu Y, Cheng Y, Wang B, Xu Y, Du W. What is impact of nonsteroidal anti-inflammatory drugs in the prevention of post-endoscopic retrograde cholangiopancreatography pancreatitis: a meta-analysis of randomized controlled trials. *BMC Gastroenterol.* 2018;18(1):106.
150. Xing Y, Chen L, Feng Y, Zhou Y, Zhai Y, Lu J. Meta-analysis of the safety of voriconazole in definitive, empirical, and prophylactic therapies for invasive fungal infections. *BMC Infect Dis*. 2017;17(1):798..
151. Kuo LT, Hsu WH, Chi CC, Yoo JC. Tranexamic acid in total shoulder arthroplasty and reverse shoulder arthroplasty: a systematic review and meta-analysis. BMC *Musculoskelet Disord*. 2018;19(1):60.

152. Beez T, Steiger HJ, Etminan N. Pharmacological targeting of secondary brain damage following ischemic or hemorrhagic stroke, traumatic brain injury, and bacterial meningitis - a systematic review and meta-analysis. BMC Neurol. 2017;17(1):209.
153. Zeng W, Liu Z, Dai H, Yan M, Luo H, Ke M, et al. Anti-fibrotic, anti-VEGF or radiotherapy treatments as adjuvants for pterygium excision: a systematic review and network meta-analysis. *BMC Ophthalmol*. 2017;17(1):211.
154. Bundhun PK, Shi JX, Huang F. Head to head comparison of Prasugrel versus Ticagrelor in patients with acute coronary syndrome: a systematic review and meta-analysis of randomized trials. *BMC Pharmacol Toxicol*. 2017;18(1):80.
155. Zhang Y, Liu Y, Su Y, You Y, Ma Y, Yang G, et al. The metabolic side effects of 12 antipsychotic drugs used for the treatment of schizophrenia on glucose: a network meta-analysis. *BMC Psychiatry*. 2017;17(1):373.
156. Zhang HL, Tan M, Qiu AM, Tao Z, Wang CH. Antibiotics for treatment of acute exacerbation of chronic obstructive pulmonary disease: a network meta-analysis. BMC pulmonary medicine. 2017;17(1):196.
157. Zhang ZQ, Zhong Y, Huang XM, Du LZ. Airway administration of corticosteroids for prevention of bronchopulmonary dysplasia in premature infants: a meta-analysis with trial sequential analysis. *BMC Pulm Med*. 2017;17(1):207.
158. Ramos-Esquivel A, Hernández-Steller H, Savard MF, Landaverde DU. Cyclin-dependent kinase 4/6 inhibitors as first-line treatment for post-menopausal metastatic hormone receptor-positive breast cancer patients: a systematic review and meta-analysis of phase III randomized clinical trials. *Breast Cancer*. 2018;25(4):479-88.
159. Zeng C, Wei J, Persson MSM, Sarmanova A, Doherty M, Xie D, et al. Relative efficacy and safety of topical non-steroidal anti-inflammatory drugs for osteoarthritis: a systematic review and network meta-analysis of randomised controlled trials and observational studies. *Br J Sports Med*. 2018;52(10):642-50.
160. Shui L, Wu YS, Lin H, Shui P, Sun Q, Chen X. Triplet Chemotherapy (FOLFOXIRI) Plus Bevacizumab Versus Doublet Chemotherapy (FOLFOX/FOLFIRI) Plus Bevacizumab in Conversion Therapy for Metastatic Colorectal Cancer: a Meta-Analysis. *Cell Physiol Biochem*. 2018;48(5):1870-81.

161. Rodrigo C, Weeratunga P, Fernando SD, Rajapakse S. Amphotericin B for treatment of visceral leishmaniasis: systematic review and meta-analysis of prospective comparative clinical studies including dose-ranging studies. *Clin Microbiol Infect*. 2018;24(6):591-8.
162. Wang S, He Q, Shuai Z. Risk of serious infections in biological treatment of patients with ankylosing spondylitis and non-radiographic axial spondyloarthritis: a meta-analysis. *Clin Rheumatol.* 2018;37(2):439-50.
163. Hong Y, Mansour S, Alotaibi G, Wu C, McMurtry MS. Effect of anticoagulants on admission rates and length of hospital stay for acute venous thromboembolism: A systematic review of randomized control trials. *Crit Rev Oncol Hematol*. 2018;125:12-18.
164. de Carvalho LSFd, Campos AM, Sposito AC. Proprotein Convertase Subtilisin/Kexin Type 9 (PCSK9) Inhibitors and Incident Type 2 Diabetes: A Systematic Review and Meta-analysis With Over 96,000 Patient-Years. *Diabetes Care*. 2018;41(2):364-7.
165. Jaafar MH, Safi SZ, Tan MP, Rampal S, Mahadeva S. Efficacy of Rebamipide in Organic and Functional Dyspepsia: A Systematic Review and Meta-Analysis. *Dig Dis Sci*. 2018;63(5):1250-60.
166. Liu J, Wang LN. The efficacy and safety of riluzole for neurodegenerative movement disorders: a systematic review with meta-analysis. *Drug Deliv*. 2018;25(1):43-8.
167. Liu LY, Liu Y, Wu MY, Sun YY, Ma FZ. Efficacy of atorvastatin on the prevention of contrast-induced acute kidney injury: a meta-analysis. *Drug Des Devel Ther*. 2018;12:437.
168. Sun S, Wang J, Bao N, Chen Y, Wang J. Comparison of dexmedetomidine and fentanyl as local anesthetic adjuvants in spinal anesthesia: a systematic review and meta-analysis of randomized controlled trials. *Drug Des Devel Ther*. 2017;11:3413.
169. Paraschakis A, Katsanos AH. Antidepressants for Depression Associated with Traumatic Brain Injury: A Meta-analytical Study of Randomised Controlled Trials. East *Asian Arch Psychiatry*. 2017;27(4):142.
170. D'Souza RS, Mercogliano C, Ojukwu E, Souza SD, Singles A, Modi J, et al. Effects of prophylactic anticholinergic medications to decrease extrapyramidal side effects in patients taking acute antiemetic drugs: a systematic review and meta-analysis. *Emerg Med J*. 2018;35(5):325-31.

171. Mei L, Hou Q, Fang F, Wang H. The antibody-based CA125-targeted maintenance therapy for the epithelial ovarian cancer: a meta-analysis. *Eur J Gynaecol Oncol*. 2016;37(4):455-60.
172. Verberkt CA, Everdingen MHJvdB-v, Schols J, Datla S, Dirksen CD, Johnson MJ, et al. Respiratory adverse effects of opioids for breathlessness: a systematic review and meta-analysis. *Eur Respir J.* 2017;50(5):1701153.
173. Sridharan K, Sivaramakrishnan G, Gnanaraj J. Pharmacological interventions for stress ulcer prophylaxis in critically ill patients: a mixed treatment comparison network meta-analysis and a recursive cumulative meta-analysis. Expert *Opin Pharmacother*. 2018;19(2):151-8.
174. Habibi MR, Habibi V, Habibi A, Soleimani A. Lidocaine dose-response effect on postoperative cognitive deficit: meta-analysis and meta-regression. *Expert Rev Clin Pharmacol.* 2018;11(4):361-71.
175. Li Y, Liu H, Peng W, Song Z. Nicorandil improves clinical outcomes in patients with stable angina pectoris requiring PCI: a systematic review and meta-analysis of 14 randomized trials. *Expert Rev Clin Pharmacol*. 2018;11(9):855-65.
176. Sangroongruangsri S, Ratanapakorn T, Wu O, Anothaisintawee T, Chaikledkaew U. Comparative efficacy of bevacizumab, ranibizumab, and aflibercept for treatment of macular edema secondary to retinal vein occlusion: a systematic review and network meta-analysis. *Expert Rev Clin Pharmacol*. 2018;11(9):903-16.
177. Hickey BA, Watson U, Cleves A, Alikhan R, Pugh N, Nokes L, et al. Does thromboprophylaxis reduce symptomatic venous thromboembolism in patients with below knee cast treatment for foot and ankle trauma? A systematic review and meta-analysis. *Foot Ankle Surg*. 2018;24(1):19-27.
178. Zhao TT, Xu H, Xu HM, Wang ZN, Xu YY, Song YX, et al. The efficacy and safety of targeted therapy with or without chemotherapy in advanced gastric cancer treatment: a network meta-analysis of well-designed randomized controlled trials. *Gastric Cancer.* 2018;21(3):361-71.
179. Khera R, Pandey A, Chandar AK, Murad MH, Prokop LJ, Neeland IJ, et al. Effects of Weight-Loss Medications on Cardiometabolic Risk Profiles: A Systematic Review and Network Meta-analysis. *Gastroenterology*. 2018;154(5):1309-19.

180. Li J, Li S, Yu H, Wang J, Xu C, Lu X. The efficacy and safety of first-line single-agent chemotherapy regimens in low-risk gestational trophoblastic neoplasia: A network meta-analysis. *Gynecol Oncol*. 2018;148(2):247-53.
181. Zhuge L, Wang Y, Wu S, Zhao RL, Li Z, Xie Y. Furazolidone treatment for Helicobacter Pylori infection: A systematic review and meta-analysis. *Helicobacter*. 2018;23(2):e12468.
182. Kim MK, Myung SK, Tran BT, Park B. Statins and risk of cancer: A meta-analysis of randomized, double-blind, placebo-controlled trials. *Indian J Cancer*.54(2):470.
183. Garg R, Mohan BP, Krishnamoorthi R, Rustagi T. Pre-endoscopic retrograde cholangiopancreatography (ERCP) administration of rectal indomethacin in unselected patients to reduce post-ERCP pancreatitis: A systematic review and meta-analysis. *Indian J Gastroenterol*. 2018;37(2):120-6.
184. Rosanova MT, Bes D, Aguilar PS, Sberna N, Lede R. Efficacy and safety of voriconazole in immunocompromised patients: systematic review and meta-analysis. *Infect Dis (Lond).* 2018;50(7):489-94.
185. Yu J, Lu H, Zhou J, Xie Z, Wen C, Xu Z. Oral prednisolone versus non-steroidal anti-inflammatory drugs in the treatment of acute gout: a meta-analysis of randomized controlled trials. *Inflammopharmacology.* 2018;26(3):717-23.
186. Kakkos SK, Nicolaides AN. Efficacy of micronized purified flavonoid fraction (Daflon) on improving individual symptoms, signs and quality of life in patients with chronic venous disease: a systematic review and meta-analysis of randomized double-blind placebo-controlled trials. *Int Angiol*. 2018;37(2).
187. Ou Z, Chen C, Chen A, Yang Y, Zhou W. Adverse events of Dupilumab in adults with moderate-to-severe atopic dermatitis: A meta-analysis. *Intimmunopharmacol*. 2018;54:303-10.
188. Yin J, Xu B, Zeng X, Shen K. Broncho-Vaxom in pediatric recurrent respiratory tract infections: A systematic review and meta-analysis. *Int immunopharmacol.* 2018;54:198-209.
189. Zhu J, Zhao W, Liang D, Li G, Qiu K, Wu J, et al. Risk of fatigue in cancer patients receiving anti-EGFR monoclonal antibodies: results from a systematic review and meta-analysis of randomized controlled trial. *Int J Clin Oncol*. 2018;23(2):389-99.

190. Liu H, Xu X. Influence of adjunctive lacosamide in patients with seizures: a systematic review and meta-analysis. *Int J Neurosci.* 2018;128(7):670-6.
191. Coccolini F, Nardi M, Montori G, Ceresoli M, Celotti A, Cascinu S, et al. Neoadjuvant chemotherapy in advanced gastric and esophago-gastric cancer. Meta-analysis of randomized trials. *Int J Surgery*. 2018;51:120-7.
192. Fan Z, Ma J, Kuang M, Zhang L, Han B, Yang B, et al. The efficacy of dexamethasone reducing postoperative pain and emesis after total knee arthroplasty: A systematic review and meta-analysis. *Int J Surgery*. 2018;52:149-55.
193. Li J, Wang G, Xu W, Ding M, Yu W. Efficacy of intravenous lidocaine on pain relief in patients undergoing laparoscopic cholecystectomy: A meta-analysis from randomized controlled trials. *Int J Surgery*. 2018;50:137-45.
194. Li S, Sheng G, Teng Y, Sun M. Systematic review of anaesthetic medication for ERCP based on a network meta-analysis. *Int J Surgery.* 2018;51:56-62.
195. Liu Q, Geng P, Shi L, Wang Q, Wang P. Tranexamic acid versus aminocaproic acid for blood management after total knee and total hip arthroplasty: A systematic review and meta-analysis. *Int J Surgery*. 2018;54:105-12.
196. Ran J, Yang X, Ren Z, Wang J, Dong H. Comparison of intra-articular hyaluronic acid and methylprednisolone for pain management in knee osteoarthritis: A meta-analysis of randomized controlled trials. *Int J Surgery*. 2018;53:103-10.
197. Zhao M, Xiang P, Jiang H. TransArterial ChemoEmbolization (TACE) with platinum versus anthracyclines for hepatocellular carcinoma: A meta-analysis. *Int J Surgery*. 2018;53:151-8.
198. Zhu J, Xie H, Zhang L, Chang L, Chen P. Efficiency and safety of ketamine for pain relief after laparoscopic cholecystectomy: A meta-analysis from randomized controlled trials. *Int J Surgery*. 2018;49:1-9.
199. Wagner G, Schultes MT, Titscher V, Teufer B, Klerings I, Gartlehner G. Efficacy and safety of levomilnacipran, vilazodone and vortioxetine compared with other second-generation antidepressants for major depressive disorder in adults: A systematic review and network meta-analysis. *J Affect Disord.* 2018;228:1-12.
200. Hickman LC, Llarena NC, Valentine LN, Liu X, Falcone T. Preservation of gonadal function in women undergoing chemotherapy: a systematic review and meta-analysis of

the potential role for gonadotropin-releasing hormone agonists. *J Assist Reprod Genet*. 2018;35(4):571-81.

201. Luo W, Wang Z, Tian P, Li W. Safety and tolerability of PD-1/PD-L1 inhibitors in the treatment of non-small cell lung cancer: a meta-analysis of randomized controlled trials. J *Cancer Res Clin Oncol.* 2018;144(10):1851-9.
202. Wang Y, Zhang H, Shen W, He P, Zhou Z. Effectiveness and tolerability of targeted drugs for the treatment of metastatic castration-resistant prostate cancer: a network meta-analysis of randomized controlled trials. *J Cancer Res Clin Oncol*. 2018;144(9):1751-68.
203. Wang DD, Ma TT, Zhu HD, Peng CB. Transdermal fentanyl for cancer pain: Trial sequential analysis of 3406 patients from 35 randomized controlled trials. *J Cancer Res Ther.* 2018;14(8):14.
204. Aboul-Hassan SS, Stankowski T, Marczak J, Peksa M, Nawotka M, Stanislawski R, et al. The use of preoperative aspirin in cardiac surgery: A systematic review and meta-analysis. *J Card Surg*. 2017;32(12):758-74.
205. Wang Y, Zhu S, R DU, Zhou J, Chen Y, Zhang Q. Statin initiation and renal outcomes following isolated coronary artery bypass grafting: a meta-analysis. *J Card Surg*. 2018;59(2):282-90.
206. Barrionuevo P, Nabhan M, Altayar O, Wang Z, Erwin PJ, Asi N, et al. Treatment Options for Hirsutism: A Systematic Review and Network Meta-Analysis. *J Clin Endocrinol Metabo*. 2018;103(4):1258-64.
207. Cui JY, Zhou RR, Han S, Wang TS, Wang LQ, Xie XH. Statin therapy on glycemic control in type 2 diabetic patients: A network meta-analysis. J *Clin Pharm Ther*. 2018;43(4):556-70.
208. Sawyer L, Fotheringham I, Wright E, Yasmeen N, Gibbons C, Møller AH. The comparative efficacy of brodalumab in patients with moderate-to-severe psoriasis: a systematic literature review and network meta-analysis. *J Dermatolog Treat.* 2018;29(6):557-68.
209. Markey GC, Salter N, Ryan J. Intravenous Flecainide for Emergency Department Management of Acute Atrial Fibrillation. *J Emerg Med.* 2018;54(3):320-7.

210. Szabó IL, Mátics R, Hegyi P, Garami A, Illés A, Sarlós P, et al. PPIs Prevent Aspirin-Induced Gastrointestinal Bleeding Better than H2RAs. A Systematic Review and Meta-analysis. *J Gastrointestin Liver Dis*: JGLD. 2017;26(4):395-402.
211. Su Q, Zhang XC, Zhang CG, Hou YL, Yao YX, Cao BW. Risk of Immune-Related Pancreatitis in Patients with Solid Tumors Treated with Immune Checkpoint Inhibitors: Systematic Assessment with Meta-Analysis. *J Immunol Res*. 2018;2018:1-9.
212. Chen C, Zhou X, Zhu M, Chen S, Chen J, Cai H, et al. Catheter ablation versus medical therapy for patients with persistent atrial fibrillation: a systematic review and meta-analysis of evidence from randomized controlled trials. *J Interv Card Electrophysiol*. 2018;52(1):9-18.
213. Chen X, Mou X, He Z, Zhu Y. The effect of midazolam on pain control after knee arthroscopy: a systematic review and meta-analysis. *J Orthop Surg Res*. 2017;12(1):179.
214. Li YJ, Xu BS, Bai SP, Guo XJ, Yan XY. The efficacy of intravenous aminocaproic acid in primary total hip and knee arthroplasty: a meta-analysis*J Orthop Surg Res*. 2018;13(1).
215. Luo W, Sun RX, Jiang H, Ma XL. The efficacy and safety of topical administration of tranexamic acid in spine surgery: a meta-analysis. *J Orthop Surg Res.* 2018;13(1):96.
216. Ma R, Chen GH, Zhao LJ, Zhai XC. Efficacy of naproxen prophylaxis for the prevention of heterotopic ossification after hip surgery: a meta-analysis. *J Orthop Surg Res*. 2018;13(1):48.
217. He H, Wang W, Lyu J, Zheng J, Guo L, An X, et al. Efficacy and tolerability of different doses of three new antidepressants for treating major depressive disorder: A PRISMA-compliant meta-analysis. *J Psychiatr Res*. 2018;96:247-59.
218. Wang KL, Chiu CC, Giugliano RP, Tan DS, Lin CY, Lai EY, et al. Drug Class, Renal Elimination, and Outcomes of Direct Oral Anticoagulants in Asian Patients: A Meta-Analysis. *J Stroke Cerebrovasc Dis* : the official journal of National Stroke Association. 2018;27(4):857-64.
219. Dhana A, Yen H, Okhovat JP, Cho E, Keum N, Khumalo NP. Ivermectin versus permethrin in the treatment of scabies: A systematic review and meta-analysis of randomized controlled trials. *J Am Acad Dermatol*. 2018;78(1):194-98.
220. Karatasakis A, Danek BA, Karacsonyi J, Rangan BV, Roesle MK, Knickelbine T, et al. Effect of PCSK9 Inhibitors on Clinical Outcomes in Patients With Hypercholesterolemia:

A Meta-Analysis of 35 Randomized Controlled Trials. *J Am Heart Assoc*. 2017;6(12):e006910.

221. Kuo CM, Tung TH, Wang SH, Chi CC. Efficacy and safety of tofacitinib for moderate-to-severe plaque psoriasis: a systematic review and meta-analysis of randomized controlled trials. *J Eur Acad of Dermatol Venereol*. 2018;32(3):355-62.
222. Liu W, Qian X, Ji W, Lu Y, Wei G, Wang Y. Effects and safety of Sinomenine in treatment of rheumatoid arthritis contrast to methotrexate: a systematic review and Meta-analysis. *J Tradit Chin Med*. 2016;36(5):564-77.
223. Zheng Y, Gu Q, Chen HW, Peng HM, Jia DY, Zhou Y, et al. Efficacy of amiodarone and lidocaine for preventing ventricular fibrillation after aortic cross-clamp release in open heart surgery: a meta-analysis of randomized controlled trials. *J Zhejiang Univ Sci B*.18(12):1113-22.
224. Fregonese F, Ahuja SD, Akkerman OW, Arakaki-Sanchez D, Ayakaka I, Baghaei P, et al. Comparison of different treatments for isoniazid-resistant tuberculosis: an individual patient data meta-analysis. *Lancet Respir Med.* 2018;6(4):265-75.
225. Bornstein NM, Guekht A, Vester J, Heiss WD, Gusev E, Hömberg V, et al. Safety and efficacy of Cerebrolysin in early post-stroke recovery: a meta-analysis of nine randomized clinical trials. *Neurol Sci*. 2018;39(4):629-40.
226. Chen HJ, Lin C, Lee CH, Chen YH. Efficacy and Safety of Bevacizumab Combined with Mitomycin C or 5-Fluorouracil in Primary Trabeculectomy: A Meta-Analysis of Randomized Clinical Trials. *Ophthalmic Res*. 2018;59(3):155-63.
227. Han C, Kuang MJ, Ma JX, Ma XL. The Efficacy of Preoperative Gabapentin in Spinal Surgery: A Meta-Analysis of Randomized Controlled Trials. *Pain Physician*. 2017;20(7):649-61.
228. Peng K, Zhang J, Meng XW, Liu HY, Ji FH. Optimization of Postoperative Intravenous Patient-Controlled Analgesia with Opioid-Dexmedetomidine Combinations: An Updated Meta-Analysis with Trial Sequential Analysis of Randomized Controlled Trials. *Pain Physician.* 2017;20(7):569-96.
229. Feng M, Ding Q, Zhong C, Li J, Wang Q, Yuan Z, et al. Adjunctive therapy with V-5 Immunitor (V5) for the treatment of tuberculosis patients: a meta-analysis. *Pharmazie.* 2016;71(9):499-503.

230. Xu L, Zhang F, Du S, Yu Q, Chen L, Long LH, et al. Inhaled antibiotics in non-cystic fibrosis bronchiectasis: A meta-analysis. *Pharmazie*. 2016;71(9):491-8.
231. Palmeirim MS, Hürlimann E, Knopp S, Speich B, Belizario V, Joseph SA, et al. Efficacy and safety of co-administered ivermectin plus albendazole for treating soil-transmitted helminths: A systematic review, meta-analysis and individual patient data analysis. *PLoS Negl Trop Dis*. 2018;12(4):e0006458.
232. Furukawa TA, Efthimiou O, Weitz ES, Cipriani A, Keller MB, Kocsis JH, et al. Cognitive-Behavioral Analysis System of Psychotherapy, Drug, or Their Combination for Persistent Depressive Disorder: Personalizing the Treatment Choice Using Individual Participant Data Network Metaregression. *Psychother Psychosom*. 2018;87(3):140-53.
233. Liu X, Zhai T, Ma R, Luo C, Wang H, Liu L. Effects of uric acid-lowering therapy on the progression of chronic kidney disease: a systematic review and meta-analysis. *Ren Fail*. 2018;40(1):289-97.
234. Miravitlles M, Urrutia G, Mathioudakis AG, Ancochea J. Efficacy and safety of tiotropium and olodaterol in COPD: a systematic review and meta-analysis. *Respir Res*. 2017;18(1):196.
235. Wang G, Zhang X, Zhang HP, Wang L, Kang Y, Barnes PJ, et al. Corticosteroid plus β 2-agonist in a single inhaler as reliever therapy in intermittent and mild asthma: a proof-of-concept systematic review and meta-analysis. *Respir Res*. 2017;18(1):203.
236. Kawalec P, Holko P, Mo*f*áko P, Pilc A. Comparative effectiveness of abatacept, apremilast, secukinumab and ustekinumab treatment of psoriatic arthritis: a systematic review and network meta-analysis. *Rheumatol Int*. 2018;38(2):189-201.
237. Malhotra K, Katsanos AH, Bilal M, Ishfaq MF, Goyal N, Tsivgoulis G. Cerebrovascular Outcomes With Proton Pump Inhibitors and Thienopyridines: A Systematic Review and Meta-Analysis. *Stroke.* 2018;49(2):312-8.
238. Zhang R, Lu Q, Wu Y. The Comparison of Midazolam and Propofol in Gastrointestinal Endoscopy: A Systematic Review and Meta-analysis. *Surg Laparosc Endosc Percutan Tech.* 2018;28(3):153-8.
239. Yamashita Y, Morimoto T, Toyota T, Shiomi H, Makiyama T, Ono K, et al. Asian patients versus non-Asian patients in the efficacy and safety of direct oral anticoagulants

relative to vitamin K antagonist for venous thromboembolism: A systemic review and meta-analysis. *Thromb Res*. 2018;166:37-42.

240. Zhang W, Sun H, Atiquzzaman M, Sou J, Anis AH, Cooper C. Influenza vaccination for HIV-positive people: Systematic review and network meta-analysis. *Vaccine*. 2018;36(28):4077-86.

241. Chen H, Shen FE, Tan XD, Jiang WB, Gu YH. Efficacy and Safety of Acupuncture for Essential Hypertension: A Meta-Analysis. *Med Sci Monit*. 2018;24:2946.

242. Arteagoitia I, Andrés CR, Ramos E. Does chlorhexidine reduce bacteremia following tooth extraction? A systematic review and meta-analysis. *PloS one*. 2018;13(4):e0195592.

243. Feng X, Tian M, Zhang W, Mei H. Gastrointestinal safety of etoricoxib in osteoarthritis and rheumatoid arthritis: A meta-analysis. *PloS one*. 2018;13(1).

244. Kawakami H, Mihara T, Nakamura N, Ka K, Goto T. Effect of magnesium added to local anesthetics for caudal anesthesia on postoperative pain in pediatric surgical patients: A systematic review and meta-analysis with Trial Sequential Analysis. *PloS one*. 2018;13(1):e0190798.

245. Li X, Zhu L, Zhou C, Liu J, Du H, Wang C, et al. Efficacy and tolerability of short-term duloxetine treatment in adults with generalized anxiety disorder: A meta-analysis. *PloS one*. 2018;13(3):e0194501.

246. Lin YC, Lin JW, Wu MS, Chen KC, Peng CC, Kang YN. Effects of calcium channel blockers comparing to angiotensin-converting enzyme inhibitors and angiotensin receptor blockers in patients with hypertension and chronic kidney disease stage 3 to 5 and dialysis: A systematic review and meta-analysis. *PloS one*. 2017;12(12):e0188975.

247. Ling X, Zhou H, Ni Y, Wu C, Zhang C, Zhu Z. Does dexmedetomidine have an antiarrhythmic effect on cardiac patients? A meta-analysis of randomized controlled trials. *PloS one*. 2018;13(3):e0193303.

248. Rohner E, Grabik M, Tonia T, Jüni P, P√©tavy F, Pignatti F, et al. Does access to clinical study reports from the European Medicines Agency reduce reporting biases? A systematic review and meta-analysis of randomized controlled trials on the effect of erythropoiesis-stimulating agents in cancer patients. *PloS one*. 2017;12(12):e0189309.

249. Sethi NJ, Nielsen EE, Safi S, Feinberg J, Gluud C, Jakobsen JC. Digoxin for atrial fibrillation and atrial flutter: A systematic review with meta-analysis and trial sequential analysis of randomised clinical trials. *PloS one*. 2018;13(3):e0193924.
250. Wolf S, Hoffmann VS, Habicht A, Kauke T, Bucher J, Schoenberg M, et al. Effects of mTOR-Is on malignancy and survival following renal transplantation: A systematic review and meta-analysis of randomized trials with a minimum follow-up of 24 months. *PloS one*. 2018;13(4):e0194975.