IPD REVIEW

Are the results of the review valid?

What question (PICO) did the IPD systematic review address?

What is best?

The main question being addressed should be clearly stated. The exposure, such as a therapy or diagnostic test, and the outcome(s) of interest will often be expressed in terms of a simple relationship.

Where do I find the information?

The **Title**, **Abstract** or **final paragraph** of the Introduction should clearly state the question. If you still cannot ascertain what the focused question is after reading these sections, search for another paper!

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

Was there a clear justification for the need to do an IPD meta-analysis?

What is best?

IPD allows
1) the application of consistent inclusion and exclusion criteria across studies;
2) analysis of longer lengths of follow-up than those reported in the original study publications;
3) statistical analysis to be standardised across studies;
4) estimates to be adjusted for baseline prognostic factors;
5) specific subgroups of participants to be analysed across studies and
6) permits the generation of prognostic models.

Where do I find the information?

The **Title**, **Abstract** or **final paragraph** of the Introduction should clearly state the question. If you still cannot ascertain what the focused question is after reading these sections, search for another paper!

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

Are all randomised trials, published and unpublished included?

What is best?

The starting point is the major bibliographic databases (e.g., Medline, Cochrane, EMBASE, etc.), but should also include a search of reference lists, contact with experts, previous systematic reviews, and manufacturers and regulatory authorities particularly to find unpublished studies. The search should not be limited to English language and should include both MESH terms and text words.

Where do I find the information?

The **Methods** section should describe the search strategy, including the terms used, in some detail. The **Results** section will outline the number of titles and abstracts reviewed, the number of full-text studies retrieved, and the number of studies excluded together with the reasons for exclusion. This information may be presented in a figure or flow chart.

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

Were checks for missing data performed, and for excluded patients?

What is best?

Has the data received been compared with any publications? Have missing values been accounted for and checks performed for the numbers and types of patients in each arm and any imbalances accounted for. Has the randomisation been checked by looking for balance across baseline factors e.g. age, sex, stage, histology and performance status. Is the information up to date?

Where do I find the information?

The **Methods** section should describe in detail the inclusion and exclusion criteria. Normally, this will include the study design. There may be a published protocol that specifies the methods in detail.

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

Were the included studies sufficiently valid for the type of question?

What is best?

The article should describe how the quality of each study was assessed using predetermined quality criteria appropriate to the type of clinical question (e.g., randomization, blinding and completeness of follow-up)

Where do I find the information?

The **Methods** section should describe the assessment of quality and the criteria used. The Results section should provide information on the quality of the individual studies.

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

Were the results similar from study to study?

What is best?

Ideally, the results of the different studies should be similar or homogeneous. If heterogeneity exists the authors may estimate whether the differences are significant (chi-square test). Possible reasons for the heterogeneity should be explored.

Where do I find the information?

The **Results** section should state whether the results are heterogeneous and discuss possible reasons. The forest plot should show the results of the chi-square test for heterogeneity and if discuss reasons for heterogeneity, if present.

In this paper

Yes ☐ No ☐ Unclear ☐

Comment:

What were the results?

How are the results presented?

The meta-analysis gives weighted values to each of the individual studies according to their size. The individual results of the studies need to be expressed in a standard way, such as relative risk, odds ratio or mean difference between the groups.

The Analysis should

- Use all randomised patients
- Intention-to-treat analysis
- 'Up-to-date' analysis
- Time-to-event analysis
- Analysis stratified by trial
- IPD does not mean that all patients are combined into a single mega trial

Subgroup analyses – word of caution
May achieve sufficient power to allow the assessment of whether any effect of treatment is larger or smaller in any patient subgroup.
But…

- Such analyses are still exploratory and should be interpreted cautiously
- Should be a reasonable biological explanation for any observed interactions

Summary of results: summarise the main findings in the context of what is already known and what the IP adds – consider the impact of the limitations on the conclusions.