

# EBP in Practice: Ten Tips for Assessing and Appraising Meta-Analyses

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## Objectives

- Meta-analyses are meant to be at the top of the evidence pyramid, and are relied upon by clinicians, researchers, and trainees for expert synthesis of research, but they often fall short in methods and presentation of results
- It is crucial to critically assess meta-analyses before relying on them for research or evidence-based practice, but current guidance is scattered across many publications in various fields; this project fills this gap

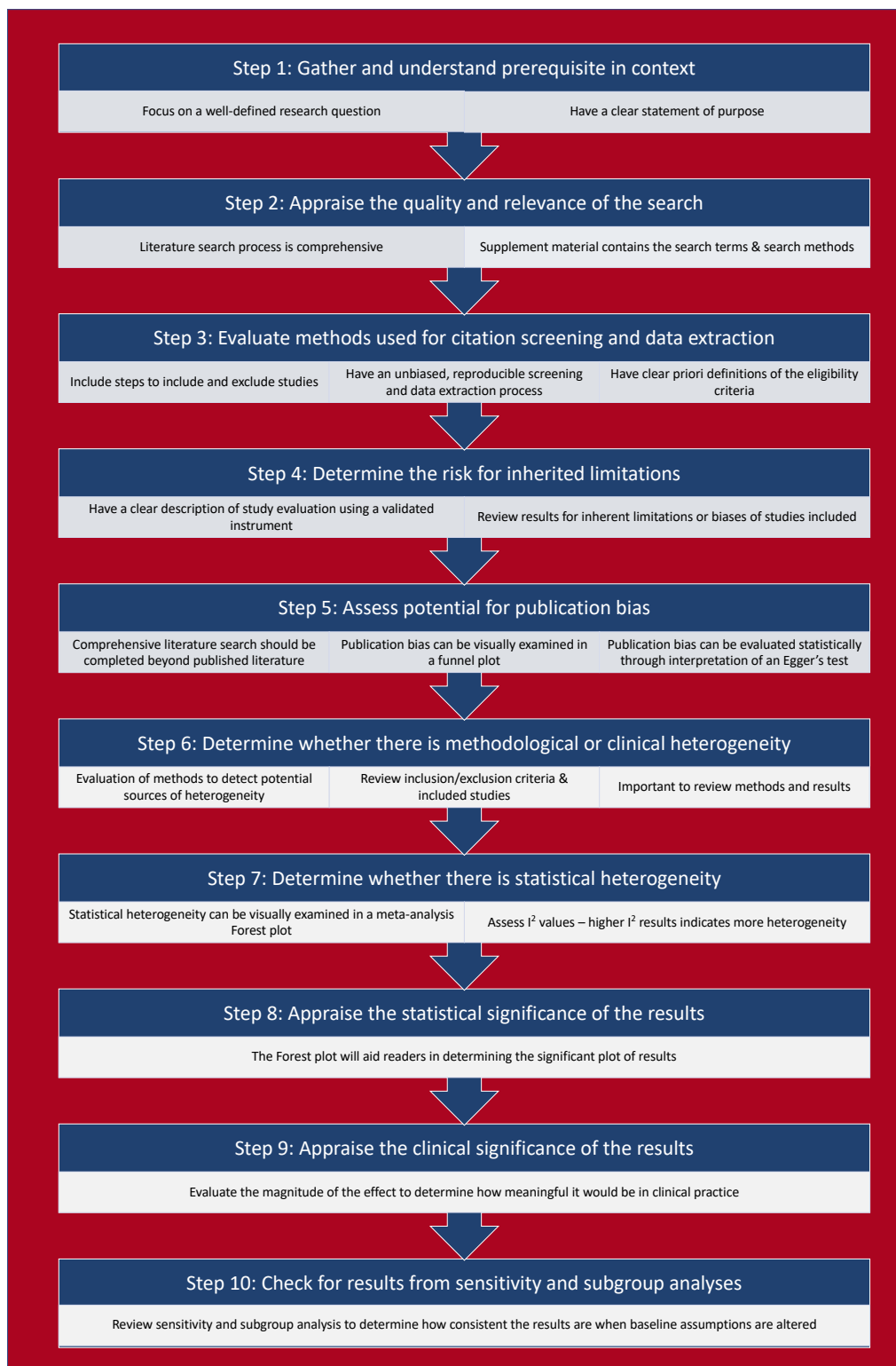
## Methods

- Two pharmacy librarians and a pharmacist conducted a literature review on the methods, appraisal, and application of meta-analyses and synthesized the literature into digestible points
- These ten tips span a meta-analysis manuscript in order from *introduction* to *conclusion* with visualizations of important figures

## Results

### Common Issues

- Errors in search strategies and suboptimal review methodology
- Lack of systematic review & meta-analysis standards and lack of compliance to reporting guidelines and structures

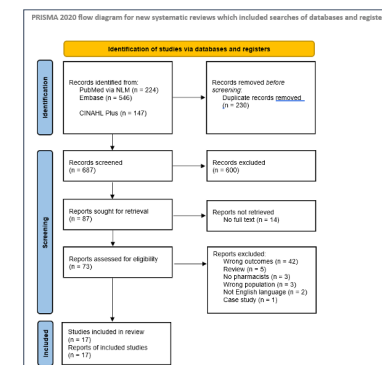


## Discussion

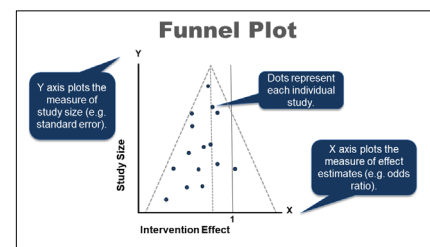
### Recommendations

- Read papers critically, paying particular attention to the methods section and comparing it to PRISMA reporting standards
- Review the results text and figures for potential biases, heterogeneity, and significance
- Use caution when applying sub-quality meta-analyses to coursework, clinical practice, or research

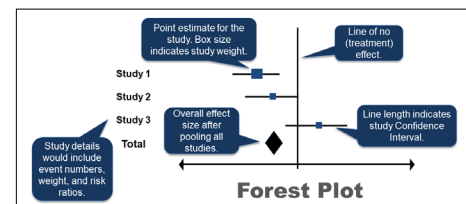
## Example Figures



Example PRISMA 2020 flow diagram. The PRISMA diagram shows the process of literature searching and screening with each study accounted for.



Funnel Plot diagram with element labels. A funnel plot is a scatter plot of the intervention effect estimates from individual studies against some measure of each study's size or precision.



Forest Plot diagram with element labels. A Forest plot is a visual representation of the study sizes and effects.

## References & Resources

