APPENDIX S1

Search strategy example – MEDLINE via Ovid:

1. exp "Pneumonia/d"
2. (lower-respiratory-tract adj3 infection") or pneumonia or pneumonias or lung-inflammation* or loblis or nonspecific-inflammatory-lung-disease* or peripneumonia or pleuropneumonia or pleuropleuritis or pleuritis or pleuroneumonia or pneumonitis or pneumonia or pulmonal-inflammation* or pulmonary-inflammation* or pulmonnial-inflammation*/tw/kf.
3. diagnosis, differential/ or early diagnosis/
4. Physical Examination/
5. Medical History Taking/
6. (clinical-presentation* or clinical-feature* or clinical-signe* or clinical-symptom* or clinical-syndrome*),tw/kf.
7. (syndrome* or symptom*),tw/kf.
8. (five-year-old* or five-years-old* or six-year-old* or six-years-old* or seven-years-old* or eight-year-old* or eight-years-old* or nine-year-old* or nine-years-old* or five-year-old* or 5-year-old* or 5-years-old* or 6-year-old* or 6-years-old* or 7-year-old* or 7-years-old* or 8-year-old* or 8-years-old* or 9-year-old* or 9-years-old* or aged-five or aged-5 or aged-six or aged-6 or aged-seven or aged-7 or aged-eight or aged-8 or aged-nine or aged-9 or aged-five of age or 5-years of age or 5-years-old or 5-years-old or 6-years-old or 6-years-old or 7-years-old or 7-years-old or 8-years-old or 8-years-old or 9-years-old or 9-years-old or more than 4 years or older than 4 years or older than 4 years or less than 10 years or less than ten years or younger than 10 years or younger than ten years or 5-9 years or 5-to-9 years or five-to-nine years or aged-5-9 or aged-five-to-nine or aged-5-9 or aged-5 to 9 or five-years or older or older than five-years or 5-years or older or older than 5 years or more than 5 years or greater than five-years),af.
9. (1 or 2) and (3 or 4 or 5 or 6 or 7) and (8 or 9).
10. limit 10 to english language.

TABLE S1

EPHPP tool modifications:

| Study design and studies | EPHPP tool modifications |
|--------------------------|--------------------------|
| Retrospective observational study | Component B: Study Design |
| Gao et al [16]            | - “Was the study described as randomized?” and related questions not applicable |
| Gordon et al [13]         | Component C: Confounders |
| Macpherson et al [6]      | - Modified to, “Were important differences between groups described and considered in analyses?” A strong rating was given to a study that considered age, sex, ethnicity and comorbidities (unless cases with comorbid conditions were excluded). A moderate rating was given to a study that considered age, sex and comorbidities (unless cases with comorbid conditions were excluded). A weak rating was given to a study that did not consider at least age, sex and comorbidities (unless cases with comorbid conditions were excluded). |
| Othman et al [11]         | Component D: Blinding |
| Sondergaard et al [14]    | - Not applicable (no rating given) |
| Udornittipong et al aP [12] | Component G: Intervention Integrity |
| Youn et al [19]           | - Not applicable |
|                           | Component H: Analyses |
|                           | - (Q4) not applicable |
| Prospective observational study | Component B: Study Design |
| Defilippi et al [20]      | - “Was the study described as randomized?” and related questions not applicable |
| Forgie et al [8]          | Component C: Confounders |
| Juven et al [18]          | - Modified to, “Were important differences between groups described and considered in analyses?” A strong rating was given to a study that considered age, sex, ethnicity and comorbidities (unless cases with comorbid conditions were excluded). A moderate rating was given to a study that considered age, sex and comorbidities (unless cases with comorbid conditions were excluded). A weak rating was given to a study that did not consider at least age, sex and comorbidities (unless cases with comorbid conditions were excluded). |
| Korppi et al [10]         | Component D: Blinding |
| Ma et al [15]             | - (Q1) modified to, “Was (were) the outcome assessor(s) aware of the research question?” |
| Salih et al [7]           | |
| Udornittipong et al aP [12] | |



If data collection was by chart review, (Q2) was not applicable. If information was collected directly from patients or carers, (Q2) was applicable.

- Scoring of this Component was as follows:

| Q1  | Q2     | Rating |
|-----|--------|--------|
| Yes | Yes    | Weak   |
| No  |        | Moderate|
| Can’t tell |          | Weak   |
| Not applicable |      | Moderate|
| No  | Yes    | Moderate|
| No  |        | Strong |
| Can’t tell |          | Moderate|
| Not applicable |      | Strong |
| Can’t tell | Yes    | Weak   |
| No  |        | Moderate|
| Can’t tell |          | Weak   |
| Not applicable |      | Moderate|

Component G: Intervention Integrity
- Not applicable

Component H: Analyses
- (Q4) not applicable

Interview and questionnaire based descriptive study
* Crocker et al [17]

Component B: Study Design
- “Was the study described as randomized?” and related questions not applicable

Component C: Confounders
- Modified to, “Were important differences between groups described and considered in analyses?” A strong rating was given to a study that considered age, sex, ethnicity and comorbidities (unless cases with comorbid conditions were excluded). A moderate rating was given to a study that considered age, sex and comorbidities (unless cases with comorbid conditions were excluded). A weak rating was given to a study that did not consider at least age, sex and comorbidities (unless cases with comorbid conditions were excluded).

Component D: Blinding
- Not applicable (no rating given)

Component G: Intervention Integrity
- Not applicable

Component H: Analyses
- (Q4) not applicable

Randomised controlled trial
* Harris et al [9]

No modifications to EPHPP tool made

* This study by Udomittipong et al included both retrospective and prospective components [12]

The global rating of papers remained unchanged:
1. Strong = no weak ratings
2. Moderate = one weak rating
3. Weak = two or more weak ratings

**TABLE S2**

**PRISMA 2020 Checklist:**

| Section and Topic | Item # | Checklist item |
|-------------------|--------|----------------|
| TITLE             |        |                |
| Title             | 1      | Identify the report as a systematic review. |
| Section and Topic | Item # | Checklist Item |
|-------------------|--------|----------------|
| ABSTRACT          | 2      | See the PRISMA 2020 for Abstracts checklist. |
| INTRODUCTION      | 3      | Describe the rationale for the review in the context of existing knowledge. |
|                    | 4      | Provide an explicit statement of the objective(s) or question(s) the review addresses. |
| METHODS           | 5      | Specify the inclusion and exclusion criteria for the review and how studies were grouped for the synthesis. |
| Eligibility criteria | 6      | Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted. |
| Information sources | 7      | Present the full search strategies for all databases, registers and websites, including any filters and limits used. |
| Search strategy   | 8      | Specify the methods used to decide whether a study met the inclusion criteria of the review, including how each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process. |
| Selection process | 9      | Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process. |
| Data items        | 10a    | List and define all outcomes for which data were sought. Specify whether all results that were compatible with the inclusion criteria for each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results were included. |
|                    | 10b    | List and define all other variables for which data were sought (e.g. participant and intervention characteristics, assumptions made about any missing or unclear information. |
| Study risk of bias assessment | 11    | Specify the methods used to assess risk of bias in the included studies, including results of the tool(s) used and whether they worked independently, and if applicable, details of automation tools used in the process. |
| Effect measures   | 12     | Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis. |
| Synthesis methods | 13a    | Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating trials comparing against the planned groups for each synthesis (Item #5)). |
|                    | 13b    | Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary conversions. |
|                    | 13c    | Describe any methods used to tabulate or visually display results of individual studies and syntheses. |
|                    | 13d    | Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used. |
|                    | 13e    | Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression). |
|                    | 13f    | Describe any sensitivity analyses conducted to assess robustness of the synthesized results. |
| Reporting bias assessment | 14    | Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from results not available in published reports, incomplete data, or missing individual participant data). |
| Certainty assessment | 15    | Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome. |
| RESULTS           |        | |
| Study selection   | 16a    | Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram. |
|                    | 16b    | Cite studies that might appear to meet the inclusion criteria of the review and how each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process. |
| Study characteristics | 17    | Cite each included study and present its characteristics. |
| Risk of bias in studies | 18    | Present assessments of risk of bias for each included study. |
| Results of individual studies | 19    | For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (e.g. confidence/credible interval), ideally using structured tables or plots. |
| Results of syntheses | 20a   | For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies. |
|                    | 20b    | Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect. |
| Section and Topic | Item # | Checklist item |
|------------------|--------|----------------|
|                   | 20c    | Present results of all investigations of possible causes of heterogeneity among study results. |
|                   | 20d    | Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results. |
| Reporting biases  | 21     | Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed. |
| Certainty of evidence | 22 | Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed. |
| **DISCUSSION**    | 23a    | Provide a general interpretation of the results in the context of other evidence. |
|                   | 23b    | Discuss any limitations of the evidence included in the review. |
|                   | 23c    | Discuss any limitations of the review processes used. |
|                   | 23d    | Discuss implications of the results for practice, policy, and future research. |
| **OTHER INFORMATION** | 24a | Provide registration information for the review, including register name and registration number, or state that the review was not registered. |
| Registration and protocol | 24b | Indicate where the review protocol can be accessed, or state that a protocol was not prepared. |
|                   | 24c    | Describe and explain any amendments to information provided at registration or in the protocol. |
| Support           | 25     | Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review. |
| Competing interests| 26     | Declare any competing interests of review authors. |
| Availability of data, code and other materials | 27 | Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review. |