CEP has several standard search filters for specific types of evidence that are frequently used in the preparation of CEP evidence reports. As with other CEP methods, they are pragmatic tools designed to apply standardized and good quality methods to rapid reviews. Their use is not obligatory, and analysts may elect to use filters developed by other agencies (please see below for a selection of those sources). Search syntax is provided in the forms that CEP uses for routine searching: Ovid MEDLINE, Embase native syntax, and EBSCO CINAHL. Filters should not be used with the Cochrane Central Register, since that database already selects for controlled clinical trials.

**Guidelines**

<table>
<thead>
<tr>
<th>MEDLINE</th>
<th>(guideline* or guidance).mp. or exp Guideline/ or exp Practice Guideline/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embase</td>
<td>('practice guideline'/de OR guideline:ti,ab OR guidance:ti,ab)</td>
</tr>
<tr>
<td>CINAHL</td>
<td>(MH &quot;Practice Guidelines&quot;) or guideline* or guidance</td>
</tr>
</tbody>
</table>

**Systematic reviews**

<table>
<thead>
<tr>
<th>MEDLINE</th>
<th>limit [search line] to (meta analysis or systematic reviews)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embase</td>
<td>[search line] AND ([systematic review]/lim OR [meta analysis]/lim)</td>
</tr>
<tr>
<td>CINAHL</td>
<td>[search line] AND Limiters - Publication Type: Meta Analysis, Meta Synthesis, Systematic Review</td>
</tr>
</tbody>
</table>

**Clinical trials (Cochrane sensitive filter)**

| MEDLINE       | 1 randomized controlled trial.pt.  
|               | 2 controlled clinical trial.pt. 
|               | 3 randomized.ab. 
|               | 4 placebo.ab. 
|               | 5 drug therapy.fs. 
|               | 6 randomly.ab. 
|               | 7 trial.ab. 
|               | 8 groups.ab. 
|               | 9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 
|               | 10 exp animals/ not humans.sh. 
|               | 11 9 not 10                                                                 |
| Embase        | 1 'randomized controlled trial’/de 
|               | 2 'controlled clinical study’/de 
|               | 3 #1 or #2 
|               | 4 random*:ti,ab 
|               | 5 'randomization’/de 
|               | 6 'intermethod comparison’/de 
|               | 7 placebo:ti,ab 
|               | 8 (compare:ti OR compared:ti OR comparison:ti) |
CEP methods appendix: January 2021

((evaluated:ab OR evaluate:ab OR evaluating:ab OR assessed:ab OR
assess:ab) AND (compare:ab OR compared:ab OR comparing:ab OR
comparison:ab))

(open NEXT/1 label):ti,ab

((double OR single OR doubly OR singly) NEXT/1 (blind OR blinded OR
blindly)):ti,ab

double blind procedure'/de

(parallel NEXT/1 group*):ti,ab

crossover:ti,ab OR ’cross over’:ti,ab

((assign* OR match OR matched OR allocation) NEAR/5 (alternate OR
group OR groups OR intervention OR interventions OR patient OR
patients OR subject OR subjects OR participant OR
participants)):ti,ab

(assigned:ti,ab OR allocated:ti,ab)

controlled NEAR/7 (study OR design OR trial)):ti,ab

(volunteer:ti,ab OR volunteers:ti,ab)

’human experiment’/de

Trial:ti

#4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14
or #15 or #16 or #17 or #18 or #19 or #20

#21 not #3

((random* NEXT/1 sample* NEAR/7 (’cross section’ OR questionnaire*
OR survey OR surveys OR database OR databases)):ti,ab) NOT
(’comparative study’/de OR ’controlled study’/de OR ’randomised
controlled’:ti,ab OR ’randomized controlled’:ti,ab OR ’randomly
assigned’:ti,ab))

’cross‐sectional study’/de NOT (’randomized controlled trial’/de OR
’controlled clinical study’/de OR ’controlled study’/de OR
’randomised controlled’:ti,ab OR ’randomized controlled’:ti,ab OR
’control group’:ti,ab OR ’control groups’:ti,ab))

’case control’/ti,ab AND random*:ti,ab NOT (’randomised
controlled’:ti,ab OR ’randomized controlled’:ti,ab)

’systematic review’:ti NOT (trial:ti OR study:ti)

’random field’/ti,ab

’random cluster’ NEAR/3 sample*:ti,ab

(review:ab AND review:it NOT trial:ti)

’we searched’:ab AND (review:ti OR review:it)

’update review’:ab

(databases NEAR/4 searched):ab

((rat:ti OR rats:ti OR mouse:ti OR mice:ti OR swine:ti OR porcine:ti
OR murine:ti OR sheep:ti OR lambs:ti OR pigs:ti OR piglets:ti OR
rabbit:ti OR rabbits:ti OR cat:ti OR cats:ti OR dog:ti OR dogs:ti OR
cattle:ti OR bovine:ti OR monkey:ti OR monkeys:ti OR trout:ti OR
marmoset*:ti) AND ’animal experiment’/de)

(’animal experiment’/de NOT (’human experiment’/de OR ’human’/de))

#23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or
#33 or #34 or #35

#22 not #36

S1 MH randomized controlled trials
S2 MH double-blind studies
S3 MH single-blind studies
S4 MH random assignment
S5 MH pretest-posttest design
S6 MH cluster sample
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S7 TI (randomised OR randomized)</td>
<td></td>
</tr>
<tr>
<td>S8 AB (random*)</td>
<td></td>
</tr>
<tr>
<td>S9 TI (trial)</td>
<td></td>
</tr>
<tr>
<td>S10 MH (sample size) AND AB (assigned OR allocated OR control)</td>
<td></td>
</tr>
<tr>
<td>S11 MH (placebos)</td>
<td></td>
</tr>
<tr>
<td>S12 PT (randomized controlled trial)</td>
<td></td>
</tr>
<tr>
<td>S13 AB (control W5 group)</td>
<td></td>
</tr>
<tr>
<td>S14 MH (crossover design) OR MH (comparative studies)</td>
<td></td>
</tr>
<tr>
<td>S15 AB (cluster W3 RCT)</td>
<td></td>
</tr>
<tr>
<td>S16 MH animals+</td>
<td></td>
</tr>
<tr>
<td>S17 MH (animal studies)</td>
<td></td>
</tr>
<tr>
<td>S18 TI (animal model*)</td>
<td></td>
</tr>
<tr>
<td>S19 S16 OR S17 OR S18</td>
<td></td>
</tr>
<tr>
<td>S20 MH (human)</td>
<td></td>
</tr>
<tr>
<td>S21 S19 NOT S20</td>
<td></td>
</tr>
<tr>
<td>S22 S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15</td>
<td></td>
</tr>
<tr>
<td>S23 S22 NOT S21</td>
<td></td>
</tr>
</tbody>
</table>

### Clinical pathways and algorithms

#### MEDLINE

1. (((clinical or critical or care) adj2 path*).mp.
2. (care adj2 (map* or plan*)).mp.
3. exp patient care planning/
4. algorithm*.mp. or exp Algorithms/
5. 1 or 2 or 3 or 4

#### Embase

'clinical protocol'/exp OR 'clinical pathway'/exp OR (((clinical* OR care* OR nurs*) NEAR/3 (pathway* OR algorithm* OR protocol*))

#### CINAHL

1. (MH "Critical Path") or (MH "Algorithms") or (MH "Decision Trees") or (MH "Protocols")
2. (care or clinic* or decision* or nursing*) n2 (protocol* or path* or algorithm* or map*)
3. S1 or S2

### Clinical decision support

#### MEDLINE

1. exp Medical Records Systems, Computerized/
2. exp decision support systems, clinical/
3. exp health information systems/
4. ((electron* or computer*) adj3 (record* or informat* or chart*)).mp.
5. (((clinic* or comput* or electron* or automat*) adj3 decision*) and (decision* adj3 support*)).mp.
6. ((order* adj2 (set* or panel* w)) and ((electron* or computer* or automat*) adj2 order*)).mp.
7. (EMR or EHR or dashboard).mp.
8. (remind* or alert* or warn*) adj2 (electron* or automat* or comput*).mp.
9. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8  
   10. 2 or 5
11. 9 and decision.mp.
12. 10 or 11  

#### Embase

[in development]

#### CINAHL

[in development]
Date and language restrictions

<table>
<thead>
<tr>
<th>Database</th>
<th>Search Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDLINE</td>
<td>limit [search line] to (english language and yr=&quot;2014 -Current&quot;)</td>
</tr>
<tr>
<td>CINAHL</td>
<td>Use limiters in Advanced Search window.</td>
</tr>
</tbody>
</table>

Other publication type restrictions used in CEP searches

<table>
<thead>
<tr>
<th>Database</th>
<th>Search Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDLINE</td>
<td>[search line] not case reports.pt.</td>
</tr>
<tr>
<td>Embase</td>
<td>#[search line] NOT ('conference abstract'/it OR 'conference paper'/it)</td>
</tr>
<tr>
<td></td>
<td>#[search line] NOT 'case report'/de</td>
</tr>
<tr>
<td>CINAHL</td>
<td>S[search line] NOT PT (Anecdote OR Case Study)</td>
</tr>
</tbody>
</table>

Other sources of search filters

**CADTH** ([https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-search-filters](https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-search-filters))

“Strings Attached” is a collection of complex search filters developed by information specialists at the Canadian Agency for Drugs and Technologies in Health. While they are not described as optimized for sensitivity or specificity, the breadth of keywords and concepts included in each search indicates they will be relatively high in sensitivity. Filters include systematic review/meta-analysis/health technology assessment (all in one filter), randomized controlled trials, guidelines, economic evaluations and cost models, and health utilities/quality of life. Filters are provided in various combinations of Ovid MEDLINE, PubMed, and Ovid Embase syntax.

**Cochrane** ([https://training.cochrane.org/handbook/version-6/chapter-4-tech-suppl](https://training.cochrane.org/handbook/version-6/chapter-4-tech-suppl))

The current Cochrane Handbook includes a technical supplement with specialized filters for identifying controlled trials in various key databases. A study comparing 36 different filters found that when searching MEDLINE, the 2008 Cochrane filters had the best combined sensitivity and specificity (1). These filters have been adopted as CEP’s standard filter for controlled trials.

**HIRU Hedges Project** ([https://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx](https://hiru.mcmaster.ca/hiru/HIRU_Hedges_home.aspx))

Hedges is a collection of filters that were developed for the National Library of Medicine; they are built in to the Ovid MEDLINE search interface as “Clinical Queries.” Hedges is notable for the validation studies that have been done on their filters and for the availability of sensitive, specific, and optimized versions for each filter category. Categories include reviews, therapy, diagnosis, prognosis, causation, economics, clinical prediction guides, qualitative, and costs. Filters are available for MEDLINE (both Ovid and PubMed syntax), Embase (Ovid syntax), and PsychINFO (Ovid syntax).
**HTAi SuRe Info** ([http://vortal.htai.org/](http://vortal.htai.org/))

“SUMmarized REsearch in Information Retrieval for HTA” is a collection of resources for systematic reviews and health technology assessment reports. It is maintained by the Information Retrieval special interest group of Health Technology Assessment International and was developed as part of the EUnetHTA Core Model for health technology assessment.

SuRe Info does not include actual search filters. Instead it includes links to various external sources of filters, including CADTH, BMJ Clinical Evidence, and InterTASC (the NICE information specialists’ working group). SuRe Info also includes tutorial essays on search strategy development, the effects of limiting searches by date and/or language of publication, and other aspects of information retrieval.

**InterTASC** ([https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/home](https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/home))

The InterTASC Information Specialists’ Sub-Group Search Filter Resource is maintained by staff of the National Institute for Health and Care Excellence (NICE) and other HTA and guideline developers in the United Kingdom. They have a systematic process for searching for and identifying newly-published filters, and maintain the most complete inventory of filters, categorized by the type of literature they are intended to identify. The InterTASC inventories are in bibliographic form and do not include the filters themselves: users must download the linked papers and websites to obtain the actual filters.

Besides the bibliographies of search filters, InterTASC includes bibliographies on topics like critical appraisal of search filters, methods papers, and links to search strategy blogs and discussion lists.

**SIGN** ([https://www.sign.ac.uk/search-filters.html](https://www.sign.ac.uk/search-filters.html))

The Scottish Intercollegiate Guidelines Network uses filters developed in-house and filters adapted from other sources such as CADTH. They describe their filters as less sensitive than some others, but they may be more pragmatic. Filters for systematic reviews, RCTs, observational studies, diagnostic studies, and other types of literature are provided. Filters are provided for MEDLINE, Embase, and sometimes CINAHL; Ovid syntax is used.

**References**