Final steps (5&6)

Assess
Code
Synthesize
Write

guides.library.tamu.edu/systematicreviews
Critical analysis for primary study

* Could be considered third selection as studies can be excluded studies for poor quality
* Reasons should be recorded
* Analysis will be different for different study types
* But needs to be as similar as possible
* Each study should be appraised by 2 independent evaluators
## Methods of assessment

<table>
<thead>
<tr>
<th>#</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Who will assess?</td>
</tr>
<tr>
<td>2</td>
<td>How will articles be divided?</td>
</tr>
<tr>
<td>3</td>
<td>Will software be used?</td>
</tr>
<tr>
<td>4</td>
<td>What will the overall procedure be?</td>
</tr>
<tr>
<td>5</td>
<td>How will disagreements be handled?</td>
</tr>
<tr>
<td>6</td>
<td>What study types are included in your set of articles?</td>
</tr>
<tr>
<td>7</td>
<td>Select tools to evaluate based on study types included</td>
</tr>
</tbody>
</table>
Coding

Other terms
* Coding
* Data extraction
* A worksheet or form that is developed that the researcher will fill out for each study
* Some studies will be written up in more than 1 article
* 1 article could have more than 1 study

Guides/examples:
* Find similar AHRQ study
* Community Guide provides blank forms for health promotion
* Look at evidence table of related reviews for hint to the coding form
Tips for assessment/coding

* Select software:
  * MS Access,
  * MS Excel,
  * Qualtrics
* Test forms with entire team and 1 or 2 studies first
* Discuss differences in rating
Selecting articles for meta analysis

* If meta analysis will be conducted, some articles may be excluded for unavailable data.
* Record these numbers and reasons
Step 6-1: Writing

PRISMA checklist
Protocol/ Registries
Synthesis
Report standard: PRISMA

* Describes outline of review
* Provides guideline for systematic reviews/meta analysis

* Has suggestions for title, abstract
* Order of information
What is a protocol?

* Plan the reviewers will follow to complete the review
* By determining methods at onset, helps to avoid the reviewer’s knowledge of study results may influence
* Done for:
  * For thesis/dissertation proposal
  * For grant
  * Have a clear plan for a large group

* Registries
* Collection of protocols
* Examples:
  * Cochrane
  * Campbell
  * PROSPERO
Update search.. Again!

* Run searches again
* Screen all new articles
* Assess/code as appropriate
To describe the process and flow of citations through the process

It is not necessary to include every detail listed on Tab 6-4

Look at journal being considered for publishing
## Discussion

<table>
<thead>
<tr>
<th>Section</th>
</tr>
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<tbody>
<tr>
<td>Statement of principal findings</td>
</tr>
<tr>
<td>Strengths and weaknesses of the study</td>
</tr>
<tr>
<td>Strengths and weaknesses in relation to other studies</td>
</tr>
<tr>
<td>Implications for clinicians/policy makers</td>
</tr>
<tr>
<td>Recommendations future research</td>
</tr>
</tbody>
</table>
### Limitations/Bias

<table>
<thead>
<tr>
<th>Bias in reviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have I clearly specified the question to be examined by my review and included studies address these questions and the extent to which my conclusions resolve this question?</td>
</tr>
<tr>
<td>2. Have I defined explicit and objective eligibility criteria for studies to be included?</td>
</tr>
<tr>
<td>3. To what extent am I confident that I have identified all potentially eligible studies?</td>
</tr>
<tr>
<td>4. Have I ensured that the eligibility criteria have been applied in ways that limit bias (possibly resulting from inappropriate acceptance or rejection)?</td>
</tr>
<tr>
<td>5. Have I assembled as high a proportion as possible of the relevant information from the included studies (guarding against a bias in outcome selection)?</td>
</tr>
<tr>
<td>6. Have I used a variety of analyses to explore any uncertainties associated with my review findings?</td>
</tr>
<tr>
<td>7. Have I presented my findings and conclusions in a structured report with clear links between what is observed and what is concluded?</td>
</tr>
</tbody>
</table>

Publication bias is measured by funnel plot.
CASE STUDY
• Look at descriptions of assessment and coding
• Look for description of strengths/limitations of the search- were the authors correct?