EvSynth One-Pager [redacted]

Systematic Review: gold standard of evidence synthesis; systematically evaluating+synthesizing existing research; provides quantitative/qualitative analysis of what is known+unknown, also provides recommendations for future research

- Might use meta-analysis (using stats from different research studies to produce a quantitative summary of the findings)
- Quick form of systematic review: rapid review

Other types of evidence synthesis include:

- Narrative -- combines personal experience+literature, biased+limited by author
- Scoping -- seeing if size+scope of literature is big enough to conduct systematic review on certain topic
- Evidence Map -- like scoping, but also identifies research gaps

Systematic reviews usually:

- Answer 1+ question(s)
- Carried out by a team of diff professions
- Use clear+detailed protocol for evaluating evidence
- Considers how subjectivity+bias impacted results
- Involve stakeholders

Types of Questions a Systematic Review can Answer:

- Examining the effectiveness of some sort of treatment
- How a disease arose
- Examining the process of diagnosis
- Predictions of long-term effects of a disease/injury
- Examining how research works/is conducted
- Asking “how” or “why” (qualitative)

How to Conduct a Systematic Review:

1. **Prepare Topic** (crafting question)
    - Make sure question is not too broad or too narrow
        - Talk to stakeholders+experts to figure out what questions are meaningful to them
        - Check if someone is doing a similar systematic review using PROSPERO
    - Good research questions usually include PICO(D)
        - Population, intervention, comparators, outcomes, design
2. **Search for Studies**
    - Be aware of publication bias; seek out unpublished works, reports by gov agencies, etc (to get more holistic view)
    - Be aware of reporting bias; follow up w authors to see if any research was omitted, compare published results with pre-written protocol
3. **Screen Studies**
    - Remove any studies that are 1) unrelated 2) don’t meet inclusion criteria
4. **Extract the relevant data** from remaining studies (there may be inconsistent info)

5. **Analyze+synthesize data** (is the quality good? Scope? How do they compare with each other? May decide to exclude some studies)
6. **Report findings**

Don't Use Systematic Review If:

- Research on topic does not exist/there isn't enough research
- Question can't be answered with systematic review (ex. If it is very philosophical or historical)