Cincinnati Children's

Project/Topic of your Clinical Question: _____

Reviewer: _____ **Today's Date:** _____ **Final Evidence Level:** _____

Article Title: _____

Year: _____ **First Author:** _____ **Journal:** _____

Do the study aim/purpose/objectives and inclusion/exclusion criteria assist in answering your clinical question?

☐ Yes ☐ No ☐ Unknown

- Study Aim/Purpose/Objectives:

- Inclusion Criteria:

- Exclusion Criteria:

When reading the bolded questions, consider the bulleted questions to help answer the main question.

If you are uncertain of your skills in evidence evaluation, please consult a local evidence expert for assistance:
  CCHMC Evidence Experts: http://groups/ce/NewEBC/EBDMHelp.htm

Unfamiliar terms can be found in the LEGEND Glossary: http://groups/ce/NewEBC/EBCFiles/GLOSSARY-EBDM.pdf

---

VALIDITY: ARE THE RESULTS OF THE SYSTEMATIC REVIEW / META–ANALYSIS VALID OR CREDIBLE?

1. Did the overview address a focused clinical question?

☐ Yes ☐ No ☐ Unknown

Comments:

2. Was the search for relevant studies detailed and exhaustive?
- Was it *unlikely* that important, relevant studies were missed?

☐ Yes ☐ No ☐ Unknown

Comments:

3. Did the systematic review use RCTs?
- Were the criteria used to select articles for inclusion appropriate?
- Was the assignment of patients to treatments randomized?

☐ Yes ☐ No ☐ Unknown

Comments:

4. Were the included studies appraised and assigned a high level of quality?

☐ Yes ☐ No ☐ Unknown

Comments:

5. Were the methods consistent from study to study?
- Were populations among the included studies comparable and appropriate?
- Were the outcomes, interventions, and exposures measured in the same way in the groups being compared?

☐ Yes ☐ No ☐ Unknown

Comments:

---

6. Was there freedom from conflict of interest? ☐ **Yes** ☐ **No** ☐ **Unknown**
- Sponsor/Funding Agency or Investigators
Comments:

RELIABILITY: ARE THESE VALID STUDY RESULTS IMPORTANT?

7. What were the main results of the systematic review/meta-analysis? *(e.g., Helpful data: Page #, Table #, Figures, Graphs)*

- What was the effect size? *(How large was the treatment effect?)*

- What were the measures of statistical uncertainty *(e.g., precision)*?
  (Were the results presented with Confidence Intervals or Standard Deviations?)

8. Were the results statistically significant? ☐ **Yes** ☐ **No** ☐ **Unknown**
Comments:

9. Were the results clinically significant? ☐ **Yes** ☐ **No** ☐ **Unknown**
- If potential confounders were identified, were they discussed in relationship to the results?
Comments:

10. Were adverse events discussed? ☐ **Yes** ☐ **No** ☐ **Unknown**
Comments:

APPLICABILITY: CAN I APPLY THESE VALID, IMPORTANT STUDY RESULTS TO TREATING MY PATIENTS?

11. Can the results be applied to my population of interest? ☐ **Yes** ☐ **No** ☐ **Unknown**
- Is the treatment feasible in my care setting?
- Do the patient outcomes apply to my population or question of interest?
- Are the likely benefits worth the potential harm and costs?
- Are the patients in this study similar to my population of interest?
Comments:

12. Are my patient's and family's values and preferences satisfied by the treatment and its consequences? ☐ **Yes** ☐ **No** ☐ **Unknown**
Comments:

13. Would you include this study/article in development of a care recommendation? ☐ Yes ☐ No ☐ Unknown
Comments:

ADDITIONAL COMMENTS OR CONCLUSIONS ("TAKE-HOME POINTS"):

QUALITY LEVEL / EVIDENCE LEVEL

- *Consider each "No" answer and the degree to which this limitation is a threat to the validity of the results, then check the appropriate box to assign the level of quality for this study/article.*
- *Consider an "Unknown" answer to one or more questions as a similar limitation to answering "No," if the information is not available in the article*

THE EVIDENCE LEVEL IS: ☐ **Good Quality Systematic Review** [1a]
☐ **Lesser Quality Systematic Review** [1b]
☐ **Not Valid, Reliable, or Applicable**

Table of Evidence Levels																			
	TYPE OF STUDY / STUDY DESIGN																		
DOMAIN OF CLINICAL QUESTION	Systematic Review Meta–Analysis	RCT [+]	CCT [+]	Qualitative Study	Cohort – Prospective	Cohort – Retrospective	Case – Control	Longitudinal (Before/After, Time Series)	Cross – Sectional	Descriptive Study Epidemiology Case Series	Quality Improvement (PDSA)	Mixed Methods Study	Decision Analysis Economic Analysis Computer Simulation	Guidelines	Case Reports N-of-1 Study	Bench Study	Published Expert Opinion	Local Consensus Published Abstracts
Intervention																		
Treatment, Therapy, Prevention, Harm, Quality Improvement	1a 1b	2a 2b	3a 3b	4a 4b	3a 3b	4a 4b	4a 4b	4a 4b	4a 4b	4a 4b	4a 4b	2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5

[+] *RCT = Randomized Controlled Trial; CCT = Controlled Clinical Trial*

Development for this appraisal form is based on:

1. Guyatt, G.; Rennie, D.; Evidence-Based Medicine Working Group.; and American Medical Association.: Users' guides to the medical literature : a manual for evidence-based clinical practice. *Users' guides to the medical literature : a manual for evidence-based clinical practice:* "JAMA & archives journals." Chicago, IL, 2002
2. Melnyk, B. M. and E. Fineout-Overholt (2005). Evidence-based practice in nursing & healthcare : a guide to best practice. Philadelphia, Lippincott Williams & Wilkins.
3. Lohr, K. N. and T. S. Carey (1999). "Assessing "best evidence": issues in grading the quality of studies for systematic reviews." Joint Commission Journal on Quality Improvement 25(9): 470-9.
4. Fineout-Overholt, E. and L. Johnston (2005). "Teaching EBP: asking searchable, answerable clinical questions." Worldviews Evid Based Nurs 2(3): 157-60.
5. Jerosch-Herold, C. (2005). "An evidence-based approach to choosing outcome measures: a checklist for the critical appraisal of validity, reliability and responsiveness studies." British Journal of Occupational Therapy 68(8): 347-53.
6. Phillips, et al: Oxford Centre for Evidence-based Medicine Levels of Evidence, 2001. Last accessed Nov 14, 2007 from http://www.cebm.net/index.aspx?o=1025.
7. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs,* 2(3): 157-60, 2005.