Cincinnati Children's

LEGEND: Evidence Appraisal of a Single Study Intervention
Systematic Review / Meta-Analysis

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?** ☐ **Yes** ☐ **No** ☐ **Unknown**
   - Was it *unlikely* that important, relevant studies were missed?

   Comments:

3. **Did the systematic review use RCTs?** ☐ **Yes** ☐ **No** ☐ **Unknown**
   - Were the criteria used to select articles for inclusion appropriate?
   - Was the assignment of patients to treatments randomized?

   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?** ☐ **Yes** ☐ **No** ☐ **Unknown**
   - 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?

   Comments:

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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:

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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** + **Cohort – Prospective**	**Cohort – Retrospective**	**Case – Control**	**Longitudinal** (Before/After, Time Series)	**Cross – Sectional**	**Epidemiology** **Descriptive** **Case Series**	**Expert Opinion** **Case Reports**
Intervention *Treatment, Therapy, Prevention, Harm, Quality Improvement*	**1a** **1b**	**2a** **2b**	**3a** **3b**	**4a** **4b**	**4a** **4b**	**4a** **4b**	**4a** **4b**	**4a** **4b**	**5a** **5b**

+ *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.

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