

# **LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY**

## **– TREATMENT / THERAPY: SYSTEMATIC REVIEW / META-ANALYSIS –**

**PROJECT / TOPIC OF YOUR CLINICAL QUESTION:** \_\_\_\_\_

**Reviewer:** \_\_\_\_\_ **Today's Date (mm/dd/yy):** \_\_\_\_\_ **Final Evidence Level:** \_\_\_\_\_

**Article Title:** \_\_\_\_\_

**Year:** \_\_\_\_\_ **First Author:** \_\_\_\_\_ **Journal:** \_\_\_\_\_

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

Yes  No  Unknown

• Study Purpose/Objective: \_\_\_\_\_

• 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. Was the quality of the included studies appraised?**  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:*

**6. Was there freedom from conflict of interest?**  Yes  No  Unknown

- Sponsor/Funding Agency or Investigators

*Comments:*

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**RELIABILITY: ARE THESE VALID STUDY RESULTS IMPORTANT?**

**7. What are the main results of the systematic review/meta-analysis?**

- What is the effect size? (*How large was the treatment effect?*)
- How precise were the results? (*Were the results presented with Confidence Intervals?*)
- What are the main results? (*e.g., Helpful data: Page #, Table #, Figures, Graphs*)

**8. Were the results statistically significant?**

*Comments:*

Yes  No  Unknown

**9. Were the results clinically significant?**

*Comments:*

Yes  No  Unknown

**10. Were adverse events discussed?**

*Comments:*

Yes  No  Unknown

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

**11. Can the results be applied to my population of interest?**

- 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:*

Yes  No  Unknown

**12. Are your patient's and family's values and preferences satisfied by the treatment and its consequences?**

*Comments:*

Yes  No  Unknown

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

*Comments:*

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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#### 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									
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN								
	Systematic Review	RCT <sup>+</sup>	CCT* Cohort – Prospective	Cohort – Retrospective	Case – Control	Longitudinal (Before/After, Time Series)	Cross – Sectional	Epidemiology Descriptive Case Series	Expert Opinion Case Reports
	Meta-Analysis								
Treatment / Therapy	1a 1b	2a 2b	3a 3b	4a 4b	4a 4b	4a 4b	4a 4b	4a 4b	5

<sup>+</sup>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.