

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:

Is a descriptive, epidemiologic, or case series study congruent with the author's study aim/purpose/objectives above?

☐ Yes ☐ No ☐ Unknown

Comments:

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 STUDY VALID OR CREDIBLE?

1. Were the study methods appropriate for the question?

☐ Yes ☐ No ☐ Unknown

- Were the study methods clearly described?
(e.g., setting, sample population, instruments, intervention, etc.)

Comments:

2. Were valid and reliable instruments/methods used to measure the outcomes?

☐ Yes ☐ No ☐ Unknown

- Was evidence provided to support the validity and reliability?

Comments:

3. Were all appropriate variables *(e.g., potential confounders, exposures, predictors)* clearly described?

☐ Yes ☐ No ☐ Unknown

Comments:

4. Were all appropriate outcomes clearly described?

☐ Yes ☐ No ☐ Unknown

Comments:

5. Were all participants accounted for at the conclusion of the study?

☐ Yes ☐ No ☐ Unknown

- Were withdrawals from the study explained?
- Was the rate of attrition acceptable?

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. Were the statistical analysis methods clearly described and appropriate?

☐ Yes ☐ No ☐ Unknown

Comments:

8. Did the study have a sufficiently large sample size?

☐ Yes ☐ No ☐ Unknown

- Was there a sufficient response rate?
- Was a power analysis described?
- Did the sample size achieve or exceed that resulting from the power analysis?
- Did each subgroup also have sufficient sample size (*e.g., at least 6 to 12 participants*)?

Comments:

9. What are the main results of the study?

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

10. Were the results statistically significant?

☐ Yes ☐ No ☐ Unknown

Comments:

11. Were the results clinically significant?

☐ Yes ☐ No ☐ Unknown

Comments:

12. Were any adverse events, safety concerns, or risks/benefits appropriately described?

☐ Yes ☐ No ☐ Unknown

Comments:

APPLICABILITY: CAN I APPLY THESE VALID, IMPORTANT STUDY RESULTS TO TREATING MY PATIENTS?**13. Can the results be applied to my population of interest?**☐ Yes ☐ No ☐ Unknown

- Do the patient outcomes apply to my population or question of interest?
- Are the likely benefits worth the potential harm and costs?
- Were the patients in this study similar to my population of interest?

*Comments:***14. Are my patient's and family's values and preferences satisfied by the knowledge gained from this study (such as outcomes considered)?**☐ Yes ☐ No ☐ Unknown*Comments:***15. 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 Descriptive/Epidemiologic Study** [4a]
☐ **Lesser Quality Descriptive/Epidemiologic Study** [4b]
☐ **Not Valid, Reliable, or Applicable**

Table of Evidence Levels																	
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN																
	Systematic Review Meta-Analysis	Meta-Synthesis	RCT ⁺	CCT ⁺	Psychometric Study	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
All Domains	1a 1b											4a 4b		2/3/4 a/b	5a 5b	5a 5b	5a 5b

⁺ RCT = Randomized Controlled Trial; CCT = Controlled Clinical Trial

Development for this appraisal form is based on:

- Fineout-Overholt, E. and L. Johnston (2005). "Teaching EBP: asking searchable, answerable clinical questions." *Worldviews Evid Based Nurs* 2(3): 157-60.
- 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
- 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.
- 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.
- Melnyk, B. M. and E. Fineout-Overholt (2005). *Evidence-based practice in nursing & healthcare : a guide to best practice*. Philadelphia, Lippincott Williams & Wilkins.
- 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>.