

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 PSYCHOMETRIC STUDY VALID OR CREDIBLE?**

- 1. Was the study purpose focused on examining one or more measurement properties (i.e., validity, reliability)?**  
 Yes  No  Unknown  
*Comments:*
- 2. Was the instrument clearly described?**  
 Yes  No  Unknown  
*Comments:*
- 3. Was the protocol for administration and scoring standardized?**  
 Yes  No  Unknown  
*Comments:*
- 4. Were the observers/raters appropriately trained or certified?**  
 Yes  No  Unknown  
*Comments:*
- 5. Were the data collected on a representative sample?**  
 Yes  No  Unknown  
*Comments:*

**6. Was the sample size adequate?**

- Do authors discuss whether the sample size is adequate?
- Comments:

Yes  No  Unknown

**7. Did the instrument make intrinsic sense – face validity (expert opinion/consensus)?**

Comments:

Yes  No  Unknown

**8. Did the instrument sample the content/domain adequately?**

Comments:

Yes  No  Unknown

**9. Was there evidence of the test's construct validity (factor analysis)?**

- Did the test discriminate between two groups (*known-groups method*)?
- Did the test values agree with values of a similar test or gold standard (*concurrent/convergent validity*) or with a future outcome (*predictive validity*)?  
If yes, then:
  - What was the strength of the correlation?
  - What were the confidence limits, if given?

Comments:

Yes  No  Unknown

**10. Was there freedom from conflict of interest?**

- Sponsor/Funding Agency or Investigators
- Comments:

Yes  No  Unknown

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

ARE THE RESULTS OBTAINED WITH THESE MEASURES REPLICABLE? (TESTS, MEASURES, SCALES, INSTRUMENTS, ETC.)

**11. What was the internal consistency (i.e., Cronbach's alpha)?**

(Relevant where scales have multiple items that sum up to a total score)

Comments:

**12. Were appropriate statistical measures used to assess agreement between two or more occasions using the same observer (i.e., intra-rater reliability)?**

Comments:

Yes  No  Unknown

**13. Were appropriate statistical measures used to assess agreement between two or more observers (i.e., inter-rater reliability)?**

Comments:

Yes  No  Unknown

**14. Were appropriate statistical measures used to assess test-retest reliability (i.e., stability coefficient)?**

- Was an appropriate test-retest interval used?

Comments:

Yes  No  Unknown

**15. Did the instrument capture important change (e.g., clinical significance)?**

Comments:

Yes  No  Unknown

**16. Was there evidence of floor or ceiling effects?**

Comments:

Yes  No  Unknown

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

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

- Is use of the instrument feasible in my care setting?
- Is the setting of the study applicable to my population of interest?
- 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:

Yes  No  Unknown

**18. Are my patient's and family's values and preferences satisfied by the use of the diagnostic test?**

Comments:

Yes  No  Unknown

**19. Would you include this study/article in development of a care recommendation?**

Comments:

Yes  No  Unknown

**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 Psychometric Study** [2a]  
 **Lesser Quality Psychometric Study** [2b]  
 **Not Valid, Reliable, or Applicable**

Table of Evidence Levels														
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN													
	Systematic Review Meta-Analysis	CCT <sup>+</sup>	Psychometric Study	Cohort – Prospective	Cohort – Retrospective	Cross – Sectional	Descriptive Study Epidemiology Case Series	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
Diagnosis / Assessment	1a 1b	2a 2b	2a 2b	3a 3b	4a 4b	4a 4b	4a 4b	2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5

<sup>+</sup> 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. 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>.
4. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs*, 2(3): 157-60, 2005.
5. Jerosch-Herold, C., 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*, 2005. 68(8): p. 347-53.