

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY

– DIAGNOSIS / ASSESSMENT: 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

- Were the selection criteria clearly described?
- Was it *unlikely* that important, relevant studies were missed?

Comments:

3. Was the quality of the included studies appraised? Yes No Unknown

Comments:

4. Were the methods consistent from study to study? Yes No Unknown

- Did the sample include an appropriate variety of patients to whom the diagnostic test will be applied in clinical practice?
- Did the clinicians know the participant diagnosis prior to reviewing any test results (i.e., diagnostic uncertainty)?
- Were the index tests (e.g., test being studied) and reference standards (e.g., gold standard or currently used test) described?
- Were withdrawals from the studies described?

Comments:

5. Did studies use independent, blind comparisons with reference standard tests (without knowledge of the results of the other test)? Yes No Unknown

- Were the reference standards likely to correctly classify the target condition?
- Did all studies include verification of diagnosis using a reference standard?

Comments:

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY

– DIAGNOSIS / ASSESSMENT: SYSTEMATIC REVIEW / META-ANALYSIS –

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 same clinical data available when test results were interpreted as would be available when the test is used in practice? Yes No Unknown

Comments:

8. Were all test results reported, including uninterpretable / intermediate test results? Yes No Unknown

Comments:

9. What are the main results of the systematic review / meta-analysis? (e.g., Helpful data: Page #, Table #, Figures, Graphs)
(e.g., Sensitivity / Specificity, Likelihood Ratios, Limits of Agreement, Patient data to calculate these)

- What was the effect size?
(e.g., Diagnostic Accuracy – Sensitivity/Specificity, Likelihood Ratios, Limits of Agreement, Patient data to calculate these)

- 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

- If potential confounders were identified, were they discussed in relationship to the results?

Comments:

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

12. Can the results be applied to my population of interest? Yes No Unknown

- Is the diagnostic test feasible in my care setting?
- Are the likely benefits worth the potential harm and costs?
- Were the patients in this study similar to my population of interest?

Comments:

13. Are my patient's and family's values and preferences satisfied by the use of the diagnostic test? Yes No Unknown

Comments:

LEGEND: EVIDENCE APPRAISAL OF A SINGLE STUDY

– DIAGNOSIS / ASSESSMENT: SYSTEMATIC REVIEW / META-ANALYSIS –

14. Would you include this study/article in development of a 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							
DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN						
	Systematic Review Meta-Analysis	CCT + Cohort – Prospective	Psychometric Study	Cohort – Retrospective	Cross- Sectional	Epidemiology Descriptive Case Series	Expert Opinion Case Reports
	1a 1b	2a 2b	2a 2b	3a 3b	4a 4b	4a 4b	5a 5b
Diagnosis / Assessment							

+ 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. 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>.
5. Fineout-Overholt and Johnston: Teaching EBP: asking searchable, answerable clinical questions. *Worldviews Evid Based Nurs*, 2(3): 157-60, 2005.