LEGEND: Evidence Appraisal of a Single Study
Etiology, Risk Factors, Prevalence
Cross–Sectional Study

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 cross-sectional 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 CROSS–SECTIONAL STUDY VALID OR CREDIBLE?

1. **Are the study methods clearly described and appropriate for the question?** ☐ **Yes** ☐ **No** ☐ **Unknown**
   - Is the setting clearly described and appropriate?
   - Was there a representative sample of patients at a well-defined point in the course of the condition of interest?
   - Is the sample population clearly described and sufficient?

   Comments:

2. **Were the participants similar** *(homogeneous)* **with respect to known factors of interest** *(e.g., demographic, exposure, risk, treatment, or etiology)***?** ☐ **Yes** ☐ **No** ☐ **Unknown**

   Comments:

3. **Were objective and unbiased criteria used to measure the variable of interest?** ☐ **Yes** ☐ **No** ☐ **Unknown**
   - Was the variable of interest quantifiable and precisely measurable?
   - Were instruments used to measure the variable of interest tested to be valid and reliable?

   Comments:

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4. Was there freedom from conflict of interest? ☐ Yes ☐ No ☐ Unknown

- Sponsor/Funding Agency or Investigators

Comments:

RELIABILITY: ARE THESE VALID STUDY RESULTS IMPORTANT?

5. Did the study have a sufficiently large sample size? ☐ Yes ☐ No ☐ Unknown

- 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:

6. Were the statistical analysis methods appropriate? ☐ Yes ☐ No ☐ Unknown

- Were the statistical analysis methods clearly described?
- If subgroups were evaluated, was a statistical adjustment made for the differences?

Comments:

7. What are the main results of the study? *(e.g., Helpful data: Page #, Table #, Figures, Graphs)*

- ***For a Prevalence Study:*** What is the rate *(e.g., number per population)*?

- ***For an Etiology Study:*** How strong is the association/correlation between known factors and the variable of interest?

- 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

Note: This question may not be applicable in all prevalence studies.
Comments:

9. 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 MY POPULATION?

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

- Is the setting of the study applicable to my population of interest?
- Were the participants in this study similar to my population of interest?
- Does the variable of interest apply to my population or question of interest?

Comments:

11. Are my patient's and family's values and preferences satisfied by the knowledge gained from this study? ☐ Yes ☐ No ☐ Unknown

Comments:

12. 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.*

		Etiology / Risk Factors	Prevalence
THE EVIDENCE LEVEL IS:	**Good Quality Cross-Sectional Study:**	☐ [4a]	☐ [3a]
	Lesser Quality Cross-Sectional Study:	☐ [4b]	☐ [3b]

☐ **Not Valid, Reliable, or Applicable**

Table of Evidence Levels

DOMAIN OF CLINICAL QUESTION	TYPE OF STUDY / STUDY DESIGN														
	Systematic Review Meta–Analysis	RCT [+]	CCT [+]	Cohort – Prospective	Cohort – Retrospective	Case – Control	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
Etiology / Risk Factors	1a 1b	2a 2b	3a 3b	3a 3b	4a 4b	4a 4b	4a 4b	4a 4b	2/3/4 a/b	5a 5b	5a 5b	5a 5b	5a 5b	5a 5b	5
Prevalence	1a 1b					3a 3b	3a 3b	4a 4b			5a 5b	5a 5b	5a 5b	5a 5b	5

[+] *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. 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.

