

Strength of Evidence



Evidence Levels	Quality Ratings
<p><u>Level I</u></p> <p>Experimental study, randomized controlled trial (RCT)</p> <p>Explanatory mixed method design that includes only a level I quantitative study</p> <p>Systematic review of RCTs, with or without meta-analysis</p>	<p>Quantitative Studies</p> <p>A. High quality: Consistent, generalizable results; sufficient sample size for the study design; adequate control; definitive conclusions; consistent recommendations based on comprehensive literature review that includes thorough reference to scientific evidence.</p> <p>B. Good quality: Reasonably consistent results; sufficient sample size for the study design; some control, fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence.</p> <p>C. Low quality or major flaws: Little evidence with inconsistent results; insufficient sample size for the study design; conclusions cannot be drawn.</p>
<p><u>Level II</u></p> <p>Quasi-experimental study</p> <p>Explanatory mixed method design that includes only a level II quantitative study</p> <p>Systematic review of a combination of RCTs and quasi-experimental studies, or quasi-experimental studies only, with or without meta-analysis</p>	<p>Qualitative Studies</p> <p>No commonly agreed-on principles exist for judging the quality of qualitative studies. It is a subjective process based on the extent to which study data contributes to synthesis and how much information is known about the researchers' efforts to meet the appraisal criteria.</p> <p><i>For meta-synthesis, there is preliminary agreement that quality assessments of individual studies should be made before synthesis to screen out poor-quality studies.</i></p> <p>A/B High/Good quality is used for single studies and meta-syntheses).</p> <p>The report discusses efforts to enhance or evaluate the quality of the data and the overall inquiry in sufficient detail; and it describes the specific techniques used to enhance the quality of the inquiry. Evidence of some or all of the following is found in the report:</p> <ul style="list-style-type: none"> ■ Transparency: Describes how information was documented to justify decisions, how data were reviewed by others, and how themes and categories were formulated. ■ Diligence: Reads and rereads data to check interpretations; seeks opportunity to find multiple sources to corroborate evidence. ■ Verification: The process of checking, confirming, and ensuring methodologic coherence. ■ Self-reflection and -scrutiny: Being continuously aware of how a researcher's experiences, background, or prejudices might shape and bias analysis and interpretations. ■ Participant-driven inquiry: Participants shape the scope and breadth of questions; analysis and interpretation give voice to those who participated. ■ Insightful interpretation: Data and knowledge are linked in meaningful ways to relevant literature. <p>C. Lower-quality studies contribute little to the overall review of findings and have few, if any, of the features listed for High/Good quality.</p>
<p><u>Level III</u></p> <p>Non-experimental study</p> <p>Systematic review of a combination of RCTs, quasi-experimental and non-experimental studies, or non-experimental studies only, with or without meta-analysis</p> <p>Exploratory, convergent, or multiphasic mixed methods studies</p> <p>Explanatory mixed method design that includes only a level III quantitative study</p> <p>Qualitative study</p> <p>Meta-synthesis</p>	

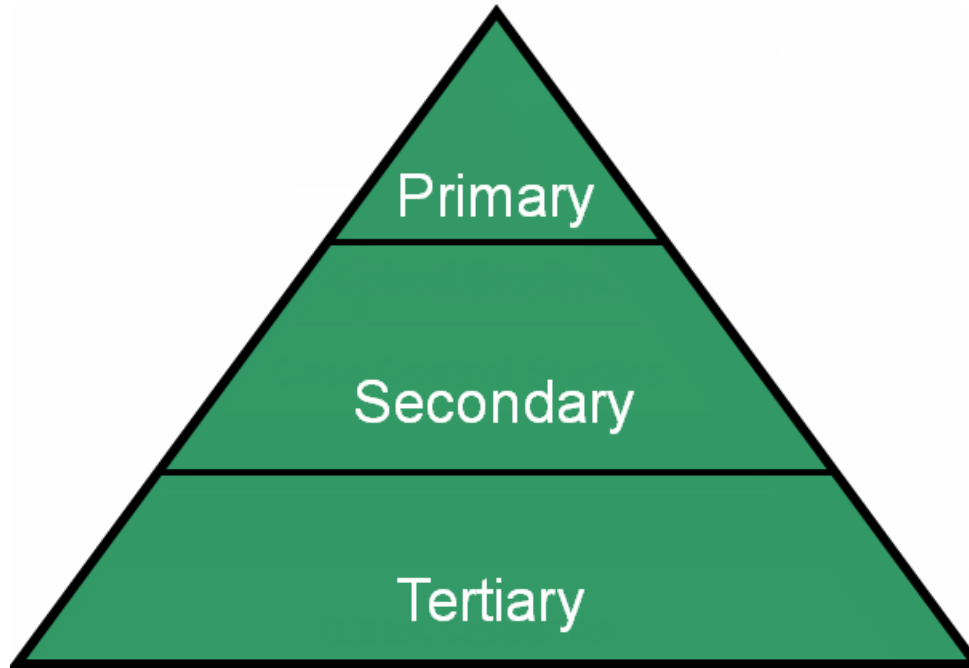
(Johns Hopkins School of Medicine, Center for Evidence-Based Practice 2017)

Evidence Levels	Quality Ratings
<p>Level IV</p> <p>Opinion of respected authorities and/or nationally recognized expert committees or consensus panels based on scientific evidence</p> <p>Includes:</p> <ul style="list-style-type: none"> ■ Clinical practice guidelines ■ Consensus panels/position statements 	<p>A. High quality: Material officially sponsored by a professional, public, or private organization or a government agency; documentation of a systematic literature search strategy; consistent results with sufficient numbers of well-designed studies; criteria-based evaluation of overall scientific strength and quality of included studies and definitive conclusions; national expertise clearly evident; developed or revised within the past five years</p> <p>B. Good quality: Material officially sponsored by a professional, public, or private organization or a government agency; reasonably thorough and appropriate systematic literature search strategy; reasonably consistent results, sufficient numbers of well-designed studies; evaluation of strengths and limitations of included studies with fairly definitive conclusions; national expertise clearly evident; developed or revised within the past five years</p> <p>C. Low quality or major flaws: Material not sponsored by an official organization or agency; undefined, poorly defined, or limited literature search strategy; no evaluation of strengths and limitations of included studies, insufficient evidence with inconsistent results, conclusions cannot be drawn; not revised within the past five years</p>
<p>Level V</p> <p>Based on experiential and non-research evidence</p> <p>Includes:</p> <ul style="list-style-type: none"> ■ Integrative reviews ■ Literature reviews ■ Quality improvement, program, or financial evaluation ■ Case reports ■ Opinion of nationally recognized expert(s) based on experiential evidence 	<p>Organizational Experience (quality improvement, program or financial evaluation)</p> <p>A. High quality: Clear aims and objectives; consistent results across multiple settings; formal quality improvement, financial, or program evaluation methods used; definitive conclusions; consistent recommendations with thorough reference to scientific evidence</p> <p>B. Good quality: Clear aims and objectives; consistent results in a single setting; formal quality improvement, financial, or program evaluation methods used; reasonably consistent recommendations with some reference to scientific evidence</p> <p>C. Low quality or major flaws: Unclear or missing aims and objectives; inconsistent results; poorly defined quality improvement, financial, or program evaluation methods; recommendations cannot be made</p> <p>Integrative Review, Literature Review, Expert Opinion, Case Report, Community Standard, Clinician Experience, Consumer Preference</p> <p>A. High quality: Expertise is clearly evident; draws definitive conclusions; provides scientific rationale; thought leader(s) in the field</p> <p>B. Good quality: Expertise appears to be credible; draws fairly definitive conclusions; provides logical argument for opinions</p> <p>C. Low quality or major flaws: Expertise is not discernable or is dubious; conclusions cannot be drawn</p>

(Johns Hopkins School of Medicine, Center for Evidence-Based Practice 2017)

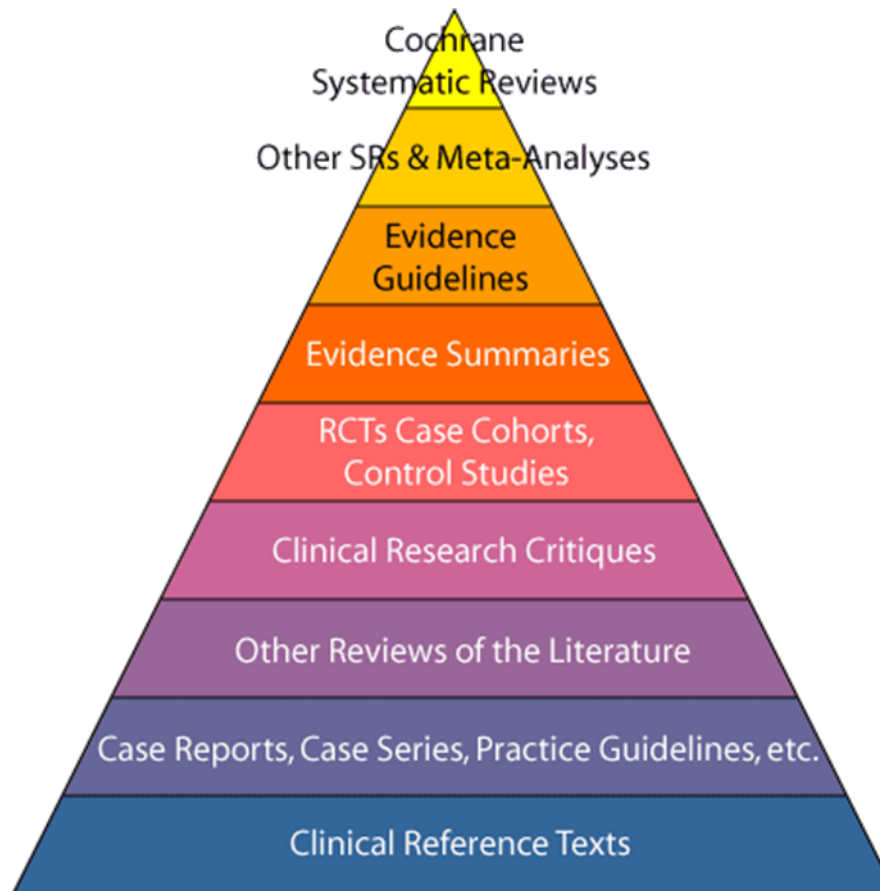
Levels of Peer Reviewed Information

- Primary: original research
- Secondary: review articles
- Tertiary: textbooks, summaries



Clark N. IT applications of EBM principles. 2003.

Secondary Sources



Van Durme, D.; Clark N.



NGC Mission:

“to provide physicians and other health care professionals, health care providers, health plans, integrated delivery systems, purchasers and others an accessible **mechanism for **obtaining** objective, detailed information on **clinical practice guidelines** and to **further** their **dissemination, implementation, and use.**”(NGC 2017).**

References

Clark N. IT Applications of EBM Principles. Tallahassee, FL: Florida State University College of Medicine, 2003.

http://med.fsu.edu/userfiles/file/MedInfo_SeminarSeries2.ppt

Van Durme, D.; Clark N. *Asking Clinical Questions and Finding an Evidence-Based Answer*

National Guideline Clearinghouse. (2017). *Help & About*. Retrieved from

<https://www.guideline.gov/help-and-about>

Johns Hopkins School of Medicine, Center for Evidence-Based Practice. (2017). *Johns Hopkins Nursing Evidence-Based Practice Model: 2017 New Model and Tools*. Retrieved from Center for Evidence-Based Practice website:

https://www.hopkinsmedicine.org/evidence-based-practice/ijhn_2017_ebp.html