

Moving Evidence to Policy and Practice

Cindy Smith Greenberg, DNSc, RN, CPNP

Chair & Professor, Department of Nursing California State University, Fullerton

- Objectives:
1. Differentiate between research and EBP.
 2. Discuss methods to identify evidence for use in practice.
 3. Integrate evidence into policy and procedures

UPDATE

Uncover the issue

Phrase the question

Data – gather it

Analyze the data and synthesize

Tailor to facility and procedure

Educate and evaluate

Uncover the issue

- What are issues in practice?
- What is the current policy or procedure?

Phrase the question

- Translate the clinical questions into a searchable question using PICO.
- PICO is an acronym that describes the elements of a well-formed clinical question.
- PICO questions can help clinicians find relevant and useful information.
- A good PICO question can also guide clinical research.

PICO

- **P = Patient Population**
- **I = Intervention/Issue of Interest**
- **C = Comparison Intervention or Comparison Group**
- **O = Outcome**
- **(T) = Time**

Data – gather it

- Current methods to update our clinical practices:
 - Tradition
 - Current policies
 - Textbooks
- Types of data
 - Original research
 - Pre-appraised clinical evidence / evidence summaries
 - systematic reviews – integrative reviews, meta-analysis
 - Translation literature
 - practice guidelines

- protocols
- standards
- clinical pathways
- clinical innovations

- Data sources
 - Scholarly literature
 - Practice Guidelines
 - Practitioners
 - Patient preference

- Scholarly literature
 - Databases – PubMed, CINAHL
 - Google Scholar <http://scholar.google.com>

- Search help <http://askmedline.nlm.nih.gov/ask/pico.php>

- Pre-appraised evidence & Practice Guidelines
 - Joanna Briggs Institute – Best Practice Database
http://www.joannabriggs.edu.au/pubs/best_practice.php
 - Cochrane Collection <http://www.cochrane.org>
 - Evidence-Based Nursing Journal <http://ebn.bmj.com>
 - National Guidelines Clearinghouse <http://www.guideline.gov>
 - Medical Clinical Guidelines <http://www.rmlibrary.com/sites/medclini.htm>
 - Guidelines for the Prevention of Intravascular Catheter-Related Infections
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5110a1.htm>
 - National Heart Lung Blood Institute Guidelines <http://www.nhlbi.nih.gov/guidelines>

- Guidelines from Professional Organizations
 - American Association of Respiratory Care Practice Guidelines
<http://www.rcjournal.com/cpgs/index.cfm>
 - American Academy of Pediatrics <http://aappolicy.aappublications.org>
 - National Association of Pediatric Nurse Practitioners <http://www.napnap.org>
 - National Association of Neonatal Nurses <http://www.nann.org>
 - Association of Pediatric Hematology Oncology Nurses <http://www.aphon.org>

- Best Practice from Other Practitioners/Agencies
 - Cincinnati Children’s Hospital
 - The Barbara Bush Children’s Hospital at Maine Medical Center
 - Seattle Children’s Hospital
 - Listservs

Analyze the data and synthesize

- Level and Grade the Evidence

Leveling the Evidence

- The Evidence Pyramid

Rating System for the Hierarchy of Evidence (Melnik & Fineout-Overholt, 2005, p. 10)

Level I	Evidence from a systematic review or meta-analysis of all relevant RCTs or evidence-based clinical practice guidelines based on systematic reviews of RCTs
Level II	Evidence obtained from at least one well-designed RCT
Level III	Evidence obtained from well-designed controlled trials without randomization
Level IV	Evidence from well-designed case-control & cohort studies
Level V	Evidence from systematic reviews of descriptive & qualitative studies
Level VI	Evidence from a single descriptive or qualitative study
Level VII	Evidence from the opinion of authorities &/or reports of expert committees

- Level I - Systematic reviews or meta-analysis of randomized controlled trials (RCT)
 - Systematic review
 - Meta-analysis
- Level II - Randomized Controlled Trials (RCT)
 - Participants are randomized
 - Compares different treatments
 - Interventions are controlled
 - Goal is to determine which treatment is best
- Level III - Studies without randomization
 - Similar to level II but no random assignment
- Level IV - Case Control & Cohort Studies
 - case control studies compare two groups of people – individuals with condition under study (cases) and individuals who are similar, preferably from the same population, but do not have the condition (control)
 - cohort studies follow a group of people over time (often years) who are in some way linked or experience the same life event in a specific period of time (birth, marriage, exposure to a substance); can also be performed prospectively or retrospectively
- Level V - Systematic Reviews of Qualitative & Descriptive Studies

- Level VI - Descriptive & Qualitative Studies
 - descriptive – describe variables of interest, no cause and effect
 - qualitative – aim is to gain understanding of human behavior, typically involves in-depth interviews with small numbers of participants
- Level VII - Expert Opinion & Guidelines
- but is it good evidence?
 - After finding a source – still need to determine quality and worth (level and grade)
 - Levels are used to provide a hierarchy of the scientific basis for the evidence
 - Grading is a method to suggest the ranking of the application of findings into practice based on the cumulative evidence

Tailor to facility and procedure

- Easy to Use
- Applicable to Environment
- Best practice versus clinician practice
- Costs
- Practice Sites

Educate and evaluate

- Education
 - Assessment of Current Practice
 - Understand Change Process
 - Be Creative
- Evaluate
 - Integrate new policies into daily practice
 - Competency evaluation
 - Changes to charting
 - Quality improvement

Bibliography / Resources

- Akobeng, A.K. (2005). Understanding systematic reviews and meta-analysis. *Archives of Disease in Childhood*, 90, 845-848.
- Boluyt, N., Lincke, C.R., & Offringa, M. (2005). Quality of evidence-based pediatric guidelines. *Pediatrics*, 115, 1378-1391.
- Cincinnati Children's Hospital Medical Center. (2006). *Evidence-based care: Guideline development and update process*. Cincinnati, OH: Author. Available at: <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/resources.htm>
- Crowther, M.A. & Cook, D.J. (2007). Trials and tribulations of systematic reviews and meta-analyses. *Hematology*, 2007, 493-497.
- Drenning, C. (2006). Using the best evidence to change practice. Collaboration among nurses, advanced practice nurses, and nurse researchers to achieve evidence-based practice change. *Journal of Nursing Care Quality*, 21, 298-301.
- Fink, R. Thompson C.J. & Bonnes, D. (2005). Overcoming barriers and promoting the use of research in practice. *Journal of Nursing Administration*, 35(3), 121-129.
- Gerrish, K., Ashworth, P., Lacey, A., Bailey, J., Cooke, J., Kendall, S. et al. (2007). Factors influencing the development of evidence-based practice: A research tool. *Journal of Advanced Nursing*, 57, 328-338.
- Glasziou, P., Vandenbroucke, J., & Chalmers, I. (2004). Assessing the quality of research. *BMJ*, 328(430), 39-41. Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC313908/?tool=pubmed>
- Hannes, K., Vandersmissen, J., DeBlaeser, L., Peeters, G., Goedhuys, J., & Aertgeerts, B. (2007). Barriers to evidence-based nursing: A focus group study. *Journal of Advanced Nursing*, 60, 162-171.
- Heater, B., Becker, A., & Olson, R. (1988). Nursing interventions and patient outcomes: A meta-analysis of studies. *Nursing Research*, 37, 303-307.
- Hockenberry, M., Wilson, D., & Barrera, P. (2006). Implementing evidence-based nursing practice in a pediatric hospital. *Pediatric Nursing*, 32, 371-377.
- Holleman, G., Eliens, A., van Vliet, M., & van Achterberg, T. (2006). Promotion of evidence-based practice by professional nursing associations: Literature review. *Journal of Advanced Nursing*, 53, 702-709.
- Hudson-Barr, D. (2004). How to read a research article. *JSPN*, 9(2), 70-72.

- Leach, M.J. (2006). Evidence-based practice: A framework for clinical practice and research design. *International Journal of Nursing Practice*, 12, 248–251.
- Long, LE, Burkett, K.W, & McGee, S. (2009). Promotion of safe outcomes: Incorporating evidence into policies and procedures. *Nursing Clinics of North America*, 44 (1), 57-70.
- McKenna, H. P., Ashton, S. & Keeney, S. (2004). Barriers to evidence-based practice in primary care. *Journal of Advanced Nursing*, 45, 178–189.
- McKibbon, K.A., & Marks, S. (1998). Searching for the best evidence. Part I: Where to look. *Evidence-Based Nursing*, 1, 68-70. Available from <http://ebn.bmj.com/cgi/content/full/1/3/68>
- Melnik, B. M. & Fineout-Overholt, E. (2005). *Evidence-based practice in nursing & healthcare: A guide to best practice*. Philadelphia: Lippincott Williams & Wilkins.
- Oermann, M.H., Nordstrom, C.K., Wilmes, N.A. et al. (2008). Dissemination of research in clinical nursing journals. *Journal of Clinical Nursing*, 17, 149-156.
- Oman, K.S., Duran, C., & Fink, R. (2008). Evidence-based policy and procedures: An algorithm for success. *Journal of Nursing Administration*, 38(1), 47-51.
- Russell, C.K. & Gregory, D.M. (2003). Evaluation of qualitative research studies *Evidence-Based Nursing*, 6, 36-40. Available from <http://ebn.bmj.com/cgi/content/full/6/2/36>
- Rutledge, D.N. (2005). Resources for assisting nurses to use evidence as a basis for home care nursing practice. *Home Health Care Management Practice*, 17(4), 273-280.
- Rycroft-Malone, J., Seers, K., Titchen, A. et al. (2004). What counts as evidence. *Journal of Advanced Nursing*, 47(1), 81-90.
- Shojania, K.G., Sampson, M., Ansari, M.T., Ji, J., Doucetter, S., & Moher, D. (2007). How quickly do systematic reviews go out of date? A survival analysis. *Annals of Internal Medicine*, 147, 224-233. Available from <http://www.annals.org/cgi/reprint/147/4/224.pdf>
- Stetler, C.B., Ritchie, J.A., Rycroft-Malone, J. et al. (2009). Institutionalizing evidence-based practice: An organizational case study using a model of strategic change. *Implementation Science*, 30(4), 78.
- University of Minnesota. Evidence-based practice: An interprofessional tutorial. Available from <http://www.biomed.lib.umn.edu/learn/ebp/>