

USING EVIDENCE TO ANSWER CLINICAL QUESTIONS

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OBJECTIVES

- Define research utilization (RU), evidence-based practice (EBP), and evidence-based nursing practice (EBNP).
- Explore the connection between a clinical nursing question and the science to answer the question.
- Prepare for translating nursing science into practice using the PICO process.



DEFINITIONS

⦿ Research Utilization (RU)

- RU is the process of translation of the results of research into practice of nursing care

Polit & Beck, 2010

⦿ Evidence-based Practice (EBP)

- EBP is defined as basing nursing care decisions on the best available evidence

Polit & Beck, 2010

⦿ Evidence-based Nursing Practice (EBNP)

- EBNP is the integration of best evidence, nursing expertise, and the values and preferences of individuals, families, and communities.

Sigma Theta Tau International, 2003



FIRST STEP OF EBP

- Ask the “burning question”.
 - What clinical question needs to be answered?
- Formatting your question using PICO.
 - Patient Population.
 - Intervention or area of interest.
 - Comparison intervention or comparison group.
 - Outcome.

Melnyk & Fineout-Overholt, 2008



LOOK FOR THE SCIENCE

- ◉ Where to begin your search?
 - Virginia Henderson International Nursing Library

- ◉ Find one research report on your topic
 - National Guidelines Clearinghouse
 - Cochrane Database of Systematic Reviews
 - PubMed



EVALUATING THE REPORT

- ◉ Does research report answer your question?
- ◉ Does individual research study meet criteria?
 - Validity
 - Relevance
 - Applicability
- ◉ Is the evidence strong enough to support a practice change?
- ◉ How strong is the evidence?



LEVELS OF EVIDENCE - QUANTITATIVE RESEARCH



CLINICAL QUESTION ANSWERED

- ◉ The first step is to answer the clinical question using scientific evidence.
- ◉ Answering the clinical question can serve as the first step toward evaluating current individual and institutional clinical practice.
- ◉ Answering the clinical question may result in introducing and piloting a change in clinical practice if current practice is not evidence-based.



CLINICAL PROBLEM

- What is the problem?
 - *Blood culture contamination can delay treatment for patients and raise the cost of health care. You want to know if your facility's skin preparation is the best evidence-based nursing practice (EBNP).*
- Think about formatting your question using PICO.
 - Patient Population.
 - Intervention or area of interest.
 - Comparison intervention or comparison group.
 - Outcome.



WHERE TO BEGIN?

Begin your search at the Virginia Henderson International Nursing Library.

<http://www.nursinglibrary.org/vhl/>



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Latest Submissions

Schistosoma op-infection protects against brain pathology but does not prevent severe disease and death in a murine model of cerebral malaria.
Bucher, Kirsten; Drell, Klaus; Lackner, Peter; Pasche, Bastian; Fendel, Rolf; Mordmüller, Benjamin; Ban-Smith, Anne; Hoffmann, Wolfgang H
3-Mar-2011

Bimodal and hysteretic expression in mammalian cells from a synthetic gene circuit.
May, Tobias; Eccleston, Lee; Hermann, Sabrina; Häuser, Hanspörg; González, Jorge; Wirth, Dagnar
3-Mar-2011

A short story about a big magic bug.
Bunk, Boyke; Scholz, Arne; Stammert, Simon; Münch, Richard
2-Mar-2011

Immune modulators with defined molecular targets: cornerstone to optimize rational vaccine design.
Edersen, Thomas; Guzmán, Carlos A
2-Mar-2011

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- FREE Resources:** A section promoting access to free resources from Cumulative Index to Nursing and Allied Health Literature (CINAHL).




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Advanced search

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SEARCH

- Began with a related search term:
 - “skin preparation”
- 31 results were found
 - Read titles and click on abstracts to pick abstracts that match YOUR PICO question
- Here are a couple abstracts from the list:
 - *Decreasing Blood Culture Contamination: Chlorhexidine vs. Povidone-iodine.* Author: K. Stonecyhper
 - *Povidone iodine gel alcohol: a 30-second, onetime application preoperative skin preparation.* Author: D.K. Jeng



PICO QUESTION

- Formatting your question using PICO
 - Patient Population = Emergency room patients
 - Intervention = Skin preparation technique
 - Comparison intervention = Chlorhexidine vs Povidone-Iodine
 - Outcome = Of the 1,302 contaminated blood cultures during the study, skin prep with povidone-iodine was 6.05% versus 3.35% for chlorhexidine



STUDY SUMMARY TABLE

Author/ Year	Evidence Level	Population	Antiseptic	Outcomes
Stonecypher (2007)	Cohort Study	ED Patients	Chlorhexidine vs Povidone- iodine	Of the 1,302 contaminated blood cultures during the study, skin prep with povidone- iodine was 6.05% versus 3.35% for chlorhexidine



YOU ARE ON THE EBNP HIGHWAY!



REFERENCES

- ◉ Melnyk, B. M., & Fineout-Overholt, E. (2010). *Evidence-based practice in nursing & healthcare : A guide to best practice, 2nd Ed.* Philadelphia, PA: Lippincott Williams & Wilkins.
- ◉ Melnyk, B. M., & Fineout-Overholt, E. (2008). The evidence-based practice beliefs and implementation scales: Psychometric properties of two new instruments. *Worldviews on Evidence-Based Nursing, 5*(4), 208-216.
- ◉ Polit, D. F., & Beck, C. T. (2010). *Nursing research: Generating and assessing evidence for nursing practice, 9th Ed.* Philadelphia, PA: Lippincott Williams & Wilkins.
- ◉ Sigma Theta Tau International, 2003

WEBSITES

- ◉ PubMed www.pubmed.gov
- ◉ Cochrane Database
<http://summaries.cochrane.org/>
- ◉ National Clearinghouse
<http://www.guideline.gov/>