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.
  - <u>P</u>atient Population.
  - <u>I</u>ntervention or area of interest.
  - <u>C</u>omparison intervention or comparison group.
  - <u>O</u>utcome.

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.
  - <u>P</u>atient Population.
  - <u>I</u>ntervention or area of interest.
  - <u>C</u>omparison intervention or comparison group.
  - <u>O</u>utcome.

WHERE TO BEGIN?

Begin your search at the Virginia Henderson International Nursing Library.

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

NAVIGATING THE WEBSITE

Check it out!
Quick guides
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Listed

Advanced search

Search: | All |

Search type:	Search for:
Any	
AND	Any	
AND	Any	

Published between | earliest | and | latest |

Search

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.

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- 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/