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# How to Write a Clinical Question

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# Overview

- Why it's important to know how to write a question
- How to write clinical questions
- Practice writing questions
  - As I'm reviewing please be thinking of clinical questions you have in your current practice
- Review and group feedback of some questions





# Objectives

- Identify the 4 components of a clinical question using the PICO format
- Apply PICO concepts and formulate a clinical question
- Constructively critique a clinical question

## GOAL

you will leave here with a question you can take back to your work place and use!!





# Why is it important to know how to write a clinical question?

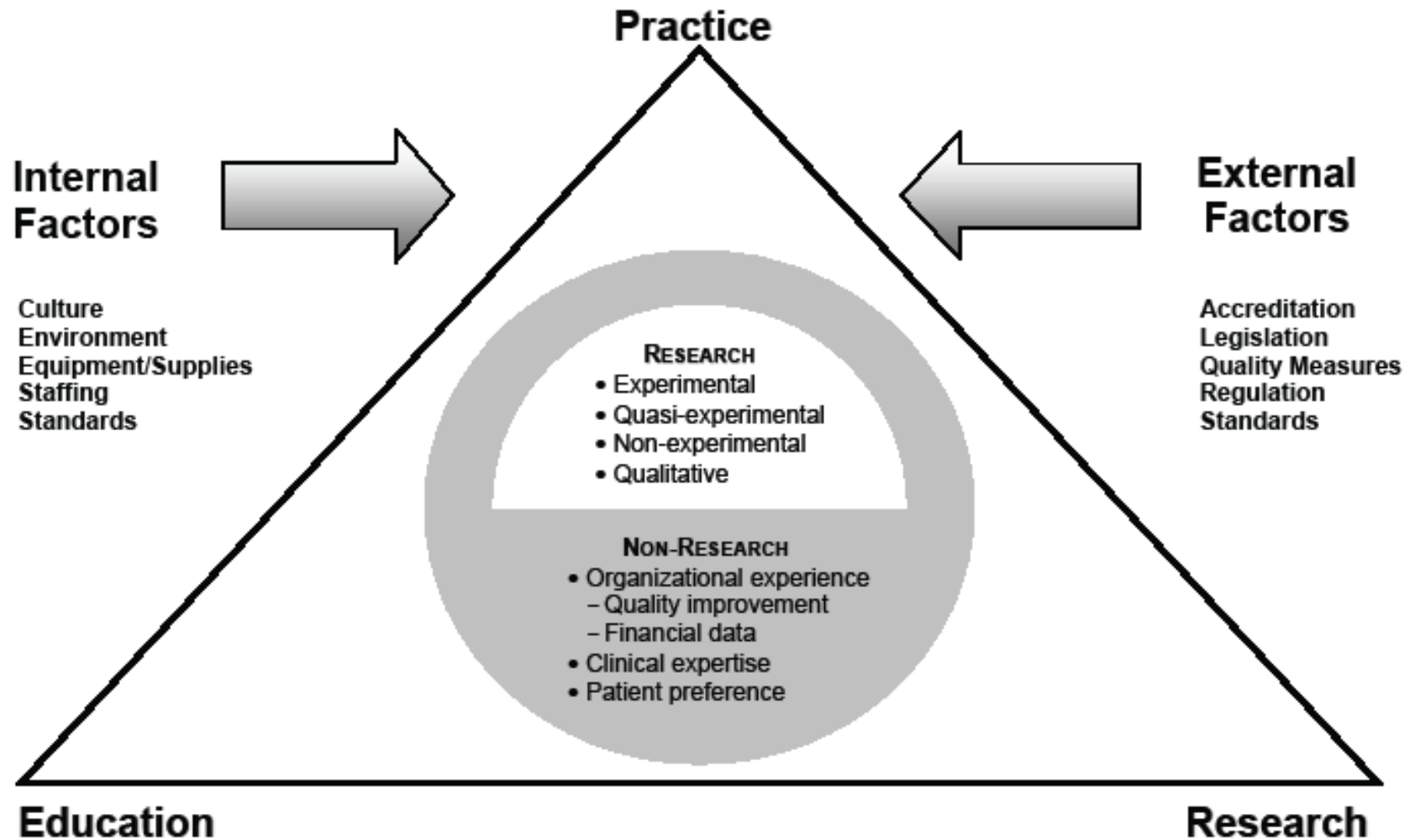
- Evidence Based Practice
  - Conscientious use of **current best evidence** in making decisions about patient care<sup>1</sup>
  - It's an approach that enables clinicians to provide quality healthcare<sup>2</sup>
- There are multiple EBP models and processes
  - One common aspect is writing the clinical question



<sup>1</sup> Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000

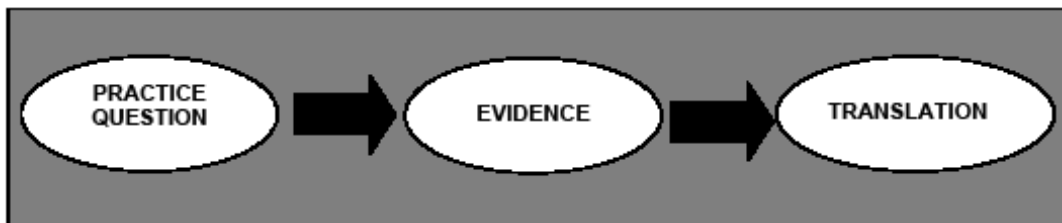
<sup>2</sup> Melnyk & Fineout-Overholt, 2005

# Johns Hopkins Nursing Evidence-Based Practice Model



## The Johns Hopkins Nursing Evidence-Based Practice Process

### PET (Practice Question-Evidence-Translation)



#### PRACTICE QUESTION

- STEP 1: Identify an EBP question
- STEP 2: Define scope of practice question
- STEP 3: Assign responsibility for leadership
- STEP 4: Recruit multidisciplinary team
- STEP 5: Schedule team conference

Step 1: Identify an EBP question

#### EVIDENCE

- STEP 6: Conduct internal and external search for evidence
- STEP 7: Critique all types of evidence
- STEP 8: Summarize evidence
- STEP 9: Rate strength of evidence
- STEP 10: Develop recommendations for change in processes or systems of care based on the strength of evidence

#### TRANSLATION

- STEP 11: Determine appropriateness and feasibility of translating recommendations into the specific practice setting
- STEP 12: Create action plan
- STEP 13: Implement change
- STEP 14: Evaluate outcomes
- STEP 15: Report results of preliminary evaluation to decision makers
- STEP 16: Secure support from decision makers to implement recommended change internally
- STEP 17: Identify next steps
- STEP 18: Communicate findings



# Why is it important to know how to write a clinical question?

- Because it is a key step in the EBP process and EBP is how “we” improve the care “we” provide to patients and families.
- Writing a well-developed, well-structured question
  - Drives the search strategy and narrows the focus of the search
  - Provides focus to the project

Melnik & Fineout-Overholt, 2005

Newhouse et al, 2007





# How do you write a question?

- PICO

- P= population, patient or problem

- I= Intervention

- For questions where there is no intervention it can stand for area of interest

- C= Comparison

- O= Outcome



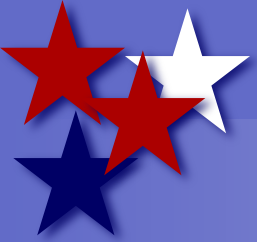




# PICO

- P=Identify the patient, population or problem succinctly.
  - Considerations: age, gender, setting, symptoms
- I= Intervention can be a treatment, an educational intervention, or administrative. It can also be an area of interest such as post-op surgical complications
- C= Comparison with another intervention or comparison with another group. This can be a comparison with usual care.
- O=Outcome of interest

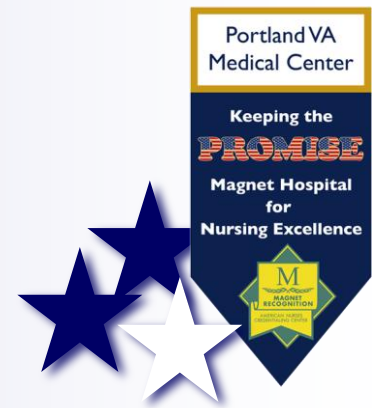




# PICO Example

What is the duration of breast feeding in new mothers who have breast-related complications in the first 3 months after giving birth compared to mothers who do not have complications?

- P= new breast feeding mothers
- I (area of interest)= breast feeding complications
- C= mothers who do not have complications
- O= breast feeding duration





# Clinical Scenario

Pediatric triage nurses reported frequently responding to parental calls regarding febrile school-age children. There was no policy on whether to recommend acetaminophen or ibuprofen for temperatures of 100.4F or higher.

PICO= In febrile school-age children with temperatures greater than 100.4F, which is more effective in fever reduction, acetaminophen or ibuprofen?

- P= febrile school-age children with temperatures greater than 100.4F
- I= acetaminophen or ibuprofen
- C= which is more effective
- O= fever reduction





# Clinical Scenario

After attending a healthcare conference on alternative therapies and learning about the use of acupuncture as a treatment of asthma in adults 2 nurses were interested in exploring this treatment option.

PICO= Among adults with asthma, is acupuncture more effective than oral inhaled steroids in maintaining effective respiratory function?

- P= adults with asthma
- I= acupuncture
- C= oral inhaled steroids
- O= effective respiratory function



# Practice

<b>What is the practice issue?</b>	
<b>1. What is the practice area?</b> <input type="checkbox"/> Clinical <input type="checkbox"/> Education <input type="checkbox"/> Administration	
<b>2. How was the practice issue identified? (Check all that apply)</b>	
<input type="checkbox"/> Safety/risk management concerns <input type="checkbox"/> Unsatisfactory patient outcomes <input type="checkbox"/> Wide variations in practice <input type="checkbox"/> Significant financial concerns <input type="checkbox"/> Difference between hospital and community practice <input type="checkbox"/> Clinical practice issue is a concern <input type="checkbox"/> Procedure or process is a time waster <input type="checkbox"/> Clinical practice issue has no scientific base	
<b>3. What is the scope of the problem?</b> <input type="checkbox"/> Individual <input type="checkbox"/> Population <input type="checkbox"/> Institution/system	
<b>4. What are the PICO Components?</b>	
<b>P</b> – (Patient, Population or Problem):  <b>I</b> – (Intervention):  <b>C</b> – (Comparison with other treatments, if applicable):  <b>O</b> – (Outcomes):	
<b>5. What evidence must be gathered? (Check all that apply)</b>	
<input type="checkbox"/> Literature Search <input type="checkbox"/> Standards (Regulatory, Professional, Community) <input type="checkbox"/> Guidelines <input type="checkbox"/> Expert Opinion <input type="checkbox"/> Patient Preferences <input type="checkbox"/> Clinical Expertise <input type="checkbox"/> Financial Analysis	
<b>6. State the search question in narrow manageable terms:</b>	



Does the early administration of beta blockers improve the in-hospital mortality rate of patients admitted with acute coronary syndrome?

P= patients admitted with ACS

I= early administration of beta blockers

C= usual care? Late administration? No administration?

O= in-hospital mortality rate





Should family members be present when their child is being resuscitated?

P=Children being resuscitated

I= Family members present

C= Family members not present (assumed)

O= Unknown

Potential outcomes: reduce anxiety?

What are the benefits of family members being present...?

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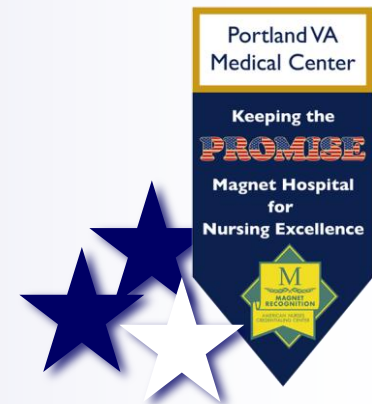
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# Summary

- Writing a clinical question is the first step in the EBP process
- The quality of the question drives the remainder of the process
- PICO is a standardized method of writing a well-structured question







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