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What is EBP?

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Evidence-Based Practice (EBP)

- Key to delivering the highest quality of healthcare and ensuring:
 - the best patient outcomes,
 - the best cost outcomes, and
 - a decrease in patient morbidity & mortality
- Not the norm in many healthcare systems across the United States and globe
- However, HCPs in the patient role overwhelmingly prefer care based on EBP



Definition of EBP

- A life-long problem-solving approach to clinical practice that integrates:
 - Search, critical appraisal, and synthesis of the most relevant and best research (**external evidence**)
 - One's own clinical expertise, which includes **internal evidence** generated from quality improvement projects, patient assessment, and evaluation
 - **Patient preferences and values**

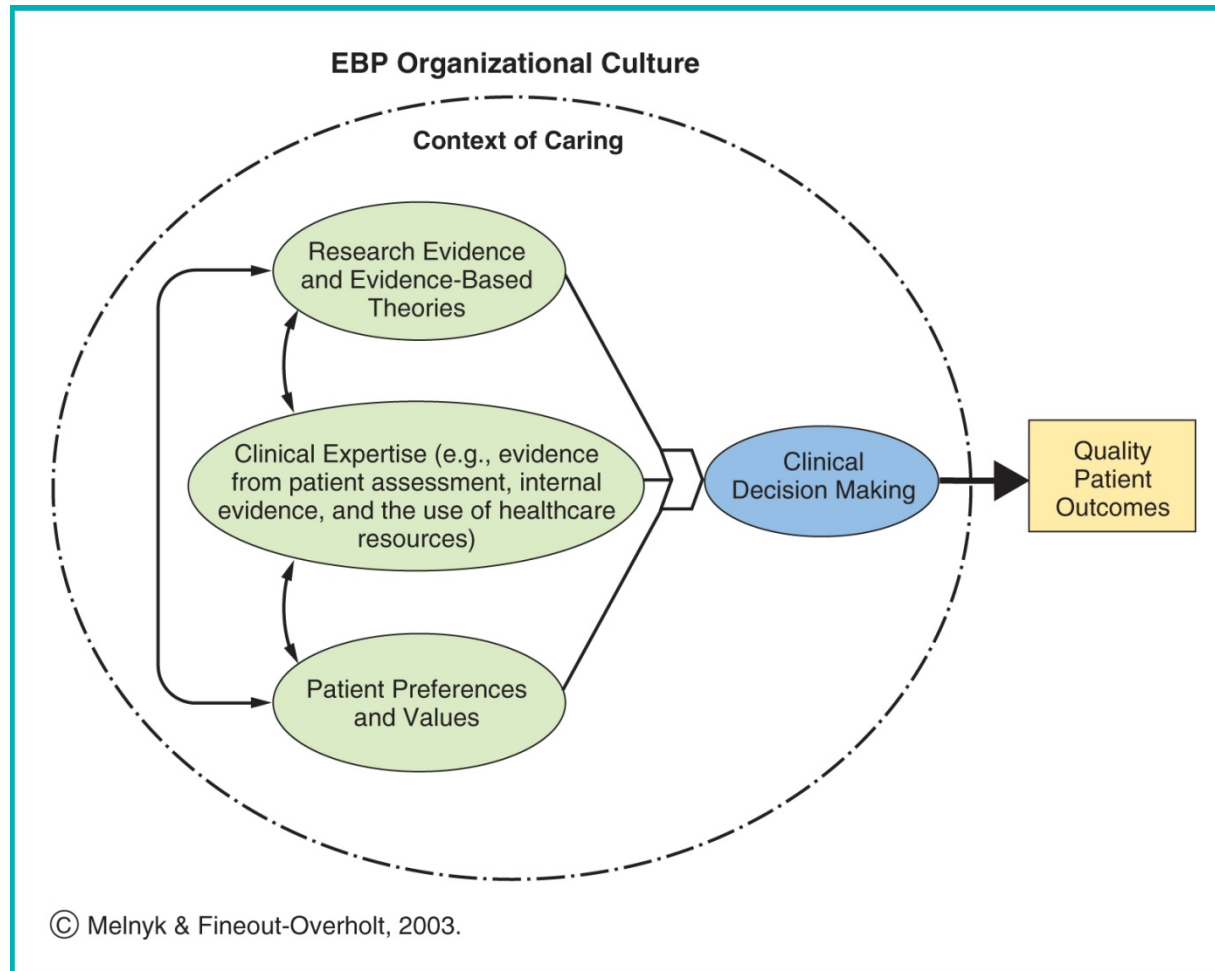


What is Evidence?

- External evidence
 - e.g., includes publications that present findings of research, and which are intended to be generalized to and used in other settings.
 - e.g., consulting nursing journal articles to determine the recommended turning frequency for immobile patients
- Internal evidence
 - e.g., practice initiatives, such as a quality improvement project undertaken in the setting in which it is produced



Components of EBP





Why is EBP important?

- Best patient outcomes
- Reduction in healthcare costs
- Reduction in geographic variations in care
- Promotion of retention of healthcare workers



In spite of the benefits, familiarity and implementation of EBP remains low

A survey of 1,097 randomly selected RNs revealed:

- 50% were unfamiliar with the term, *Evidence-based practice*
- > 50% do not believe their colleagues use research findings
- Only 27% knew how to search electronic databases
- Most did not believe they had adequate searching skills

[American Academy of Nursing, 2005]



Barriers to Evidence-Based Practice

- Lack of knowledge
- Information overload
- Lack of role models
- Lack of time or money
- Resistance to change
- Misperceptions – require education



Facilitators of Evidence-Based Practice

- Support and encouragement from leaders and peers
- Adequate time
- Resources
- EBP mentors
- Clinical promotion system
- Journal clubs, EBP rounds, handouts, articles posted



Initiatives to Advance EBP

1. Institute of Medicine's Roundtable on Evidence-Based Medicine
2. United States Preventive Services Task Force (USPSTF)
3. Agency for Healthcare Research and Quality (AHRQ)
4. National Consortium for the Advancement of Pediatric and Adolescent Evidence-Based Practice (NCPAEP)
5. Magnet Recognition Program by the American Nurses Credentialing Center



Steps of the EBP Process

0. Cultivate a spirit of inquiry.
1. Ask the burning clinical question in PICOT format.
2. Search for and collect the most relevant best evidence.
3. Critically appraise, evaluate and synthesize the evidence



Steps of the EBP Process (cont'd)

4. Integrate the best evidence with one's clinical expertise and patient preferences and values to make a practice decision or change.
5. Evaluate outcomes of the practice decision or change based on evidence.
6. Disseminate the outcomes of the EBP decision or change.



Step 1: Ask the Burning Clinical Question in PICOT Format

- **P**atient population
- **I**ntervention or issue of interest
- **C**omparison intervention or group
- **O**utcome
- **T**ime frame



Step 2: Search for and Collect the Most Relevant Best Evidence – Hierarchy of Evidence

- Level I: Systematic reviews or meta-analyses of RCTs
- Level II: RCTs
- Level III: Controlled trials without randomization
- Level IV: Case-control and cohort studies
- Level V: Systematic reviews of descriptive and qualitative studies
- Level VI: Single descriptive or qualitative studies
- Level VII: Opinion of authorities and/or reports of expert committees



Step 3: Critically Appraise the Evidence

- Appraise:
 - Validity - Are the results of the study accurate?
 - Reliability – What are the results?
 - Applicability – Will the results help me in caring for my patients?



Step 4: Integrate the Best Evidence with the Nurse's Clinical Expertise and Patient Preferences

- This is the “implementation” step
- EBP is not based solely on research and published evidence
- Patients' histories and circumstances have a significant bearing on the nurse's choice of intervention
- Availability of resources must also be considered



Step 5: Evaluate Outcomes of the Practice Decision or Change Based on Evidence

- Measurement of outcomes is important to determine and document impact of the EBP change on healthcare quality and/or patient outcomes
- Essential in determining whether the change based on evidence resulted in the expected outcomes when implemented in the real-world clinical practice setting



Step 6: Disseminate the Outcomes of the EBP Decision or Change

- Too often in healthcare, positive outcomes are not shared with others
- There are numerous strategies for accomplishing this goal, from personal communication to conference presentation



Iowa Model of Evidence-Based Practice

- Developed by Dr. Marita Titler – University of Iowa-2001 to describe knowledge transformation & guide implementation of research into clinical practice
- Provides guidance for nurses and other clinicians in making decisions about day-to-day practices that affect patient outcomes and promote quality care
- A multiphase change process with feedback loops
- Widely recognized for its applicability and ease of use by multidisciplinary healthcare teams



Using the Iowa Model

- Begins with practice questions or “triggers”
- A team is formed to develop, implement, and evaluate the practice change
- The team selects, reviews, critiques, and synthesizes available research evidence
- A practice change is piloted
- A determination is made regarding appropriateness of adoption beyond the pilot
- On-going evaluation and Dissemination of results



Questioning Clinical Practices, Changing Practice, and Evaluating Impact

- Nurses must ask questions about their current practice
- Practice problems should be prioritized
- Change to EBP requires
 - a culture that values and expects EBP,
 - a clear vision,
 - a written strategic plan, and
 - persistence to make it happen



Practice using the PICOT format

- **P**atient population
- **I**ntervention or issue of interest
- **C**omparison intervention or group
- **O**utcome
- **T**ime frame



PICOT Question for scenario 2.1

In middle-aged Caucasian obese females [P], how does weight loss [I] compared to ACE inhibitors [C] affect blood pressure [O] over 6 months [T]?



PICOT Question for scenario 2.2

In elderly patients with prostate cancer [P], how does surgery as a treatment method [I] compared to other treatment options [C] influence lifespan and quality of life [O]?



PICOT Question for scenario 2.3

In pregnant women with suspected appendicitis [P], is ultrasound followed by a CT scan [I] compared with ultrasound alone [C] more accurate in diagnosing appendicitis [O]?



PICOT Question for scenario 2.4

Are adult patients with asthma [P], who take beta-adrenergic agonists [I] compared with those without prescribed beta-adrenergic agonists [C], at increased risk for death [O]?



PICOT Question for scenario 2.5

How do family members [P] with a critically ill relative who is being resuscitated [I] perceive healthcare providers' responses to their presence [O] during a resuscitation?

What is the best evidence to inform decision making regarding whether or not family members should be allowed to be present during a cardiac arrest?