

EVIDENCE BASED PRACTICE PROCESS

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outlines

The Steps of Evidence-Based Practice

- Step 0: Cultivate a Spirit of Inquiry
- Step 1: Formulate the Burning Clinical PICOT Question
- Step 2: Search for the Best Evidence
- Step 3: Critical Appraisal of Evidence
- Step 4: Integrate the Evidence with Clinical Expertise and Patient Preferences to Make the Best Clinical Decision
- Step 5: Evaluate the Outcomes of the Practice Change Based on Evidence
- Step 6: Disseminate the Outcomes of the Evidence-Based Practice Change

Step 0: Cultivate a Spirit of Inquiry

- Before embarking on the well-known steps of EBP, it is critical to cultivate a spirit of inquiry (i.e., a consistently questioning attitude toward practice) so that clinicians are comfortable with and excited about asking questions regarding their patients' care as well as challenging current institutional or unit-based practices. Without a culture that is supportive of a spirit of inquiry and EBP, individual and organizational EBP change efforts are not likely to succeed and sustain. A culture that fosters EBP promotes this spirit of inquiry and makes it visible to clinicians by embedding it in its philosophy and mission of the institution.

Key elements of an EBP culture include

1. A spirit of inquiry where all health professionals are encouraged to question their current practices.
2. A philosophy, mission, and clinical promotion system that incorporate EBP.
3. A cadre of EBP mentors who have in-depth knowledge and skills in EBP, mentor others, and overcome barriers to individual and organizational change.
4. An infrastructure that provides tools to enhance EBP (e.g., computers for searching at the point of care, access to key databases, ongoing EBP educational and skills building sessions, EBP rounds and journal clubs).

5- Administrative support and leadership that values and models EBP as well as provides the needed resources to sustain it.

6- Regular recognition of individuals and groups who consistently implement EBP.

step 1: Formulate the Burning Clinical PICOT Question

- In step 1 of EBP, clinical questions are asked in **PICOT format** (i.e., *P*atient population, *I*ntervention or *I*ssue of interest, *C*omparison intervention or group, *O*utcome, and *T*ime frame) to yield the most relevant and best evidence.

- **For example**, a well-designed PICOT question would be:
In teenagers (the patient population), how does a cognitive-behavioral skill building (the experimental intervention) compared to yoga (the comparison intervention) affect anxiety (the outcome) after 6 weeks of treatment (the time frame)?

- When a clinical problem generates multiple clinical questions, priority should be given to those questions with the most important consequences or those that occur most frequently (i.e., those clinical problems that occur in high volume and/or those that carry high risk for negative outcomes to the patient).

- **For example**, nurses and physicians on a surgical unit routinely encounter the question: In postoperative adult patients, how does morphine compared to hydromorphone affect pain relief? Another question might be: In postoperative patients, how does daily walking compared to no daily walking prevent pressure sores? The clinical priority would be answering the question of pain relief first, as pain is a daily occurrence in this population, versus putting a priority on seeking an answer to the second question because pressure ulcers rarely occur in postoperative adult patients

Evidence-based practice questions may concern:

- The cause of a condition
- Diagnosis and assessments
- Prevention of conditions
- Prognosis of conditions
- Treatment outcomes
- Client concerns
- Economic evaluation

Step 2: Search for the Best Evidence

The search for best evidence should first begin by considering the elements of the PICOT question. Each of the key words from the PICOT question should be used to begin the search. The type of study that would provide the best answer to an intervention or treatment question would be systematic reviews or meta-analyses, which are regarded as the strongest level of evidence on which to base treatment decisions. There are different levels of evidence for each kind of PICOT question. Although there are many hierarchies of evidence available in the literature to answer intervention PICOT questions

- Develop search strategies before you start, including:
 - Databases you will use
 - Key terms to search under
 - Set limits of your search

Step 3: Critical Appraisal of Evidence

- Step 3 in the EBP process is vital, in that it involves critical appraisal of the evidence obtained from the search process. Although healthcare professionals may view critical appraisal as an exhaustive, time-consuming process, the first steps of critical appraisal can be efficiently accomplished by answering three key questions as part of a rapid critical appraisal process in which studies are evaluated for their validity, reliability, and applicability to answer the posed clinical question:

Step 4: Integrate the Evidence with Clinical Expertise and Patient Preferences to Make the Best Clinical Decision

- The next key step in EBP is integrating the best evidence found from the literature with the healthcare provider's expertise and patient preferences and values to implement a decision. Consumers of healthcare services want to participate in the clinical decision-making process, and it is the ethical responsibility of the healthcare provider to involve patients in treatment decisions.

- **For example**, on follow-up evaluation, a clinician notes that the first-line treatment of acute otitis media in a 3-year-old patient was not effective. The latest evidence indicates that antibiotic A has greater efficacy than antibiotic B as the second-line treatment of acute otitis media in young children. However, because antibiotic A is far more expensive than antibiotic B and the family of the child does not have prescription insurance coverage, the practitioner and parents together may decide to use the less expensive antibiotic to treat the child's unresolved ear infection.

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

- Step 5 in EBP is evaluating the evidence-based initiative in terms of how the change affected patient outcomes or how effective the clinical decision was with a particular patient or practice setting. This type of evaluation is essential in determining whether the change based on evidence resulted in the expected outcomes when implemented in the real-world clinical practice setting. Measurement of outcomes is important to determine and document the impact of the EBP change on healthcare quality and/or patient outcomes.

Step 6: Disseminate the Outcomes of the Evidence-Based Practice Change

- The last step in EBP is disseminating the outcomes of the EBP change. All too often, clinicians achieve many positive outcomes through making changes in their care based upon evidence, but those outcomes are not shared with others, even colleagues within their same institution. As a result, others do not learn about the outcomes and clinicians as well as patients in other settings do not benefit from them. It is so important for clinicians to disseminate outcomes of their practice changes based on evidence through such venues as oral and poster

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