What is EBP? Classic Definition of Evidence-Based Medicine (EBM)

“... the explicit, judicious and conscientious use of current best evidence from health care research in making decisions about the health care of individuals and populations.”

Sackett et al., 2000.

EBM

- Typically refers to the “medical” field
- Involves the integration of individual clinical experience with the best available external clinical evidence
- “individual clinical experience” refers to the proficiency and judgment that individuals acquire through clinical experience and clinical practice.
  Sacket et al. (1996)

Five Step Process

- An answerable research question is formulated
- Efficient literature search is conducted
- Evidence is critically appraised
- Application of evidence to health care practice
- An evaluation to the effects of change on the practice
  Sacket et al., 2000

Evidence-Based Practice (EBP)

- Conceptually similar to EBM
- Tends to encompass more aspects of health care and rehabilitation
- Clinical experience does matter...
- Definitions have expanded to embrace the use of best evidence available in conjunction with client choices
  (Muir Gray, 1997)

A Definition of EBP

“Placing the client’s benefits first, evidence-based practitioners adopt a process of lifelong learning that involves continually posing specific questions of direct practical importance to clients, searching objectively and efficiently for the current best evidence relative to each question, and taking appropriate action guided by evidence”.

Gibbs (2003)
Research knowledge is only one source of information

“In fact, EBP can be considered to be a combination of information from what we know from research, what we have learned from clinical wisdom, and what we learned from information from the client and their family. This combination of information enables us to work together with clients and families to make the best use of knowledge.”


An EBP Perspective on Clinical Reasoning

What else is there?

- Evidenced-based rehabilitation
- Evidence-informed practice
- Evidence-based healthcare
- Evidence-based clinical practice
- “Best practice”

Ultimately...EBP is about your ability to critically examine, evaluate and apply knowledge then assess your findings.

Criticisms of EBP

- it is too time-consuming
- there is not enough evidence
- the evidence is not good enough
- readers of clinical research cannot distinguish between high and low quality studies
- clinical research does not provide certainty when it is most needed

More Criticisms of EBP

- findings of clinical research cannot be applied to individual patients
- clinical research does not tell us about patients’ true experiences
- evidence-based practice removes responsibility for decision making from individual therapists.

Herbert et al. (2001)

but..."it’s the best model of practice currently available."

Reality of EBP

Many practitioners take little or no time to review current medical findings

Even extremely busy practitioners can initiate evidence-based practice through planning and habit building

EBP requires extensive clinical expertise, and is not just cookie-cutter practice

EBP emphasizes the best available evidence for each client’s situation

(Law & MacDermid, 2008)
Why worry about EBP?
- The Accreditation Council for Occupational Therapy Education (2006) has standards which dictate student competence in core aspects of evidence-based practice.

**WHAT DO YOU VALUE?**

The Process of EBP
- Identify an issue or area of uncertainty
- Translate uncertainty into a relevant, answerable question
- Search for and retrieve the evidence
- Critically appraise the evidence
- Apply the results in clinical practice
- Evaluate, reflect on your performance

What's your problem?!
Take a moment...think of when you were observing therapists treating clients...what were they doing?...why were they doing it?...what outcome were they hoping to achieve?

Now...please write down a clinical problem related to this.

What's your clinical question?
P.I.C.O
- **Patient:**
  - How could you describe a group with a similar problem?
  - How you would describe the patient to a colleague?
  - What are the important characteristics of this patient?
- Intervention
- Comparison
- Outcome

What's your clinical question?
P.I.C.O
- Patient
- **Intervention:** what you plan to do for that patient.
  - What treatment method or modality will you choose?
- Comparison
- Outcome
**What’s your clinical question?**

**P.I.C.O**

- Patient
- Intervention
- **Comparison**: the main alternative you are considering. What specific alternative method or modality are you considering? This one may be optional as in some cases, there may not be an alternative.
- Outcome

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**What’s your clinical question?**

**P.I.C.O**

- Patient
- Intervention
- Comparison
- **Outcome**: It specifies the result(s) of what you plan to accomplish, improve or affect and should be measurable.
  - ROM, pain, strength, endurance, walking, dressing, homemaking, driving, working, playing, socializing, quality of life, etc.

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**The Clinical (“Answerable”) Question**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe pt</td>
<td>Which main intervention</td>
<td>Which alternative TX for comparison</td>
<td>What will this affect or accomplish</td>
</tr>
<tr>
<td>In children with cognitive or physical disabilities</td>
<td>What are the factors that facilitate inclusion in activities</td>
<td>compared with the barriers</td>
<td>... affecting overall participation in activities</td>
</tr>
</tbody>
</table>

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**What’s your question?**

- Patient...
- Intervention...
- Comparison...
- Outcome...

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**What we will do today...**

- Use your PICO question to search for evidence (“C” may be optional).
- Identify data bases and generate key words for a search.
- Locate relevant literature related to your clinical (PICO) question. Be prepared to change your question.
- Report to the class two pieces of evidence relevant to your question.
Best Research Evidence

- "Worthy of our attention" - PICO worthy?
- Understandable - To you?!?
- Valid - credible and current
- Clinically important – meaningful outcome?
- Applicable to your setting and your clients

Evidence Hierarchy

I Systematic review of multiple well-designed randomized controlled trials.
II Well-designed randomized controlled trial.
III Well-designed trials without randomization, single group pre-post test, cohort, time series, or case-controlled studies.
IV Well-designed nonexperimental studies
V Opinions of respected authorities, or reports of expert committees.

Moore et al. (1995)

Does "evidence" from qualitative studies count?

- Challenging taken-for-granted practices
- Illuminating factors that shape client and clinical behavior
- Developing new interventions based on client's experiences
- Enhancing an understanding of organizational culture and management

Popay & Williams (1998).

Collecting your own "evidence"

- Document your actions / observations systematically (especially with something new)
- Keep track of all assessment results, review them annually
- Ask patients/clients to complete a survey upon discharge
- Listen to patients/clients

Where can I find the evidence?

- Ask a librarian...Really!
- http://www.pedro.fhs.usyd.edu.au
- http://www.otseeker.com
- http://www.cochrane.org
- http://scholar.google.com
- http://www.isu.edu/library

How can I learn to critically appraise the evidence?

- Take PTOT 514...
- Be engaged in class...
- Have a desire to learn...
CLINICAL EXPERTISE IN PRACTICE

- Your wisdom and experience is important
- Listen to your clients
- Be explicit in providing research information to clients to enable them to make informed decisions
- Be "systematic" in your reflections and decision making
- Develop simple tracking and reporting systems

Some critical points about EBP

- EBP is one clinical decision making model
- Utilizes both research and clinical expertise
- The evidence is interpreted and implemented by "informed" clinicians
- It will not give you the "absolute truth"
- Best practice is ultimately based upon the best external evidence, the patient’s perspectives and the practitioners clinical wisdom

How can you learn more about EBP?

- www.herts.ac.uk/lis/subjects/health/ebdm.htm
- www.cche.net
- www.otevidence.info
- www.ebdm.med.ualberta.ca
- http://www.otseeker.com
- Ask a librarian! REALLY!!! (282-3104)

References


References