Evidence-Based Practice (EBP), Quality and Safe Care

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Disclaimer

• No conflicts of interest to declare
Objectives

• Define evidence-based practice (EBP)
• Explore databases for EBP and clinical practice guidelines (CPGs)
• Discuss components of CPGs
• Describe how to adapt and advance EBP in clinical nursing practice for quality and safe care
Evidence-Based Practice (EBP)

Steps in the EBP Process

Steps in the EBP Process

1. Assess the patient – start with a patient- a clinical problem or question that arises from patient care
2. Ask the question – Construct a well built clinical question derived from the case
3. Acquire the evidence – Select the appropriate resource(s) and conduct a search
4. Appraise the evidence – Appraise the evidence for its validity and applicability
5. Apply – Return to the patient- integrate the evidence with clinical expertise, patient preferences and apply it to practice.

* Self-Evaluation – Evaluate your performance with this patient
PICO: Guide to Making a Clinical Question

- P - Population/Patient problem
- I - Intervention, prognostic factor or exposure
- C - Comparison
- O - Outcome
Sample Case

You are taking care of a patient who is a 60 year-old male with a long history of type 2 diabetes and obesity. He is 5’6” tall and his weight is currently 280 lbs. He does not smoke nor drink alcohol. His medical history is unremarkable. He has tried numerous diets and exercise programs to reduce his weight but has not been very successful. He knows that his diabetes puts him at a high risk for heart disease. He is very frustrated that he cannot lose the necessary weight. An obese work colleague had his stomach stapled a year ago and as a result not only lost over 100 lbs. but also "cured" his diabetes. He wants to know if this procedure really works.
# PICO for the Sample Case

<table>
<thead>
<tr>
<th>Patient Problem</th>
<th>obese, diabetes type 2, male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>stomach stapling (gastric bypass surgery; bariatric surgery)</td>
</tr>
<tr>
<td>Comparison</td>
<td>standard medical care</td>
</tr>
<tr>
<td>Outcome</td>
<td>remission of diabetes; weight loss; mortality</td>
</tr>
</tbody>
</table>
Clinical Question for Case

In patients with type 2 diabetes and obesity (P), is bariatric surgery (I) more effective than standard medical therapy (C) at increasing the probability of remission of diabetes (O)?
### Type of Question = Type of Study

<table>
<thead>
<tr>
<th>Common type of questions:</th>
<th>Type of study:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnosis</strong></td>
<td>prospective, blind</td>
</tr>
<tr>
<td>how to select and interpret diagnostic tests</td>
<td>comparison to a gold standard or cross-sectional</td>
</tr>
<tr>
<td><strong>Therapy</strong></td>
<td>randomized controlled</td>
</tr>
<tr>
<td>how to select treatments that do more good than harm and that are worth the efforts and costs of using them</td>
<td>trial &gt; cohort study</td>
</tr>
<tr>
<td><strong>Prognosis</strong></td>
<td>cohort study &gt; case control &gt; case series</td>
</tr>
<tr>
<td>how to estimate the patient’s likely clinical course over time (based on factors other than the intervention) and anticipate likely complications of disease</td>
<td></td>
</tr>
<tr>
<td><strong>Harm/Etiology</strong></td>
<td>cohort &gt; case control &gt; case series</td>
</tr>
<tr>
<td>how to identify causes for disease (including iatrogenic forms)</td>
<td></td>
</tr>
</tbody>
</table>

EBP Pyramid(s)

http://s3.amazonaws.com/libapps/customers/1364/images/Types_of_Evidence_for_Treatment.png

**Acquiring Evidence**

<table>
<thead>
<tr>
<th><strong>PICO</strong></th>
<th><strong>Clinical Question</strong></th>
<th><strong>Search Strategy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient / Problem</td>
<td>obese, diabetes type 2, male</td>
<td>diabetes type 2, obesity</td>
</tr>
<tr>
<td>Intervention</td>
<td>stomach stapling (gastric bypass surgery; bariatric surgery)</td>
<td>bariatric surgery</td>
</tr>
<tr>
<td>Comparison (if any)</td>
<td>standard medical care</td>
<td></td>
</tr>
<tr>
<td>Outcome</td>
<td>remission of diabetes; weight loss; mortality</td>
<td></td>
</tr>
<tr>
<td>Type of Question</td>
<td>therapy</td>
<td>(see below)</td>
</tr>
<tr>
<td>Type of Study</td>
<td>RCT</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical Query** – Therapy/narrow or Limit to randomized controlled trial as publication type

Evidence-Based Databases

- Ovid MEDLINE - http://ovidsp.tx.ovid.com.libproxy.uthscsa.edu/sp-3.25.0a/ovidweb.cgi?&S=IFNPFPGBLGDBKINCGKECMCJEOMAA00&New+Database=Single%7c0
- CINAHL - http://web.a.ebscohost.com.libproxy.uthscsa.edu/ehost/search/advanced?vid=0&sid=8a3ffc90-608d-4853-9970-9f3e06fa132b%40sessionmgr4007
- Scopus - https://www-scopus-com.libproxy.uthscsa.edu/home.uri
- Cochrane - http://www.cochrane.org/
- Joanna Briggs Institute - http://joannabriggs.org/
- OTHERS
PubMed Search with Limiter

Display Settings: Summary, 20 per page, Sorted by Recently Added

Results: 20

1. The long-term effectiveness of a lifestyle intervention in severely obese individuals.

Evaluating the Validity of the Study

• Are the results of the study valid?
  • Randomization?
  • Concealment of group allocation?
  • Groups similar?
  • Blinding?
  • Follow-up complete?
  • Analysis of patients in groups allocated?
  • Aside from intervention, were the groups treated equally?

• What are the results?
  • How large was the treatment effect?

• Will the results help in caring for my patient?
  • Clinical significance?
Apply the Findings to Your Patient

- **Were the study patients similar to my population of interest?**
  Does your population match the study inclusion criteria?
  If not, are there compelling reasons why the results should not apply to your population?

- **Were all clinically important outcomes considered?**
  What were the primary and secondary endpoints studied?
  Were surrogate endpoints used?

- **Are the likely treatment benefits worth the potential harm and costs?**
  What is the number needed to treat (NNT) to prevent one adverse outcome or produce one positive outcome?
  Is the reduction of clinical endpoints worth the potential harms of the surgery or the cost of surgery?
Self-Evaluation

• Did you ask a relevant, well focused question?
• Do you have fast and reliable access to the necessary resources?
• Do you know how to use them efficiently? Did you find a pre-appraised article?
• If not, was it difficult to critically evaluate the article?
CPG Databases

• National Guideline Clearinghouse - https://www.guideline.gov/
• Clinical Guidelines and Recommendations – American College of Physicians - https://www.acponline.org/clinical-information/guidelines
• VA/DoD Clinical Practice Guideline Home - https://www.healthquality.va.gov/
• Clinical Practice Guidelines – ACR - https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines
• Many others
Components to Assess a CPG

- AGREE II
  - Appraisal of Guidelines Research and Evaluation Collaboration Self-Assessment Tool
- Scope and purpose
- Stakeholder involvement
- Rigor of development
- Clarity and presentation
- Applicability
- Editorial independence
Adopting and Sustaining EBP

- Metz (2007)

**TEN STEPS TO ADOPTING AN EVIDENCE-BASED PRACTICE**

- To plan and assess its readiness to adopt an EBP,
- To create the perfect “fit” in terms of adapting an EBP to meet the needs of your local community,
- To train staff and begin initial implementation, and
- To create feedback loops for ongoing learning and reflection during and after the implementation of the EBP within your program.
Plan and Assess Readiness

• **Prioritize Outcomes**
  • Prioritize the outcomes your program hopes to achieve and assess how current gaps in programming, staffing, and/or services have impeded your ability to produce desired results.

• **Conduct Readiness Assessment**
  • Collect data on your program’s *ability and motivation* to change.
  • Tools exist to help programs measure their readiness to change at both the frontline staff and administrative levels.

• **Garner the Support of Critical Stakeholders**
  • Gain broad support from program funders, administrators, managers, frontline staff, and program participants and their families to create and sustain change.
Creating the Perfect Fit

• **Research and Identify a “Good Fit”**
  • Select an EBP which matches the needs of your program participants, can be incorporated into your existing program and delivered by trained frontline staff, and will help you achieve desired outcomes.

• **Decide on Necessary Program Adaptation**
  • Make necessary and feasible adaptations to the program model to meet the unique needs of your community without undermining the core elements of the original program.

• **Seek Information, Technical Assistance, and Program Consultation**
  • Gather information on the EBP including essential intervention components, staff training guidelines, and necessary financial and organizational resources for implementation.
  • When possible, consult with the program developer or seek outside expert consultation.
Training Staff and Get Going

• **Provide Staff Training and Coaching**
  • Train staff at all levels on the new practice, including directors, supervisors, and frontline staff.
  • Provide staff with ongoing coaching and mentoring in the field.

• **Begin Initial Implementation**
  • Incorporate changes at multiple levels to support the implementation of the practice, including changes in policies and procedures, operations, staffing, and resource allocations.
Learning, Reflecting, and Improving

- **Conduct Ongoing Evaluation and Fidelity Assessments**
  - Collect formative evaluation data to inform continuous program improvement
  - Conduct an outcome evaluation to assess whether you have achieved desired outcomes.
  - A fidelity assessment can provide information on the level of adherence to the original program model.

- **Create Feedback Loops and Ongoing Opportunities for Learning and Reflection**
  - Institute procedures for ongoing learning and reflection such as monthly meetings for staff to discuss challenges associated with implementing the new practice, training or technical assistance needs, and successes and achievements.
EBP: Key to Quality and Safe Care

- Nurses play a vital role in improving the safety and quality of patient care.
  - not only in the hospital or ambulatory treatment facility, but also of community-based care and the care performed by family members.

- Nurses need know what proven techniques and interventions they can use to enhance patient outcomes.

- EBP is the key.


http://www.unisa.edu.au/PageFiles/69161/Evidence%20based%20medicine.png
References

4. Patient Safety and Quality and Evidence-Based Handbook for Nurses
Questions?

- Opportunities to ask questions and practice some of the tenets included in this presentation will be afforded at the national convention.