Evidence-based Journal Club

From Evidence to Practice

Potvin and Wilcox 2006

Welcome
Purpose of Today’s Meeting

1. Why participate in an Evidence-based (EB) Journal Club?
2. How to do an EB Journal Club?
3. How will the TRIPSCY EB Journal Club work?
4. Choose the first question(s) and reviewer(s).

Why participate in an Evidence-based Journal Club?
What is Evidence-based Practice?

Levels of Knowledge about Efficacy and Effectiveness of Intervention (Sackett et al., 2000):
• Research Evidence
• Clinical Expertise
• Patient (Family) Values

What are the benefits of EBP?

- Student/child outcomes
- Value of the profession(s)
- Reimbursement
What are challenges to EBP?

Knowledge translation: the exchange, synthesis and ethically-sound application of knowledge within a complex system of interactions among researchers and users to accelerate the capture of the benefits of research for patients through improved health, more effective services and products, and a strengthened health care system. http://www.cihr-irsc.gc.ca

What are your challenges in being an Evidence-based Practitioner?
What are the problems with Evidence-based Practice?

- **Access**: how can we be sure we have found all relevant “evidence”?  
  
- **Appraisal**: how can we make sense of it all? *(Validity, reliability, relevance..)*  
  
- How do we implement it?
Knowledge Translation

What are the benefits of a Journal Club for EBP?

Gain Skills
- Asking questions in a specific manner
- Learn ways to access professional literature
- Choosing information sources to use
- Enhance critical appraisal skills
- Make sense of the implications of the findings
- Brainstorm solutions to implementation barriers

Time
- Larger number of studies being read and discussed
Continuing Education Credits

- **In Vermont - OT**
  - Professional study group, minimum of 3 participants: 5 hours
  - Independent learning/study, such as CE articles, peer-reviewed, role-related professional articles video, audio, and/or online courses: 10 hours

- **NBCOT**
  - Professional study group/online study group designed to advance knowledge through active participation: 3 hours equal 1 unit, 36 Units
  - Independent reading peer-reviewed, role-related professional articles/chapters in textbook, AND writing a report describing the implications for improving skills in one’s specific role: 5 articles/chapters equal 1 unit, 18 Units

How to do an Evidence-Based Journal Club?
There is research on what makes Journal Club Effective

Steps of Evidence-based Practice
1. Identifying a need for information
2. Formulation of a question
3. Searching, finding and selecting evidence to answer the question
4. Critical appraisal of evidence
5. Integrating information into practice
6. Performance evaluation - Is this working?
Identifying a need for information: Where do these questions come from?

- Assessment: gathering clinical findings properly and interpreting them soundly.
- Intervention: selecting treatments that do more good than harm.
- Prognosis: anticipating the patient's likely course.
- Prevention: screening and reducing the risk for disease.

Formulating a Question

A question has 4 components which becomes the basis for the search strategy:

- Patient/population
- Intervention
- Comparison
- Outcome
In people with ________________ does (intervention or characteristics) ____________________________
in comparison to ________________ affect (outcomes) ________________
__________________________________________

Searching & selecting the information to review

☐ To be evidence-based practitioners therapists need to search the literature for evidence.
☐ Not all therapists have access to the appropriate resources to find this evidence.
☐ Where to access free information
  ☐ Public Libraries
  ☐ Local hospital, high school and colleges Libraries
  ☐ On the Web
☐ Consult with a librarian
Searching & selecting the information to review

- Cochrane Library
- Peer-reviewed journals
  - Hand searching
  - Reference lists
- Textbooks
- Expert opinion
- Free Internet Sites
  - PEDro
  - OT Seeker
  - CanChild
  - Peer-reviewed journals
  - CAOT Information Gateway

Selecting the information to review
Why bother with reviews?

- *volume* of literature is becoming unmanageable
- good reviews of effectiveness *available*
- increasing opportunity to *access* information
- “*new*” information becomes apparent

Reviews: which to use?

“If one doesn’t have some guidelines for assessing the reviews from which these recommendations are taken, deciding which review to believe is like deciding which toothpaste to use. It is a question of taste rather than a question of science.”

(Oxman and Guyatt, 1988)

“Clinical review articles should be as scientific as the articles they review”

Critical appraisal of evidence

It is the process of systematically assessing and interpreting research studies by asking 3 key questions
- Is the study valid?
- Are the results reliable?
- What does it mean - can I generalize from this study to my workplace?

Why is Critical Appraisal important?

- Quantity of information
  - >2,000,000 biomedical publications per year
- Quality of information
  - peer-reviewed publication
  - internal documents
  - other - lack of quality indication (e.g. internet)
Box 1. 12 questions to help you make sense of a trial. Adapted from Guyatt et al.

**A. Are the results of the study valid?**

**Screening questions**

1. *Did the trial address a clearly focused research question?*
   - Tip: a research question should be focused in terms of:
     - The population studied
     - The intervention given
     - The outcomes considered.

2. *Did the authors use the right type of study?*
   - Tip: the right type of study would:
     - Address the research question
     - Have an appropriate study design.

**Is it worth continuing?**

**Detailed questions**

3. *Was the assignment of patients to treatments randomised?*
   - Tip: consider if this was done appropriately.

4. *Were all of the patients who entered the trial properly accounted for at its conclusion?*
   - Tip: look for:
     - The completion of follow-up
     - Whether patients were analysed in the groups to which they were randomised.

5. *Were patients, health workers and study personnel ‘blind’ to treatment?*
   - Tip: this is not always possible, but consider if it was possible – was every effort made to ensure ‘blinding’?

6. *Were the groups similar at the start of the study?*
   - Tip: think about other factors that might affect the outcome such as age, sex, social class.

7. *Aside from the experimental intervention, were the groups treated equally?*
   - Tip: for example, were they reviewed at the same time intervals.

**B. What are the results?**

8. *How large was the treatment effect?*

9. *How precise was the estimate of the treatment effect?*
   - Tip: look for the confidence limits.

**C. Will the results help locally?**

10. *Can the results be applied to the local population?*
    - Tip: consider whether the patients covered by the trial are likely to be very different from your population.

11. *Were all clinically important outcomes considered?*

12. *Are the benefits worth the harms and costs?*
Efficient Way to Read an Article

- What is the question posed in the study
- What is the method used
- What are the results (start with the tables)

Method match Question
Group is representative
Limitations and biases

Critical Appraisal Forms

- Quantitative studies
- Qualitative studies
- Systematic review
Integrating information into practice

- Research shows that this is most difficult
- What are the barriers?
- What can the Journal Club/TRIPSCY do to help?

Performance evaluation

- You posed a question, searched and reviewed the evidence, and made a change to your practice. Is this working?
- Data Collection !!!
How will the TRIPSCY Evidence-Based Journal Club work?

Objectives of the TRISPCY EB Journal Club

• Learning how to identify a topic for review
• Learning how to read articles efficiently
• Gaining critical appraisal skills
• Gaining lifelong learning skills
• Incorporating new knowledge into our assessment and intervention strategies
• Sharing what we have learned with others
The logistics

- Journal Club (JC) has co-leaders
- 3-4 meetings per year
- Combination of face-to-face (Gizmo) and VIT
- JC group choose topics and formulate questions
- JC group identify reviewers (Format A or B) for each question
- Initially, co-leaders do search and identify articles
- Co-leaders send article to JC group
- Co-leaders facilitate meetings
- Participants assess quality and effectiveness of the JC through feedback forms
- Co-leaders with reviewer(s) compile critical appraisals and discussions into fact sheets

Main styles of Journal Club

- Format A - review 3-4 key articles on 1 topic to answer a question
- Format B - a key article is reviewed and presented
From Topics to Questions

- Choose 2 topics first
- Formulate 2 questions
- Should we do 2 questions at one time since we have a large group?
- Choose a format to answer question
- Volunteer(s) for each question
Bibliography


