Evidence-Informed Practice Workshop Series

Level 3: Making Recommendations for Clinical Practice

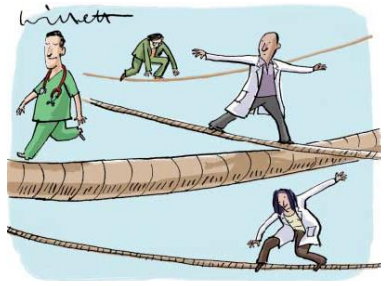
Objectives

- To review the main concepts of EIP
- To identify the resources available in accessing the literature.
- Identify other sources of information
- Describe the steps in creation of practice recommendations
- To understand the steps in the GRADE process.

How Do We Make Decisions?

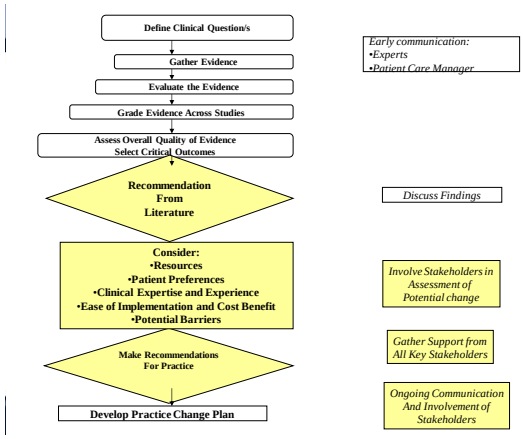
- Evidence-Based or Eminence-Based

"Half of what we know or do today will be shown to be wrong in 10 years" Which half?



Evidence-Informed Practice Model

From: DiCenso A, Guyatt, G & Ciliska, D (2005) Evidence-Based Nursing



GRADE Process

- Methodology to explore the evidence and determine recommendations for a specific focused question
- GRADE working group: www.gradeworkinggroup.org

GRADE Process Step 1: Asking Questions

- Very specific questions about aspects of treatment, approaches, tests
- Should we do …?

Another layoff at the textbook publishing company.

Searchable Questions

1. **Population -** Specific health care problem, group of patients or individual
2. **Intervention or Exposure**
3. **Control or Comparison**
4. **Outcome** – Patient relevant consequences (good or bad)

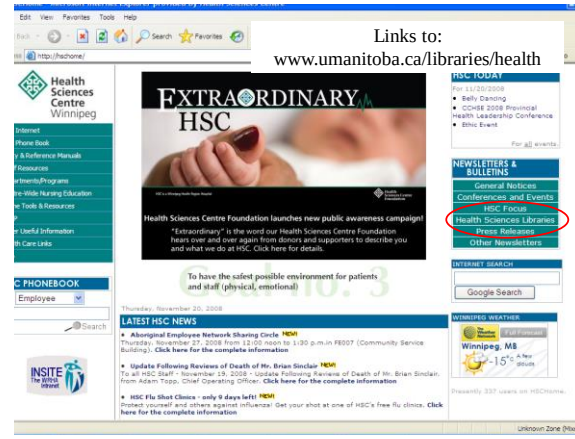
Among…(population) Does … (intervention /comparison) Impact …(outcome or effect)?

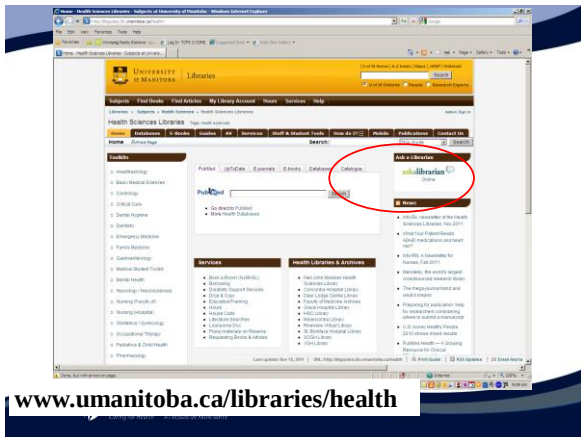
Clinical Questions

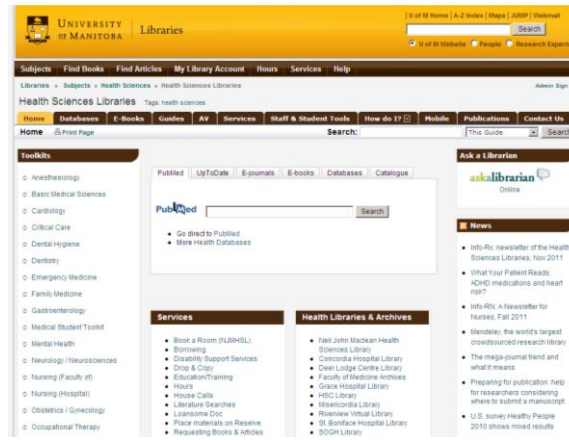
- Group discussion about clinical questions developed during Level 1 workshop
- Review actual and potential questions that have been or should be addressed in your clinical practice

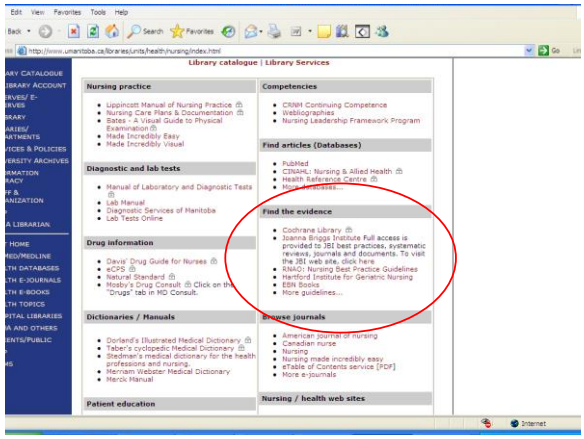
GRADE Process Step 2: Gather Evidence

- Complete literature search
- Professional organizations
- Cochrane Database
- Other Library links / resources









GRADE Process Step 3: Review & Organize Literature

- Level of evidence
- Relevance to your question
- Methodological quality
- Outcomes assessed
- Magnitude of effect – statistical and clinical
- Direction of support

Critical Appraisal

- Worksheets guide you in the process of evaluating each clinical study
  - Study question
  - Sampling
  - Measurement & Follow-Up
  - Validity
  - Strength of results
  - Conclusions
  - Applicability

Quality of Evidence

- Best Evidence
- Confidence in these estimates
- Statistics tell you WHAT not WHY

Evidence varies from

HIGH	⊕⊕⊕⊕
MODERATE	⊕⊕⊕◯
LOW	⊕⊕◯◯
VERY LOW	⊕◯◯◯

- Randomised controlled trials start as high quality
- Observational studies start as low quality

Decrease grade if:

- Serious (-1) or very serious (-2) limitation to study quality
- Important inconsistency (-1)
- Some (-1) or major (-2) uncertainty about directness
- Imprecise or sparse data (-1)
- High probability of reporting bias (-1)

Increase grade if:

- Strong evidence of association – significant relative risk of >2 (<0.5) based on consistent evidence from two or more observational studies with no plausible confounders (+1)
- Very strong evidence of association – significant relative risk of >5 (<0.2) based on direct evidence with no major threats to validity (+2)
- Evidence of a dose response gradient (+1)
- All plausible confounders would have reduced the effect (=1)

Summary of Findings

#·of·studies¤	Design¤	Quality·rating·(range)¤	Consistency¤	Directness¤	Other¤	Summary·of·findings/·strength·of·results¤	Grade¤
Outcome·Measure·(importance):¤							
¤	¤	¤	¤	¤	¤	¤	¤
¤	¤	¤	¤	¤	¤	¤	¤
¤	¤	¤	¤	¤	¤	¤	¤
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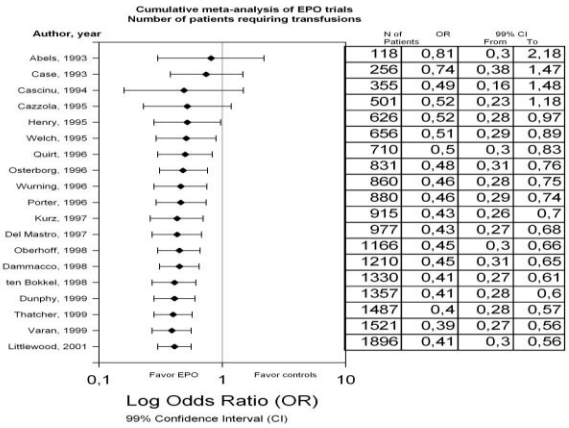


Application to Practice

Example

Rubber band ligation versus excisional haemorrhoidectomy for haemorrhoids (Review)

Shanmugam V, Campbell KL, Loudon MA, Rabindranath KS, Steele RJC, Thaha MA

DATA AND ANALYSES

Analysis 1.4. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 4 Number of patients cured of haemorrhoidal disease.

Analysis 1.7. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 7 Number of patients required re-treatment.

Analysis 1.8. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 8 Number of patients with post-operative pain.

Analysis 1.9. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 9 Number of patients with urinary retention.

Analysis 1.10. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 10 Number of patients with significant post-operative haemorrhage.

Analysis 1.11. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 11 Number of patients complicated with anal stenosis.

Analysis 1.15. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 15 Number of patients with faecal incontinence.

Analysis 1.16. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 16 Number of patients with flatus incontinence.

Analysis 1.17. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 17 Overall complications - Delayed.

Analysis 1.18. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 18 Overall complications - Early.

Analysis 1.20. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 20 Patient satisfaction - Excellent and satisfactory.

Analysis 1.21. Comparison 1 Rubber band ligation versus surgical haemorrhoidectomy for haemorrhoids, Outcome 21 Patient satisfaction - Same or worse symptoms.

GRADE profiler

- Software that you can download from the GRADE working group that helps you organize the data

Self management for patients with chronic obstructive pulmonary disease

Patient or population: patients with chronic obstructive pulmonary disease
Settings: primary care, community, outpatient
Intervention: self management[1]
Comparison: usual care

Outcomes	Illustrative comparative risks* (95% CI) Assumed risk usual care	Corresponding risk self management	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
Quality of Life St George's Respiratory Questionnaire. Scale from: 0 to 100. (follow-up: 3 to 12 months)	The mean quality of life ranged across control groups from **38 to 60 points**	The mean quality of Life in the intervention groups was **2.58 lower** (5.14 to 0.02 lower)		698 (7)	⊕⊕⊕O **moderate**[2]	Lower score indicates better quality of life. A change of less than 4 points is not shown to be important to patients.
Dyspnoea Borg Scale. Scale from: 0 to 10. (follow-up: 3 to 6 months)	The mean dyspnoea ranged across control groups from **1.2 to 4.1 points**	The mean dyspnoea in the intervention groups was **0.53 lower** (0.96 to 0.1 lower)		144 (2)	⊕⊕OO **low**[3,4]	Lower score indicates improvement

GRADE Process Step 4: Overall Quality & Critical Outcomes

- Study limitations
- Inconsistency of results between studies
- Indirectness of evidence
- Imprecision
- Reporting bias

Assess for Each Outcome

High= further research is very unlikely to change our confidence in the estimate of effect (4 stars)

Moderate=further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate (3 stars)

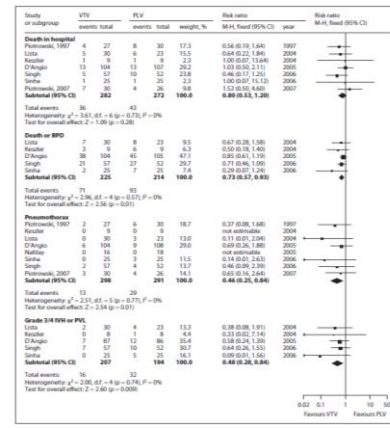
Low=further research is very likely to have an important impact on our confidence in the estimate and may change the estimate (2 stars)

Very Low=any estimate of effect is very uncertain (1 star)

Select Critical Outcomes

- Critical
- Important but not critical
- Not important

- Hemorrhoid Surgery vs Rubber band which would be critical to you?
  - cure, pain, retreatment, urinary retention, post-op hemorrhage, anal stenosis, fecal incontinence, early and late complications, patient satisfaction.



Volume-Targeted vs Pressure Limited Ventilation in preterm infants
Meta-Analysis

GRADE Process Step 5: Make a Recommendation

- Consensus on the science
- You can say "more studies are needed"
- "No recommendation" is a decision in itself – to keep doing what you were doing

Making Recommendations

- Net benefits = intervention clearly does more good than harm
- Trade-offs = there are important trade-offs between the benefits and harm
- Uncertain trade-offs = no clear if the intervention does more good than harm
- No net benefits = the intervention clearly does more harm than good

GRADE Recommendations

- "Do it"
- "Probably do it"
- Probably don't do it"
- Don't do it"

Example

Using the GRADE process Ontario Ministry of Health concluded:

Implantable cardioverter defibrilators are effective in preventing sudden cardiac death in patients who have been resuscitated and suffer from life-threatening arrythmias.

Grade Process Step 6: Apply Recommendations

Consider the setting:

- International
- National
- Regional
- Local

AGREE Tool:
www.agreecollaboration.com

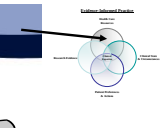
Clinical Expertise

- Ability to use clinical skills and past experiences to identify, implement and evaluate best practices in a supportive environment

Clinical Expertise

- Collaboration
- Networking
- Objective Review
- Quality Improvement
- Delphi Method

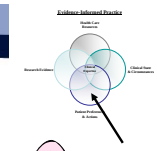
Resources



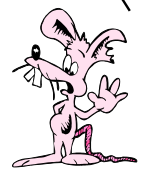
Are there limits on what we can offer?

On what we should offer?

Patient Preference



- What if patient's refuse?



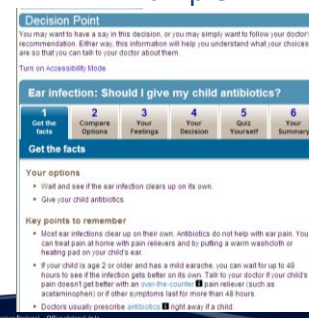
Decision Support Systems: Decision Coaching

- When the population is one patient/family
- Coaching vs giving advice

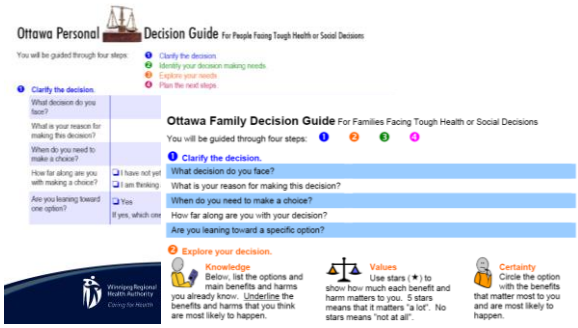
Decision Aids

- Ottawa Health Research Institute
- Computerized algorithms
- Search: "health decision support aid"
- http://decisionaid.ohri.ca

Example



No Decision Aid?



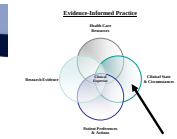
"Knowledge Brokers"

- Organizations that provide evidence-based information to individuals to help them make decisions

Individual Exercise

- Take the Ottawa Personal Decision Guide
- Pick a health care decision that you or a member of your family is facing, or may face
- Work through the questions
- Take 10 minutes
- Share your thoughts with the group

Clinical State & Circumstances



- This is where the rubber hits the road

Consideration: Ease & Cost

- Factors affecting ease of implementation
  - Unit factors
  - Intervention specific factors
  - Patient factors
- Cost-Benefit Factors
  - Physical
  - Emotional
  - Monetary
  - workload

Consideration: Potential Barriers

- Implementation of change

http://www.youtube.com/watch?v=Ij8bPX8IINg

Practical Approach

- Now you know how, just do it?
- Labour intensive
- Stats!!!
- Is there another way?

Realistic Process for Each Question?

- You don't have to reinvent the wheel
- Build on the work of others
- Let the experts do their work
  - Cochrane reviewers
  - Large organizations and Associations

Shortcuts

- Systematic Reviews
- Practice Guidelines
- Meta Analyses
- Position Statements

Group Exercise

- Review the package as a group
- Share the work – each review one or more parts
- Using the evidence and information provided – come up with a practical recommendation
- Present to the whole group