Evidence-Informed Practice
Workshop Series

Level 1: Introduction to Evidence-Informed Practice

Session Outline

What is Evidence Informed Practice
Levels of Evidence
Develop a research-able question – PICO
Break
Exercise 1: create questions from policy
Exercise 2: create questions from practice
Lunch (noon)

Objectives

To understand the principles of evidence informed practice;

To develop well defined research/practice questions;

Definition: Evidence Informed Practice

Integration of best research evidence with clinical expertise and patient values to facilitate clinical decision-making – "Evidence Informs Practice"

Examples of research to inform practice:

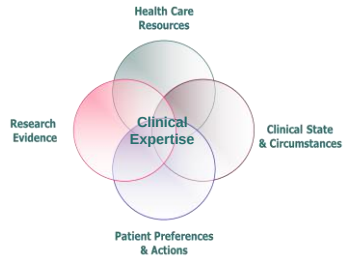
Effectiveness and safety of interventions

Accuracy and precision of assessment measures

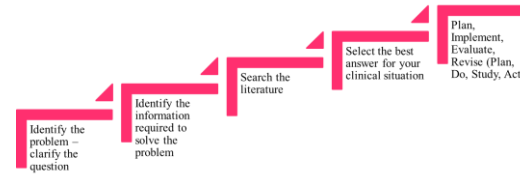
Meaning of illness or patient experiences

Evidence-Informed Practice (EIP) Model

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



Steps of EIP



Where Does the Process Start?

Practice

Client/staff feedback

Organizational priorities

Critical incidents

Mandated tasks

Prioritize Your Questions

Examine practice;

Examine members' outcomes;

Ask "So What?"

- What happens if the policy/procedure wasn't in place?
- What happens if the policy/procedure wasn't followed?
- What are the risks? Benefits?

Research Evidence

6S Hierarchy

Includes studies and synthesized evidence

Incorporated into the model developed by DiCenso – they comprise the top 6 layers of the total hierarchy

We will go through each layer individually

Levels of Evidence – the 6S Pyramid

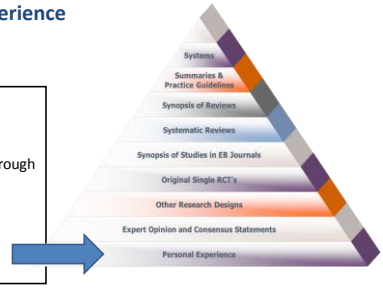
From DiCenso A, Bayley L & Haynes B (2009)

Personal Experience

Base of the hierarchy

"pooled" experience strengthens it

Dangers of looking through blinders



The Power of Building Collective Experience

Clairol "Nice and Easy" ad campaign:

1950s only 7% of American women used hair color. Only women of 'ill repute' used hair dye.

Used celebrities to increase sales – within 6 years 70% of women dying their hair.

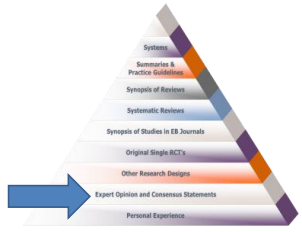
http://en.wikipedia.org/wiki/Clairol

Expert Opinion & Consensus Statements


Consensus statement

Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012

Preamble



Other Research Designs

- Observational
- Qualitative research
- Case control or cohort

Qualitative v. Quantitative

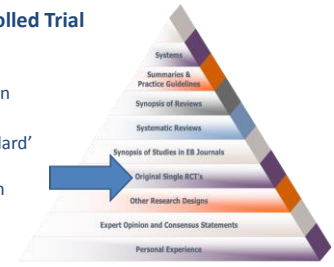
Quantitative	Qualitative
• Informs • Controls context • One reality • Direct application of research findings in procedures, clinical protocols, practice guidelines, standard care plans	• Enlightens • Explores context • Multiple realities • Practitioners become aware of research findings, take them in, and let them inform their practice in ways that are often indirect

Randomized Controlled Trial

Quantitative Design

Treatment/Intervention Effect

Considered 'gold standard' due to control of bias through randomization process and allocation concealment.



Study Synopsis


Evidence-Based Nursing

Qualitative

Reasons for non-adherence to cardiac rehabilitation programmes included lack of motivation, domestic duties, and other health problems

QUESTION

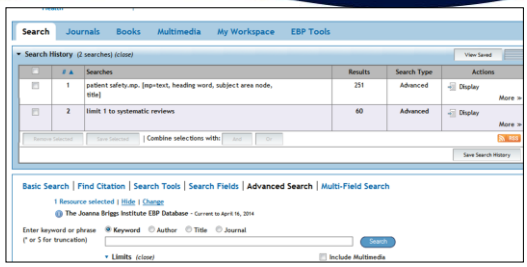
DESIGN

SETTING

PARTICIPANTS

Systematic Reviews

- A comprehensive, methodologically rigorous, and transparent summary of all the research evidence related to a focus clinical question
- Sources:
  - Cochrane Library
  - PubMed Clinical Queries: has filter that limits only to systematic reviews (includes Cochrane)
  - See sample of source on next slide (JBI)



Joanna Briggs Institute – SR Source Example

There are 60 SRs on the topic of patient safety in JBI (after limiting to systematic review as a publication type).

Synopsis of Reviews (Synthesis)

- Synopsis: a summation of the findings of a SR
- A source: Health Evidence

Summaries & Practice Guidelines

- **Practice Guidelines**: often developed by committee or organizations who work through the literature and develop recommended practices on a given topic;
- **Evidence Summaries**: concise, structured documents on a specific practice problem, provide latest evidence (usually includes systematic reviews) and with levels of evidence, provides recommendations

Practice Guideline Example

Exercise-based cardiac rehabilitation in patients with coronary heart disease: a practice guideline

R. J. Achttien, J. B. Staal, B. van der Voort, H. M. C. Kemps, H. Koers, M. W. A. Jongert, E. J. M. Hendriks, and on behalf of the Practice Recommendations Development Group

Abstract

Background

To improve the quality of exercise-based cardiac rehabilitation (CR) in patients with coronary heart disease (CHD) the CR guideline from the Dutch Royal Society for Physiotherapists (KNGF) has been updated. This guideline can be considered an addition to the 2011 Dutch Multidisciplinary CR guideline, as it includes several novel topics.

Methods

A systematic literature search was performed to formulate conclusions on the efficacy of exercise-based interventions during all CR phases in patients with CHD. Evidence was graded (1−4) according the Dutch evidence-based guideline development (EBRO) criteria. In case of insufficient scientific evidence, recommendations were based on expert opinion. This guideline comprised a structured approach including assessment, treatment and evaluation.

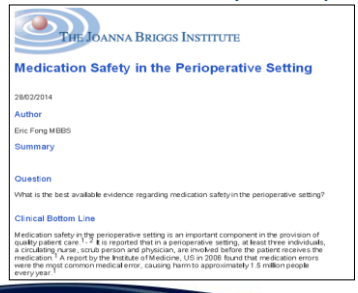
Results

Recommendations for exercise-based CR were formulated covering the following topics: preoperative physiotherapy, mobilisation during the clinical phase, aerobic exercise, strength training, and relaxation therapy during the outpatient rehabilitation phase, and adoption and monitoring of a physically active lifestyle after outpatient rehabilitation.

Conclusions

There is strong evidence for the effectiveness of exercise-based CR during all phases of CR. The implementation of this guideline in clinical practice needs further evaluation as well as the maintenance of an active lifestyle after supervised rehabilitation.

Evidence Summary Example



The Joanna Briggs Institute

Medication Safety in the Perioperative Setting

28/02/2014

Author

Eric Fong MBBS

Summary

Question

What is the best available evidence regarding medication safety in the perioperative setting?

Clinical Bottom Line

Medication safety in the perioperative setting is an important component in the provision of quality patient care.[1,2] It is reported that in a perioperative setting, at least three individuals, a circulating nurse, scrub person and physician, are involved before the patient receives the medication.[1] A report by the Institute of Medicine, US in 2006 found that medication errors were the most common medical error, causing harm to approximately 1.5 million people every year.[1]

Guideline Sources

- The Registered Nurses Association of Ontario publishes Nursing Best Practice Guidelines
- The Centre for Evidence-Based Rehabilitation provides numerous resources and links to best practice guidelines
- WRHA Evidence Informed Practice
- PubMed Systematic Review search tool (with results limited to Practice Guidelines)

Tips for Finding Guidelines

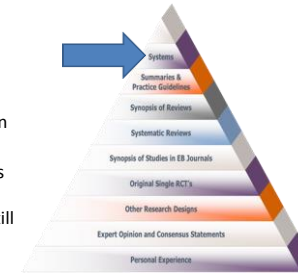
- Guidelines can be difficult to find
- Can fit into "grey literature" category – reports etc. that are not formally published
- Found in association websites, registries, "report sections" of policy institutes e.g. Manitoba Centre for Health Policy reports
- Common sources for guidelines:
  - Trip database
  - National Guideline Clearing House
  - NICE
  - PubMed Systematic Review (publication limit: Clinical guideline)
  - Joanna Briggs Institute (JBI)
  - Practice-Based Evidence in Nutrition (PBEN)

Systems

Ultimate marriage of the patient and evidence;

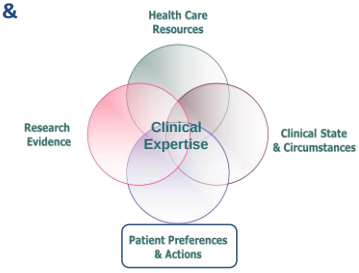
Electronic clinical decision making tool

Ideally information that is integrated at the system level is best evidence – still subject to currency, maintenance etc.



Patient Preferences & Actions

Pivotal – largely determines success of the intervention; requirement to quality improvement and patient safety

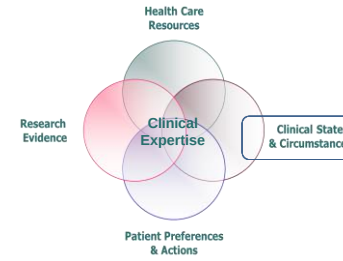


Clinical State & Circumstances

Conditions affecting ability to implement recommendations

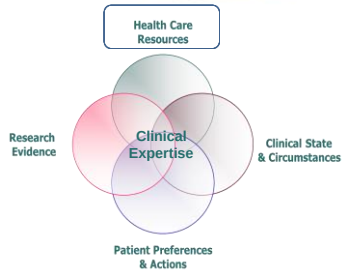
Drug A may be best, but may not be readily available

Unit B may be implementing other "priority" changes – timing is everything



Health Care Resources

Are there limits to what we can offer? On what we SHOULD offer?



Review: Types of Questions

Background: General questions about conditions, tests etc.

Example: **What are the complications of bacterial meningitis?**

Foreground: Specific questions about aspects of treatment, approaches, tests

Example: **In adult cancer patients on a medicine floor, does a pain management team versus standard practice result in better pain control and improved patient satisfaction?**

Background Resource Examples

Tidy's Physiotherapy

Cardiology: an illustrated textbook

Dictionary of Pharmaceutical Medicine

Exercise: Identify Background & Foreground Questions

In people with multiple sclerosis has therapeutic touch been demonstrated to effectively reduce chronic pain?

What is music therapy?

Among inpatient psychiatric patients does transition groups reduce recidivism and/or increase client satisfaction?

What are some pain assessment strategies for cognitively impaired patients e.g. Alzheimer's, elderly dementia?

Anatomy of foreground (quantitative) question

P **(Patient population)** *Among…*

I **(Intervention)** does…

C **(Comparison)** *versus…*

O **(Outcome of interest)** *cause/affect…*

Qualitative Question Framework: SPIDER

- Sample: population of interest
- Phenomenon of Interest: how and why certain experiences, behaviours and decisions are occurring
- Design: research methodology of interest e.g. survey or questionnaire
- Evaluation: subjective outcomes like views, attitudes
- Research: either qualitative or mixed method
- Spider method: National Collaborating Centre for Methods and Tools http://www.nccmt.ca/registry/view/eng/191.html
- SPICE: used by JBI (Setting, Perspective, Intervention, Comparison, Evaluation)

Example: Develop a Question

P Among outpatient patients in a community support group who currently smoke

I Smoking cessation program

C versus no education program

O Improve smoking cessation

TAKE A BREAK

Exercise #1

1. Work individually or in pairs
2. Choose a policy (CELL PHONE, HAND HYGIENE OR DRESS CODE)
3. Answer the following questions
   - Who is the intended population for the policy?
   - What is the intervention described in the policy?
   - What is the comparison (may not be stated but do some brainstorming)
   - What are the outcomes the policy addresses? (is there more than one?)

Exercise 2

Consider your practice (as a group or individually)

- What bugs you about your current practice?
- Is there something you do for which it is not evidence-informed or unclear as to how tit came to be?

Develop these critiques into PICO-framed questions

- Present these PICO questions to the rest of the groups

THANK YOU! TIME FOR LUNCH