Nursing Research - NURS 372
Evidence-Based Information Retrieval and Evaluation

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Definition
Evidence-Based Medicine

- Abbreviated EBM

“the conscientious, explicit and judicious use of current best evidence in making decisions about the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research” (Sackett D, BMJ, 1996)
Definition

Evidence-Based Practice

- Abbreviated EBP

“the formulation of treatment decisions by using the best available research and integrating this evidence with the practitioner’s skill and experience”

(Stedman’s Dictionary for the Health Professions and Nursing, 2012)
Steps in the Evidence-Based Practice Process

- A clinical problem arises
- Develop the clinical question
- Select appropriate resources**
- Evaluate the evidence**
- Integrate and apply the evidence
- Evaluate your performance with the patient

**Where the library and research skills come into the picture
Definitions

RCTs & Practice Guidelines

- **Randomized Control Trial (RCT)** — study in which a group of clients are randomly allocated into either
  - an experimental group
  - a control group

- **Practice Guideline** — a description of a process of patient care management that facilitates the improvement or maintenance of health status
  - Purpose is to:
    - Identify preferred treatment
    - Describe treatment alternatives
  - Published by subspecialty or disease-specific experts from authoritative national & international societies & organizations, e.g., American Heart Association (AHA), American Academy of Pediatrics (AAP)
  - Not all based on experimental studies
Definition
Review Article (narrative)

Also called a narrative review

In the health and medical literature, this type of article refers to an article which comprehensively scrutinizes a topic over a period of time

Provides a broad overview of a topic

The studies included are selected through an implicit process

May include practical, real-life clinical experiences

Frequently contains a long list of references in the bibliography
Definition

Systematic Review

- Summarize large bodies of evidence
- Help to explain differences among studies on the same question
- Apply scientific strategies that limit bias to the selection, critical appraisal and synthesis of all pertinent studies that address a specific clinical question (Cook, Mulrow, Haynes, 1997)

In a systematic review:

- Studies are selected through an explicit process
- Methods of the studies are appraised
- Results are summarized
- Key finding presented
- Limitations of the current knowledge-base on a specific topic are acknowledged
Differences Between Narrative and a Systematic Reviews

**Narrative Review**
- Clinical Question - seldom reported, or addresses several general questions
- Search for Primary Articles – seldom reported; if reported, not comprehensive
- Selection of Primary Articles – seldom reported; if reported, often biased sample of studies
- Evaluation of Quality of Primary Articles – seldom reported; if reported, not usually systematic
- Summary of Results of Primary Studies – usually qualitative nonsystematic summary

**Systematic Review**
- Clinical Question - focused question specifying population, intervention, and outcome
- Search for Primary Articles – comprehensive search of several evidence sources
- Selection of Primary Articles – explicit inclusion and exclusion criteria for primary studies
- Evaluation of Quality of Primary Articles – methodologic quality of primary articles is addressed
- Summary of Results of Primary Studies – synthesis is systematic (if quantitative, often referred to as meta analysis)

Definition

Integrative Review

- Summarizes past experimental & non-experimental research in order to provide a comprehensive understanding of a problem or phenomenon

- Allows for varied perspectives to be represented

- The body of literature includes all studies that address related or identical hypotheses

- Present the state of science, contribute to theory development, & apply to practice and policy

- May be tagged as systematic reviews (CINAHL) or Reviews (PubMed)
Definitions

Meta-Analysis & Meta-Synthesis

- **Meta-Analysis** - a type of systematic review that uses statistical methods to combine and summarize the results of several primary studies
  
  *(Cook, Mulrow, Haynes, 1997)*

- **Meta-Synthesis** – assembles qualitative data to form a new interpretation of the research topic
  
  Sometimes called a *qualitative systematic review*
Medical Research Library of Brooklyn
Pyramid of EPB Resources

Adaptation of the Evidence Pyramid Diagram developed by the Medical Research Library of Brooklyn, SUNY Downstate Medical Center
Meta-synthesis*

Integrative Review*

*Additions by E.R. Bucciarelli, 2015

Locating EBP Information - Selective Resources

- Evidence Based Practice Web Resources
  http://guides.emich.edu/c.php?g=188055&p=1242813
- Essential Evidence Plus & AHSF DI Essentials in the STAT!Ref database
- Agency for Healthcare Research and Quality
  - Guidelines International Network
  - National Guideline Clearinghouse
- CINAHL and PubMed/Medline
- Clinicaltrials.gov
- Cochrane Library
- Dissertations & Theses Full-Text
- Guide to Clinical Preventive Services
- PubMed Health
- Worldviews on Evidence-based Nursing
Retrieving EBP Information from CINAHL

- Check the box in front of Evidence-Based Practice on the Limit your results: section
- In the Publication Type menu, limit to:
  - Clinical Trial
  - Meta Analysis
  - Meta Synthesis
  - Practice Guideline
  - Randomized Controlled Trial
  - Research
  - Systematic Review
- Clinical Queries - a pre-set search that limits to specific clinical research areas
- And into your search:
  - qualitative studies – MW Word in Subject Heading
  - quantitative studies - MW Word in Subject Heading
- Check the box for Research Article (primary research article)
- See short video series at:
Retrieving EBP Information from PubMed

- Run your search
- Off the left-hand frame, see Article Types
- Click on more…
- Under that menu, select
  - Clinical Trial (all types)
  - Meta Analysis
  - Practice Guideline
  - Randomized Controlled Trial
  - Review
  - Systematic Review

PubMed Clinical Queries – a pre-set search that limits to specific clinical research areas


See short video series at:
Links to the Main Resources Discussed in This Lecture

- **NURS 372 – Nursing Research guide**
  - [http://guides.emich.edu/nurs372](http://guides.emich.edu/nurs372)

- **Identifying Primary, Secondary, & Tertiary Research**

- **Searching CINAHL & PubMed for EBP resources video series**

- **Appraising Evidence**
“April Fool’s Day is the one day of the year that people critically evaluate news articles before accepting them as true”

www.tickld.com
Appraising Evidence

- **A3BCD**
  - A-Authority
  - A-Accuracy
  - A-Audience
  - B-Bias/Objectivity
  - C-Currency
  - D-Design
  - Functionality
  - Format & appearance

http://www.emich.edu/library/help/a3bcd/index.php

vinyl-decals.com

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References


www.tickld.com