Evidence Informed Practice - The Basics for Ensuring Best Practice

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November 2013

Disclosure Statement

I, Patricia Grainger, have no affiliations, sponsorships, honoraria, monetary support or conflict of interest from any commercial source.

OUTLINE

- What is evidence informed practice (EIP)?
- Why do we need EIP?
- What is the evidence?
- Critically analyzing the evidence
- The process of EIP
- Conclusion and discussion
What is Evidence Informed Practice?

- the integration of experience, judgment and expertise with the best available external evidence from systematic research
- the conscientious and judicious use of current best evidence in conjunction with clinical expertise and patient values to guide health care decisions
- “doing the right thing right”

Evidence Informed Practice

- evidence based practice
- evidence based decision making
- evidence based nursing
- evidence based nursing practice
- best practice

Research Utilization

- application of research findings to clinical practice
- one component of EIP
Why do we need Evidence-Informed Practice?

“Most health care professionals will recognize that things done in the name of health care are usually beneficial, sometimes ineffective and occasionally detrimental” (Webster, 2002)

The knowledge that I use in my practice is based on...

1. information learned about each patient
2. personal experiences in nursing
3. information from inservices
4. information learned in nursing school
5. information from physicians
6. information from fellow nurses
7. intuition
8. policy and procedure manuals
The knowledge that I use in my practice is based on...

9. physician’s orders
10. what has worked for years
11. information in textbooks
12. articles from nursing journals
13. the way I have always done it
14. articles from nursing research journals
15. articles from medical journals
16. information from the media

(Estabrooks, 2005)

The Need for EIP

- client outcomes
- economics
- protect clients from outdated practices
- protection from litigation
- job protection
- credibility and professional status

Show Me the Evidence!!

- Research
- Clinical expertise
- Patient input/preferences
## What is Research?

Diligent, systematic inquiry or study to validate and refine existing knowledge and develop new knowledge.

<table>
<thead>
<tr>
<th>Research Process</th>
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<tbody>
<tr>
<td>Research problem identified</td>
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<tr>
<td>Question/hypothesis generated</td>
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<tr>
<td>Literature review</td>
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<tr>
<td>Method</td>
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<tr>
<td>Data collected</td>
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<td>Data analyzed</td>
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<td>Findings disseminated with implications for practice, education and future research</td>
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## Quantitative Research

- Formal, objective, systematic
- Large samples
- Questionnaires, surveys, interventions tested
- Measurements
- Numbers, statistics
- Generalization
Qualitative Research
- subjective
- describe life experiences
- give meaning

Levels of Nursing Research
- Exploratory or descriptive
- Correlational or comparative
- Quasi-experimental or experimental
- Synthesis of research findings

Synthesis of Research Findings
- **Meta-analysis** - technique for quantitatively combining results of multiple studies on a given topic.
- **Meta-summary** - pooled findings from qualitative studies
- **Systematic review** - systemic assembly, critical appraisal, and synthesis of all relevant studies on a specific topic.
Show Me the Evidence!!

- Research
- Clinical expertise
- Patient input/preferences

Clinical Expertise

- Not to be confused with years of experience!
- Information from colleagues
- Non-research publications
- Practice Guidelines (May also be research based)
- Presentations
- Evaluation reports
- Web-sites
- Blogs

Patient Preferences

Consider
- individual preferences
- unique concerns
- expectations
- values
Levels of Evidence

- **Ia** - Evidence obtained from meta-analysis or systematic review of randomized controlled trials
- **Ib** - Evidence obtained from at least one randomized controlled trial.
- **IIa** - Evidence obtained from at least one well-designed controlled study without randomization
- **IIb** - Evidence obtained from at least one other type of well-designed quasi-experimental study, without randomization
- **III** - Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies
- **IV** - Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities

Critical Appraisal of the Evidence

- Objectively and critically evaluating evidence for scientific merit and relevance for practice
- Is this good enough to use?
- Is this relevant for my practice area?

Appraising Individual Studies

- problem & purpose relevant?
- based on previous research, theory?
- sample representative?
- valid & reliable measurement tools?
- extraneous variables controlled?
- conclusions based on findings?
- sufficient evidence to change practice?
- feasible to implement findings?
Appraising Reviews & Meta-analyses
1. Is there a clearly focused question?
2. Were all relevant studies identified & included?
3. Was the quality of studies assessed?
4. Was it reasonable to combine the results?
5. Were the results presented clearly?
6. Can the results be applied to the population of interest?
7. Should policy or practice change as a result of this evidence?

“A meta-analysis is like a sausage. Only God and the butcher know what goes into it and neither would ever eat any.”

Dr. James Elliott, Rush Medical College talking about a meta-analysis that showed everyone should be on antihypertensives regardless of their BP.

Medscape 6/3/2009

Critical Appraisal Resources
- http://www.ebm.med.ualberta.ca/
- http://www.cihr-irsc.gc.ca/e/45245.html
- http://www.bmj.com/cgi/content/full/315/7109/672
Appraisal of Clinical Expertise

- Availability
- Organization
- Currency
- Authority
- Accuracy
- Relevance

Process of EIP

- Identify the problem
- Collect the evidence
- Critically appraise the evidence
- Implement the best evidence
- Evaluate the outcome

Implementing EIP

- Individual perspective
- Organizational perspective
- Identification of practice issues
- Nursing research departments
- Programs to develop research skills
- Links between education and practice
Resources
- RNAO Best Practice Guidelines
  http://rnao.ca/bpg/ guidelines
- Cochrane Foundation
- AHRQ www.guidelines.gov
- PART – Practice and Research Together

RNAO Nursing Best Practice Guidelines for Hypertension

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<th>Evidence Level</th>
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<td>2.1 Nurses will work with clients to identify lifestyle factors that may influence hypertension management, recognize potential areas for change and create a collaborative management plan to assist in reaching client goals, which may prevent secondary complications.</td>
<td>2.2 Nurses will assess for and educate clients about dietary risk factors as part of management of hypertension, in collaboration with dietitians and other members of the healthcare team.</td>
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<td>2.3 Nurses will counsel clients with hypertension to consume the DASH Diet (Dietary Approaches to Stop Hypertension), in collaboration with dietitians and other members of the healthcare team.</td>
<td>2.4 Nurses will counsel clients with hypertension to limit their dietary intake of sodium to the recommended quantity of 4.5-100 mmol/day, in collaboration with dietitians and other members of the healthcare team.</td>
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Models of EIP

Evidence Informed Practice Model
Step 1: Identify need using practice focused triggers and knowledge focused triggers
Step 2: Determine the scope of the problem and establish priority
Step 3: Form a team
Step 4: Conduct a review of the evidence
Step 5: Determine range of options appropriate to address problem
Step 6: Choose an option and conduct a pilot
Step 7: Evaluate effectiveness and appropriateness of option in practice environment
Step 8: Plan implementation of option broadly across practice areas
Step 9: Evaluate adoption and effectiveness of change
Step 10: Disseminate results

Barriers to EIP

- lack of research
- research only explains the technical aspects of nursing
- limited access to resources
- lack of experience with research
- negative staff attitudes/resistance
- lack of administrative support
- not infallible

Conclusion

“A profession that fails to change its values and holds on to tradition and routine in the face of developing technologies, more knowledge, increased information and rising expectations, is a profession that is unlikely to survive in any recognizable form in the 21st century”

(Sullivan, 1998)