



Evidence Based Practice: Improving the effectiveness & efficiency of nursing
PRESENTATION NOTES

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In God We Trust,
Everyone Else Must Bring Data

- Effective Nursing Practice
 - Requires information, judgment, skill, and art.
 - Clinical protocols to produce the “best” patient outcomes
 - How do we make decisions about care?
 - How do we use the evidence to shape our care?

- Evidence-Based Practice

A problem solving approach to clinical practice that integrates the conscientious use of best evidence in combination with a clinician’s expertise as well as patient preferences and values to make decisions about the type of care that is provided.
Bernadette Melnyk, 2006.

- Evidence-Based Practice

“The explicit, judicious, and conscientious use of current best evidence from health care research in decisions about the care of individuals and populations”

 - Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000

- United States
 - 1910 – Flexner Report
 - 1920 – American Journal of Nursing
 - 1970 – Practicing nurses were not aware of research → Standards of practice

- England
 - 1972 – Cochrane Collaboration at Oxford

- Canada
 - 1982 – Evidence-based Practice movement at McMaster University



- Preoperative teaching
- Constipation in nursing home residents
- Management of urinary drainage systems
- Pressure ulcer management

- Why is this so important?
 - To enhance our current education and continuing education programs
 - To enhance our professional nursing practice and facilitate life long learning
 - To be “current” practicing practitioners
 - Information explosion
 - To be ready for 3rd party payer requirements
 - Magnet influences

- Why is this so important?
 - Practice is rapidly outdated, often to the detriment of patients.
 - For years, pediatric providers advised parents to place their infants in a prone position while sleeping to prevent aspiration in the event of vomiting.
 - In 2000, the American Academy of Pediatrics released a clinical practice guideline recommending a supine or side lying position for infant sleep.

- Patient Contribution in EBP
 - Scientific data alone is not sufficient
 - Patient satisfaction, values and cost must be involved in our decisions
 - Do we practice the “best evidence” at any cost?
 - Examples:
 - “When Doctors Say Don’t and the Patient Says ‘Do” (Siegel, Oct 29, 2002 NYT)
 - “Daily sedation holidays and readiness to extubate” (Baker, Chris 2006, St Mary’s Med Center Madison WI)
 - Outcomes of EBP



- Realities of EBP
 - Research Findings are frequently NOT integrated into practice
 - Despite huge movement towards research and many \$\$\$
 - Takes approximately 17-19 years to translate research findings into practice

- Realities of EBP

- Survey of RNs in the US:

- 34.5% felt they needed information seldom or occasionally
- ~ ½ were not familiar with the term “evidence based practice”
- > ½ believe their colleagues don’t use research findings in practice
- Most don’t search for evidence
- Only 27% had knowledge of using electronic databases

- Realities of EBP

- Landmark Study– Slippery Slope

- Realities of EBP
- 70 lbs of guidelines per family doctor per year
- 25000 biomedical journals in print
- 8000 articles published per day
- 95% of studies cannot reliably guide clinical decisions

- EBP Now

In order to keep up with all of the journals relevant to our practice, we need to review 19 articles a day, 365 days per year

Melnyk, 2006

- EBP
 - No recipe format
 - Must include patient preference
 - Must include clinician expertise



- Must include findings from RCT AND consider findings from qualitative and descriptive studies
- Must be incorporated by ALL (not just academicians)

- EBP: The Process
 - Five Steps in EBP
 - **Ask:** formulate the clinical question
 - **Acquire:** evidence - search for answers, collect the evidence
 - **Appraise:** the evidence for quality and relevance
 - **Apply** the results with patient/provider preference
 - **Assess** the outcome as implemented

- Five Steps in EBP
- 1. **Ask** the essential clinical question in PICO format:

- Patient population
- Intervention or interest
- Comparison intervention or group
- Outcome

In premature infants is oral sucrose versus saline more effective in reducing pain?

- Five Steps in EBP
- 2. **Acquire**/Collect the Best Evidence

- Begin by searching for systematic reviews (secondary sources)
 - Guidelines: UK National Library for Health, NICE, SIGN; US National Guidelines Clearinghouse; Canadian Medical Association; New Zealand Guidelines Group.
 - i.e. Cochrane Database of Systematic Reviews AND Evidence based clinical practice guidelines (www.guidelines.gov)

Search for Primary Sources

- Use methodological filters to target the right type of study:
- PubMed filters for:



- therapy
- Diagnosis
- Prognosis
- etiology

- Six-level Evidence Hierarchy (Stetler)
Levels of evidence (from strongest to weakest):
 - Level I Meta-analyses of controlled studies
 - Level II Individual experimental studies
 - Level III Quasi-experimental studies
 - Level IV Nonexperimental studies
 - Level V Program evaluations, RU studies, case reports, quality improvement projects,
 - Level VI Opinions of respected authorities and expert committees

- Five Steps of EBP
Critically **Appraise** the evidence
 - Valid results?
 - Random assignment
 - Long enough follow up
 - Appropriate control group
 - Valid and reliable instruments

- Statistical and clinical significance
 - Magnitude and accuracy

Critically **Appraise** the evidence

- Clinically relevant findings?
 - Risks/ benefits of treatment
 - Feasible in my practice setting
 - Outline patient values and expectations for the outcome and the treatment

- Five Steps of EBP
Apply the results
Integrate evidence, clinical expertise, and patient factors/ preferences to implement a decision and apply findings

Assess/Evaluate the outcome



- Barriers to EBP in Nursing
 - Research-related barriers
 - Nurse-related barriers
 - Organizational barriers
 - Barriers related to the nursing profession
 - Barriers to EBP implementation
 - Discomfort with search techniques
 - Perceived lack of time to search for best evidence
 - Challenges in critically appraising research reports
 - Lack of organizational/ administrative support
 - Barriers to EBP implementation
 - Educational programs approach to teaching research in the 'traditional way' with a focus on DOING research instead of USING the research evidence
 - Negative attitudes towards research
 - Critical Facilitators of EBP
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 - Individual knowledge and skills of EBP
 - BELIEF that EBP improves practice
 - BELIEF of the ability to implement EBP
 - Mentors/teachers skilled in EBP
 - Administrative/organizational SUPPORT
 - Advancing EBP
 - What is the personal commitment to EBP among administrators and educators?
 - Are there mentors who have strong knowledge and skills related to EBP?
 - Do nurses, APNs and administrators model EBP?
 - Do learners have access to quality computers AT THE POINT OF CARE?



- Advancing EBP
 - Are there librarians who have knowledge of EBP who can assist with it?
Champions of EBP at all levels (Admin, teachers, learners etc)
 - Resources (committed and skilled EBP mentors, computers, access to quality databases and the internet)
 - EBP NOW: Strategies for Implementation
 - EBP workshops (basic, advanced)
 - Online EBP modules and discussion groups/ journal clubs
 - “Wisdom Wagon” (traveling EBP poster, SUNY Upstate Med Center)
 - EBP NOW: Resources
- EBP workshops (basic, advanced)
- ASU (<http://nursing.asu.edu>)
 - 5 day immersion EBP mentorship program
 - Annual EBP Conference
 - 17 credit graduate/post masters certificate in EBP
- EBP Conferences/Workshops
- University of Maryland (<http://nursing.umaryland.edu>)
 - McMaster University (<http://cche.net.ebcp>)
 - Univ Texas Health Science Center, San Antonio (<http://acestar.uthscsa.edu>)
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- EBP NOW: Resources
- St Marys Hospital Medical Center
 - Introduction to EBP
 - 4 hour session
 - Lecture/ discussion & hands on in computer lab
 - EBP Forum
 - Four- 8 hour days over 3 months
 - Focus on learning how to use best evidence to change practice
 - The clinical question
 - Finding the evidence
 - Evaluating & Scoring the evidence
 - Translating the evidence
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- EBP in Clinical Settings
- Change is NOT easy
- EBP needs to become second nature



- EXCITING
 - Spirit of Inquiry is contagious
 - Strategies for Nurses to Play a Role in EBP
 - Read widely and critically
 - Attend professional conferences
 - Learn to expect evidence that a procedure is effective
 - Become involved in a journal club
 - Pursue and participate in EBP projects
 - EBP Project Exemplars
 - EBP Forum Examples
 - St Marys Medical Center
 - Achieving Euglycemia (2004)
 - Prevention of Catheter associated UTI in Surgical Patient (2005)
 - Prevention of Ventilator Associated Pneumonia (ongoing)
- Baker, Chris; St Marys Hospital Med Center, Madison WI, presented at University Maryland Annual EBP conference 4/7/06
- EBP Forum Example
 - Achieving Euglycemia
 - Supporting data of glycemic status at baseline and over course of protocol implementation
 - Average CBG at baseline = 140 (Oct 04)
 - Average CBG post implementation of EBP protocol (all patients on insulin infusions) = 121 (Sept 05)
 - Incidence of hypoglycemia
 - Oct 04/ Dec 04
 - On protocol <1% / ~0%
 - Not on protocol 5% / ~2%
 - Project evaluation (patient, nurse, MD satisfaction)



■ EBP Forum Example “Achieving Euglycemia”
Data

- Percent of patients requiring Insulin
 - 31% (3SW), 52% (MICU), 67% (SICU)
- Of those requiring an Insulin Drip, % with NO history of Diabetes
 - 57%-60%
- Percent reduction in average CBG
 - 16%-28%

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