

Knowledge Mastery...Improving Patient Outcomes

Bringing Evidence to the Point of Care

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Why Evidence-Based Practice?

Rule 5 of the 10 Rules for Healthcare in
Crossing the Quality Chasm is
evidence-based decision making

(IOM, 2001)



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Why Evidence-Based Practice?

The 5 core competencies deemed necessary by the recent *Summit on Healthcare Professions Education* include:

- Provide patient-centered care
- Work in interdisciplinary teams
- *Employ evidence-based practice*
- Apply quality improvement
- Utilize informatics

(Greiner & Knebel, 2003, p.46)



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Evidence-based Practice

A problem-solving approach that

- incorporates the best available scientific evidence
- clinicians' expertise
- and patients' preferences and values

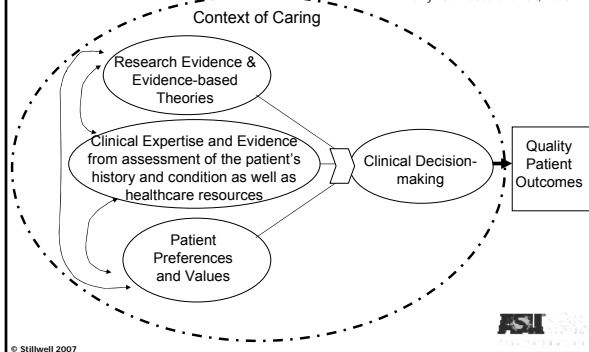
(Melnyk & Fineout-Overholt, 2004)



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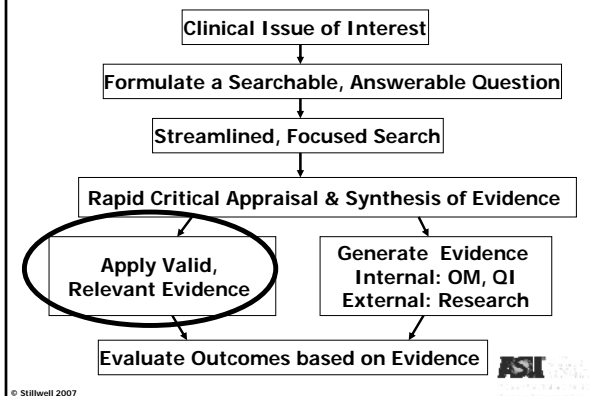
The Merging of Science and Art: EBP within a Context of Caring Results in the Highest Quality of Patient Care

© Melnyk & Fineout-Overholt, 2003



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EBP Process



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What's the Strongest Evidence?

1. Ask the burning clinical question in PICO format
2. Collect the best evidence. Search first for systematic reviews (e.g., the Cochrane Database of Systematic Reviews) and evidence-based clinical practice guidelines (www.guideline.gov)
3. Rapidly critically appraise the evidence
4. Integrate evidence, clinical expertise, and patient factors/preferences to implement a decision
5. Evaluate the outcome



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Pre-appraised Literature

- Systematic reviews
- Evidence-based Guidelines
- Single study reviews



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Systematic Reviews Where Do You Find Them?

Cochrane Collaboration
Cochrane Database of Systematic Reviews (CDSR)
Database of Abstracts of Reviews of Effectiveness (DARE)
Health Technology Assessment (HTA)

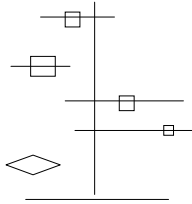
www.cochrane.org

National Library of Medicine
PubMed/ MEDLINE
www.ncbi.nlm.nih.gov/entrez
CINAHL



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Blöbogram



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- *burden*
- *beliefs*
- *bargain*
- *barriers*



Straus, Richardson, Glasziou, Haynes (2005) Evidence-based medicine: How to practice and teach EBM. Elsevier

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EBP

...essential for establishing what effect nurses have on patient outcomes (Richardson Miller, & Potter, 2002, p 44)

...improves cost-effectiveness of patient care (Kilson, 2000; Madigan, 1998; Rosenfeld, Duthie, Bier, Bower-Ferres, Fulmer Lervolino et al., 2000; Selig, 2000; Winch, Creedy, & Chaboyer, 2002).

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Kristie Newton RN, BSN

April 2007

<http://nursing.asu.edu/caeplebstories/featurestory.htm>

- For as long as I have been a nurse, I have used baby powder when bathing my patients. I have used it to freshen up patients, rub their backs, and sometimes as an air freshener. So you can imagine my confusion when baby powder disappeared from the supply room. At first, I figured we were just out of it, since other items were on back order. However, when I noticed they had eliminated the bin used for baby powder, I began asking questions. All I was told was we were not using baby powder anymore, "it causes infections." I could not believe this explanation. What does baby powder have to do with infections? After all, it is safe for babies, why not patients?



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why, after 20 years of nursing, was this the first time I had ever heard about baby powder being bad for patients

Kristie Newton RN, BSN
April 2007 <http://nursing.asu.edu/caeplebstories/featurestory.htm>



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PICOT

- In caring for hospitalized patients, does using baby powder compared to not using baby powder increase the rate of infection?

Kristie Newton RN, BSN
April 2007 <http://nursing.asu.edu/caeplebstories/featurestory.htm>



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study after study linking baby powder to topically yeast infections and fungal infections in immunocompromised patients, and how it was detrimental when talc was inhaled for respiratory patients, i.e. asthmatics. I was speechless. Why had I never heard of this before? Apparently, these studies had been available for years....

Kristie Newton RN, BSN
April 2007 <http://nursing.asu.edu/caep/ebpstories/featuredstory.htm>



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It's NOT Funny

- Central Venous Catheter Removal

60 y/o patient had been receiving IV fluids via a central line. A 4X4 gauze with silk tape was applied after removing the catheter. Soon after, the clinician told a very funny story and the patient burst into laughter. The patient stopped laughing, slumped over and fell to the floor. The patient was unresponsive and a code was called. The resuscitation effort was unsuccessful.

(Massoriti, 1999)



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Evidence

In God we trust.
Everyone else must bring data.

By: Sid Peimer

<http://www.bizcommunity.com/Article/196/19/287.html>



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Evidence: Clinical Decision Making to Improve Patient Outcomes

Internal

- Risk management data
- Quality improvement data: pressure ulcer rates, falls, VAP
- Benchmarks
- Staffing levels
- Nurse satisfaction data
- Patient satisfaction data

External

- Original research
 - ❖ Qualitative
 - ❖ Quantitative
- Pre-appraised
- Systematic reviews
 - ❖ Meta-analysis



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The Leapfrog Group

Leapfrog Hospital Ratings

Search Results: City: Allentown, PA
Below are the results of your search. Click on the "tabs" and the circles for more details.

Click to Compare	Hospital Name	City	Leapfrog										Survey Results (Individual)			
			Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10				
<input type="checkbox"/>	LEWIS & CLARK HOSPITAL	Allentown, PA	●	●	●	●	●	●	●	●	●	●	●	●	●	6/9/2007



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AHRQ Quality Indicators

http://www.qualityindicators.ahrq.gov/psi_overview.htm

- Complications of Anesthesia
- Pressure Ulcer
- Failure to Rescue
- Post-op Hemorrhage
- Post-op Respiratory Failure
- Post-op PE/DVT
- Post-op Sepsis
- Post-op Wound Dehiscence



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National Quality Forum (NQF)

<http://www.qualityforum.org/nursing/>

- Failure to Rescue
- Pressure Ulcer
- Falls
- Falls with Injury
- Restraints
- Urinary Catheter Associated UTI
- Central Line Blood Stream Infection
- VAP
- Smoking Cessation Counseling: AMI, HF, Pneumonia



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National Database of Nursing Quality Indicators (NDNQI) - examples

- Pediatrics IV infiltration rate
- Pediatric pain assessment (AIR)
- Nurse Turnover
- RN education/certification

<http://www.nursingquality.org/>



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IHI 5 Million Lives Campaign

<http://www.ihl.org/ihl>

- Pressure Ulcers
- Decreasing MRSA
- High Alert Medications
- Surgical Complications
- EBP for CHF
- Rapid Response Team
- Medication Reconciliation



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EBP Outcomes: Outcomes reflect IMPACT!

- EBP's effect on patients:
 - ❖ Physiologic
 - ❖ Psychosocial
 - ❖ Functional improvement.

- EBP's effect on the health system:
 - ❖ Decreased cost, length of stay;
 - ❖ Nursing retention / job satisfaction;
 - ❖ Interdisciplinary collaboration.



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The 4-Step

Step One

- What is the clinical problem?
- What is the desired outcome?
- What instruments can measure the outcome?

Baseline Data

Adapted from Anne Wojner-Alexandrov, EBP Outcomes Model



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Step Two

- Appraise the evidence
 - e.g. reliable, valid, applicable
- Who are the stakeholders involved?
- What will be the new practice?
- Establish integrity of the practice to be implemented



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Step Three

Communicate, educate, communicate

Role model the change

Collect Data

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Step Four

Terminate data collection cycle

Analyze the impact

Communicate findings

Revision? Return to Step Two

Adopt the practice change and continue to monitor outcome

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"It is wise to keep in mind that neither success nor failure is ever final."

Roger Babson

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Evidence: HOW to keep up

Evidence: WHERE to access it



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A Systematic Evaluation of Evidence Based Medicine Tools for Point-of-Care

- SCC/MLA 2006
- Texas Health Science Libraries Consortium



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<http://ils.mdacc.tmc.edu/papers.html>

Raw	Evidence	Important/Not As Important	Levels
ACP PIER	ACP PIER	ACP PIER	ACP PIER
eMedicine	Clinical Evidence*	Clinical Evidence*	Clinical Evidence*
DynaMed	DynaMed	DynaMed	Diseasdex - General Medicine
Clinical Evidence*	Clinical Resources @ Ovid	eMedicine	DynaMed
Clinical Resources @ Ovid	eMedicine	Diseasdex - General Medicine	InfoPOEMS/InfoRetriever
UpToDate	UpToDate	Clinical Resources @ Ovid	Zynx Evidence
Diseasdex - General Medicine	Diseasdex - General Medicine	UpToDate	eMedicine
FirstConsult	InfoPOEMS/InfoRetriever	InfoPOEMS/InfoRetriever	Clinical Resources @ Ovid
InfoPOEMS/InfoRetriever	FirstConsult	FirstConsult	UpToDate
Zynx Evidence	Zynx Evidence	Zynx Evidence	FirstConsult
Harrison's Practice: Answers on Demand	Evidence Matters	Harrison's Practice: Answers on Demand	Prodigy Knowledge*
Prodigy Knowledge*	Harrison's Practice: Answers on Demand	Evidence Matters	Harrison's Practice: Answers on Demand
Evidence Matters	Prodigy Knowledge*	Prodigy Knowledge*	Evidence Matters



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ACP Journal Club

- <http://www.acpjic.org/>

Biomedical literature articles that report original studies and systematic reviews
Summarized in abstracts
Commented on by clinical experts
Subscription required



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InfoPOEMs

- <http://www.infopoems.com/>

Patient-Oriented Evidence that Matters
PICO question, answer, citation, study design, funding source, setting and summary

InfoRetriever – search engine
Subscription required \$249
30 day free trial



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<http://www.uptodate.com/>

UpToDate

- a comprehensive evidence-based clinical information resource available to clinicians on the Web, desktop, and PDA.

Subscription required \$495
Trial available



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National Guideline Clearinghouse for PDAs

- <http://www.guideline.gov/resources/pda.aspx>

Guideline Summaries in a text format can be downloaded

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Institute for Clinical Systems

- <http://www.icsi.org/>

Guidelines, order sets and protocols
Subscription required

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Sumsearch

<http://sumsearch.uthscsa.edu/>

- SUMSearch combines searching in order to automate searching for medical evidence.
- SUMSearch
 - ❖ selects the best resources for your question
 - ❖ formats your question for each resource
 - ❖ makes additional searches based on results

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**University of Minnesota
Biomedical Library**

- <http://www.biomed.lib.umn.edu/help/guides/primary/ebp#toc36025>

Multiple EBP Resources and Databases

PICOMaker



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TIGER initiative

<http://www.umbc.edu/tiger>

- enable practicing nurses and nursing students to fully engage in the unfolding digital electronic era in healthcare
- identify information/knowledge management best practices and effective technology capabilities for nurses.
- create and disseminate local and global action plans that can be duplicated within nursing and other multidisciplinary healthcare training and workplace settings.



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<http://www.cpmrc.com/>

- The Clinical Practice Guidelines support the interdisciplinary team in delivering their scope of practice accountability while integrating services at the point of care.
- Clinical Practice Resource Model (subsidiary of Eclipsys)



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Connecting the Dots

Knowledge Mastery

...

Improving Patient Outcomes



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Perseverance

- How do YOU face the tough challenges?
- Who do you call?
 - ❖ Rapid response team for EBP!!



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Strategies for Advancing Evidence-Based Practice in Clinical Settings

(Finout-Overholt, Levin, Melnyk 2004/2005)
Journal of the New York State Nurses Association 28-32


- EBP rounds
- STEPS of EBP
- PICOT boxes
- Posters of critically appraised topics of interest to population
- Journal Club
- Self-directed learning with educational prescriptions
- EBP Workshops
- EBP Mentorship Programs



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Perseverance
Persistence
Patience
Practice
Possibilities

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Role Modeling is the Most Powerful Variable in Success
What is experienced and seen in the clinical area is what will likely predict future behavior.
Bob Berenson

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Belief at the beginning of an endeavor is the one thing that will ensure success
William James

Implement and Teach Evidence-Based Practice
YOU CAN DO IT!

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