


Evidence Based Practice (EBP)

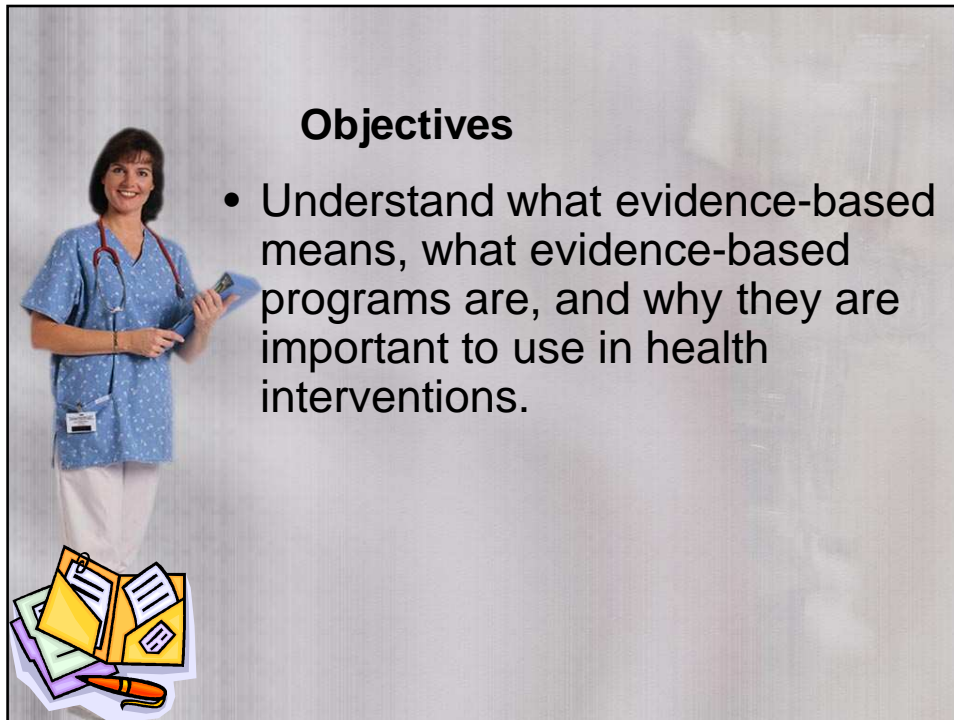
http://staff.ksu.edu.sa/whataml_eh/en

Dr. Wajed Hatamleh



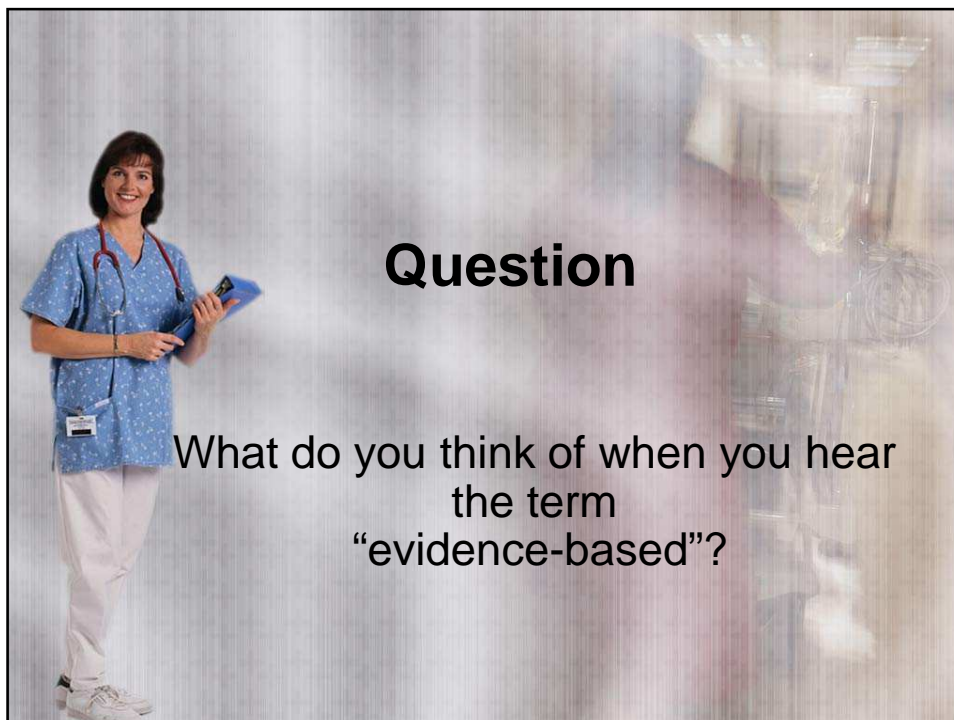
Activity 1: Let's Get To Know Each Other

What is your name?
Where are you from?
Who do you work for?
Share one interesting fact about yourself.




Objectives

- Understand what evidence-based means, what evidence-based programs are, and why they are important to use in health interventions.




Question

What do you think of when you hear the term “evidence-based”?



Evidence-based practice


- An integration of the best evidence available, nursing expertise, and the values and preferences of the individuals, families, and communities who are served.
- EBP = best practice




What Is Evidence?

- Surveillance Data
- Systematic Reviews of Multiple Intervention Studies
- An Intervention Research Study
- Program Evaluation
- Word of Mouth
- Personal Experience

OBJECTIVE




SUBJECTIVE



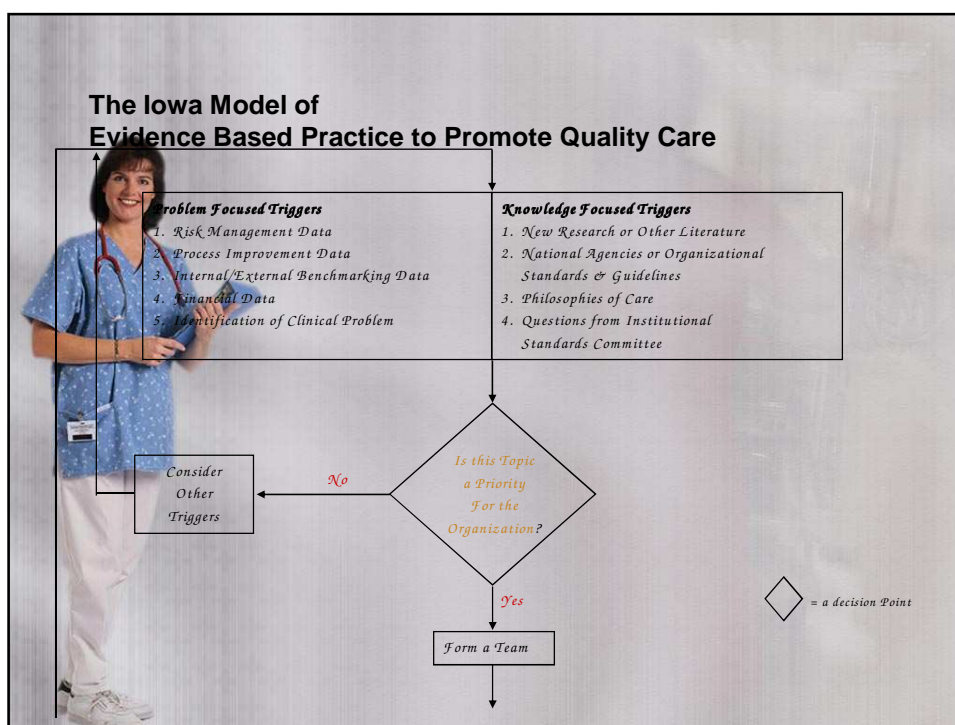
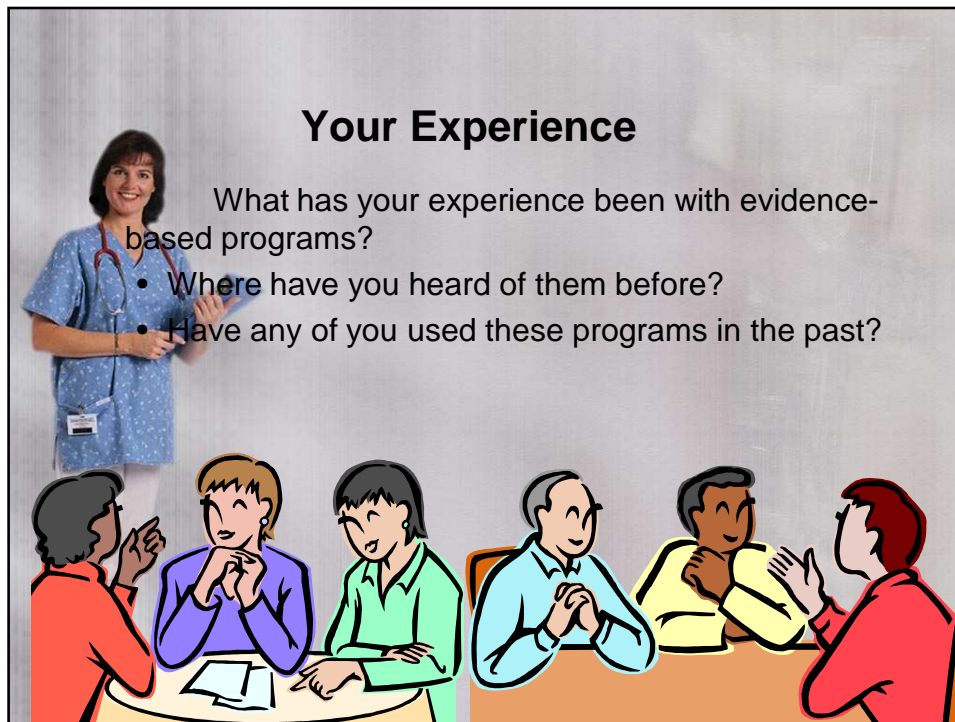
Assumptions

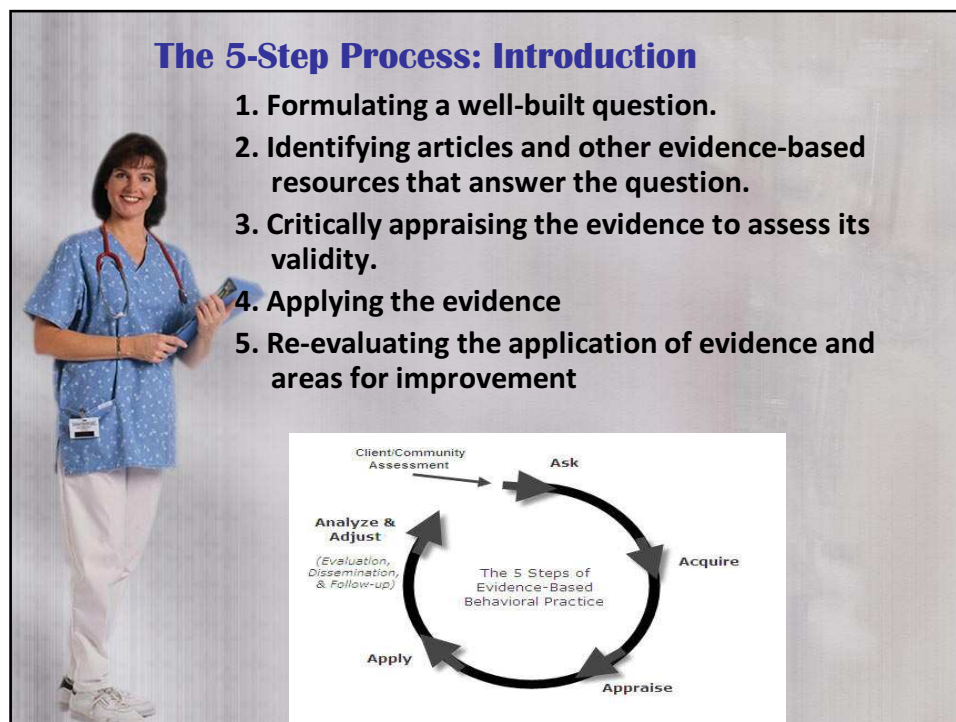
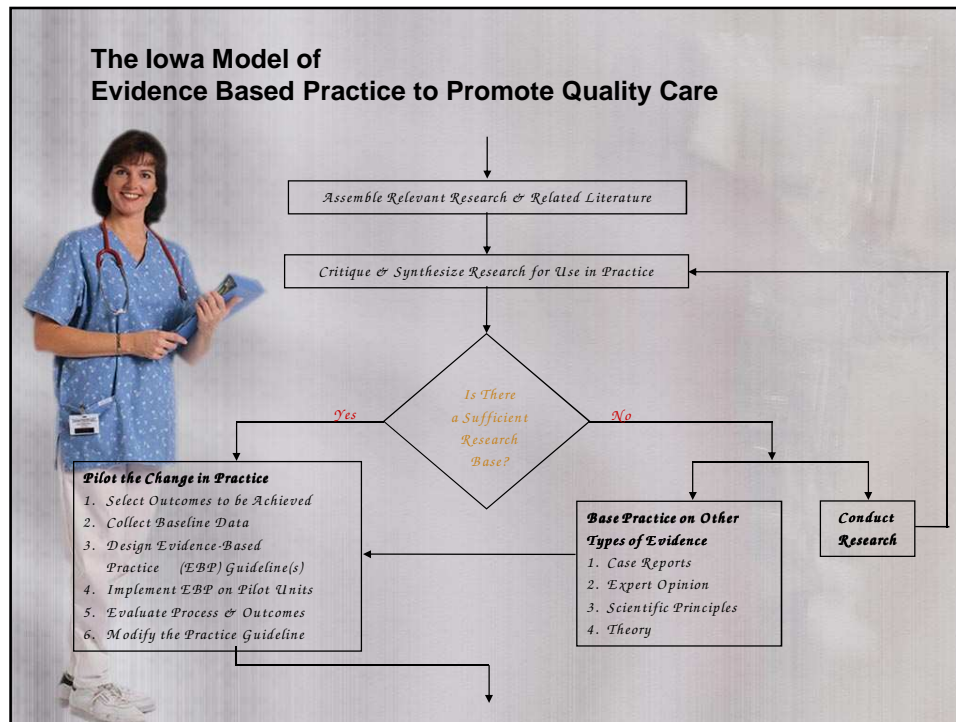
- Nursing is an applied science and the practice of nursing should be grounded in science.
- Use of EBP contributes to patient/family outcomes that improve health.

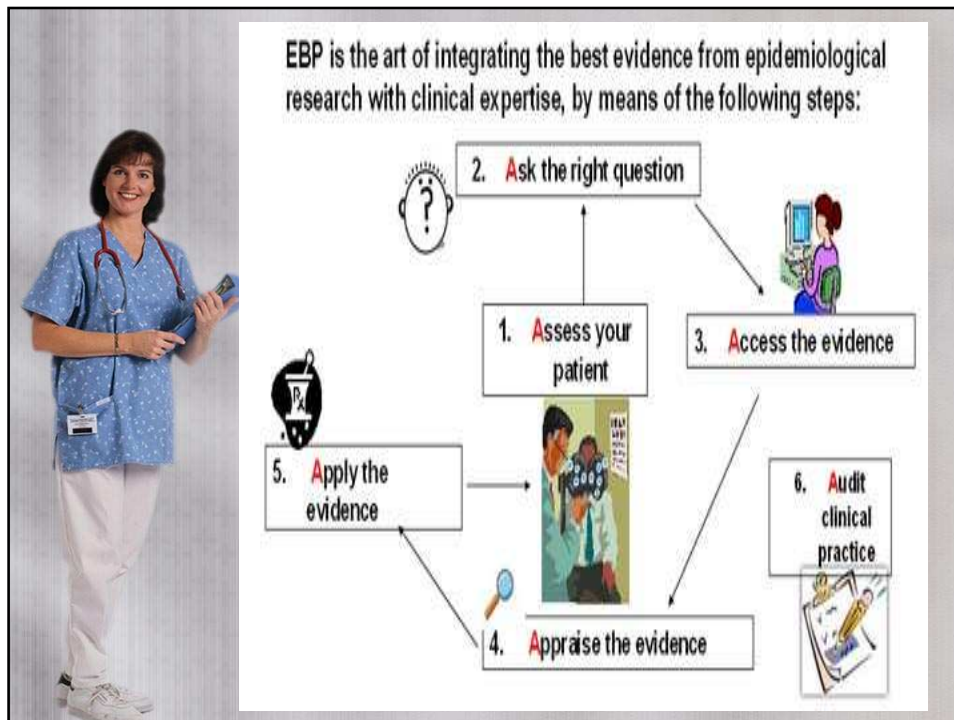


Who are the Users of Evidence-Based Practice

- Nurses (RN, LVN, NP)
- Nursing assistants
- Physicians
- Respiratory Therapists
- Physical Therapists
- Pharmacists
- Others








Step 1: Formulating the Question

- ☐ you first need to decide what details are important to the question at hand so you can formulate the question.
- ☐ A well-built clinical question includes the following components:
 - ☐ The patient's disorder or disease
 - ☐ The intervention or finding under review
 - ☐ A comparison intervention (if applicable—not always present)
 - ☐ The outcome.
- ☐ The acronym PICO assists in remembering the steps

PICO Format

- 
- PICO is a state of mind.
 - Applying PICO is a systematic way to identify important concepts in a case, and formulate a question for searching. However, you will often not have a comparison intervention. Also, different types of EBP resources require different levels of specificity, so depending on the type of resource you're using, you might not search with all the PICO components at first.


Patient/ population

Intervention or interest

Comparison intervention or group

Outcome


Framing Good Questions



The following approach can help you frame a good question:


- ✓ Describe the subject of the question
- ✓ Define which intervention
- ✓ Define the type of outcome

CONTINUE.....



Patient Population and/or Problem	Intervention	Comparison intervention	Outcome
Description of the patient, population and/or the target disorder of interest	Examples: diagnostic test, Prognostic factor, therapy, exposure	Examples: standard of care, reference standard, Placebo	Clinical outcome of interest to you and your patient

Step 2: Database/Resource Searching



After successfully formulating the clinical question (step 1) you need to find relevant evidence. You may need to consult several types of information resources.

These resources generally fall into three categories and are used in sequential order depending on need and applicability.

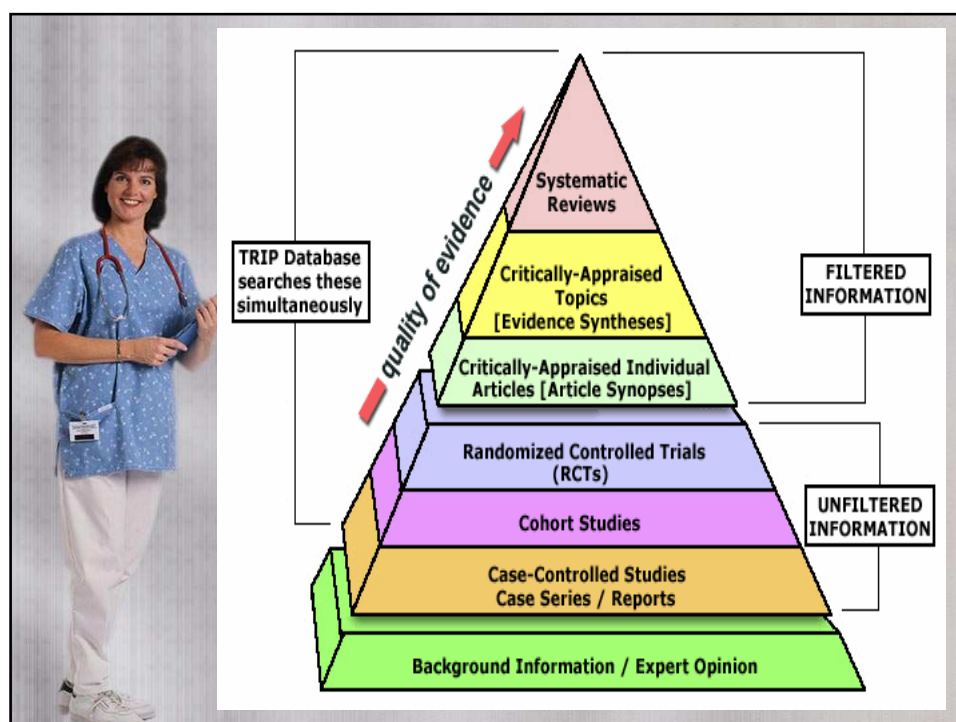
The three categories are:

- ☐ General Information (Background resources)
- ☐ Filtered Resources
- ☐ Unfiltered Resources

Continue



- General information (background) resources
ex: text books, current diagnosis & treatment.
- Filtered resources
ex: Cochrane Data Base, National Guidelines.
- Unfiltered resources
ex: MEDLINE & CINAHL



Publication Types

Different types of publications have different characteristics.


Primary Literature

- ☐ Primary literature is authored by the researchers, contains original research data, and is usually published in a peer-reviewed journal.
- ☐ Primary literature may also include conference papers, pre-prints, or preliminary reports. The intended audience of primary literature includes researchers and specialists, not the general public.

CONTINUE.....

Secondary Literature

- ☐ Secondary literature consists of organized works and compilations that are derived from or refer to the primary source literature.
- ☐ Examples of secondary literature include: review articles (specifically meta-analysis and systematic reviews) and reference works. Professionals within each discipline take the primary literature and synthesize, generalize, and integrate new research. The intended audience of secondary literature consists of colleagues within the respective discipline, as well as interested colleagues from other fields.




Tertiary Literature

- ❑ Tertiary literature consists of textbooks, encyclopaedia articles, and guidebooks or handbooks. The purpose of tertiary literature is to provide an overview of key research findings and an introduction to principles and practices within the discipline. Thus, this type of publication is an excellent resource for students.

Popular Media

- ❑ The purpose of health sciences popular literature is to inform the general public about new research findings, prevention, and treatment. Popular media is often found in popular magazines, radio, newspapers, television, and web sites. The author need not be an expert in the discipline, and the aim is to summarize key concepts for the general public.



Systematic reviews

A systematic review is:

- A summary of the medical literature that uses explicit methods to perform a comprehensive literature search and critical appraisal of individual studies, and that uses appropriate statistical techniques to combine these valid studies.
- somewhere in a systematic review or meta-analysis

Cont....

Systematic reviews

Meta-Analysis

- A meta-analysis is a particular type of systematic review that attempts to combine and summarize quantitative data from multiple studies using sophisticated statistical methodology. Such a strategy strengthens evidence as it makes the small sample size of individual studies much larger, giving the results more statistical power and, therefore, more credibility than the individual studies. Meta-analyses are not comprehensive, as only compatible data may be combined into a larger data set.
- Authors should clearly specify the criteria for inclusion or exclusion of individual studies



Step 3: Critical Appraisal

- After identifying an article or resource that seems appropriate to your question (step 2), you must appraise the information critically. If the study is from a primary source, one that provides original data on a topic with no commentary—you should do a “validity” (closeness-to-truth) check.
- To check for validity, ask questions related to **diagnosis, therapy, harm, and prognosis.**



Critical Appraisal Diagnosis




- Did the patient sample include an appropriate spectrum of patients to those found in the general practice?
- Was the gold standard applied to all cases?

Critical Appraisal Therapy




- Was the assignment of patients to treatment groups randomized?
- Were all enrolled patients accounted for the conclusion of the study?
- Were the treatment groups similar at the start of the study?



Critical Appraisal

Harm

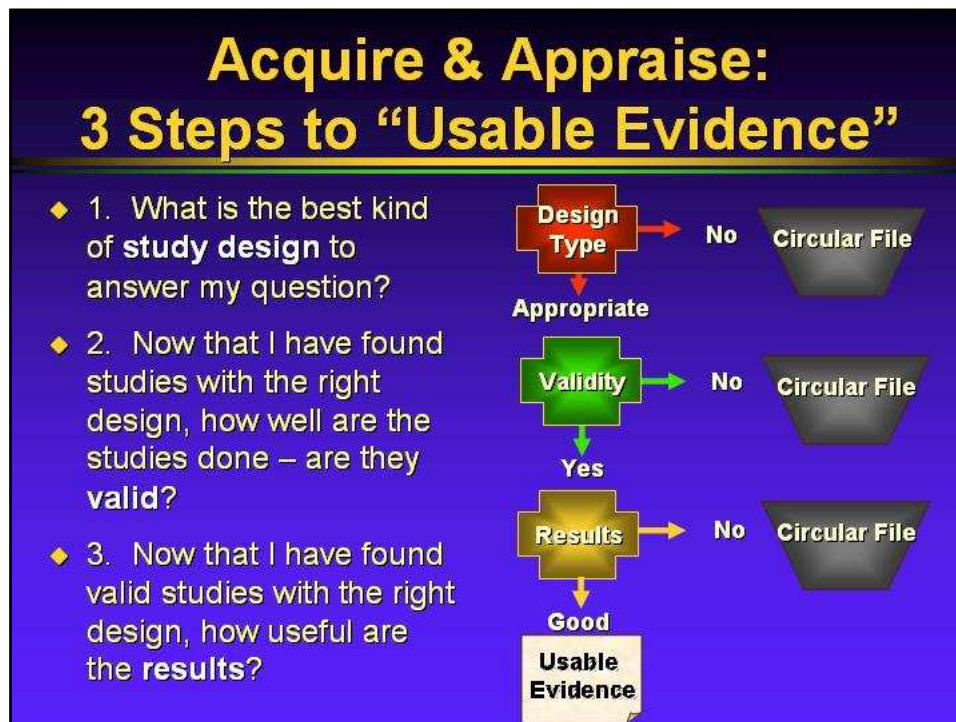
- Were exposure and outcomes measured similarly in the groups compared?
- Were the comparison groups similar in outcome in all respects except for the variable studied?
- Was the follow-up adequate?




Critical Appraisal

Prognosis


- Was the patient sample representative at a well-defined point in the course of the disease or disorder?
- Was the length of follow-up adequate?
- Was the follow-up complete?



Step 4: Applying the Evidence




- Once you have determined that a study is internally valid (step 3), you must decide how the study and/or other information applies to your question.
- To reach your conclusion you may consult questions related to **diagnosis, therapy, harm, and prognosis**.
- Keep in mind that you must interpret the information based on a number of criteria and depending on your skill and experience, you may need to confer with a peer.




Applying the Evidence -Diagnosis

- Is the test affordable, accurate, and available in my hospital?
- Can I estimate the pretest probability of the disease in question?
- Will the prosttest probability affect my management?




Applying the Evidence -Therapy

- Is my patient so different from those in the study group that the results cannot be applied.
- According to the study results, how much would my patient benefit from the treatment.



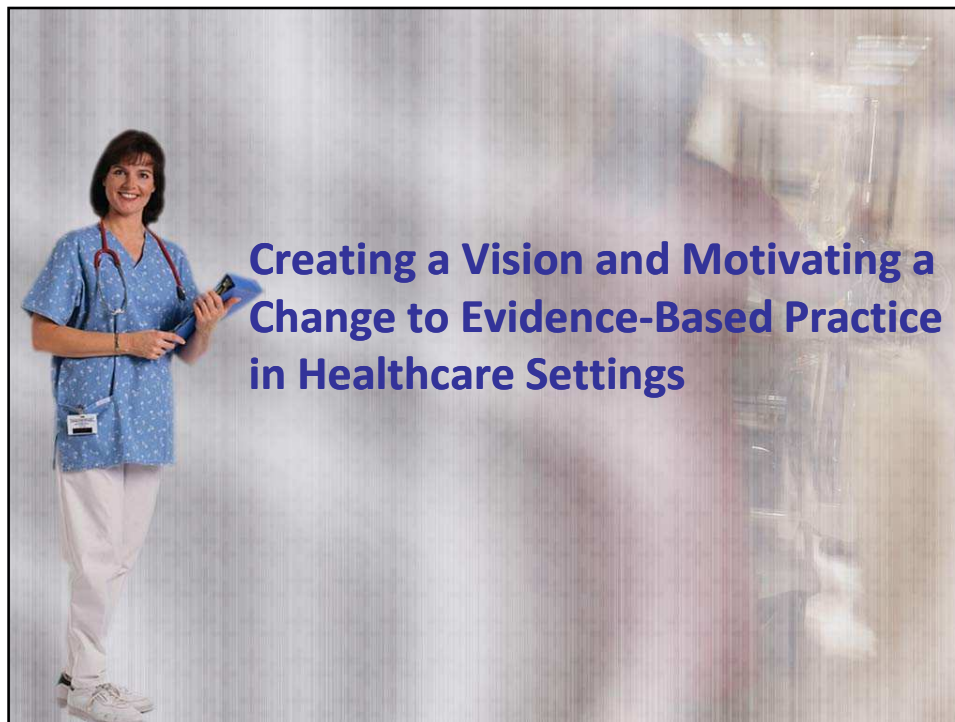
Applying the Evidence -Harm

- Can the study results be applied to my patient?
- What is my patient's risk for adverse effects?
- Are there alternative therapies?



Applying the Evidence -Prognosis

- Is my patient similar to the patients in the study group?
- How will evidence influence my choice of treatment?

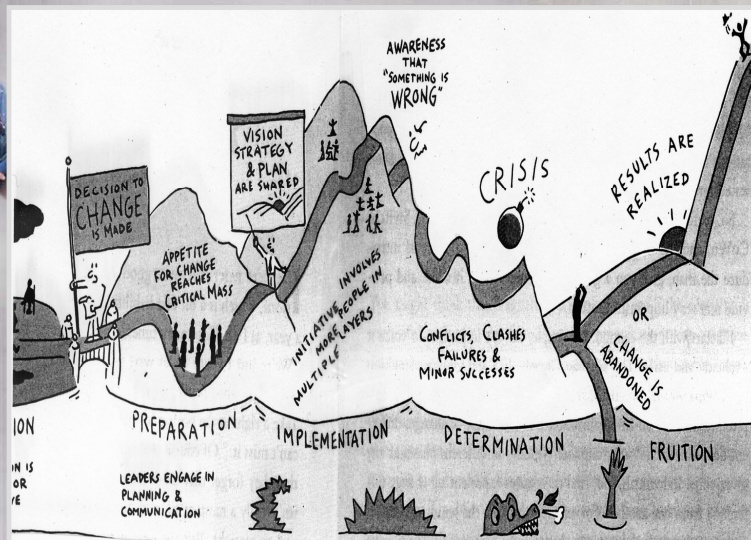



Key Ingredients for Organizational Change



- ☐ A vision with well defined strategic plan and goals.
- ☐ Strong belief about its accomplishment.
- ☐ Clear communication of that vision & plan.
- ☐ Strategies to overcome barriers.
- ☐ Champions and EBP mentors.
- ☐ Knowledge & skills building workshops.
- ☐ Resources, including computers at point of care.
- ☐ Persistence through the “character-building” times.
- ☐ Recognition and rewards.


Knowing what to expect as part of the change process will enhance success!






Step 5: Re-evaluating the Evidence

- In the process of executing evidence-based practice, you have developed a clinical question (step 1), sought out answers to verify and support your clinical decision (steps 2 and 3) and ultimately applied the findings to your patient (step 4).
- The last step in this process is to evaluate the effectiveness and efficacy of your decision in direct relation to your patient



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Cont....

You may ask questions such as:

- Was the diagnosis and treatment successful?
- Is there new information/data in the literature?
- How can I improve and/or update my clinical decisions?
- All of these questions require thoughtful action and keeping up-to-date with the current literature




Importance of EBN and barriers to practice

- ☐ Investing in EBN can assist in the lifelong learning and clinical performance of health care professionals.
- ☐ The Centre for Evidence-Based Medicine's "Background to EBM" addresses the importance of EBM/EBN by providing data that illustrate clinical performance and up-to-date knowledge deteriorates with time.
- ☐ The implementation of a new decision-making model may seem daunting, particularly for those feeling pressed for time.
- ☐ Despite a positive attitude about EBN, you may face some barriers to practicing EBN.



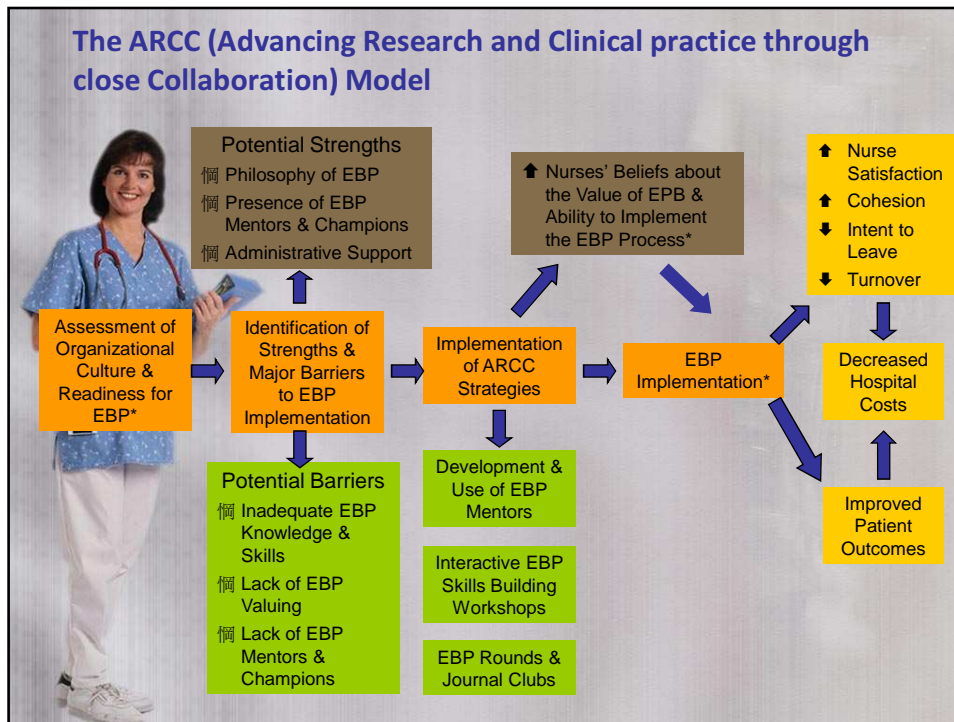
Barriers

- Nurses lack
- Lack of nursing research
- Knowledge transfer
- Nurse
- Research utilization




Solution

- Climate for EBP by leadership
- Researchers or clinical experts in research analyses
- Librarian
- Task force utilizing a process for EBP
- P&P
- Impeded of EBP in computer solution
- Resources
- Politics




Advantages

- ☐ Clinicians upgrade their knowledge base
- ☐ It improves clinicians' understanding of research and its methods;
- ☐ It improves confidence in managing clinical situations;
- ☐ It improves computer literacy and data searching skills;
- ☐ It allows group problem solving and teaching;
- ☐ Juniors can contribute as well as seniors;
- ☐ For patients, it is a more effective use of resources.




Advantages

- ❑ It allows better communication with the patient about the rationale behind treatment;
- ❑ It improves our reading habit;
- ❑ It leads us to ask questions, and then to be skeptical of the answers;
- ❑ What better definition is there of sciences?
- ❑ Wasteful practices can be abandoned;
- ❑ Evidence-based medicine presupposes that we keep up-to-date, and makes it worthwhile to take trips around the perimeter of our knowledge;
- ❑ Evidence-based medicine opens decision making processes to patients



Disadvantages

- ❖ It takes time to learn the methods and to put them into practice;
- ❖ There is the financial cost of buying and maintaining equipment;
- ❖ Medline and other electronic databases are not always comprehensive;
- ❖ Authoritarian practitioners may find these methods threatening.



The Generation of High Quality Evidence is Absolutely Necessary for EBP to Advance

**We Must Become an
“Evidence-Seeking” Profession**

-D. Rothenberger

We must generate practice based evidence!




Advancing and Teaching EBP calls for a *paradigm shift* in educational programs and the fusion of clinical practice and research



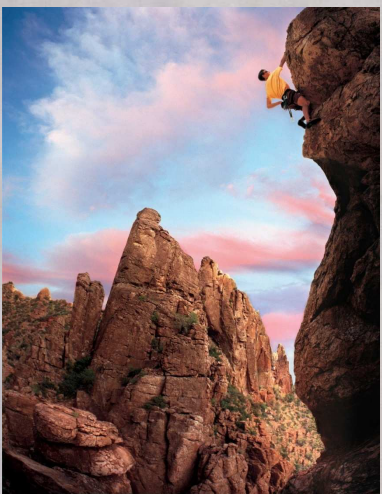
RESEARCH EBP PRACTICE

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

-William James



Failure is Not an Option!

-Gene Krantz



Thank You

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