HLC Accreditation 2020-2021

Evidence Document

Wichita State University | University Libraries

EBP Portal: Library Faculty -- Health Professions Faculty Collaboration

Additional information:

College of Health Professions Evidence Based Practice Portal

What is Evidence Based Practice?

Evidence-based practice (EBP) is a way of approaching decision making about clinical issues. It is more than just the EBP research process outlined in the five A's below. It is a means of making decisions

- with the best and most current knowledge possible from science and from practice (for example, quality improvement or core measures data)
- as that knowledge is interpreted by a clinician (with that person's expertise, experience, life knowledge and intuition completely integrated into the interpretation)
- and with the collaboration with the patient, where the doctor or nurse values what s/he wants as the outcome for this decision and why.

Patient preferences, as they are called, sometimes change when clinicians explain the science as interpreted through their expertise - we call these informed patient preferences. This enables the best outcome to be achieved for that patient.

The University of Minnesota Libraries- Health Sciences Libraries has produced a module called *What is Evidence Based Practice?* for further information.

EBP Research Portal Goals

- Train professional students to quickly access evidence during their clinical work.
- Introduce College of Health Professions students to concepts related to information literacy and lifelong learning, including the skills needed for finding information efficiently, selecting relevant information sources, evaluating information for authority and credibility, and using information for a specific purpose.
- Provide CHP students with online, self-paced instructional resources for improving research skills.

This Portal was created as a collaborative effort between the Wichita State University College of Health Professions and the University Libraries.

Ask

PICO

This module covers formulating a well-built research question using the PICO method of asking questions in a clinical setting. **PICO** is a mnemonic that helps you remember what questions to ask in a clinical setting.

These resources have more information on PICO:

- The Well-Built Clinical Question - from Duke University's EBP guide
- Forming Focused Questions with PICO - an interactive tutorial based on different specialties from UNC Chapel Hill's PICO tutorial

- Clinical questions logbook from Knowledge Translation Canada

PICO Examples

Element of the clinical question	**Patient** Describe as accurately as possible the patient or group of patients of interest	**Intervention (or cause, prognosis)** What is the main intervention or therapy you wish to consider? Including an exposure to disease, a diagnostic test, a prognostic factor, a treatment, a patient perception, a risk factor, etc.	**Comparison (optional)** Is there an alternative treatment to compare? Including no disease, placebo, a different prognotic factor, absence of risk factor, etc.	**Outcome** What is the clincial outcome, including a time horizon if relevant?
Example	In patients with acute bronchitis,	do antibiotics	none	reduce sputum production, cough or days off.?
Example	In children with cancer	what are the current treatments		in the management of fever and infection?
Example	Among family-members of patients undergoing diagnostic procedures	does standard care,	listening to tranquil music, or audiotaped comedy routines	make a difference in the reduction of reported anxiety.
Example	In patients with type 2 diabetes and obesity,	is bariatric surgery more effective	than standard medical therapy	at increasing the probability of remission of diabetes?

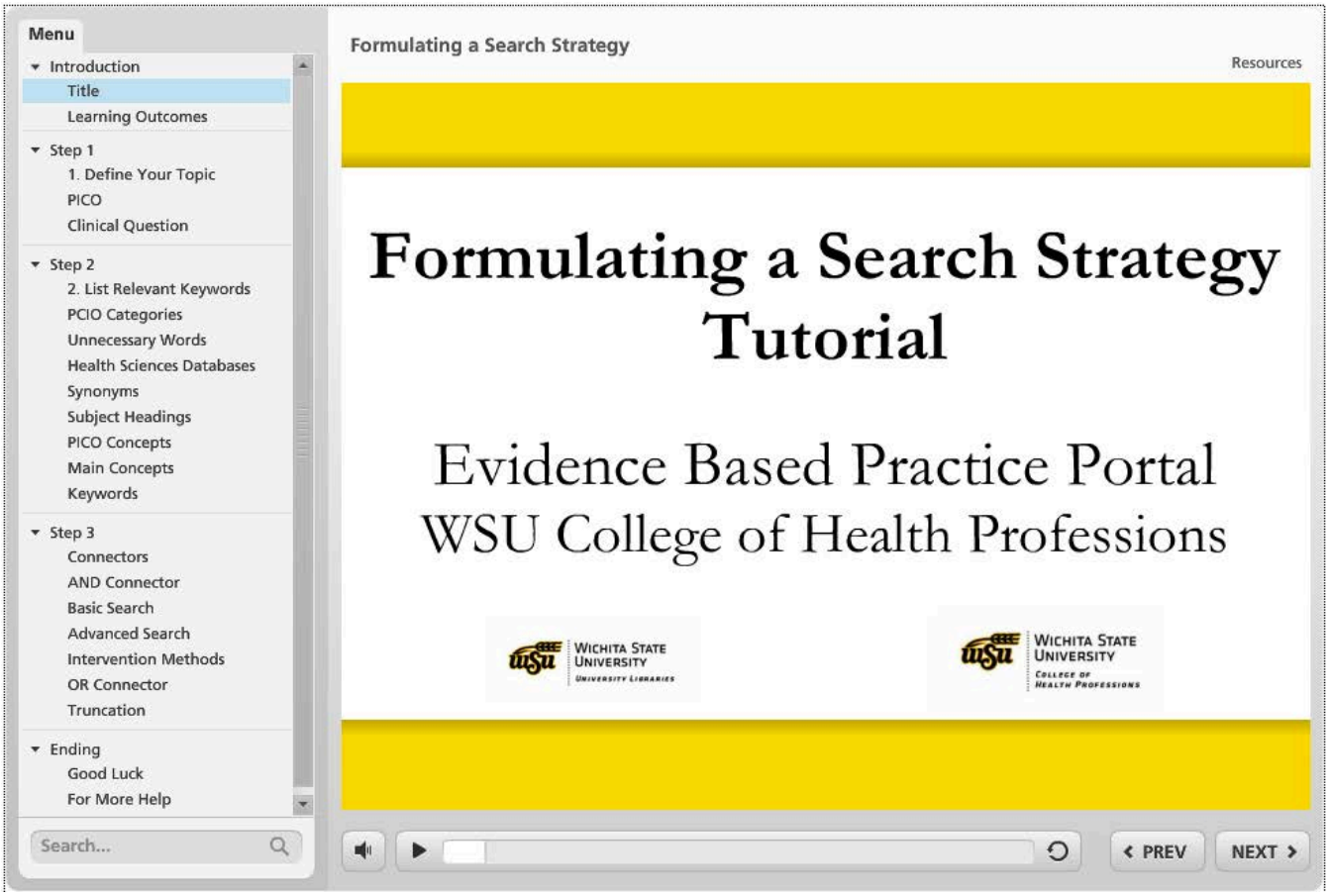
Acquire

This module covers searching for articles and other evidence-based information to answer your clinical question. The resources on this page will assist you in developing a successful search strategy that can be applied to any number of information sources.

Formulating a Search Strategy

This tutorial is designed to assist you in formulating a search strategy for acquiring evidence. The strategies discussed in this tutorial can be applied to any database. You will learn how to compile a list of keywords for your topic and determine how to organize those keywords in order to retrieve relevant articles.

View the tutorial by clicking on the link below (https://libtools.wichita.edu/tutorials/CHP_EBPP/story_html5.html).



If you would like to view the tutorial on a mobile device (including iPads), please click here.

Study Design

Different types of clinical questions are best answered by different types of research studies.

This table suggests study designs best suited to answer each type of clinical question.

Clinical Question	**Suggested Research Design(s)**
All Clinical Questions	**Systematic review, meta-analysis**
Therapy	**Randomized controlled trial (RCT), meta-analysis** Also: cohort study, case-control study, case series
Etiology	**Randomized controlled trial (RCT), meta-analysis, cohort study** Also: case-control study, case series
Diagnosis	**Randomized controlled trial (RCT)** Also: cohort study

Prevention	**Randomized controlled trial (RCT), meta-analysis** Also: prospective study, cohort study, case-control study, case series
Prognosis	**Cohort study** Also: case-control study, case series
Meaning	**Qualitative study**
Quality Improvement	**Randomized controlled trial (RCT)** Also: qualitative study
Cost	**Economic evaluation**

Source

Finding the Full Text of Articles

When Full Text is Available

Ideally, when searching for articles, you'll see one of these icons that indcate the full-text of an article is available electronically:

If you see one of those icons, just click the link to view, save, or print the article.

Your Next Step . . .

If you don't see the above full text links, you might see the 360Link icon:

This will let you know if the article is available in another database or if it's not available electronically. Click here for a detailed guide on 360 Link.

InterLibrary Loan (ILL)

If we don't have an article either electronically or in print, you can request that article through ILL. Click here and log in with your myWSU ID and password. Click on Article under the New Request menu and fill out the information in the form. Due to the RapidILL consortial agreement, articles are often delievered to your email as a PDF file in as little as an hour!

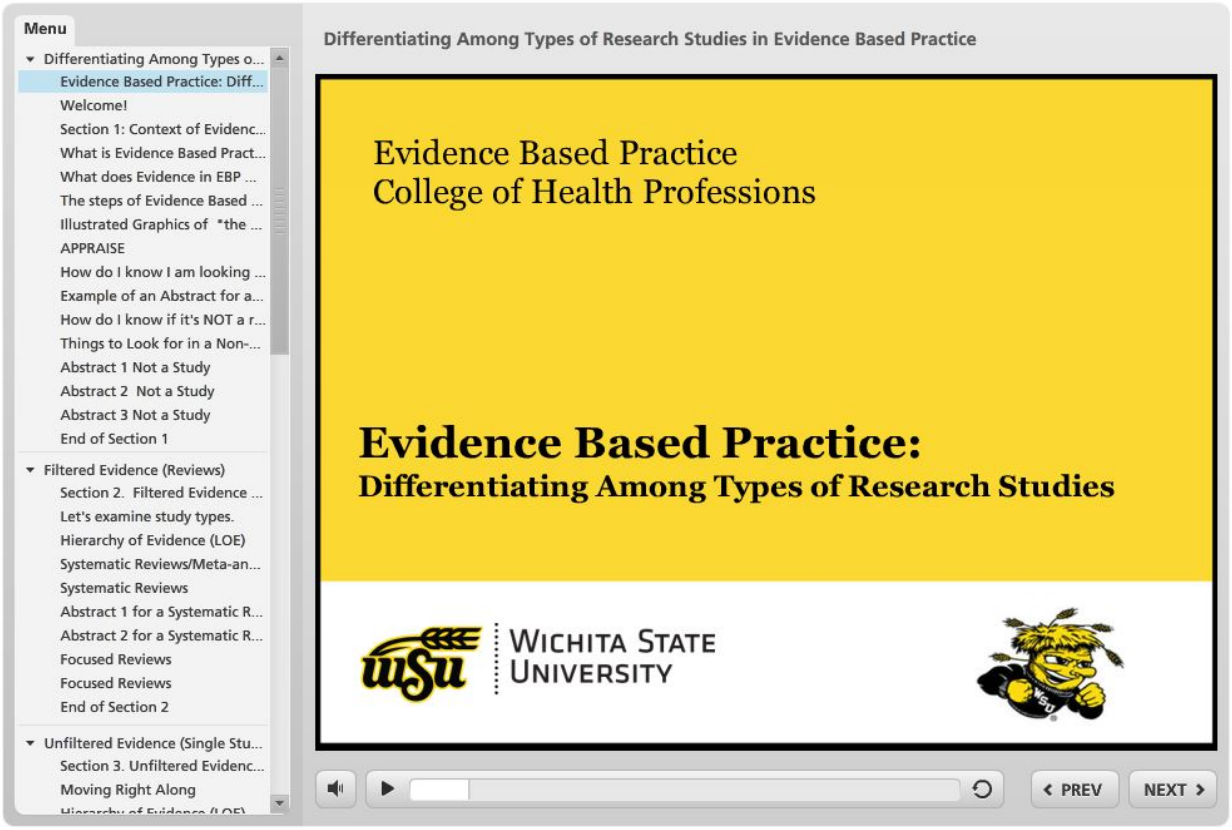
Appraise

Critical evaluation and appraisal is a very important part of the research process. You need to make sure you can identify where the information came from, its validity, and how relevant it is to your particular context. The tools on this page will help you with appriaising the information you find.

Differentiating Between Types of Studies Tutorial

- College of Health Professions tutorial: Differentiating Between Types of Studies

Please click on the link above to access this tutorial live on the web. Please also note that some versions of the Google Chrome browser have trouble displaying the presentation slides. If this is an issue, try a different browser.



Critical Evaluation

To a certain extent, you will have to rely on your own knowledge of the subject and your critical thinking skills when evaluating research. Some of the criteria to keep in mind when appraising evidence are:

Quality

Trials that are randomised and double blind, to avoid selection and observer bias, and where we know what happened to most of the subjects in the trial.

Validity

Trials that mimic clinical practice, or could be used in clinical practice, and with outcomes that make sense. For instance, in chronic disorders we want long-term, not short-term trials. We are [also] ... interested in outcomes that are large, useful, and statistically very significant ($p < 0.01$, a 1 in 100 chance of being wrong).

Size

Trials (or collections of trials) that have large numbers of patients, to avoid being wrong because of the random play of chance. For instance, to be sure that a number needed to treat (NNT) of 2.5 is really between 2 and 3, we need results from about 500 patients. If that NNT is above 5, we need data from thousands of patients.

These are the criteria on which we should judge evidence. For it to be strong evidence, it has to fulfil the requirements of all three criteria.

Source: Bandolier via the Oregon Health Sciences Library

These tools can help your appraisal by providing you with a list of items to look for.

- Critical Appraisal Checklist - from the Center of Evidence-Based Mental Health (CEBMH) website.
- Critical Appraisal Tools - from the Center of Evidence Based Medicine at the University of Oxford. Includes sheets and checklists in English and Spanish.

Systematic Reviews

Are the results of this article valid?

1. Did the review explicitly address a sensible question?

The systematic review should address a specific question that indicates the patient problem, the exposure and one or more outcomes. General reviews, which usually do not address specific questions, may be too broad to provide an answer to the clinical question for which you are seeking information.

2. Was the search for relevant studies detailed and exhaustive?

Researchers should conduct a thorough search of appropriate bibliographic databases. The databases and search strategies should be outlined in the methodology section. Researchers should also show evidence of searching for non-published evidence by contacting experts in the field. Cited references at the end of articles should also be checked.

3. Were the primary studies of high methodological quality?

Researchers should evaluate the validity of each study included in the systematic review. The same EBP criteria used to critically appraise studies should be used to evaluate studies to be included in the systematic review. Differences in study results may be explained by differences in methodology and study design.

4. Were selection and assessments of the included studies reproducible?

More than one researcher should evaluate each study and make decisions about its validity and inclusion. Bias (systematic errors) and mistakes (random errors) can be avoided when judgment is shared. A third reviewer should be available to break a tie vote.

Key issues for Systematic Reviews:

- focused question
- thorough literature search
- include validated studies
- selection of studies reproducible

What are the results?

Were the results similar from study to study?
How similar were the point estimates?
Do confidence intervals overlap between studies?

What are the overall results of the review?
Were results weighted both quantitatively and qualitatively in summary estimates?

How precise were the results?
What is the confidence interval for the summary or cumulative effect size?

More information on reading forest plots:

Ried K. Interpreting and understanding meta-analysis graphs: a practical guide. Aust Fam Physician. 2006 Aug;35(8):635-8. PubMed PMID: 16894442.

Greenhalgh T. Papers that summarise other papers (systematic reviews and meta-analyses). BMJ. 1997 Sep 13;315(7109):672-5. PubMed PMID: 9310574.

How can I apply the results to patient care?

Were all patient-important outcomes considered?
Did the review omit outcomes that could change decisions?

Are any postulated subgroup effects credible?
Were subgroup differences postulated before data analysis?
Were subgroup differences consistent across studies?

What is the overall quality of the evidence?
Were prevailing study design, size, and conduct reflected in a summary of the quality of evidence?

Are the benefits worth the costs and potential risks?
Does the cumulative effect size cross a test or therapeutic threshold?

Apply

Once you have found evidence in support of your clinical question, you must then apply it to your situation. This may mean applying the studies found to case patients or real patients in a clinical setting. The resources on this page will provide you with more information on the questions you should ask.

Questions to Ask Yourself

Diagnosis

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

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?

Harm

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

Prognosis

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

Source

Electronic Posters

A **scholarly poster** is a way of presenting data from a research project and are often used at professional conferences. Posters combines a small amount of text, along with pictures, charts, and graphs in a visually engaging way.

Resources for Designing Posters

- Making Posters with PowerPoint

Step-by-step advice and tips for designing high quality posters in PowerPoint.

- Presentation Zen

Excellent blog that showcases various presentations and talks about why they are great.

Tools for Creating Electronic Posters

- Google Presentation
- Haiku Deck
- Prezi
- Easel.ly

A free infographic creator. Infographics are a great way to synthesize data, and can be added to posters.

Helpful Articles

Preparing and presenting effective research posters. Miller JE, Bloustein EJ. Health Serv Res. 2007 Jan;42(1):311-28.

Ten steps to successful poster presentation. Hardicre J. Devitt P, Coad J. Br J Nurs. 2007 Apr 12;16(7):398-401.

Tip: Search for the article title in SmartSearch to access these articles.

Assess & Adjust

The final step in the Evidence Based Practice process is assessment and adjustment. As with any process, it is important to assess its success. When you applied the diagnosis or treatment, was it successful? Has any new data been published in the literature? How can you improve your clinical decisions?

This module will cover both assessment of the clinical setting as well as self-assessment techniques. Strategies for adjusting the process are also provided.

Resources

- Health Technology Toolkitt

A needs-based health technology assessment model is used to provide methods to match the identified health needs of a population, to the most appropriate interventions. This toolkit is based on clinical and population health status and takes into account issues of gender equity, social justice and community participation.

- Ottawa Personal Decision Guide

This guide can help people assess their decision making needs, plan the next steps, and track their progress in decision making.

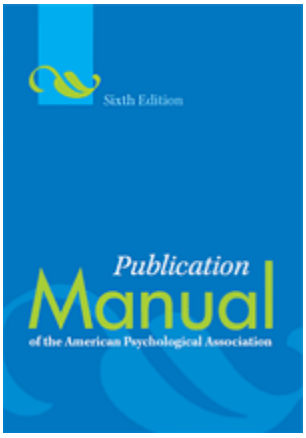
- EBM Decision Support Tools

Cite Your Work

The following resources will help you in providing credit to your sources and avoiding plagiarism (like in these cases) using the American Psychological Association (APA) citaiton format.

- APA Style Guide

From the OWL at Purdue, this is a comprehensive guide for citing papers in APA format.



- Citing Sources - APA

WSU University Libraries guide

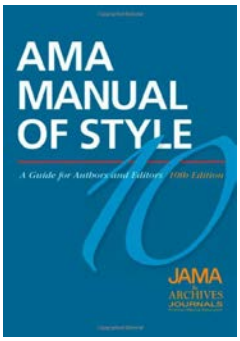
- Citing Internet Sources

This page from APA has information on citing material you find on web sites, including blogs.

- Citing Systematic Reviews

Information on citing systematic reviews found in The Cochrane Database.
Example citation:
Singh, J., Kour, K., & Jayaram Mahesh, B. (2012). Acetylcholinesterase inhibitors for schizophrenia. Cochrane Database of Systematic Reviews, 2012(1), 1–101. doi:10.1002/14651858.CD007967.pub2

American Medical Association - AMA



- Quick Guide to AMA Citations

Examples of books, webpages, journal articles, and reports.

- AMA Citations

Includes examples of in-text citations.

- Citing Websites with AMA

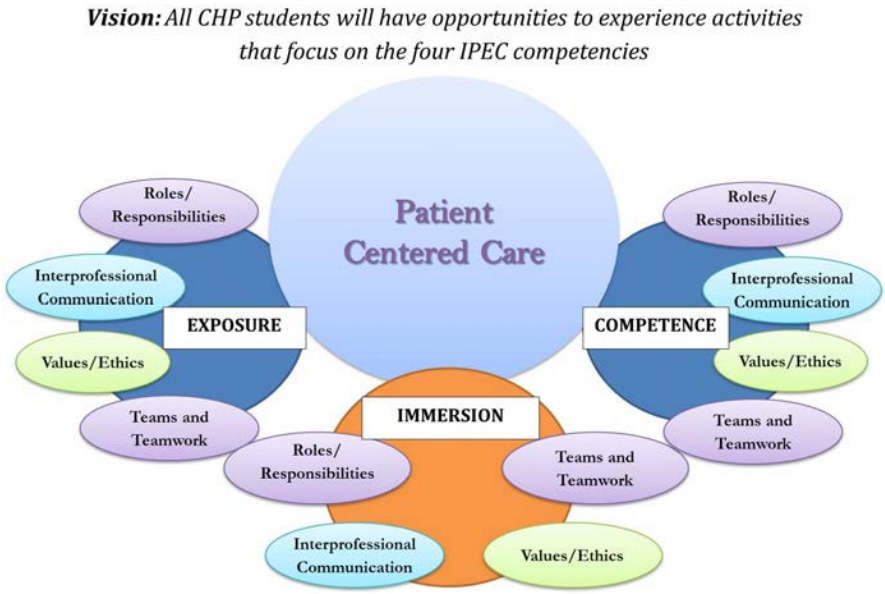
EndNote

EndNote is a citation manager that will assist you in storing and managing citations for research projects and papers. Use these guides to learn how to download and use EndNote to manage citations.

- EndNote Help Guide

College of Health Professions Interprofessional Education

- Interprofessional Education at CHP Website



Interprofessional Collaborative Practice Competencies

from The Association of American Medical Colleges (AAMC)

1. (Values/Ethics for Interprofessional Practice)

Work with individuals of other professions to maintain a climate of mutual respect and shared values.

*2. (*Roles/Responsibilities)

Use the knowledge of one's own role and those of other professions to appropriately assess and address the

healthcare needs of the patients and populations served.

*3. (*Interprofessional Communication)

Communicate with patients, families, communities, and other health professionals in a responsive and responsible

manner that supports a team approach to the maintenance of health and the treatment of disease.

4. (Teams and Teamwork)

Apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to

plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable.

- Interprofessional Collaborative Practice Competencies

For a more complete document of the interprofessional core competencies, please follow this link to the pdf.