EBP and the Medical Librarian
INLS710.01W.FA23
Syllabus Fall 2023

Evidence-Based Practice is the conscientious use of current best evidence in making decisions about patient care. It incorporates clinical expertise, current clinical research and patient preference and values into a shared decision-making process to improve health care. This course is designed to be an introduction to the process of evidence-based practice (EBP). This course will focus on understanding the knowledge management skills clinicians need to practice EBP, such as how to formulate relevant questions, efficiently search medical literature and evaluate the evidence for validity and applicability to the patient. The course also will focus on the role of the librarian in supporting EBP.

A prerequisite for this course is a basic understanding of search techniques for bibliographic databases such as MEDLINE (via PuMed or Ovid). The format of the course is a combination of course material, independent readings, self-correcting reviews and short essay exercises. Students are required to participate in discussions through the course Forums. In addition, a research paper demonstrating an understanding of EBP and its application to teaching and clinical practice is also required for UNC students.

Course Identifier: INLS710.01W.FA23 is approved for 3 academic credits to UNC students. [For practicing librarians, the course is approved for 35 MLA contact hours](). The course is offered twice a year in the Spring and Fall semesters. This is an online course available through Canvas.

For UNC/SILS students: There will be a mandatory PubMed searching session held during the first 2 to 3 weeks of the course. One of the course instructors will lead the session online through Zoom. UNC/SILS students will be contacted to determine the best day and time for the session.

Instructors:
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Target Audience: The course targets Library Science students interested in working in medical or health sciences libraries. The course is also open to practicing librarians for CE credit through the Medical Library Association.

Course Prerequisites: This course is an introduction to the process of Evidence-Based Practice (EBP) and to the supporting roles and opportunities for medical librarians.

Course Goals and Key Learning Objectives:
1. Identify and explain the 5 steps in the practice of EBP
2. Identify the parts of a well-built clinical question and use them to formulate a search strategy
3. Identify appropriate resources to answer clinical questions
4. Identify and explain the criteria for assessing the risk of bias in:
    a. Randomized controlled trials
    b. Systematic Review/Meta-Analysis
    c. Prognosis studies
    d. Harm/Etiology studies

e. Diagnosis testing studies
5. Identify and explain the basic statistical terminology used to report the results of randomized controlled trials and systematic reviews
6. Identify roles for librarians in supporting EBP training and practice for health care professionals

Course Content:

Module One: Introduction and Question Building
- What is EBP?
- Why is EBP important?
- Is it reasonable to expect evidence from the literature?
- What is the librarian's role in EBP?
- Constructing a Well-Built Clinical Question
- Study Designs in Clinical Research
- Complete Review 1A, Review 1B, and Exercise 1

Module Two: Selecting the Resources and Conducting the Search
- Selecting resources
- Searching PubMed/MEDLINE
- Complete Exercise 2A and 2B

Module Three: Evaluating the Evidence
A. Role of the Librarian in critical appraisal
B. Appraising articles on Therapy
C. Appraising articles of Systematic Reviews
D. Appraising articles on Diagnosis
E. Appraising articles on Prognosis
F. Appraising articles on Etiology/Harm
G. Complete Review 3 and Exercise 3 Therapy A, 3 Therapy B, 3 Systematic Review C
H. MLA CE librarians select and complete Exercise 3D, 3E, **or** 3F
I. UNC/SILS students complete Exercise 3D, 3E, **and** 3F

Module Four: Roles for the Librarian, Final Assignment
- Roles for the Librarian
- Final Assignment
- Class evaluation
- Capstone Project: For UNC/SILS students enrolled for academic credit ONLY

Course Requirements:

For each Module, participants and students should:
- Read the course manual – this is the main "text" for the course
- View and/or read the additional recommended material listed in the course manual
- Complete ALL of the Reviews and Exercises listed at the end of each Module
- Contact both instructors with specific questions about the course material
- Contribute to the class Forums to respond to discussion prompts and for general comments and questions
- ***MLA CE Participant Librarians:*** must complete all assignments by the designated course completion date to receive MLA CE credit. See course calendar for explicit dates and times.
- ***UNC/SILS Students:*** Attend a PubMed training session held online during the first 2-3 weeks of the course (set up by the instructors).
- ***UNC/SILS Students:*** Conduct in-depth research via the Capstone Project on a topic related to library roles in evidence-based practice. This is a multi-stage project with deliverables due after completion of the other modules. Deliverables include:
  - Topic selection and search strategy
  - Annotated bibliography/literature summaries

- o Abstract
  - o Conference poster

Schedule:
For practicing librarians receiving MLA credit, the course runs for 8 weeks.

For UNC students enrolled for academic credit, this is a semester-long course.

There is a weekly calendar, which serves as a guideline for keeping students focused on the cumulative class content.

Assignments are due on each Sunday of the course.

Please note that the following section only applies to UNC/SILS students

UNC/SILS Students: Course Policies, Grading, and Capstone Project Guidelines

GRADES: The course uses the UNC SILS grading levels for High / Pass / Low.

GRADE COMPONENTS:
Exercises: 30%
Final Exercise: 25%
Capstone Project: Annotated Bibliography/Literature Summaries: 20%
Capstone Project: Abstract: 10%
Capstone Project: Conference poster: 15%

LATE ASSIGNMENTS:
Late assignments – exercises or capstone project deliverables – will be subject to a 1-point per day deduction.

DISCUSSIONS:
The Discussions area is the main communication for interacting with other students in the course, many of whom will be practicing librarians. If you are new to EBP or medical librarianship this is an opportunity to ask questions of practicing librarians. Posting in the Discussons is not required, but is encouraged.

PUBMED SEARCHING SESSION:
For UNC/SILS students: There will be a mandatory PubMed searching session held during the first 2 to 3 weeks of the course. One of the course instructors will lead the session online through Zoom. UNC/SILS students will be contacted to determine the best day and time for the session.

COURSE EXERCISES:
In order to receive full credit for the Exercises, they must be submitted by the Sunday of the week they are due. See class schedule. You must complete all of the exercises. Individual feedback on every exercise will be given. In order to get the most out of the exercises, you should read all feedback before doing the next exercise. If you have any questions about the content or feedback please contact the instructors.
Exercises to complete:
  - Review 1A: PICO
  - Review 1B: Study Design
  - Exercise 1: PICO
  - Exercise 2A: Search Strategy
  - Exercise 2B: Search Strategy Critique
  - Review 3: Risk of Bias
  - Exercise 3A: Therapy 1
  - Exercise 3B: Therapy 2

- Exercise 3C: Systematic Review
- Exercise 3D: Diagnosis
- Exercise 3E: Prognosis
- Final Exercise: select ONE scenario
- Capstone project

CAPSTONE PROJECT (for UNC/SILS students only)

The capstone project consists of several steps: topic selection, literature search, annotated bibliography/literature summaries, abstract, and a digital conference poster. The project allows students to examine roles and opportunities for librarians and information specialists in evidence-based practice. Students will be expected to read, summarize, and then synthesize 8-10 articles on their topic. Students will write an abstract summarizing what they learn and will present the information in a digital conference-style poster. All deliverables will be due to instructors after completion of the course modules and exercises, allowing maximum focus on both course content and the capstone project. Students should see the course calendar for specific deliverables and due dates.

Deliverables:

A. **Topic selection and search strategy: October 8, 2023**

Students should select a topic from the list below. Students may choose an alternate topic with instructor approval. The search strategy should include search terms used to identify articles relevant to the topic.

Topic choices:
- What are library / information science services and programs that can enhance evidence-based clinical practice in a specific setting, such as graduate medical education, undergraduate medical education, pharmacy, physical therapy, etc.?
  - *Note – students selecting this topic should specify a specific setting or role, e.g., residents, nurses, surgeons, physical therapists, etc.*
- What are the barriers and / or challenges for clinicians in "doing" evidence-based clinical practice?
  - *Note – students selecting this topic could select a specific setting or role, e.g., residents, surgeons, physical therapists, etc.*
- What opportunities exist for library / information science professionals to address the challenges clinical providers face in using the best evidence in the process of clinical care?
- What kinds of instructional methods are used by librarians teaching evidence-based clinical practice in health professions curricula and how well do they work?

Format: Submit via course site and email a Word document to both Instructors.

B. **Annotated bibliography / Literature summaries: November 5, 2023**

This deliverable should include summaries of 8-10 relevant articles for the selected topic. Summaries should each be 1-2 paragraphs and each summary should be at least 250 words. Summaries should include descriptions of any interventions or programs, indicate setting, and describe findings. Summaries should not use quotes from the article but rather a synthesis in students' own words demonstrating the students' understanding of the research/program described in the article. Summaries are not a critical appraisal, but students can include information about methodological strengths and weaknesses.

Format: Word document with 8-10 article summaries organized as an annotated bibliography (ie, citation, then 1-2 paragraph summary of article). Any citation style is acceptable, but should be consistent. Submit to course site and email a Word document to both instructors.

C. **Abstract: November 19, 2023**

The abstract should summarize and synthesize what students learned from reading and writing literature summaries on their topic. Abstracts should be written in academic language and in a format as would be used in a conference proposal, such as Background, Findings, and Discussion. Note: since this project does not involve original research, we

have removed the traditional "methods" section since all methods should be the same – a review of relevant articles on the topic. Findings should describe information gained on the topic from the 8-10 articles presented in the annotated bibliography and may be organized thematically. Discussion section should include student conclusions, perspectives, observations, overall strengths/weaknesses and next steps for practitioners in the field. For help writing abstracts, see: The Structured Abstract: an Essential Tool for researchers. http://www.mlanet.org/page/structured-abstract

Format: Word document with structured abstract with sections for Background (60 to 100 words), Findings (100 to 200 words), and Discussion (100 to 200 words). Submit to course site and email a Word document to both instructors.

D. Conference Poster: December 3, 2023
This digital-only conference poster should be formatted using a clean but visually attractive template and should synthesize information from summaries and the abstract. The text on the conference poster does not need to match the abstract text exactly: additional information, graphics, tables, etc. are allowed. Visuals should be included where appropriate. It is OK to use images from the articles if cited correctly. Posters can be in PPT or PDF file types. Templates should be large enough to enable readability of text and visuals. Students can select their own template; we recommend reviewing tips and templates on https://gradschool.unc.edu/academics/resources/postertips.html Note: do not print a copy of this poster, this is a digital-only assignment.

Format: PPT or PDF. Submit to course site and email to both instructors.

GRADING CRITERIA FOR CAPSTONE PROJECT:
In grading the annotated bibliography/literature summaries, abstract, and conference poster, the following areas will be taken into consideration:

Literature Summaries
*   Are selected articles relevant to the topic?
*   Do summaries describe the research article with sufficient detail for readers to understand (ie, describe interventions or programs, indicate setting, describe findings)?
*   Do summaries provide a synthesis rather than rely on quotes?
*   Is the writing organized in a logical fashion?
*   Are sentences and word choice clear and unambiguous?
*   Are there typos or grammatical errors?
*   Are there 8-10 summaries of 8-10 unique articles?
*   Are summaries at least 250 words each?

Abstract:
*   How well does the abstract summarize and synthesize the findings from the literature summaries?
*   How well is the abstract written in academic language?
*   Is the abstract formatted with standard headings, such as Background, Findings, and Discussion?
*   How well does the abstract include student conclusions, perspectives, observations, overall strengths/weaknesses, and next steps for practitioners in the field?
*   Is the writing clear and unambiguous?
*   Are there typos or grammatical errors?

Conference Poster (15% of the course grade)
*   How well does the conference poster summarize and synthesize the findings from the literature summaries?
*   How well do visuals and graphics support the findings?
*   How well does the conference poster layout enable audience comprehension?
*   Are visuals referenced appropriately?
*   Is the writing clear and unambiguous?
*   Are there typos or grammatical errors?

COURSE RESOURCES:
All course resources are provided from the course site. No additional textbooks are required.

HONOR CODE:
Students are expected to support the principles of academic integrity and to refrain from all forms of academic dishonesty. See section IIB in The Instrument of Student Judicial Governance
https://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf

INSTRUCTORS:
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