

Example of Foundational EBP Application

1. **Title:** Understanding Literature Appraisal: Implementing Compilation Research in Clinical Practice
2. **NATA Practice Domains:** Domain V Organizational and Professional Health and Well-being
3. **Difficulty Level:** Essential, Advanced or Mastery
Advanced
4. **Learning Objectives: (Must be written with Bloom's Taxonomy)**
At the conclusion of the presentation, attendees will be able to:
 - 1) Identify common sources of compilation research
 - 2) Recognize the differences between systematic reviews, critically appraised topics, and meta analyses
 - 3) Explain the appraisal process of a research article using level of evidence scales (e.g. CEBM, SORT)
 - 4) Recognize the difference between levels of evidence and strength or grade of recommendation
 - 5) Interpret appraisal scale scores (e.g. PEDro, Jadad, QUADAs) commonly used in compilation research
5. **Provide the primary question(s) this program is intended to answer:** Programming is intended to promote Evidence Based Practice (EBP) within the profession by enhancing a clinician's ability to find and evaluate evidence, and apply it to their clinical practice. Programming must be organized around and address practical aspects of EBP. Instruction may also include knowledge gaps or the application of a relevant topic, such as critical appraisal or statistical analysis.
 1. What sources provide compilation research literature?
 2. What is the difference between the types of compilation research?
 3. What factors into determining the level of evidence of a research article?
 4. What types of research provide the highest level of evidence?
 5. What factors into determining an appraisal score?

The focus of this presentation will be to help clinicians understand where they can find the highest levels of research and how to appraise this evidence. Clinicians need to understand how to better utilize the resources that are available in order to optimize their time and patient care.

6. **Provide the Educational Need and Practice Gap for this Program:** Explain the overall educational need for this program and identify one specific practice gap. What is the gap between available evidence and current clinical practice? There may be gaps in knowledge, competency and/or performance. Why is it important to close this gap? Use citations where appropriate to support your position.

Athletic training clinicians have identified that they are uncomfortable with the concept of EBP and lack knowledge and confidence in the ability to find and appraise research pertinent to their patient care population.^{1,2,3} While this is not different from other professions⁴, there are resources that have been made available to athletic trainers to assist in improving their EBP knowledge.^{5,6} Many clinicians do not have previous education in EBP concepts, so they rely on previous formal training and clinical habits.^{2,7,8} The ability to appraise and understand current research is paramount to helping clinicians understand how best to implement research findings into clinical practice. Clinicians have indicated that they would like more compilation research that is already summarized and broken down for them.^{2,9} Resources such as Critically Appraised Topics, the NATA News Clinical Bottom line, and the EBP section of the Journal of Athletic Training are free to access and provide a summary of current evidence for practicing clinicians, yet many clinicians are unaware of these resources. Participants will be introduced to the following types of compilation research: critically appraised topics, meta-analyses, systematic reviews. The purpose of this presentation is to understand available compilation research and to introduce participants to the components of these types of research in order to accurately appraise the literature. Additionally, levels of evidence, grades of evidence, strength of recommendation, and various scoring rubrics used in the appraisal of evidence will be introduced. Understanding the types of research and appraisal terms will aid clinicians to feel more comfortable with the acquisition and appraisal of current literature.

7. **List of at least 3 peer reviewed references with current evidence addressing your primary question(s).**

1. Hankemeier, DA, Walter, JM, McCarty, CW, Newton, EJ, Walker, SE, Pribesh, SL, Jamali, BE, Manspeaker, SA, and Van Lunen, BL.(2013) Use of evidence-based Practice among athletic training educators, clinicians, and students, part 1: Perceived importance, knowledge, and confidence. *Journal of Athletic Training*. 48, 3, 394-404.
2. Hankemeier DA & Van Lunen BL. (2013). Perceptions of approved clinical instructors: barriers in the implementation of evidence-based practice. *Journal of Athletic Training*. 48(3), 382-93.

3. McCarty CW, Hankemeier DA, Walter JM, Newton EJ, & Van Lunen BL. (2013). Use of evidence-based practice among athletic training educators, clinicians, and students, part 2: attitudes, beliefs, accessibility, and barriers. *Journal of Athletic Training*. 48(3), 405-15.

4. Heiwe S, Kajermo KN, Tyni-Lenne R, et al. Evidence-based practice: attitudes, knowledge and behavior among allied health care professionals. *Int J Qual Health Care*. 2011;23(2):198–209.

5. Hootman JM. New section in JAT: evidence-based practice. (Editorial). *Journal of Athletic Training*. 2004;39(1):9-9.

6. NATA. Evidence-based practice in athletic training. <http://nata.org/Evidence-based-Practice-in-Athletic-Training>. Accessed August 1, 2013.

7. Welch CL, Walker SE, Manspeaker SA, Hankemeier DA, Browns SD, & Oñate JA. (2011). Athletic training educator's knowledge, comfort, and perceived importance of evidence-based practice. *Athletic Training Education Journal*. 6(1), 5-14.

8. Mazerolle SM, Pinkus DE, Casa DJ, McDermott BP, Pagnotta KD, Ruiz RC, Armstrong LE, & Maresh CM. (2011). Evidence-based medicine and the recognition and treatment of exertional heat stroke, part II: a perspective from the clinical athletic trainer. *Journal of Athletic Training*. 46(5), 533-42.

9. Manspeaker SA & Van Lunen BL. (2011). Overcoming barriers to implementation of evidence-based practice concepts in athletic training education: Perceptions of select educators. *Journal of Athletic Training*. 46, 5, 515-522.

8. **Please provide the learning methods utilized in this program.** Educational methods should be appropriate for the program's objectives, pedagogy and facilities as well as the intended audience's skill level.

The presentation will be based in a lecture format that uses questions to stimulate audience participation. Through discussion of the types of compilation research, participants will be given examples of specific journals and search databases that house high quality evidence. Individuals will be informed on where to find critically appraised topics, systematic reviews, and meta-analyses. These types of research often refer to a specific level of evidence from either the CEBM or SORT scale, or an appraisal scale score from PEDro, Jadad, or QUADAS, so participants will also learn how to interpret this information. Understanding how to read and interpret the components of compilation research will help participants better analyze the literature. Understanding the difference between levels of evidence and grades or strength of recommendations will help clinicians evaluate individual articles as well as understand clinical

recommendations based on a body of evidence. Since lack of appraisal skills is commonly identified by clinicians, creating dialog and opportunities for discussion will allow participants to voice concerns and questions they have regarding the appraisal process.

9. List all known instructors and their credentials:

Dorice Hankemeier, PhD, LAT, ATC