Evidence-Based Practice Competencies

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Background
R25 Program Funded by NCCAM/NIH

- CAM Practitioner Research Education Project Grant Partnership
  - PAR-04-097
  - PAR-08-095
- Grants awarded to 9 CAM schools that train DCs, DOs, NDs, & TCM practitioners
Purpose

• “Increase the quality and quantity of the research content in the curricula...to enhance CAM practitioners’ exposure to, understanding of, and appreciation of the evidenced-based biomedical research literature and approaches to advancing scientific knowledge.”
Aims

• Curriculum Development
• Faculty Development
• Mentored Research
• Dissemination
• Evaluation
Collaborations

• Required Partnership with a conventional medical institution

• In Portland: Oregon Health & Science University
  – School of Medicine
  – School of Nursing
Competencies
The graduate must be able to:

- Conduct in-depth assessment
- Rapidly access/digest high quality pre-filtered sources

(based on the Sicily conference, Dawes 2005)
- **ASK** a searchable clinical question
- **ACCESS** the best evidence available
- **APRAISE** the quality and applicability of that evidence
- **APPLY** the evidence into the care being offered
- **ASSESS** effectiveness
R25 Curriculum Committee

• Creation of the competency document
  – > 50 meetings.
  – EBP journals & texts
  – Seed document & endless iterations

• Operationalize & determine EBP weightings
  – Working level: Minimum for graduation
  – Advanced: useful, level of general faculty
  – Expert: for core EBP course instructor, researcher
Contents

• 6 Standards
• 33 Main Learning Objectives
• 135 Specific Competencies
• “Training the EBP Practitioner: Standards, Learning Objectives and Competencies”
  – 25-page PDF used to construct curriculum
  – [www.uws.edu](http://www.uws.edu) -> Research menu -> EBP resources

• Process Details
3. **Standard 3:** The EBP competent practitioner can effectively and efficiently access, retrieve and manage useful, up-to-date health care information and evidence. ¹, p. 31

3.1. Can design and conduct an effective and efficient literature/information search. (1.0)

1. Can define and discuss the suitability of evidenced-based professional journals, open-source journals, peer-reviewed journals, trade journals and lay publications depending on the nature of the information required. (1.0)

2. Can select an appropriate search engine or database. (1.0)
   a. Recognizes that each database has a unique focus and selects appropriately. (1.0)

3. Can select sources based on time considerations. (1.0)
   a. Understands the need to access quality information in a busy practice setting. (1.0)
   b. Can demonstrate a strategy of how to use pre-filtered sources to aid rapid evaluation. (1.0)¹¹, p. 12

4. Can select sources based on effectiveness and comprehensiveness. (1.0)
   a. Understands the role of primary studies when more in-depth evaluation is desired or a search of filtered resources is unproductive (e.g., MEDLINE, PUBMED, Mantis). (1.0)

5. Can select appropriate sources based on whether the goal is browsing (“foraging”) or problem-solving (“hunting”). (1.0)¹², p. 8

6. Can select appropriate primary vs. secondary vs. tertiary sources. (1.0)
   a. Understands the role of primary sources. (1.0)
      i. Can define what a primary source is and cite examples. (1.0)
      ii. Can cite the advantages and disadvantages of using a primary source. (1.0)

   b. Understands the role of secondary sources. (1.0)
      i. Can define what a secondary source is and cite examples. (1.0)
      ii. Can cite the advantages and disadvantages of using a secondary source. (1.0)

   c. Understands the role of tertiary sources (e.g., textbooks). (1.0)
      i. Can define what a tertiary source is and cite examples. (1.0)
      ii. Can cite the advantages and disadvantages of using tertiary sources. (1.0)
1. Summarize EBP
The EBP practitioner can present a general overview of the characteristics & principles of EBP

• 1.1. Can describe EBP
• 1.2. Differentiates scientific evidence from other knowledge
• 1.3. Balances patient- and disease-oriented evidence
• 1.4. Can explain steps for rapid & in-depth data acquisition
• 1.5. Can articulate the advantages of EBP
• 1.6. Can address controversial issues
2. Form the Question

Can translate an issue of clinical uncertainty into an answerable question

• 2.1. Understands the issues relating to clinical ambiguity & uncertainty
• 2.2. Translates uncertainty / knowledge gaps into a searchable question
3. Find & Judge the Source
Can efficiently and effectively search for and retrieve useful and up-to-date health-care information and evidence

• 3.1. Can design & conduct an effective & efficient search
• 3.2. Familiar with “best” resources for finding evidence
• 3.3. Can retrieve previously searched health care information
4. Judge the Evidence
Critically appraises the evidence for validity and clinical importance

• 4.1. Rates quality of different levels of evidence; strengths/weaknesses
• 4.2. Conceptual understanding of biostatistics as they apply to EBP
• 4.3. Design & hierarchy of different designs; strengths & weaknesses
• 4.4. Characteristics that determine the quality of research studies
• 4.5. Characteristics of diagnostic tests
• 4.6. Studies of diagnostic tests.
• 4.7. Studies of differential diagnosis
• 4.8. Studies of treatment
• 4.9. Studies of prognosis
• 4.10. Studies of harm
• 4.11. Studies of cost-effectiveness
5. Judge the Clinical Applicability
Applies the relevant evidence to practice

• 5.1. Assesses the relevance to the clinical problem at hand
• 5.2. Selects & interprets diagnostic tests for a particular patient
• 5.3. Decides if a therapy is likely to be effective for a particular patient
• 5.4. Evaluates potential harm to a particular patient
• 5.5. Applies prognostic indicators to help predict a patient’s outcome
• 5.6. Understands how to select appropriate outcome measures
• 5.7. Develops a plan to apply new evidence to the patient’s situation
6. Judge How You Did

Engages in self evaluation of his/her process for accessing, appraising and incorporating new evidence into practice

• 6.1. Demonstrates the behavior necessary to maintain and improve EBP skills

• 6.2. Reflects on how well these activities are performed and continues to improve them
Incorporation in Curriculum
Coursework & Monitoring

- Coursework
  - 4 Core EBP courses
  - Non EBP Core course (all divisions all 4 years)
  - 3rd year OSCE – remedial class

- Mapping projects
45% give literature search assignment
45% cite level of evidence in lectures
88% cite validity indices for dx tests
86% model how evidence can be applied in clinical scenarios
34% cite clinical effect sizes for lectures on management
Team

**UWS**

- Mitch Haas, DC
  - PI
  - Evaluation Chair

- Dave Peterson, DC
  - Director
  - Faculty Training Chair
  - Outreach Chair

- Ron LeFebvre, DC
  - Co-Director
  - Curriculum Revision Chair
  - Protocol Development Chair

- Shireesh Bhalerao, DC
- Rich Gillete, PhD
- Janice Tapper, MLS
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**OHSU**

- Michelle Berlin, MD
  - Faculty Training Co-Chair
  - Curriculum Revision Co-Chair

- John Muench, MD, MPH
  - Outreach Co-Chair
  - Protocol Development Co-Chair

- Michael Leo, PhD
  - Evaluation Co-Chair

- Joe Istvan, PhD
  - Evaluation Co-Chair
Thank You!

I Think, Sort Of
Therefore I am, Maybe!
Mitch