



# Evidence-based Practice in Healthcare: Implications for Nursing Education

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[fuld.nursing.osu.edu](http://fuld.nursing.osu.edu)

# Objectives

Upon completion of this learning activity, participants will:

- Discuss the role of EBP in healthcare today
- Discuss the importance of integrating EBP into educational programs at all levels.
- Discuss tools to structure EBP integration into nursing curricula at all levels.



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# Adoption of the Patient Protection and Affordable Care Act changed U.S. Healthcare

Patient Protection and Affordable Care Act, Retrieved 3/30/18; Neiderman et al. 2011.














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## EXHIBIT ES-1. OVERALL RANKING

### COUNTRY RANKINGS

Top 2*
Middle
Bottom 2*

											
	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>OVERALL RANKING (2013)</b>	4	10	9	5	5	7	7	3	2	1	11
<b>Quality Care</b>	2	9	8	7	5	4	11	10	3	1	5
Effective Care	4	7	9	6	5	2	11	10	8	1	3
Safe Care	3	10	2	6	7	9	11	5	4	1	7
Coordinated Care	4	8	9	10	5	2	7	11	3	1	6
Patient-Centered Care	5	8	10	7	3	6	11	9	2	1	4
<b>Access</b>	8	9	11	2	4	7	6	4	2	1	9
Cost-Related Problem	9	5	10	4	8	6	3	1	7	1	11
Timeliness of Care	6	11	10	4	2	7	8	9	1	3	5
<b>Efficiency</b>	4	10	8	9	7	3	4	2	6	1	11
<b>Equity</b>	5	9	7	4	8	10	6	1	2	2	11
<b>Healthy Lives</b>	4	8	1	7	5	9	6	2	3	10	11
<b>Health Expenditures/Capita, 2011**</b>	\$3,800	\$4,522	\$4,118	\$4,495	\$5,099	\$3,182	\$5,669	\$3,925	\$5,643	\$3,405	\$8,508

**U.S. Healthcare is struggling**

Notes: \* Includes ties. \*\* Expenditures shown in \$US PPP (purchasing power parity); Australian \$ data are from 2010.

Source: Calculated by The Commonwealth Fund based on 2011 International Health Policy Survey of Sicker Adults; 2012 International Health Policy Survey of Primary Care Physicians; 2013 International Health Policy Survey; Commonwealth Fund National Scorecard 2011; World Health Organization; and Organization for Economic Cooperation and Development, *OECD Health Data, 2013* (Paris: OECD, Nov. 2013).



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**Unintended medical errors claim 440,000 people a year in the U.S.**



**BMJ 2016; 353:i2139**



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# EBP helps us get to The Institute of Medicine's Quadruple Aim in Healthcare



Institute for Healthcare Improvement, 2016,  
retrieved from  
<http://www.ihl.org/resources/Pages/AudioandVideo/WIHI-Moving-Upstream-to-Address-the-Quadruple-Aim.aspx>



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**EBP is  
an expectation  
in U.S.  
Healthcare!!**



**Accreditation Standards...Education Standards...Professional  
Organizations...Practice Guidelines...Policy**



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# The Establishment of Evidence-based Practice Competencies for Practicing Registered Nurses and Advanced Practice Nurses in Real-World Clinical Settings: Proficiencies to Improve Healthcare Quality, Reliability, Patient Outcomes, and Costs

2014

Bernadette Mazurek Melnyk, RN, PhD, CRNP FAANP, FNAP, FANN

Lynn Gallagher-Ford, RN, PhD, DPFNAP, NE-BC

Lisa English Long, RN, MSN, CNS

Ellen Fineout-Overholt, RN, PhD, FAAN

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## EBP Competencies:

- **First 13 for all practicing registered nurses**
- **Last 10 for advanced practice nurses**



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**Competency = Knowledge + Skills + Attitudes**



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# First National EBP Competency Study in U.S. Nurses

## Aims:

- Describe the state of EBP competency in nurses across the U.S.
- Determine important factors associated with EBP competency

## Methods/Sample:

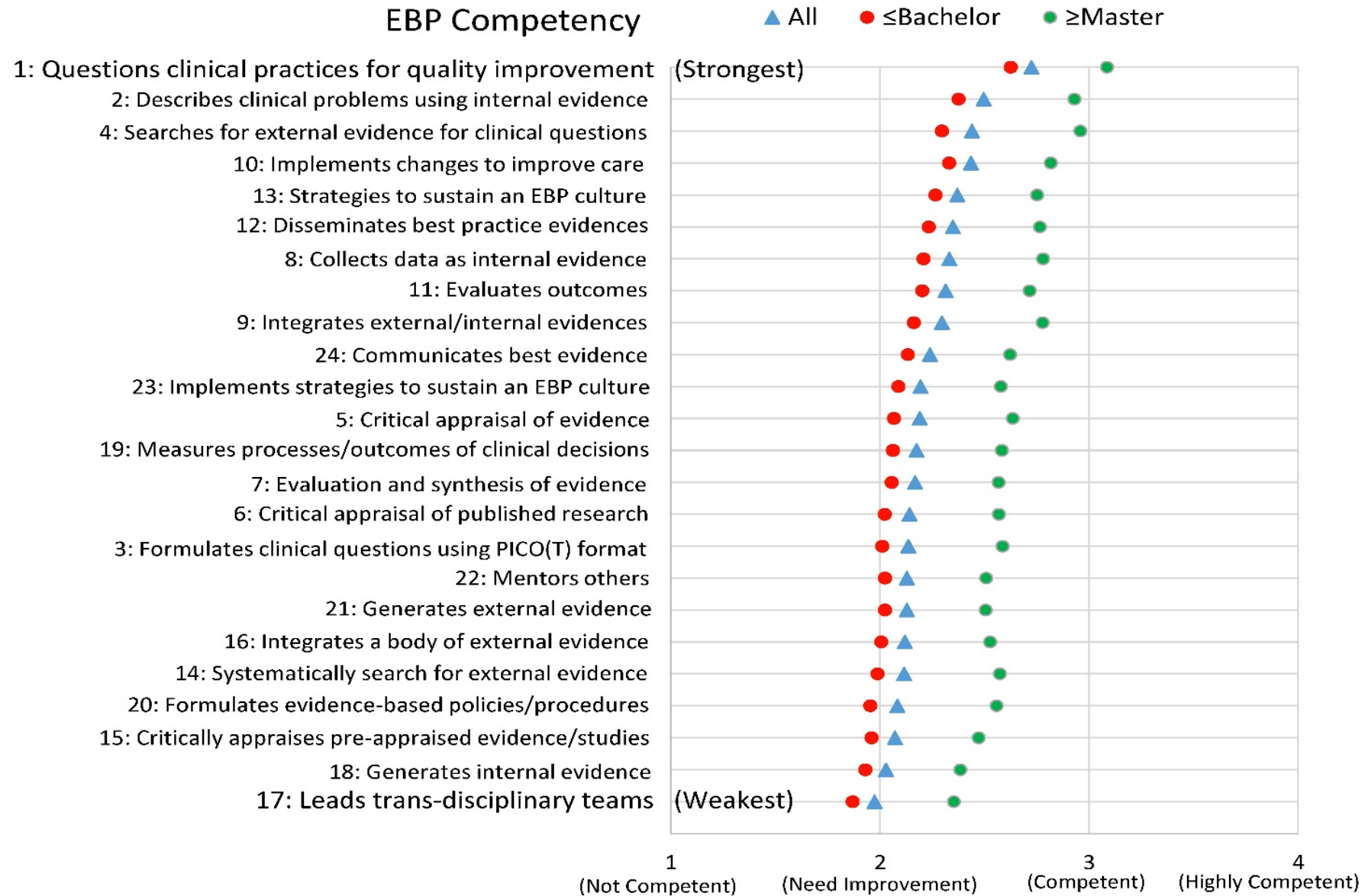
- Surveyed 2,344 nurses from 19 hospitals/healthcare
- Mean age = 44.5 years
- 92% female
- 85% non-Hispanic White
- 58% had a bachelor's degree
- 69.2% worked in a Magnet organization

Melnyk, Gallagher-Ford,  
Zellefrow, et al. 2018.



# State of Self-reported EBP Competencies by Nurses Across the United States (N = 2075)

## EBP Competency

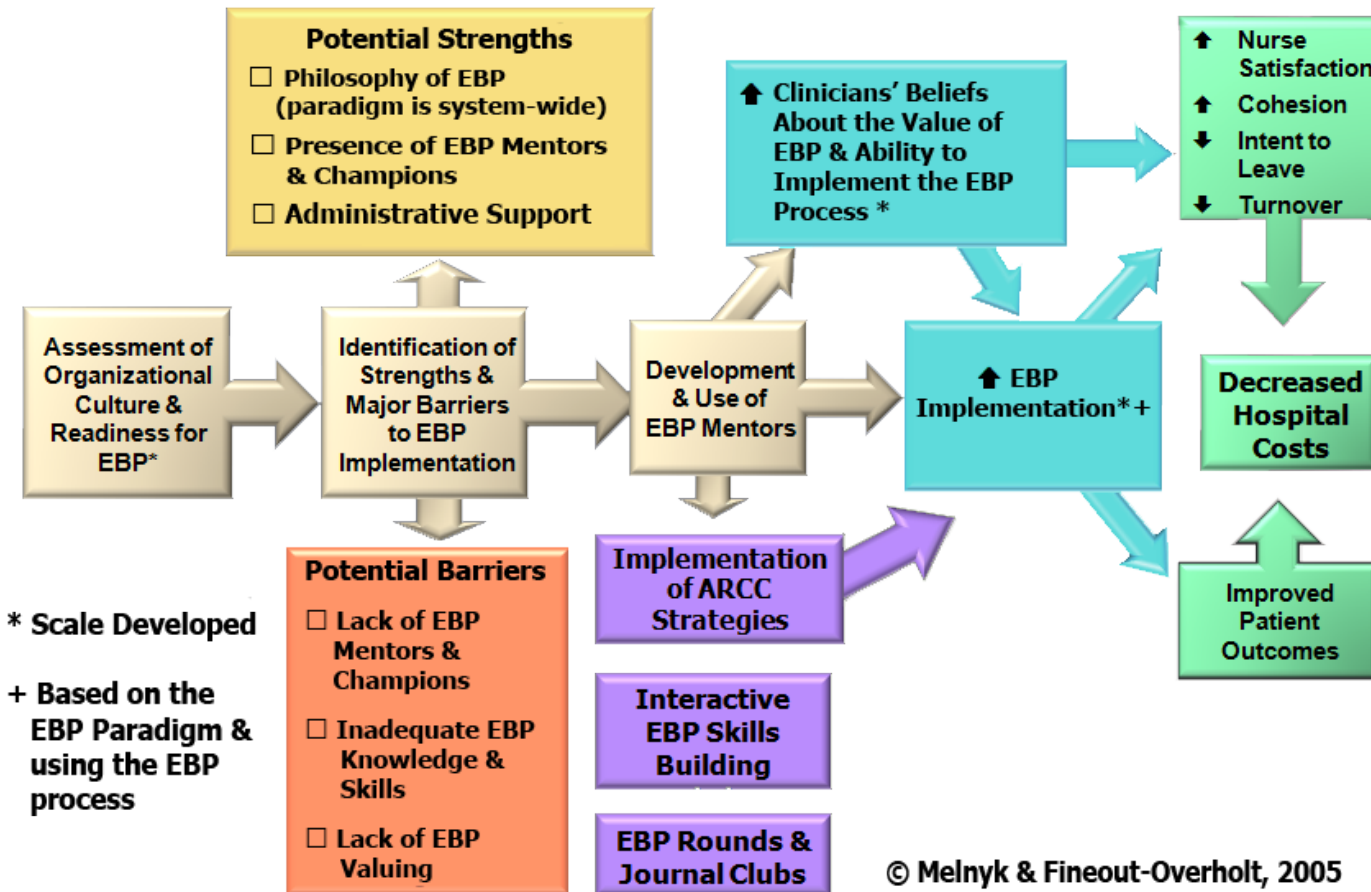




**EBP must  
become an  
integral part of  
nursing  
curricula**



# Choose an EBP model



Melnyk & Fineout-Overholt's Advancing Research and Clinical practice through Close collaboration (ARCC) Model



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# The EBP Competencies guide integration into curricula

## EBP Competencies for **all** Practicing Registered Professional Nurses

- **Searches for** external evidence
- **Participates in** the critical appraisal
- **Collects** practice data

## EBP Competencies for **Advanced Practice Nurses**

- **Systematically conducts** and exhaustive search
- **Critically appraises** relevant pre-appraised evidence
- **Generates internal evidence** through outcomes management
- ★ • **Mentors others** in evidence-based decision making
- ★ • **Leads transdisciplinary teams**



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## Commitment to Excellence:

- **Safe and Quality care**
- **Improved outcomes**
- **Patient Experience**
- **Lower healthcare costs**
- **Improved clinician outcomes**



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**We can't teach what we do not know AND clinicians can't  
implement what they don't know**



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# Meaningful integration of EBP into academic programs is key



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**The time has come for EBP integration!!**

**ready. set. go!**



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# Integrating Evidence-based Practice as a Way of Thinking in an Undergraduate Curriculum

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# Objectives

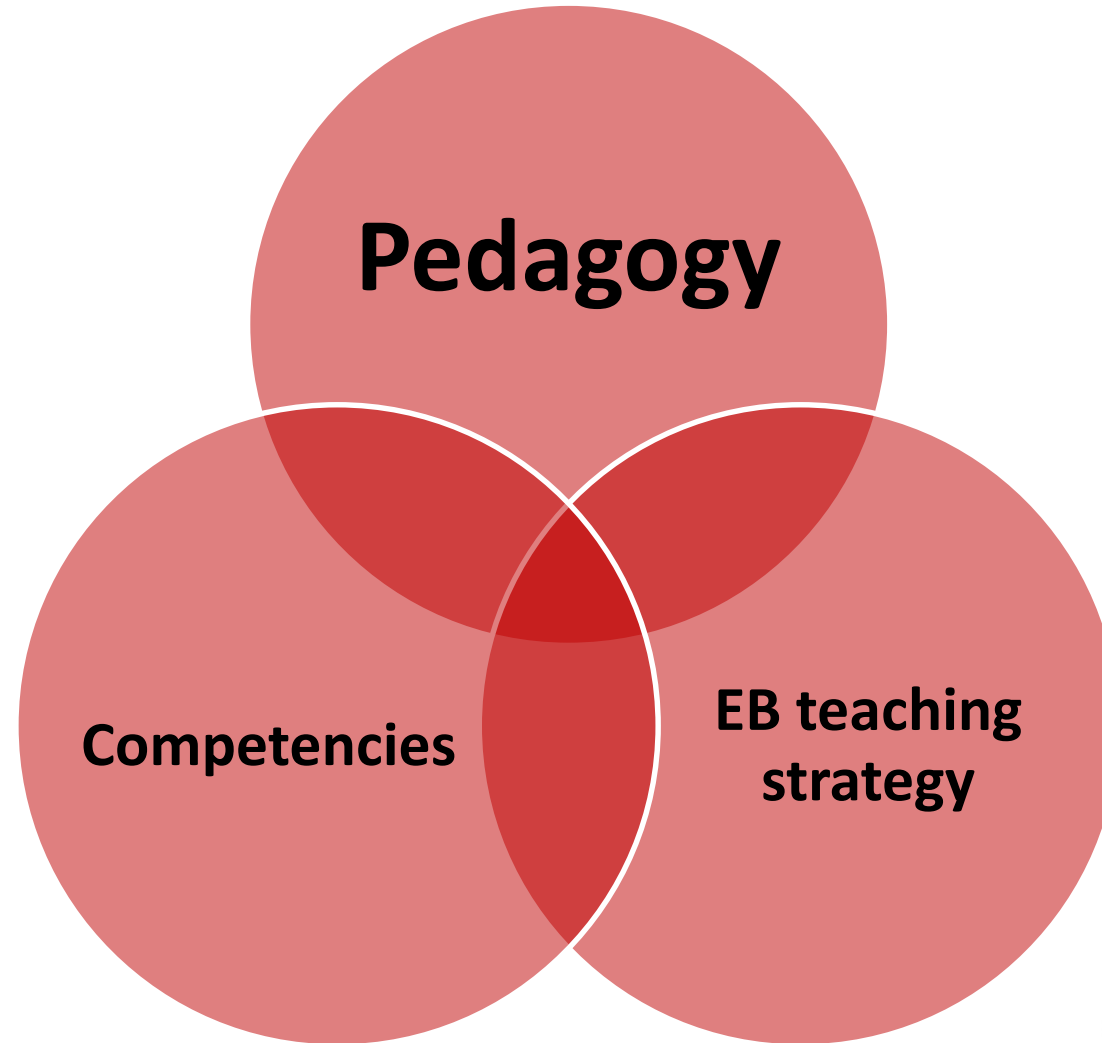
- Identify evidence-based pedagogies for teaching and learning evidence-based practice
- Discuss teaching evidence-based practice as a way of thinking about clinical-decision making
- Synthesize how evidence-based practice may be integrated throughout curriculum.



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# Pedagogy of Teaching EBP



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# Pedagogy and Epistemological Approaches

- EB teaching strategies vs. Teaching EBP
- *A way of Being and Thinking* with student
  - Constructivism
  - Social Learning Theory
- Synthesis
  - Higher level of thinking
  - Builds on lower levels (knowledge/comprehension)





# Competency-based Frameworks

- Pedagogy and competency-based
- Competency
  - Framework (Melnik et al, 2014)
  - Structure
- Teaching using framework
  - What is EB teaching
  - How does literature relate to teaching that competency



# Literature Review

- Pedagogical strategies to teach bachelor students evidence-based practice (Aglen, 2016)
  - Systematic Review
  - Students struggle with translation of EBP to practice – faculty need to focus on transfer of knowledge as relates to practice. (“real” work of nurses)
- Developing information literacy (IL) skills in pre-registration nurses (Brettell & Raynor, 2013)
  - RCT
  - Author recommends to incorporate IL throughout curriculum become competent in integrating EBP.



# Literature Review (con't)

- EBP teaching practice (EBTP) in nursing ed: Faculty Perspectives and Practices (Kalb et al, 2015)
  - Descriptive / Quantitative
  - Faculty value EBP, but need administrator support along with workload time for development
- Knowledge and Competency of Nursing Faculty Regarding EBP (Orta et. al, 2016)
  - Descriptive / Quantitative
  - Intervention increased competency, but not knowledge (Faculty knowledge was similar to students beginning EBP)



# Curricular Integration

- Outcome competency measurements for EBP throughout curriculum
- Integrate EB teaching strategies that create active learning
- Students learn how and when to find evidence at various stages in the curriculum



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# EBP as a way of THINKING



**How**

**EBP**



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# Student Perspectives



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# Framework for Integrating Evidence-based Practice (EBP) in an Undergraduate Curriculum

Amy Jauch, MSN, RN, CNE



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# Framework Overview

- Site Specific
  - Adapted for use in undergraduate nursing programs
- Faculty Driven
  - Where and how integrated



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# Framework Components

## Steps of EBP

STEP 0:	Cultivate a spirit of inquiry along with and EBP culture and environment
STEP 1:	Ask the PICO(T) question
STEP 2:	Search for the best evidence
STEP 3:	Critically appraise the evidence
STEP 4:	Integrate the evidence with clinical expertise and patient preferences to make the best clinical decision
STEP 5:	Evaluate the outcome(s) of the EBP practice change
STEP 6:	Disseminate the outcome(s)

(Melnik & Fineout-Overholt, 2015)



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# Framework Components

## EBP Competencies for Practicing Registered Professional Nurses

1. Questions clinical practices for the purpose of improving the quality of care.
2. Describes clinical problems using internal evidence.
3. Participates in the formulation of clinical questions using PICOT format.
4. Searches for external evidence to answer focused clinical questions.
5. Participates in critical appraisal of preappraised evidence.
6. Participates in critical appraisal of published research studies to determine their strength and applicability to clinical practice.
7. Participates in the evaluation and synthesis of a body of evidence gathered to determine its strength and applicability to clinical practice.

(Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014)



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# Framework Components

## EBP Competencies for Practicing Registered Professional Nurses

8. Collects practice data systematically as internal evidence for clinical decision making in the care of individuals, groups, and populations.
9. Integrates evidence gathered from external and internal sources in order to plan evidence-based practice changes
10. Implements practice changes based on evidence and clinical expertise and patient preferences to improve care processes and patient outcomes
11. Evaluates outcomes of evidence-based decisions and practice changes for individuals, groups, and populations to determine best practices.
12. Disseminates best practices supported by evidence to improve quality of care and patient outcomes.
13. Participates in strategies to sustain an evidence-based practice culture.

(Melnyk et al., 2014)



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# Alignment of EBP Steps and Competencies

**Step 0:** Cultivate  
a Spirit of  
Inquiry

- EBP Competencies 1, 2

**Step 1:** Ask the  
PICO(T)  
Question

- EBP Competency 3



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# Alignment of EBP Steps and Competencies

**Step 2:** Search  
for the best  
evidence

- EBP Competencies 4, 5, 6

**Step 3:** Critically  
appraise the  
evidence

- EBP Competencies 5, 6, 7



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# Alignment of EBP Steps and Competencies

**Step 4:** Integrate the evidence with clinical expertise & patient preferences to make the best clinical decision

- EBP Competencies 8, 9, & 10

**Step 5:** Evaluate the outcome(s) of the EBP practice change

- EBP Competency 11





# Alignment of EBP Steps and Competencies

**Step 6:**  
Disseminate the  
outcome(s)

- EBP Competency 12

## **EBP Competency 13:**

Participates in strategies to sustain an evidence-based practice culture.

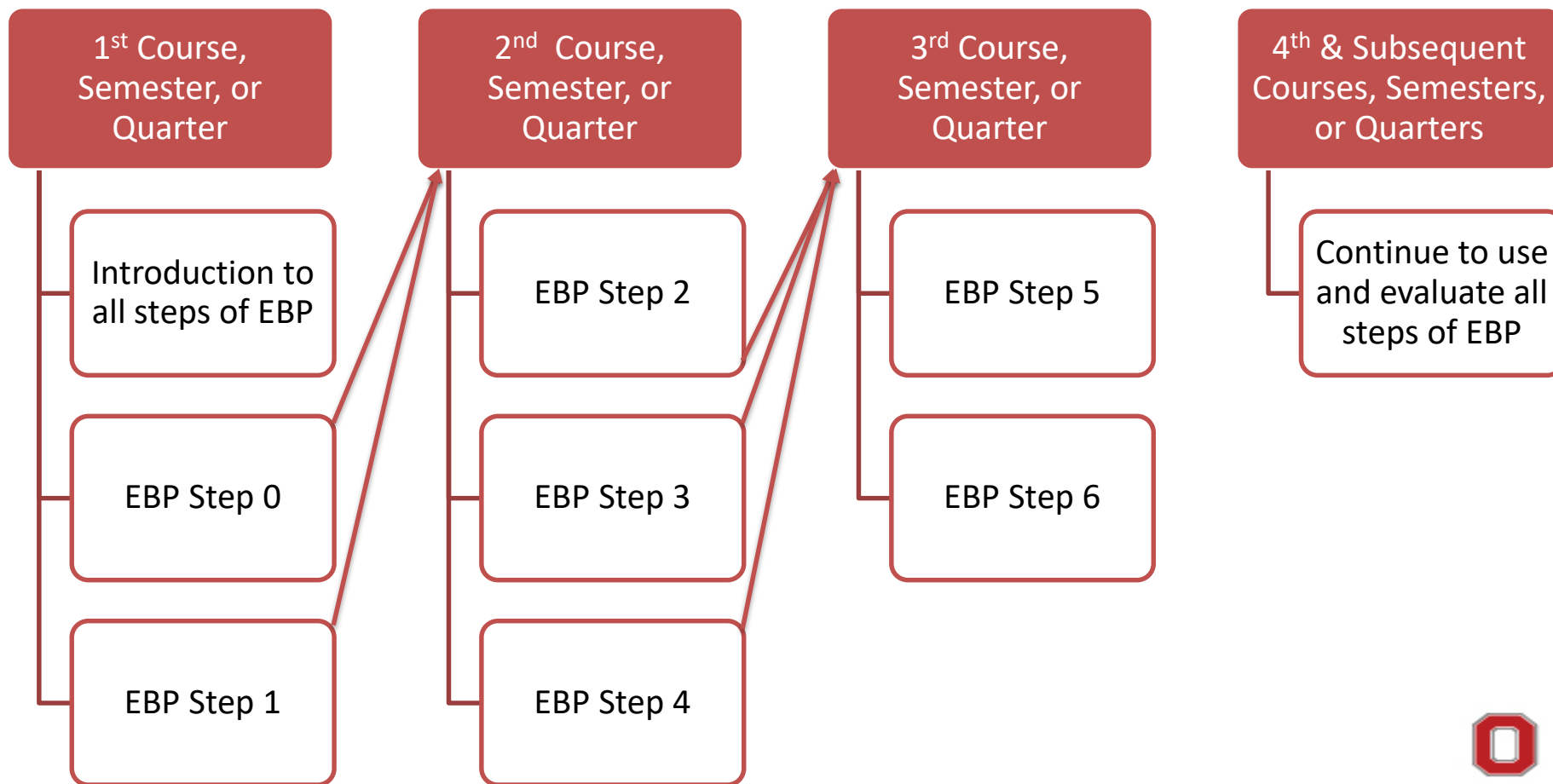


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# Curriculum Integration Example

Integrated through theory, clinical, and lab experiences.



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# Evaluation of EBP Competencies

## Step 0: Cultivate Spirit of Inquiry

EBP Competencies 1 & 2

Write clinical inquiry summary paragraph



## Step 1: Ask the PICO(T) Question

EBP Competency 3

Develop a PICOT question to search the literature



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# Evaluation of EBP Competencies

## Step 2: Search for the best evidence

EBP Competencies 4, 5, 6

Summary table of evidence found, including search strategies



## Step 3: Critically appraise the evidence

EBP competencies 5, 6, 7

Complete critical appraisal forms



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# Evaluation of EBP Competencies

**Step 4:** Integrate the evidence with clinical expertise & patient preferences to make the best clinical decision

EBP Competencies 8, 9, 10

Proposes practice change using evidence-based decision making



**Step 5:** Evaluate the outcome(s) of the EBP practice change

EBP Competency 11

Describes metrics used to evaluate the outcome of the practice change



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# Evaluation of EBP Competencies

## Step 6: Disseminate the outcome(s)

EBP Competency 12

Poster presentation about the practice change



## Participates in strategies to sustain an EBP culture

EBP Competency 13

Observation of knowledge, skills, and attitudes when completing EBP related assignments



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