

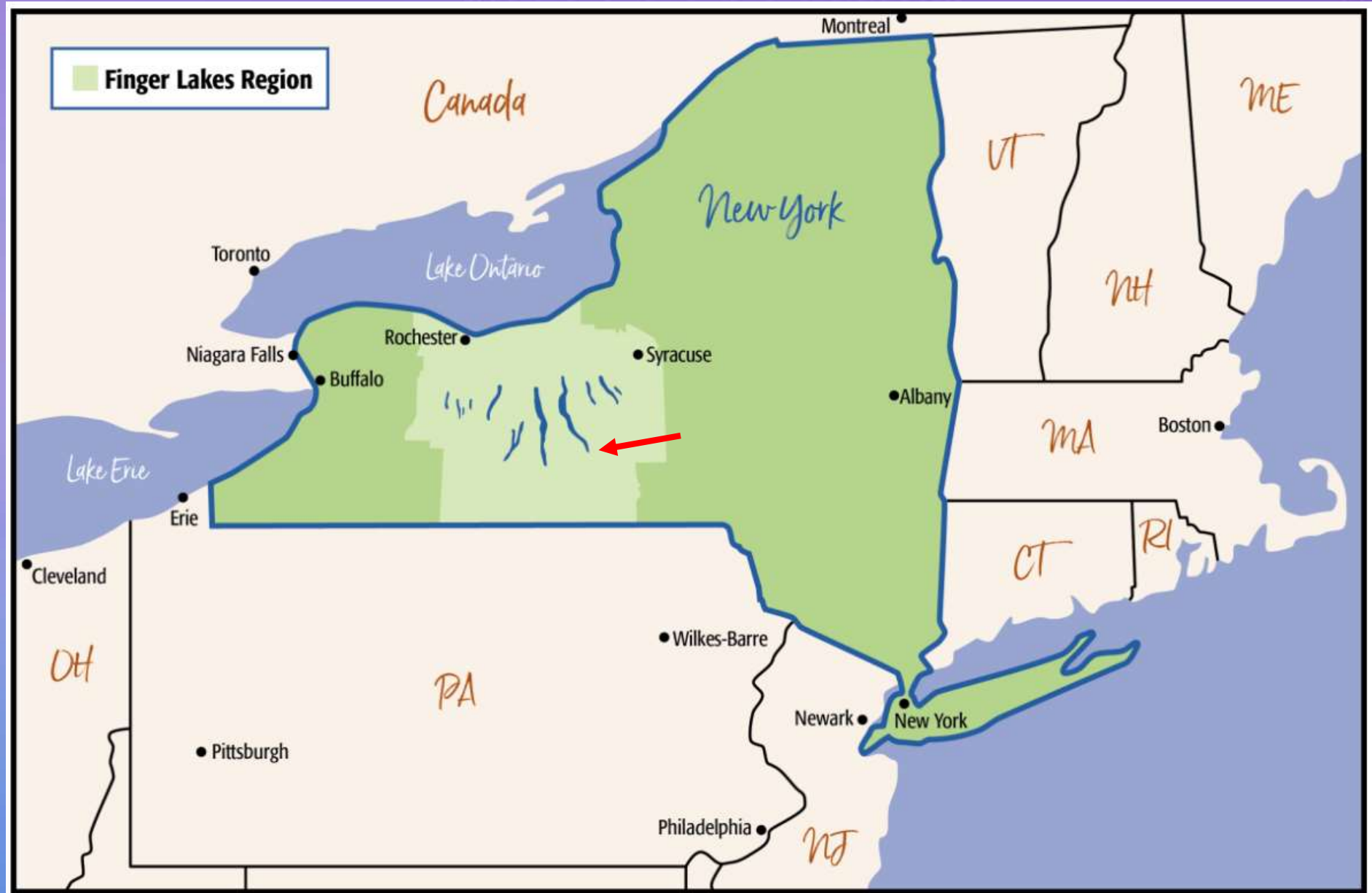


# THE ECOSYSTEM OF EVIDENCE

Lessons learned in the pandemic era and future challenges

10<sup>th</sup> International Conference for EBHC Teachers and Developers  
10<sup>th</sup> Conference of the International Society for EBHC  
Taormina, 25<sup>th</sup> - 28<sup>th</sup> October 2023

#EBHC2023



Ithaca College  
Ithaca, NY

# Background



- 2014 “Doctor of Physical Therapy Education Evidence-Based Practice Curriculum Guidelines” (Levine et al, Academy of PT Research,
  - Provides guidance on curricular objectives for teaching EBP in entry-level PT education programs
  - 33 terminal objectives that programs should strive to incorporate
  - Examples of instructional objectives for classroom and clinic
- 2016 “Strategies for Using the APTA Section on Research Evidence-Based Practice Curriculum Guidelines Companion

article (Kaplan et al, *JOPTE*)



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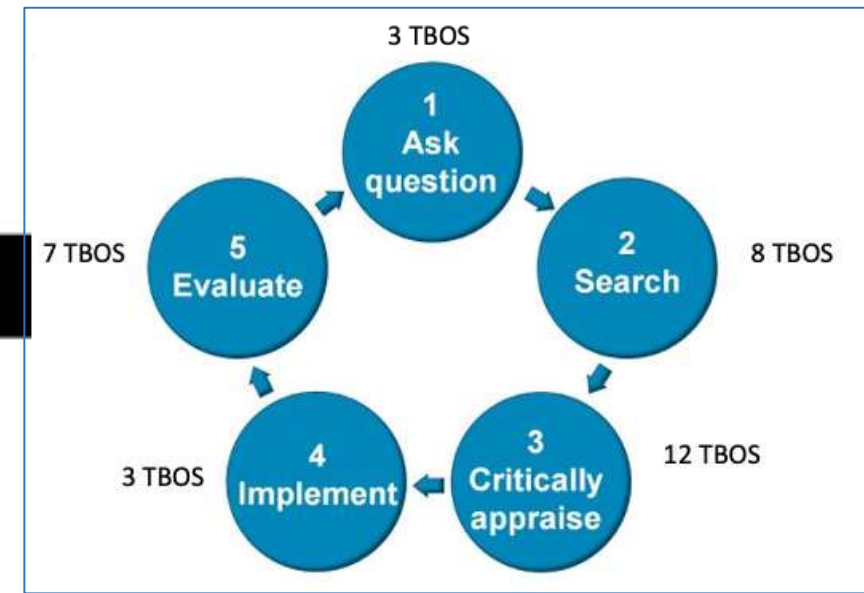
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# Example of the Guideline

## Step 1 Ask a focused clinical question

### Primary Content

- History of patients/clients
- Patient care management model
- Structure of clinical questions (e.g., PECO, PICO questions)
- Foreground questions
- Background questions



### Terminal Behavioral Objectives

After the completion of the content, the student will be able to...

- 1) Distinguish between foreground and background questions and recognize that different strategies are needed to answer each type of question.

- 2) Articulate gaps in their clinical knowledge.

### Example Instructional Objectives for the Classroom

After the completion of the content, the student will be able to...

- Examine the differences between background and foreground questions.
- Identify sources used to answer background and foreground questions.
- Compare the characteristics (e.g. cost, coverage, search options, indexing features) of databases for background and foreground questions.

- Formulate examples of background questions related to prevalence

### Example Instructional Objectives for the Clinic

After the completion of the content, the student will be able to...

- Construct a background question related to an episode of patient care.
- Develop a strategy and search for answer(s) to the background question.
- Compose a foreground question related to an episode of patient care.
- Develop a strategy and search for evidence to help answer the foreground question.

# Curricular Guideline Utilization

RESEARCH REPORT

## Evidence-Based Practice Doctor of Physical Therapy Curricular Guideline Utilization: A Convergent Parallel Mixed Methods Study

Yuping Chen, PT, ScD, Lisa Selby-Silverstein, PT, PhD, Hilary B. Greenberger, PT, PhD, Denise Gobert, PT, MEd, PhD, David Levine, PT, DPT, PhD, FAPTA, and Sandra L. Kaplan, PT, DPT, PhD, FAPTA

*JOPTe*, 2023



### Aims:

1. Determine EBP-CG objectives taught in entry-level DPT curricula
2. Determine expected mastery level for objectives
3. Determine feasibility of teaching the objectives
4. Learn from faculty about experience teaching EBP



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# Methods

## Quantitative Piece

Are students expected to acquire this skill?



Yes  
No  
Under Consideration

Expected level for student outcome



Knowledge  
Practice  
Mastery  
N/A

## Qualitative Piece

- Semi-structured interviews
- 16 questions
- N=14
- Thematic analysis using NVivo

# Results

- Each objective taught by 76-100% of respondents
- Only 7 objectives taught to independent mastery
- Students should be knowledgeable research & evidence consumers
- All 5 steps should be taught, with varying competence levels

1. Formulating patient centered questions
2. Using databases efficiently
3. Screening evidence for relevance
4. Appraising information credibility
5. Critically appraising evidence
6. Classification systems to rate evidence & recommendations
7. Integrating with other pillars of evidence



# Results: 4 Preparation Gaps

## Limited EBP-CG Awareness

- only 1/3 of survey respondents were aware of guideline

## Use of Group versus Independent Projects to Practice EBP

- group projects may limit development of EBP competence

## Communication between Academic & Clinical Education Settings

- Inconsistent student experiences practicing EBP in the clinic

## No Minimum EBP Competencies Exist

- Are some objectives beyond entry level?



# Limits

Survey was not externally validated

Only represents 33% of accredited US programs

Those that chose to complete the survey and/or be interviewed may have a stronger interest or commitment to EBP education

Study did not describe what *is* taught or mastered, but what and to what level respondents perceived *EBP-CG objectives* were addressed





# Conclusions



It is possible to address all 33 EBP-CG objectives



Most objectives are taught at knowledge or practice levels; not at individual mastery levels



EBP-CG objectives are useful for course content validation, ID of content gaps, structuring courses, standardization of content across programs



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# References

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- Chen Y, Selby-Silverstein L, Greenberger HB, et al. Evidence-based practice DPT curricular guideline utilization: a convergent parallel mixed methods study. *J Phys Ther Ed*. 2023;37, 9-16.
- Kaplan SL, Tilson JK, Levine D, et al. Strategies for using the APTA Section on Research evidence-based practice Curriculum guidelines. *J Phys Ther Ed*. 2016;30, 23-31.

