



Evidence-Based Medicine and PEARLS™

Overall Objectives

1. Using principles of evidence-based medicine, complete PEARLS™* exercises to evaluate a clinical guideline, systematic review and randomized-control trial. See below for specific objectives.
2. Synthesize evidence from a clinical guideline, systematic review and randomized-control trial in order to effectively answer a relevant clinical question.
3. Through self-directed learning, continue to use evidence-based medicine to answer clinical questions as they arise in one's practice.

*PEARLS – This is a program of evidence-based practice reflection exercises that facilitates integration of new clinical knowledge into practice.

PEARLS 1: Evaluate a guideline - [Worksheet](#) & [Evaluation Form](#)

1. Define conflict of interest (COI) and find the COI statement in a guideline or a randomized control trial.
2. Describe how levels of evidence are presenting using the GRADE criteria (or similar).

PEARLS 2: Evaluate a systematic review derived from a guideline

[Worksheet](#) & [Evaluation Form](#)

1. Describe how a systematic review should be performed.
2. Use a systematic review to identify the best randomized controlled trials to answer a clinical question based on the similarity of the trial PICO to the clinical question (relevance), control of confounding variables (quality or bias), and confidence intervals (quantity).

PEARLS 3: Evaluate a randomized control trial derived from a systematic review - [Worksheet](#) & [Evaluation Form](#)

1. Evaluate a randomized controlled trial (RCT) for potential sources of bias.
2. Use a RCT to quantify the benefits and harms of an intervention in a trial population. (Number needed to treat or equivalent; plus, the associated confidence intervals.)
3. Estimate the benefits and harms of an intervention for a real-life population based on the RCT. (This will require the relative risk reduction from the RCT and the risk of the RCT population compared to the real-life population).



PEARLS 4: Synthesis of a guideline and its supporting evidence - [Worksheet](#)

1. Identify how COI might influence how evidence from RCTs is presented in guideline recommendations (addressing clarity, levels of evidence, magnitude of net benefits, and external validity).
2. Lead a small group discussion about whether or not to implement a guideline recommendation based on evidence, available resources, and standard of care (using the legal definition).

PEARLS 5: From systematic review to implementation

1. Identify a systematic review that evaluates the best available evidence on a specific PICO question.
2. Summarize that evidence of a systematic review in an oral presentation.
3. Lead a small group discussion on how best to understand and, if appropriate, implement the evidence of a systematic review in the context of relevant guidelines, available resources, and standard of care (using the legal definition).

[Final Evaluation](#) – to be completed after PEARLS 4SYN by Faculty Evaluator

[Conclusions](#) – to be completed by non evaluating team members

[Implementing Evidence Program Overview](#)