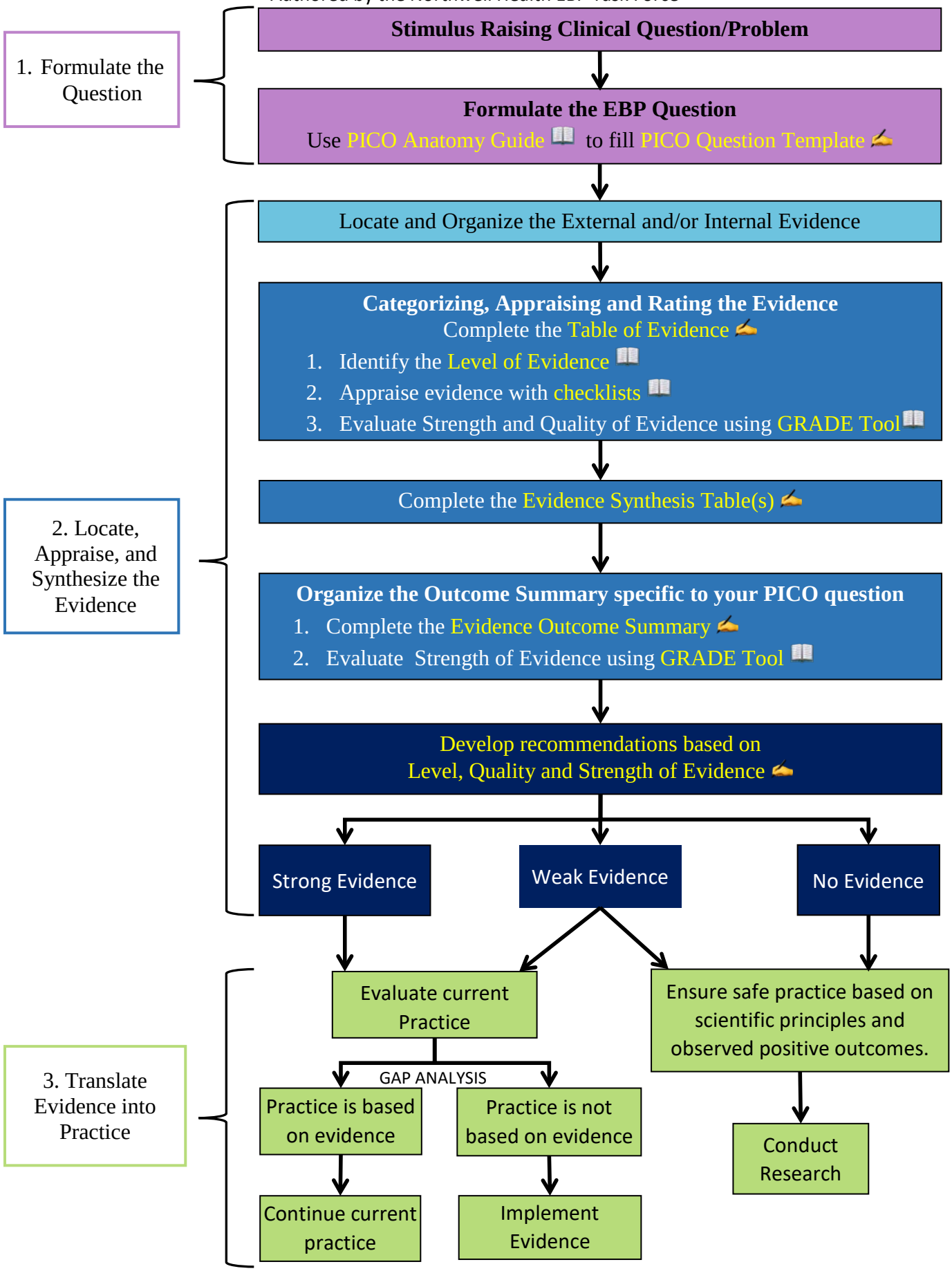
Northwell Health

Resource Document 📖
Action Document ✍

Evidence Based Practice Algorithm

Authored by the Northwell Health EBP Task Force



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Anatomy of a well-built clinical question: PICO

PICO is a model for translating clinical problems into searchable clinical questions

P Patient or Problem

- What are you trying to address?
- Does gender/age influence clinical care?

In adolescents who have…,
In older patients diagnosed with…
In patients with asthma
In patients treated with antipsychotic medications
In patients with the risk for cardiac-related death, etc.

Could include:

- A single patient
- A group of patients with a particular
- condition or with similar demographic characteristics
- A health care problem

I Intervention or Interest

- What will you do for the patient?

is the …
will/does the use/ implementation
what is/are
how do …

Could include:

- Exposure
- Diagnostic test
- Prognostic factor
- Therapy
- Surgery
- Patient perception
- Exercise
- Diet
- Measurement
- Implementation

C Comparison intervention or group

- Applicable mostly to therapy-related questions
- What is an alternative to compare with the intervention?

compared with

It could be:

- Another intervention
- Gold standard
- No intervention

O Outcome

What do you want to achieve or avoid?
What will be improved for the patient?

It could be:

- Mortality
- Clinical outcomes
- Quality of life
- Exacerbation
- Full recovery
- Remission

improve…, increase…, decrease…, reduce…, eliminate…, how effective…, affects…

Created by Tanya Shkolnikov, Senior Librarian, North Shore University Hospital

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EVIDENCE BASED PRACTICE

PICO Question Template

Formulating the PICO Question

*Name*_____ *Date*_____

PICO

Patient Population/Problem/Disease

(Age, Gender, Ethnicity, With certain disorder)

Define who or what the question is about. Is it answerable, feasible, and significant to practice?

Intervention

Define which intervention you want to test/compare

Comparison

Define the alternate intervention

Outcomes

Define the outcomes that you want to achieve or avoid

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Evidence Based Practice: Table of Evidence

Project Title:

Reviewer:

Hospital Name:

Date of Review:

Article Being Reviewed in APA Format:

e.g .: Babiss, F., Thomas, L., & Fricke, M. M. (2017). Innovative Team Training for Patient Safety: Comparing Classroom Learning to Experiential Training. *The Journal of Continuing Education in Nursing, 48*(12), 563-569. doi:10.3928/00220124-20171115-08

Study Design & Level of Evidence (Check "Rating System for the Hierarchy of Evidence")	**Sample Size and Setting** (Inclusion & Exclusion Criteria; is the sample size adequate?)	**Methods** (Consider independent and/or dependent variables or method of review)	**Findings** (What are the results and author's conclusions?)	**Strength & Limitations**	**Recommendation** (Reviewer's comments; does this article help answer the PICO question? Should it be included?)

Rating System for the Hierarchy of Evidence

Level of Evidence	Description
Level 1	Evidence from a systematic review of all relevant randomized controlled trials (RCT's), or evidence based clinical practice guidelines based on systematic reviews of RCT's
Level 2	Evidence obtained from at least one well developed RCT
Level 3	Evidence from well-designed controlled trials without randomization
Level 4	Evidence from well-designed case-control and cohort studies
Level 5	Evidence from systematic reviews of descriptive and qualitative studies
Level 6	Evidence from a single descriptive or qualitative study
Level 7	Evidence from the opinion of authorities and/or expert committees

Critical Appraisal Skills Program Checklists

*CLICK THE BLUE UNDERLINED TITLE TO ACCESS THE CHECKLIST

- **Case Control checklist**
  Critical Appraisal Skills Programme (2017). CASP (Case Control) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Clinical Prediction Rule checklist**
  Critical Appraisal Skills Programme (2017). CASP (Clinical Prediction Rule) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Cohort Study checklist**
  Critical Appraisal Skills Programme (2017). CASP (Cohort Study) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Diagnostic checklist**
  Critical Appraisal Skills Programme (2017). CASP (Diagnostic) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Economic Evaluation checklist**
  Critical Appraisal Skills Programme (2017). CASP (Economic Evaluation) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Qualitative Research checklist**
  Critical Appraisal Skills Programme (2017). CASP (Qualitative Research) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Randomized Controlled Trial checklist**
  Critical Appraisal Skills Programme (2017). CASP (Case Control) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

- **Systematic Review checklist**
  Critical Appraisal Skills Programme (2017). CASP (Systematic Review) Checklist. [online] Available at: *URL*. Accessed: *Date 03/08/18.*

AGREE II Instrument (Appraisal of Guidelines for Research & Evaluation)

- **Agree II Instrument starts on page 47 of the pdf document.**

AGREE Next Steps Consortium (2017). *The AGREE II Instrument* [Electronic version]. Retrieved <March, 08, 2018>, from http://www.agreetrust.org.

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Determine Quality and Strength of Evidence

GRADE - Grading of Recommendations Assessment, Development and Evaluations

Quality of Evidence	Definitions
High	**We are very confident that the true effect lies close to the true effect for this outcome. That is, another study would not change the conclusion.**
Moderate	**We are moderately confident that the estimate of effect lies close to the true effect for this outcome. That is, the findings are likely to be stable, but some doubt remains.**
Low	**We have limited confidence that the estimate of effect lies close to the true effect for this outcome. Additional evidence is needed.**
Insufficient	**We have no evidence, we are unable to estimate an effect, or we have no confidence in the estimate of effect for this outcome.**

Strength of Recommendations	
Strong	**Weak** (conditional/discretionary)

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Reference: N.D. Berkman et al. / Journal of Clinical Epidemiology 68 (2015) 1312-1324

Levels of Evidence Synthesis Table Template

Place an 'X' under each article to identify the level of evidence.	Article 1	Article 2	Article 3	Article 4	Article 5	Article 6	Article 7	Article 8	Article 9	Article 10	Article 11	Article 12	Article 13	Article 14	Article 15
Level I: Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs), or evidence-based clinical practice guidelines based on systematic reviews of RCTS															
Level II: Evidence obtained from at least one well developed RCT															
Level III: Evidence from well-designed controlled trials without randomization															
Level IV: Evidence from well-designed case-control and cohort studies															
Level V: Evidence from systematic reviews of descriptive and qualitative studies															
Level VI: Evidence from a single descriptive or qualitative study															
Level VII: Evidence from the opinion of authorities and/or expert committees															

[1] From: Melnyk, Bernadette Mazurek, and Ellen Fineout-Overholt. *Evidence-Based Practice in Nursing & Healthcare: A Guide to Best Practice*

Evidence Outcome Summary

Synthesis Topic/PICO Question: _____

Sources of Evidence	One sentence summary of what the study is about.	List the findings in bullet format.	Reason(s) you wouldn't use this evidence.	Author's conclusions and the bottom line result(s)?	Do the results answer your question?	Additional comments.
1. Last Name and Year of Publication						
2. Last Name and Year of Publication						
3. Last Name and Year of Publication						
4. Last Name and Year of Publication						
5. Last Name and Year of Publication						

***Include last name and year of publication (For example, Wright, 2017) there may be more than 3 sources**

Developing recommendations based on Level, Quality and Strength of Evidence

PICO Question:

Recommendations	Source	Level of evidence	Quality & Strength of evidence	Results –align with PICO Q	Limitations Benefit vs. harm

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