

Chapter 2. Answering a Clinically Relevant Question

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- _____ 1. Within the PICO format, which element is optional?
 - A. Patients
 - B. Intervention
 - C. Comparison
 - D. Outcome

- _____ 2. What is the name of the database of more than 500 scholarly journals focusing on many medical disciplines?
 - A. PubMed
 - B. CINAHL Plus
 - C. SPORTDiscus with full text
 - D. Health Source: Nursing/Academic Edition

- _____ 3. Which is NOT a criterion of the Database of Abstracts of Reviews of Effects (DARE)?
 - A. Were inclusion and exclusion criteria reported?
 - B. Were studies ranked based on the evidence pyramid?
 - C. Were the included studies synthesized?
 - D. Was the quality of the included studies assessed?

- _____ 4. Which kind of validity is clinical relevance associated with?
 - A. External validity
 - B. Internal validity
 - C. Construct validity
 - D. Measurement validity

- _____ 5. What is the name of the database that allows a researcher to identify which later articles cite any particular earlier article, or the articles of any particular author, or which articles are cited most frequently?
 - A. Science Citation Index
 - B. Physiotherapy Evidence Database
 - C. PubMed
 - D. Database of Abstracts of Reviews of Effects

- _____ 6. What is the main problem with using a Boolean search?
 - A. A Boolean search allows you to only combine search terms.
 - B. A Boolean search can be time-consuming.
 - C. Boolean searches can be unpredictable when combining Boolean operators.
 - D. Because the Boolean operators of AND and OR have opposite effects on a search, this may lead to cancelling out certain articles.

- _____ 7. Study validity refers to which of the following two kinds of validity?
 - A. External and internal
 - B. Internal and construct

- C. Measurement and construct
- D. Internal and measurement

- _____ 8. Which is a clinical question using the PICO format?
- A. What is the screening tool for assessing type 2 diabetes in middle-aged women?
 - B. What exercises are recommended for an obese (body mass index = 30.5) 40-year-old woman with a doctor's note to exercise?
 - C. How many sets, repetitions, and pounds of weight should be used to build strength in the quadriceps?
 - D. What is the best stretching programs for pre- and post-training for a 32-year-old man who wants to run his second marathon in 6 months?
- _____ 9. Which is NOT one of the areas critical to clinical practice that should be assessed when determining your effectiveness in using the evidence-based process?
- A. Are you asking answerable questions?
 - B. Are you conducting efficient searches on appropriate electronic databases?
 - C. Are you appraising the literature based on your professional practice?
 - D. Are you using evidence in your treatment of clients?
- _____ 10. There are two primary reasons you should define patients as specifically as possible. The first reason is that you want to search for research that applies as closely to your patients as possible. What is the second reason?
- A. You want to define your patients when you begin searching your literature to narrow it to a manageable size.
 - B. You want to ensure the intervention, treatment, or diagnostic test is appropriate for the particular patients you have defined.
 - C. You want to ensure the outcomes apply to the particular patients you have defined.
 - D. You want to ensure the patients you have defined can be compared to a control group.

Multiple Response

Identify one or more choices that best complete the statement or answer the question.

- _____ 11. What are examples of ways to make searches more efficient? *Select all that apply.*
- A. Boolean operators
 - B. Medical subject headings
 - C. Evidence-based pyramid
 - D. Filters
- _____ 12. What are examples of electronic databases? *Select all that apply.*
- A. Cochrane Collaboration
 - B. Science Citation Index
 - C. PubMed
 - D. CINAHL Plus
- _____ 13. When assessing clinical relevance, which of the following questions should be asked? *Select all that apply.*
- A. Do the results apply to your clients?

- B. Do the results apply to your setting?
- C. Do the results apply to your comparison treatments?
- D. Do the results apply to qualities that matter to your client?

- _____ 14. What is an efficient way to search for a particular subject? *Select all that apply.*
- A. Use medical subject headings.
 - B. Locate a few initial articles and identify the terms used to describe your topic.
 - C. Use the Science Citation Index to narrow down your subject.
 - D. Conduct a Boolean search.
- _____ 15. What is true when understanding experimental terminology? *Select all that apply.*
- A. The intervention is given to the treatment group.
 - B. The treatment group and the standard treatment group are described as being two different levels of the independent variable.
 - C. The comparison group is also known as the control group.
 - D. If there are multiple interventions, then there are more than two levels of the dependent variable.
- _____ 16. What is an example of an outcome measure? *Select all that apply.*
- A. Quality of conducting skinfold measurements
 - B. Quality of life
 - C. Cardiac stress test
 - D. Blood pressure
- _____ 17. Once you have found the best therapy based on the scientific evidence, what should you do next in implementing this therapy into your practice? *Select all that apply.*
- A. You should use the therapy (i.e., best practice) on your client.
 - B. You should address the concerns and priorities of your client's family.
 - C. You should consider culture in the clinical context.
 - D. You should consider disease trajectory.
- _____ 18. What are examples of Boolean operators? *Select all that apply.*
- A. AND
 - B. NOT
 - C. OR
 - D. BUT

True/False

Indicate whether the statement is true or false.

- _____ 19. The purpose of the five-step approach is to provide a problem-solving framework to identify the best evidence-based practices.
- _____ 20. The dependent variable refers to the aspects of a patient's health or fitness that are expected to change in response to an intervention in the clinical question.
- _____ 21. When there is an implied alternative within a clinical question, the status quo is the explicit alternative.

- ___ 22. The Cochrane Collaborative is a database that contains abstracts of systematic reviews that have been assessed for quality.
- ___ 23. Turning Research Into Practice (TRIP) ranks original studies above systematic reviews, which is an example of sorting by the evidence-based pyramid.
- ___ 24. Validity is defined as the degree to which the results are true and whether the study demonstrated what it intended to establish.
- ___ 25. The five areas of self-assessment that are critical to clinical practice and should be assessed include: 1) asking answerable questions using the PICO format, 2) assessing whether your searches are efficient and relevant to your question, 3) assessing your critical appraisal of the literature, 4) evaluating your inclusion of evidence into your clinical practice, and 5) evaluating whether your clinical practice is improving.
- ___ 26. Applicability refers to how relevant the clinical evidence is to your typical population of clients.
- ___ 27. When a practitioner identifies a goal for a client, the practitioner needs to ensure it matches the clinical goal of the client.
- ___ 28. Finding the best evidence available is the acquire part of the five-step approach used in evidence-based practice.
- ___ 29. Author searches can be useful in tracking updates.
- ___ 30. One of the best ways to determine the effectiveness of your evidence-based progress is whether your clinical practice is improving.
- ___ 31. In diagnostic studies, validity refers to the study's ability to establish a cause-and-effect relationship.

Other

32. What is the order of the five-step approach?

_____ Analyze and adjust
_____ Ask
_____ Appraise
_____ Acquire
_____ Act

33. Which is the correct order of the following?

_____ Relevance
_____ Validity
_____ Applicability

Completion

Complete each statement.

34. PICO is a model to find appropriate evidence to answer a specific question. PICO stands for _____.
35. When there is no explicit alternative in the clinical question, the implied alternative is the _____.
36. The term defined as the degree to which data or results of a study are correct or true is called _____.
37. The term that refers to investigating diagnostic or screening tests in patients or clients in the clinical question is called _____.
38. The term that refers to the number of people needed to be treated so that one person experiences a benefit is called _____.
39. The database focused on rehabilitation is called the _____.

Chapter 2. Answering a Clinically Relevant Question

Answer Section

MULTIPLE CHOICE

1. ANS: C

Rationale: In a clinical question, sometimes there may not be alternatives to compare.

PTS: 1

2. ANS: D

Rationale: Health Source: Nursing/Academic Edition is the name of the database of more than 500 scholarly journals focusing on many medical disciplines.

PTS: 1

3. ANS: B

Rationale: This is a criterion of Turning Research into Practice (TRIP), not DARE.

PTS: 1

4. ANS: A

Rationale: Clinical relevance refers to external validity.

PTS: 1

5. ANS: A

Rationale: The Science Citation Index is a database of articles that allows a researcher to identify which later articles cite any particular earlier article, or the articles of any particular author, or which articles are cited most frequently.

PTS: 1

6. ANS: C

Rationale: It is impossible to predict the results when combining Boolean operators.

PTS: 1

7. ANS: B

Rationale: Study validity refers to both internal validity and construct validity.

PTS: 1

8. ANS: D

Rationale: This question addresses the components of PICO, while the other answers are missing one or more of the components.

PTS: 1

9. ANS: C

Rationale: The question should read, "Are you appraising the evidence based on the assessment of validity?"

PTS: 1

10. ANS: A

Rationale: You want to define your patients when you begin searching the literature to narrow it to a manageable size.

PTS: 1

MULTIPLE RESPONSE

11. ANS: A, B, D

Rationale: The evidence-based pyramid is not a method for improving the efficiency of searches.

PTS: 1

12. ANS: B, C, D

Rationale: The Cochrane Collaboration provides a list of databases and is not a database.

PTS: 1

13. ANS: A, B, D

Rationale: Option C should read, "Do the results apply to your available treatments?" not to your comparison treatments.

PTS: 1

14. ANS: A, B, D

Rationale: The Science Citation Index only allows you to search by author or article(s), not subjects.

PTS: 1

15. ANS: A, B, C

Rationale: If there are multiple interventions, then there are more than two levels of the independent variable.

PTS: 1

16. ANS: B, C, D

Rationale: Quality of conducting skinfold measurements is an example of process measures, not outcome measures.

PTS: 1

17. ANS: B, C, D

Rationale: Just finding and evaluating the scientific evidence, albeit a critical step, is not evidence-based practice. Once you have established the scientific facts and determined that the known science is applicable to your client, the question arises whether it should be applied to your client.

PTS: 1

18. ANS: A, B, C

Rationale: BUT is not a Boolean operator.

PTS: 1

TRUE/FALSE

19. ANS: F

Rationale: The purpose of the five-step approach is to provide a problem-solving framework for assessing your patient, or population, and to identify the best quality care through the application of evidence.

PTS: 1

20. ANS: T

Rationale: Dependent variable is another word for outcome, and this is the definition of outcome.

PTS: 1

21. ANS: F

Rationale: The opposite is true; when there is not an explicit alternative within a clinical question, the status quo is the implied alternative.

PTS: 1

22. ANS: F

Rationale: This describes the DARE database, not the Cochrane Collaborative, which is a list of databases and is not a database.

PTS: 1

23. ANS: F

Rationale: Per Figure 2-5, original research or primary studies are considered lower on the evidence-based pyramid compared to systematic reviews.

PTS: 1

24. ANS: T

Rationale: This is the definition of validity.

PTS: 1

25. ANS: T

Rationale: These are the five areas for self-assessment.

PTS: 1

26. ANS: F

Rationale: Applicability refers to how relevant the clinical evidence is to the specific client you are treating.

PTS: 1

27. ANS: T

Rationale: The practitioner needs to give careful thought to the outcome of interest and makes sure that it matches the clinical goal of the client.

PTS: 1

28. ANS: T

Rationale: This is the acquire step in the five-step approach.

PTS: 1

29. ANS: T
Rationale: Author searches can be useful in tracking updates.
PTS: 1
30. ANS: F
Rationale: One of the best ways to determine the effectiveness of your evidence-based progress is whether there is evidence of a client's progression.
PTS: 1
31. ANS: F
Rationale: In diagnostic studies, validity refers to the study's ability to establish a diagnostic accuracy in detecting disease.
PTS: 1

OTHER

32. ANS:
5, 1, 3, 2, 4
PTS: 1
33. ANS:
2, 1, 3
PTS: 1

COMPLETION

34. ANS: Patients, Intervention, Comparison, and Outcome
PTS: 1
35. ANS: status quo
PTS: 1
36. ANS: validity
PTS: 1
37. ANS: intervention
PTS: 1
38. ANS: number needed to treat
PTS: 1
39. ANS: Physiotherapy Evidence Database
PTS: 1