

Clinical Reasoning questions

Principals, do's and don'ts of designing



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Your expectations from today's workshop?



Learning objectives

After this presentation, we will be able to:

1. Define clinical reasoning skills

2. Differentiate different clinical reasoning(CR) questions

3. Criticize important considerations about each component of a CR question

4. Describe our plan for designing clinical reasoning questions

Definition of CR questions



Tests about a core competency

Tests about taking an action or making a decision

Different types of clinical reasoning questions

Clinical reasoning area	Type of question
Information gathering	KF, Information gathering test
Hypothesis generating	CRP, Integrated puzzle, Scenario writing
Hypothesis testing	SC
Problem solving	PMP

Different components of clinical reasoning question

1

■ Scenario (“case,” “vignette,” or “case vignette”)

Mrs. P. is a 70 y.o. female with left above knee amputation, admitted with vascular insufficiency and right heel wound. Baseline functional status is independent with transfers from a wheelchair base. Therapy initiated for wound care and mobility with goal of return to baseline functional status. After 1 week of therapy, patient is not able to transfer independently due to wound on right heel. She will remain in the hospital at least one more week and wound PT will continue for wound care issues.

2

■ Leading question

Which diagnosis best explains the patient's current clinical manifestations? Select only one diagnosis from the following sets of diagnoses.

3

■ Options or choices

1. Chronic Limb-Threatening Ischemia (CLTI)
2. ...
3.
4.

Tips about scenario of a CR question

The most important component

Bank of scenarios with learners' collaboration

Similar to the real conditions at clinical settings

Challenging

Not jargons, usually in lay terms to avoid cueing

Avoid abbreviations in scenarios

Tips about scenario of a CR question

🍷 The type of scenario?

➤ Patient complaints in KF, specific clinical cases in Puzzle

🍷 The length(short or long?)

➤ Short in KF, long in SC

🍷 Coverage and relevance of scenarios(especially in high stake examinations)

Tips about scenario of a CR question

🧩 Avoid weak scenarios, which do not need reasoning

🧩 Ask for good role modeling(“You are asked to visit.....” not “A patient has come”)

Tips about leading questions and instructions

 Clear

 Emphasis on decision making about diagnosis, management, ...

 Specification of the maximum number of acceptable answers

 More questions better than the more cases

Tips about options or choices of a CR question

+ MCQs or short responses

+ Short-answer "write-in" (WI) responses or "short-menu" (SM) responses

+ Higher discrimination power of WI responses

+ Distractors from common errors of learners

+ Similar rules as for MCQs

Tips about scoring of CR questions

By experts, not question designers

Experts matched with the learners' educational level

Experts, including faculty members, scholars, experienced specialists or even graduates

Similar votes of experts

Tips about scoring of CR questions

The number of experts: 5-26

The more the number of the experts, the higher the learners' scores

At least 15 for high-stake tests

Similar reliability of the results with 20 and more than 20 experts

Some important points about CR questions

- ✚ No text references for correct answers

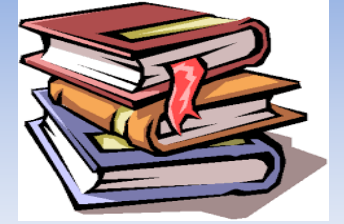
- ✚ The intended purpose of the test (formative assessment, high-stakes examinations, maintenance of certification, etc.)

- ✚ Target group (students, residents or interns, licensed health professionals, etc.)

Lessons learned from today's workshop?



References



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Really appreciate your attention.
Bone appetite!