

Assess and teach clinical reasoning

Clinical reasoning has been defined as *'the sum of thinking and decision-making processes associated with clinical practice... it enables practitioners to take... the best judged action in a specific context.'*

The method par excellence to assess and teach clinical reasoning is the discussion of cases, including direct consultation observation, problem case discussion, random case analysis, inbox review and simulated patients.

Assessment and teaching of clinical reasoning during case discussion can be facilitated by using the 5Ps model.

5Ps MODEL

Presentation of the case

Probe for further information

Pose hypotheticals

Problem definition and discussion

Prioritise and plan learning

P Presentation of the case

Ask the registrar to present the patient using a 'problem representation' format.

Assess the registrar's case summary, including the key positive and negative features.

TIPS

- Ensure the problem representation comprises 1. a description of the patient demographics and risk factors, 2. the temporal pattern of illness, and 3. the clinical syndrome
- Ensure the registrar also includes 'semantic qualifiers', e.g. acute/chronic; severe/mild; localised/diffuse; previously healthy/significant PMH

P Probe for further information

Probe the registrar for further information using relevant questions.

Assess the registrar's data gathering, synthesis, weighting, and interpretation; communication; patient-centredness; diagnostic processes; investigation ordering; management planning; hypothesis generation; incorporation of evidence; and reflection on practice.

EXAMPLE QUESTIONS

DATA GATHERING

- When the patient first mentioned their symptoms, what were your initial thoughts?
- What further key aspects of history could have been obtained?
- What physical examination findings could have been sought?
- What red flags symptoms and signs were important to consider?

SYNTHESIS AND INTERPRETATION

- What other key features might have been useful to establish a diagnosis?
- How important was this particular piece of data?
- How did this piece of data interrelate with the other data already gathered?
- Did you use a diagnostic pause?
- Did you recognise a 'pattern' in the way this patient presented?
- What was your working diagnosis and differential?
- Did you use a diagnostic framework to generate a differential?
- Did you have any 'gut feelings', either reassurance or alarm?
- Do you think that you were prone to any cognitive bias?
- How well did your explanation incorporate your reasoning?
- What do you think was the patient's understanding of the problem and specific concerns?

EXAMPLE QUESTIONS CONT.	<p>MANAGEMENT PLANNING</p> <ul style="list-style-type: none"> • What other key investigations could have been considered? • What other management actions could have been considered? • What would you consider if the patient failed to improve? • How did you manage the uncertainty in the presentation? • How well do you think the patient contributed to the management plan? <p>EVIDENCE-BASED MEDICINE</p> <ul style="list-style-type: none"> • What evidence did you seek in managing this case? • What other guidelines or clinical information may have been of value?
TIPS	<ul style="list-style-type: none"> • Take notes as you go. • Be selective in which areas to pursue in order not to overwhelm the registrar. • Ask the registrar to role play key areas to reinforce learning.

P Pose hypothetical scenarios
 Pose hypothetical questions to further explore the registrar’s reasoning skills.
 Assess the registrar’s responses.

EXAMPLE QUESTIONS	<ul style="list-style-type: none"> • What if the patient was older/younger? • What if the patient was Aboriginal or Torres Strait Islander? • What if the patient had a fever/cough etc.? • What if you were practicing in a rural setting?
TIPS	<ul style="list-style-type: none"> • Avoid posing hypothetical questions if the registrar is struggling.

P Problem definition and discussion
 Define any problem areas of reasoning
 Give feedback to the registrar, including suggestions for development.

TIPS	<ul style="list-style-type: none"> • Categorise identified clinical reasoning difficulties into one of five areas: <ul style="list-style-type: none"> – Hypothesis generation, identifying key features and data gathering – Hypotheses refinement and testing – Prioritising – ‘Seeing the whole picture’ – Management planning • Use a best practice approach to delivery of feedback
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Prioritise and plan
 Prioritise the key learning areas from the case discussion and plan how these will be learnt.
 For example, clinical knowledge gaps, incomplete history taking, failure to explore red flags, flawed weighting and synthesis, limited differential, communication issues etc.

TIPS	<ul style="list-style-type: none"> • Ask the registrar ‘How will you apply what you have learnt to future practice?’ • Use specific teaching and learning resources e.g. practice-based teaching, role play, ‘Clinical reasoning: the game’, IM reasoning podcasts • Follow up to ensure learning
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