

Guidelines for Assessing Students' Critical Thinking Skills Using the Mini-CEX

Medical students are now receiving basic grounding in Critical Thinking and should be encouraged to implement this skill in their clinical encounters with patients. It is part of an overall initiative to improve rationality in clinical decision making. To assist clinicians to provide feedback and guidance to clerks on their ability to apply critical thinking in their clinical decision making, we have created a few guiding questions. These may be used to promote conversation, interaction and feedback following the observed clinical encounter. They are not exhaustive, but may serve as a quick framework to employ in assessment.

Remember – The Mini-Clinical Evaluation Exercise (Mini-CEX) is intended to facilitate **formative** assessment (i.e. not pass/fail decision) of core clinical skills in 3rd year clerks. Formative assessment is considered feedback and should help guide the learner along the critical thinking continuum as outlined below.

	1	2	3	4	5	6
Critical Thinking	<input type="radio"/> At times, Is impulsive, opinionated, quick to jump to conclusions <input type="radio"/> Shows evidence of vulnerability to bias in decision making <input type="radio"/> Does not treat clinical issues with sufficient depth and breadth <input type="radio"/> Demonstrates failures in logic <input type="radio"/> Thought content shows inaccuracies, lack of precision, irrelevance, unclear content, incompleteness, inclusion of insignificant issues <input type="radio"/> Evidence of lack of humility, integrity, or fairmindedness in thinking <input type="radio"/> Limitations in ability to focus on important aspects of clinical problem			<input type="radio"/> Appears to think reflectively, non-judgmentally <input type="radio"/> Stays within the limits of the evidence <input type="radio"/> Is skeptical and careful in drawing conclusions <input type="radio"/> Appears open to possibilities other than the obvious <input type="radio"/> Able to identify biases and other sources of cognitive failure <input type="radio"/> Reasoning appears logical, accurate, precise, and relevant. <input type="radio"/> Clinical problem is managed in sufficient depth and breadth <input type="radio"/> Appears to be a well-calibrated and intellectually humble thinker		

Suggested guiding questions to facilitate feedback that leads to improvement.

- *What is your differential diagnosis?*
- *Describe your reasoning; what were the important points / evidence that helped you come to this diagnosis or rule out others?*
- *What assumptions are you making?*
- *Have you asked yourself "What else could this be?"*
- *Is there anything that may be acting biasing your thinking?*
- *What could you do to offset bias in this circumstance?*

Want to know more? The following websites can provide faculty more information on the Dalhousie approach to Critical Thinking:

- [Dalhousie Critical Thinking Program](#)
- Online course for faculty | [Teaching and Assessing Critical Thinking Program](#)