

# Learning to Make Clinical Decisions

## Video Transcript

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### Overview:

Clinical reasoning skills are the utmost importance in healthcare professions as they form the foundation of competent and effective patient care. Clinical reasoning refers to the cognitive process that healthcare professionals utilize to analyze patient data, interpret clinical information, and make sound decisions about patient diagnosis, treatment and management.

### Learning Objectives:

Upon completion, the learner will be able to

- 1) discuss the concept of clinical reasoning
- 2) describe how to teach clinical reasoning skills
- 3) discuss how to assess clinical reasoning.

Concept of clinical reasoning get that is ongoing discovery, which occurs throughout the clinician's career. From the educator standpoint, it is essential to gain a good understanding of clinical reasoning prior to commencing teaching. This refers to thinking and decision making and processes associated with clinical practice. So in clinical reasoning, when we're in the clinical setting, it's very important for us to really be great facilitators and engage our learners to make sure that they understand the process of clinical reasoning, because without it then as they couldn't become independent competent practitioners and becomes something of critical nature so that they be able to make these decisions competently in that clinical practice.

So what is clinical reasoning? It is a process where a clinicians collect the clues, process the information, come to understanding of

a patient problem or situation, plan and implement interventions, evaluate outcomes and reflect on and learn from the process. In the next slide, we will discuss how this this vortex actually goes through and achieves the process of clinical reasoning.

So what is clinical reasoning important? It is effective clinical reasonings that have a positive impact on patient outcomes. So poor clinical reasoning skills equals a failure to rescue, so if they cannot make their reasoning skills, in a competent manner, then they're not able to be become independent and competent themselves. So this can result in adverse patient outcomes and escalating healthcare complaints. So we have a built in mechanism of assessments to make sure that we are able to monitor and evaluate their clinical reasoning skills. So the process dependent on clinical critical thinking is influenced by persons, attitudes, philosophical perspectives and preconceptions. And we, we also say that the process is not linear, it's this vortex, this spiral that we go through. And so on this slide here we actually see the clinical reasoning model. So the initial encounter with the client or the patient and then the learner goes through these four elements of clinical reasoning. We have the cognition, metacognition and knowledge. So the cognition can be defined as being all the mental processes and abilities in which people engage on a daily basis, such as memory, learning, problem solving, evaluation, reasoning, and decision making. While the metacognition is often defined as thinking about thinking, it allows the learner to complete a given task through planning, monitoring, evaluating and comprehending, and then the knowledge that the learner has.

So we need to make sure that our learners are really thinking about what they're thinking in order to be effective clinical reasoners. In contextual and parameters the client and the clinicians frame of reference, the clinical case we can see this other vortex causing harmonious interactions of elements. And then we get to the top of the vortex where it says they're understanding of the client and the clinical problem which we relate to our final outcome. As you can see here, it's not a linear model. This spiral indicates the processes of that clinical reasoning.

So the clinical reasoning cycle is composed of many components, and so we have to consider the patient, collect the queues or information and process the information and identify problems and issues, establish our goals and take actions, evaluate and then reflect on the process.

As we can see here, these different sections of the of the cycle is further explained in detail, and if any of these processes something goes wrong that we don't actually assist our learners in accomplishing it, then that clinical reasoning cycle becomes much more, much more challenging to come out with that clinical that final outcome. So it's important that we monitor each of these sections of the cycle to make sure that our learners are competent and comfortable enough to make those clinical reasoning decision making skills.

So traditionally approaches in dental education has evolved around four major themes. One is teaching sciences and techniques. Two is promoting problem solving skills. Three is developing competencies and other curricular changes, and four community service learning. All of these four major themes have been the cornerstone of dental education throughout its beginnings.

And so there has been a push for the need for a new conceptual framework for clinical reasoning. Dental education has evolved from a narrow focus on biology of oral diseases to a broader awareness of environmental and psychosocial determinants of oral health disease. The evolution has led to substantial

revision of curricular objectives. A renewed focus on the nature of clinical reasoning. It is essential for competent health care practice, the need for conceptual framework in dentistry grounded in empirical evidence and reflective of the contextual determinants of oral health and disease. So there is this push as far as thinking about besides the four predominantly themes of clinical, of dentistry. And so we need to really think about how do we evolve this to the next level within another new framework of clinical reasoning.

Assessing clinical reasoning skills is not a simple task. Okay, reasoning is not readily observable. It is an internal process, so it's difficult to measure since there is neither one perfect reasoning process nor interpreting any given case or situation. So it is very dynamic and as we look at our illustration here, the learning the anticipate to challenge, interpret, decide and align or all processes that work. And that dynamic process is makes it not a simple task for us as educators, depending where we are teaching our learners within that context.

So as far as assessment methods, there is really no single method of assessment that can adequately evaluate clinical reasoning. But here are some examples: Oral assessments, direct observations of performance with explanations, real or simulated events, self-assessments and peer assessments. Self-assessments and peer assessments are really complementary to each other. Make sure with peer assessments that your peer evaluators are calibrated and they have been practicing with the faculty on what the expectations are for a peer assessment. And the same thing with self-assessment, if you have a self-assessment tool, make sure that it goes through a pilot process to make sure that it's clear on both ends from the faculty and the learners viewpoint. Formative assessment, situation, exploration and application of thoughts with discussion time. That's another formative assessment method. Debriefing, explaining the rationale using probing questions, ask students to provide in depth responses to question. If you're doing simulation again, this is an excellent opportunity to have a debriefing

session after each scenario to make sure that the learner understands, and it also provides an educational scaffolding to the learner to make sure that through that process of them clinical reasoning that they understand what are some things they have to consider if they need to improve on their clinical reasoning skills? And finally, the clinical faculty acts as “sounding boards”. How do how do students think about it? And so if they talk to you out loud and ask you for your opinion, give that opinion and tell them if you decided to go this route, what do you think would be the outcome as opposed to another route within your clinical reasoning process?

Another way of formative assessment situations is to engage in reflective interactions. So reflection in practice and reflection on practice foster, that's critical self-assessment. And really, when it comes down to assessment, it's really selecting and designing, conducting the appropriate sentiment method to what you're trying to measure. So it's important that you're learning objectives can be measured and deciding what's the most appropriate assessment method for the learning objectives that you have set forth. So these are things that have to be considered when you're planning your assessment methods within your clinical teaching.