



Teaching briefing: Clinical Reasoning

Summary of discussions at annual GP tutor meeting October 2017

Background

Clinical reasoning is the process by which we use information to make decisions about diagnosis, treatment and management. Our understanding of clinical reasoning has increased recently, based on work in cognitive science around how people make decisions and process uncertainty. This is best summed up in Kahneman's fast and slow thinking (or type 1 and type 2)¹. Type 1 thinking is rapid, often instinctive and based largely on recognising patterns and following rules of thumb. Type 2 thinking is slower, more cognitively demanding and works deductively to weigh a number of possibilities. "Spot" diagnosis uses type 1, differential diagnosis uses type 2.

Knowledge about clinical reasoning is relevant to GP tutors for three reasons. First, it gives us insight into our own decision-making processes and may help us to reduce clinical errors (many more of which are caused by cognitive error than by lack of knowledge). Second, a sense of unease is often an indication that it might be time to switch from type 1 to type 2 thinking; demonstrating this application of science in the real world can be useful for demystifying clinical expertise. Third, awareness of clinical reasoning processes can be useful in helping students understand the complexity of what we do – they often observe us making quite complicated decisions using type 1 thinking and may underestimate the complexity of our work and decision processes.

Dr Alan Shirley spoke at the GP Tutors meeting in October about clinical reasoning. His slides are available on request from AUPMC.

Clinical reasoning in undergraduate GP teaching

Early years

Students at this stage are very junior but some easy steps in clinical reasoning do occur and can be highlighted, e.g. a man with abdominal pain is unlikely to be pregnant!

The learning point from this simple example is that we think about patient demographics in assessing probabilities all the time.



3a & 3b in the consultation

Although we like our students to be doing histories and examinations whenever possible, we know that GPs work in the real world, time and space are at a premium, and initially you may have the student observing a few consultations. Here are suggestions for promoting clinical reasoning in a range of situations.

Observed consultation: little time to slow down

Consider grouping several patients together but asking the student to look at how you are making decisions:

“I’m going to see the next few people in my usual manner. It may seem like I am sometimes making decisions quickly (but I still have to be safe).”

“Try to make a note of the three most important points in each history and examination, that led me to my conclusion and we can discuss them in the break.”

Explain that what seems 'easy' is actually system 1 pattern recognition.

“See if you can spot any of the patterns I am recognising ...”

“Try to spot the ways in which I safety net (and any times when I might forget to do so).”

Observed consultations, slower surgery

When you are consulting with a student observer and have a little more time:

- Try deliberately slowing down from type 1 processing (pattern recognition) and go through type 2 (reasoning).
- Consider “thinking out loud” to show to the student how you came to your conclusion.
- Reiterate key points at the end of surgery to reinforce learning

Students taking histories (but not yet managing differential diagnosis)

With 3a students who are taking histories, but not yet managing differential diagnosis and management plans, aim to help them think about their reasoning. Consider the following:

- Push them towards taking a *focused* history and *summarising* the key points:
- Why did you ask that?
- Is there any other information that might be useful?
- What do you think are the most important questions / points in the history here (if you can only pick three)?
- Ask them to summarise in three lines

Students taking histories and thinking about diagnosis / plans

Once you can detect that students are thinking about differential diagnoses (in their own or observed consultations), aim to help them to be critical about their reasoning

- Get them to commit to a likely diagnosis
- Ask what they are thinking now, and follow it up with
 - “Why do you think that?”
 - “What else have you considered?”
 - “What do you need to know now?”; “Is there any other information that might make that more or less likely?”
- And to throw in an extra challenge, ask “what ifs”, such as
 - “What if this was an older patient/ a woman/ a man ..”
 - “ ...recently arrived from...?”

Outside the consultation

There are ways of using time outside the direct consultation to push students to reason clinically.

Looking at results

- What do you think is the significance of this result? (taking into account the bigger picture of the patient, the consultation and the records).

Looking at repeat prescriptions

- What problems do you think this patient might have and why?
- What do you need to know before you sign a repeat prescription for this patient?

Looking at audit results

Look at the patients who do not fall within the guidelines. Can you find a reason why the GP might have chosen to manage them differently?

For small group teaching

Case-based ILA's

These can allow you to extend clinical reasoning by asking about management. You may wish to get the students to think about the biopsychosocial aspects of the problem, using a table such as this:

	Bio	Psycho	Social
Differential Diagnosis			
What action is needed now?			
What action is needed soon?			

What action is needed later?			
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Alternatively, you may wish to use key questions similar to those suggested earlier:

- What are you thinking?
- What else could it be?
- Why do you think this?
- Are we on automatic?

Consider using questions / techniques which extend to the next steps of a consultation – i.e. they build on the clinical reasoning to date:

- What are you going to say?
- What are you going to do?
- Use Role play snippets within the small group learning.

Discussing consultation skills

Try using a scientific paradigm with students (in contrast to “the art of”). The 3Ss: summarising, signposting & safety netting are useful both as tools but as examples of actions which trigger type 2 thinking. Emphasise that “summarising when stuck” may have pragmatic value in bringing all available information to hand for making a decision but also makes sound neuro-scientific sense. By talking we automatically activate thinking areas of the brain.

If you are discussing type 1 thinking and how you use it, consider how we take “safe shortcuts”.

Debrief/Significant event sessions

If a student brings up something about the GP tutor in practice, use it as an opportunity to recognise that *feelings affect thinking* and also allow us to understand our innate biases and cultural norms.

- Encourage the student to be proactive in finding out the GP’s reasoning.
- Question/ gently challenge the student
 - Why do you think you/we feel like that?
 - What did you ask your GP tutor?
- If the student has not questioned the GP’s reasoning, help them to find appropriate wording to do so next time

Further reading:

1. Kahneman D. Thinking, fast and slow. London: Penguin 2012.