Building Focused, Well-Articulated Clinical Questions

What makes a clinical question well built? First, the question should be directly relevant to the problems at hand. Next, the question should be phrased to facilitate searching for a precise answer. To achieve these aims, the question must be focused and well-articulated for all 4 parts of its 'anatomy' (known as PICO):

1) the Patient, population or problem being addressed
   What are the characteristics of the patient or population?
   What is the condition or disease?

2) the Intervention being considered which could include:
   exposure, diagnostic test, prognostic factor, therapy, patient perception or
   What do you want to do with this patient? Treat, diagnose, observe?

3) the Comparison intervention or exposure, when relevant
   relevant most often when looking at therapy questions
   What is the alternative to the intervention? Placebo, different drug, surgery?

4) the clinical Outcomes of interest
   What are relevant clinical outcomes of interest to you and your patient?
   Morbidity, death, complications?

Asking focused, four-component questions takes practice. Doing it well requires that you have insight into what you do not know, coupled with curiosity and a willingness to learn. Also, knowing how questions arise, where they come from, and how to recognize and articulate them can help you refine your skills.

How do clinical questions arise? During a patient encounter, the clinician may be uncomfortable making a decision until more is known. It is recommended that you quiet your emotions while turning your implicit knowledge gaps into explicit questions.

Most clinical questions arise from the following six aspects of clinical work:

1) Clinical evidence: how to gather clinical findings properly & interpret them soundly.
2) Diagnosis: how to select and interpret diagnostic tests.
3) Prognosis: how to anticipate the patient's likely course.
4) Therapy: how to select treatments that do more good than harm.
5) Prevention: how to screen and reduce the risk for disease.
6) Education: how to teach yourself, the patient, and the family what is needed.
How can you recognize and formulate clinical questions as they occur? First, pay careful attention to the questions that spontaneously occur to you. Listen for the 'question behind the question.' Next, try saying your questions out loud or writing them down with all four components included. Then build your question in two steps, starting with the 'location,' such as 'my question is about therapy;' Ask yourself what type of clinical scenario would you like to consider: Therapy? Prognosis? Diagnosis? Harm? Then, articulate all four PICO components explicitly. See the example below.

What if too many questions arise? Select from the many questions the few that are most important to answer right away. Ask yourself, "What is the most important issue for this patient now? What issue should I address first? Which question, when answered, will help me most?"

**PICO Example:**

- **Patient or Problem:** 65-year-old man with a stroke & moderate carotid stenosis
- **Intervention:** ASA (acetylsalicylic acid)
- **Comparison Intervention:** Placebo
- **Outcome:** Stroke

becomes a

**Focused, Well-Built Question:**

In a 65-year-old man with a stroke and moderate carotid stenosis, can ASA decrease the risk of another stroke compared with no treatment?

**Additional Practice**

If you would like additional practice formulating articulate questions using a web tutorial go to:

http://www.cebm.utoronto.ca/practise/formulate/

**Answering Clinical Questions**

After the patient care problem(s) has been articulated into a focused, well-built question, the next step is to search the literature. A variety of EBM resources will be explored in the library teaching sessions.

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