

Formulating a Clinical Question

The most important aspect of finding the right answer is starting with the right question. Question writing is a skill that takes time and practice. As you work toward formulating a clinical question, consider what end product you want to achieve – what is it that you want to know? Trying to develop a clinical question that fits a predetermined answer is difficult and feels awkward to even the most advanced clinicians and researchers. This is the proverbial solution in search of a problem.

A good clinical question will come from clinical practice. Clinical questions should be patient-centered and focused on an outcome. In this regard, clinical questions have 3 or 4 specific elements. The PICO, as defined here, will drive your search for evidence.	P	Patient or Population with the condition
	I	Intervention - specific diagnostic test, treatment, adjunctive therapy, medication
	C	Comparison treatment (not always included in clinical questions)
	O	Outcome relevant to you or the patient

Consider the following scenario: A 32-year-old female patient complains of recurrent ankle instability. She plays indoor and outdoor soccer (each) once per week and states “I roll my ankle at least once a game. I can return to play, but the rolling is really a problem and it seems to be getting worse.” She does not present with significant mechanical instability and is looking for relief from her ankle problems. You consider options for therapeutic intervention and arrive at the following clinical question.

Clinical Question: Do resistive ankle exercises improve ankle stability in active adults with functional ankle instability?

The PICO elements for this question are:	P	Athletes with functional ankle instability
	I	Resistive strengthening exercises
	C	(none)
	O	Improved stability

Note that the above clinical question includes the elements from the PICO (in this case PIO), but is still written as a question.

Alternatively, you could have considered the value of resistance exercises alone or a combination of balance exercises and strengthening exercises and arrived at the following clinical question.

Clinical Question: Are strengthening exercises, alone, as effective as strengthening exercises in addition to balance exercises for improving functional ankle stability in athletes?

The PICO elements for this question are:	P	Athletes with functional ankle instability
	I	Resistive strengthening exercises
	C	Resistive exercises + Balance exercises
	O	Improved stability

Sample General versus Focused Clinical Questions

Sample 1	General	What is the best sideline test for detecting concussions in athletes?
	Focused Clinical	Is the King-Devic sideline test a more accurate concussion evaluation tool than the SCAT 3 for college aged athletes?
Sample 2	General	What is the best method of treating athletes with heat exhaustion or heat stroke?
	Focused Clinical	Are cold towels, ice packs, and fans as effective as whole body immersion in lowering core temperature in an individual with exertional heat illness?
Sample 3	General	What are the best tests for determining SLAP lesions?
	Focused Clinical	Is the O'Brien test more accurate than the Clunk or Grind Tests in assessing SLAP lesions in non-throwing overhead athletes?
Sample 4	General	Is stretching beneficial for athletes?
	Focused Clinical 1	Does a static stretching program improve vertical jump in soccer players?
	Focused Clinical 2	Does contract-relax stretching improve vertical jump in tennis players?
	Focused Clinical 3	Is contract-relax stretching more effective than static stretching for improving vertical jump in soccer players?

Quick Tips to Formulating a Clinical Question

- ✓ Begin with asking, "What end product do you want to achieve – what is it that you want to know?"
- ✓ Make sure your clinical question has PIO or PICO components.
 - You may not always have a comparison treatment "C," thus PIO.
- ✓ *Be Certain.*[™] your clinical question is patient-centered and focused on an outcome.
- ✓ Clinical questions are written in the form of a question.