

WELL-BUILT CLINICAL QUESTION



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The first part of any research is identifying the question you want to answer. This is very important because the more you understand your question the more likely you are to obtain relevant “answers.” The process of formulating a good search question is known in evidence-based health care as “the well-built clinical question.”* One way of “building” your search question starts with the patient and is known as “P.I.C.O.”

This stands for:

- **Patient or Population or Problem**
Who or what is the question about? How would you describe a group of patients similar to yours? What are the most important characteristics of the patient/population/problem? This may include the primary problem, disease, or co-existing conditions. Sometimes the sex, age or race of a patient might be relevant to the diagnosis or treatment of a disease.
- **Intervention, Exposure or Prognostic Factor**
What main intervention/treatment are you considering? What do you want to do with this patient? Prescribe a drug? Order a test? Consider surgery? What factor may influence the prognosis of the patient? Age? Co-existing problems? Genetic conditions? What was the patient exposed to?
- **Comparison(s)**
What is the main alternative intervention/treatment to the above being considered, if any? Are you trying to decide between two drugs, a drug and no medication or placebo, surgical techniques, or two diagnostic tests? Your clinical question does not have to always have a specific comparison.
- **Outcome(s)**
What are you trying to accomplish, measure, improve or affect? What are you trying to do for the patient? Relieve or eliminate the symptoms? Reduce the number of adverse events? Improve function or test scores?

There are two additional elements that round out the well-built clinical question. These help in focusing the question and determining the most appropriate type of clinical evidence.:

- **Type of Question** : this is a question about --
 - ✓ Diagnosis : How to select and interpret diagnostic tests
 - ✓ Therapy : How to select treatments to offer patients that do more good than harm and that are worth the efforts and costs of using them
 - ✓ Prognosis : How to estimate the patient’s likely clinical course over time and anticipate likely complications of disease
 - ✓ Etiology : How to identify causes for disease, including genetics
- **Type of Study** : what type of study would provide the best answer --
 - ✓ Randomized Controlled Clinical Trials
 - ✓ Cohort Studies
 - ✓ Case Control
 - ✓ Meta-Analysis
 - ✓ Case Series
 - ✓ Cross Sectional

The Well-Built Clinical Question Worksheet

P.I.C.O. Elements	Example	Your Clinical Case
Patient/Population/Problem Who or what is the question about?	Teenage patients with Type I diabetes	
Intervention/Exposure/Prognostic Factor Which main intervention/treatment are you considering?	Continuous subcutaneous insulin infusion therapy	
Comparison (if appropriate) What is the main alternative intervention/treatment to the above intervention/treatment?	Compare with multiple daily insulin injections	
Outcome What are you trying to accomplish/measure/improve or affect?	Will this help adolescents maintain good/strict diabetic control and avoid hypoglycemia?	
Your Question Is: Use the above elements to create a focused question	In teenage patients with Type I diabetes, will continuous subcutaneous insulin infusion therapy be more effective in maintaining good diabetic control than multiple daily insulin injections, with little, or no adverse effects?	
Type of Question Diagnosis/Therapy/Prognosis/Etiology/Prevention/Harm, etc.	Therapy	
Type of Study What would be the best study design in order to answer the question?	Randomized Controlled Trial	

***Reference:**

(Richardson, W. Scott MD, Wilson, Mark C. MD, MPH. Nishikawa, Jim MD. Hayward, Robert S.A. MD, MPH. **The well-built clinical question: a key to evidence-based decisions.** *ACP Journal Club*, v123:A12, Nov-Dec, 1995)