PICO: Model for Clinical Questions

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Introduction

The PICO process is a technique used in evidence-based practice to frame and answer a clinical question in terms of the specific patient's problem that helps clinically relevant for evidence in the literature (Table 1 and Figure 1) [1-5]. The process of finding an appropriate response to the doubt that arises in patient care depends on how we structure the relevant parts of this methodology. The recommended form is known by the acronym PICO. That is formed by P of patient or population, I of intervention or indicator, C of comparison or control and O of "outcome", which means clinical outcome, result, or, finally, the response that is expected to be found in the sources of scientific information. Well-formulated questions should contain information about the patient [1], some exposure (to a treatment, a diagnosis or agent) [2] and an outcome of interest [3]. Clinical outcomes are the variables that will be studied. It can be illness, cure, and better in quality of life, death or limitation [6-13].

P	**Patient**, Population, or Problem	How would I describe a group of patients similar to mine? (e.g., age, disease/condition, gender)
I	Intervention, Prognostic Factor, or Exposure	Which main intervention, prognostic factor, or exposure am I considering? (e.g., drug or other treatment, diagnostic/screening test)
C	Comparison or Intervention (if appropriate)	What is the main alternative to compare with the intervention? (e.g., placebo, standard therapy, no treatment, the gold standard)
O	Outcome you would like to measure or achieve	What can I hope to accomplish easure, improve, or affect? (e.g., reduced mortality or morbidity, improved memory, accurate and timely diagnosis)
	What type of question are you asking?	Diagnosis, Etiology/Harm, Therapy, Prognosis, Prevention 1. What causes the problem? AETIOLOGY, RISK FACTORS 2. What is the frequency of the problem? FREQUENCY 3. Does this person have the problem? DIAGNOSIS 4. Who will get the problem? PROGNOSIS, PREDICTION
	Type of study you want to find	What would be the best study design/methodology?
	Primary question types	• **Therapy:** how to select treatments to offer our patients that do more good than harm and that are worth the efforts and costs of using them. • **Diagnostic tests**: how to select and interpret diagnostic tests, in order to confirm or exclude a diagnosis, based on considering their precision, accuracy, acceptability, expense, safety, etc. • **Prognosis**: how to estimate a patient's likely clinical course over time due to factors other than interventions • **Harm / Etiology:** how to identify causes for disease (including its iatrogenic forms). • **Prevention:** how to reduce the chance of disease by identifying and modifying risk factors and how to diagnose disease early by screening.
	Other Question Types	• **Clinical findings:** how to properly gather and interpret findings from the history and physical examination. • **Clinical manifestations of disease:** knowing how often and when a disease causes its clinical manifestations and how to use this knowledge in classifying our patients' illnesses. • **Differential diagnosis:** when considering the possible causes of our patient's clinical problem, how to select those that are likely, serious and responsive to treatment. • **Qualitative:** how to empathize with our patients' situations, appreciate the meaning they find in the experience and >understand how this meaning influences their healing • **Self-improvement:** how to keep up to date, improve my clinical and other skills and run a better, more efficient clinical practice. • **Experience and meaning:** (for qualitative research) how to empathize with our patients' situations, appreciate the meaning they find in the experience and understand how this meaning influences their healing.

Table 1: PICO process.

This is a necessary condition for our search to be successful; the second is to find the keywords that best describe each of these four characteristics of the question. Without this care, searches in computerized databases usually result in a lack of information or a very large amount of information that is not related to our interest. It is important to understand that all decisions begin with the formulation of a clinical question and must consider the fact that taking a longer time, whenever possible reflecting on a real clinical situation, will only bring benefit to the team of professionals and especially to patient and the society [6-13].

It begins with the formulation of a clinical question of interest. A good question posed is the first step in starting a survey because it reduces the chances of systematic errors (biases) occurring during design, planning, statistical analysis, and study completion [6-13].

The quality of the scientific question is based on four fundamental items:

1. Clinical situation (what is the disease);

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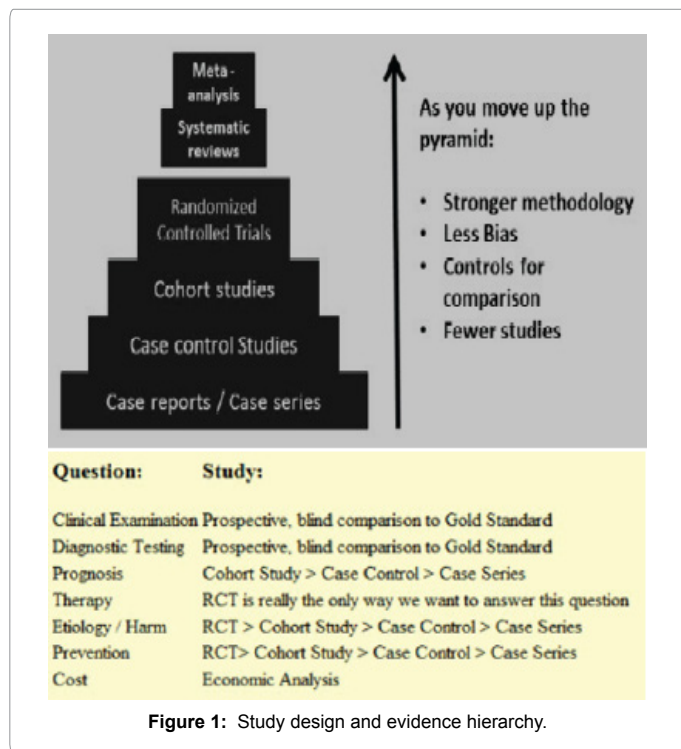
Figure 1: Study design and evidence hierarchy.

2. Intervention (what is the treatment of interest to be tested);

3. Control group (placebo, sham, no intervention or other intervention);

4. Clinical outcome.

The clinical issues focus on the knowledge about the care of patients with a particular disease, having as main components:

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1. The patient or problem of interest;

2. The main intervention, which may include an exposure, a diagnostic method, a

prognostic factor, a treatment, or both;

3. A comparison intervention, when applicable;

4. The clinical outcomes of interest.

The evidence-based daily clinical practice requires that we use a large amount of knowledge, both basic and clinical. The questions then arise in a hybrid way, being centered on patient care and on a common scenario, involving clinical findings, etiology, differential diagnosis, diagnostic methods, prognostic factors, therapeutic methods, patient experience and opinion, and personal enhancement. Clinical issues alert us to possible benefits and damages arising from patient or medication decision-making; have in common the study of the clinical manifestations, the symptoms and the well-being of the patient [6-13].

The knowledge of this methodology as well as their application can benefit your patient.

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