What is PICO?
PICO is a model that helps you outline a clinical research question. It is a framework that asks you to think specifically about your question and helps you identify the various aspects you want to investigate.

**P**  
Patient, Population, or Problem

**I**  
Intervention, Prognostic Factor, or Exposure

**C**  
Comparison or Intervention (if appropriate)

**O**  
Outcome

**t**  
Type of Question (optional)

**t**  
Type of Study (optional)

### Primary Question Types

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Questions pertaining to how to select and interpret diagnostic tests in order to confirm or exclude a diagnosis. This includes considerations on specificity and sensitive, expense, and safety.</th>
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<tr>
<td>Etiology/Harm</td>
<td>Questions addressing the causes or origin of disease, the factors that produce or predispose toward a certain disease or disorder.</td>
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<tr>
<td>Prognosis</td>
<td>Questions addressing how to anticipate the likely course of a disease over time and any likely complications.</td>
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<tr>
<td>Therapy</td>
<td>Questions addressing how to select the treatments that do more good than harm; includes aspects such as availability.</td>
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<tr>
<td>Prevention</td>
<td>Questions addressing how to screen and/or reduce the chance of a disease; often by identifying and modifying lifestyle or risk factors.</td>
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Examples of Question Types

Diagnosis
1. In ______________________ (P), are _____________ (I) compared with _____________ (C) more accurate in diagnosing __________________ (O)?

2. Are _________ (I) more accurate in diagnosing _____________ (P) compared with/to _________ (C) for ______________ (O)?

Is yearly mammogram (I) more effective in detecting breast cancer (O) compared with mammogram every 3 years (C) in women under age 50 (P)?

Etiology/Harm
1. Are ___________________ (P) who have ______________ (I) at increased/decreased risk for/of __________________ (O) compared with/without _____________ (C)?

2. Are _________ (P) who use __________________________ (I) compared with _____________ (C) at risk for/of _____________ (O)?

Are kids with Type 1 diabetes (P) who have insulin injections (I) at decreased risk for diabetic ketoacidosis (O) compared with those who use an insulin pump (C)?

Prognosis
1. In ____________ (P), how does ______________________ (I) compared to ______________________ (C) influence ________________________ (O) over/during ___________ (T)?

2. Do ________________ (I) in patients who are ________________________ (P) influence ____________ (O) within ________________ (T)?

Do mindfulness workshops (I) in patients who are undergoing chemotherapy treatments (P) influence stress reduction (O) within eight weeks of the initiation of therapy (T)?

Intervention/Therapy
1. In _________ (P), how does _________ (I) compared to _________ (C) affect _________ (O) within _________ (T)?

2. In ___________________________ (P), what is the effect of ____________________ (I) on ____________________ (O) compared to/with _____________ (C) within ____________________ (T)?

In school age children (P), what is the effect of a school-based physical activity program (I) on a reduction in the incidence of childhood obesity (O) compared with no intervention (C) within a 1 year period (T)?
Prevention

1. For ____________ (P), does the use of ________________ (I) reduce the future risk of __________ (O) compared to/with ____________ (C)?

For adults over age 65 (P), does a daily 30-minute exercise regimen (I) reduce the future risk of heart attack (O) compared with no exercise regimen (C)?

When should I use PICO?

Clinical information is often divided into two types of information:

- Background Information
- Foreground Information

**Background information** is well accepted and consistent. **Background questions** are needed when searching for general information.

**Foreground information** is more specific, and tends to require in-depth knowledge and the most current research. **Foreground questions** are needed when answering question regarding clinical care of a specific patient.

PICO is most often used when answering **foreground questions**.

Questions?

**Contact:**
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**Check out these resources:**
http://libraries.uky.edu/MCL
https://libguides.uky.edu/nursing

References

Sources: Evidence-Based Practice: PICO ; NAU Evidence Based Practice Ask: Write a focused clinical question, MUSC Evidence-Based Dentistry, Picking a PICO