## Defining your PICO Question

<table>
<thead>
<tr>
<th>P = The <strong>Patient or Population</strong></th>
<th>EXAMPLE:</th>
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<tbody>
<tr>
<td>“Who will be the focus?”</td>
<td>In: <strong>Patient or Problem or Risk Factor</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>I = <strong>Intervention or Exposure</strong></th>
<th>EXAMPLE:</th>
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<tbody>
<tr>
<td>“What is the Exposure or Treatment of interest?”</td>
<td>Does: <strong>Treatment A or Exposure A</strong></td>
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<tr>
<th>C = <strong>Comparison</strong></th>
<th>EXAMPLE:</th>
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<tr>
<td>“What will you compare the treatment to?”</td>
<td>Compared to: <strong>Treatment B</strong></td>
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<tr>
<th>O = <strong>Outcome</strong></th>
<th>EXAMPLE:</th>
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<tr>
<td>“What do you hope the treatment will do or change?”</td>
<td>Reduce: <strong>Outcome of interest</strong></td>
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Examples of finished PICO Questions: (Don’t include the ‘P’, ‘I’, ‘C’, ‘O’ – write them as a sentence)

In **youth with psychosis** do **SGA’s vs. FGA’s** result in fewer **metabolic side effects**?

Do **residents living within 1 mile of bridges painted with lead paint** have **higher rates of depression**?

**Your PICO Question written in 1 sentence:**

__________________________________________________________________________

__________________________________________________________________________
PICO: ‘A Diamond in the Rough’

P= Patient, Population, Problem, Risk Factor
I= Intervention or Exposure
C= Comparison (if you have or want one)
O= Outcome
PICO: ‘A Diamond in the Rough’

P = Patient, Population, Problem, Risk Factor
I = Intervention or Exposure
C = Comparison (if you have or want one)
O = Outcome
<table>
<thead>
<tr>
<th>Search Tool</th>
<th>Topic1 And➔ Or↓</th>
<th>Topic2 And➔ Or↓</th>
<th>Topic3 And➔ Or↓</th>
<th>Topic4 And➔ Or↓</th>
<th>Topic5 Or↓</th>
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<td>Synonym</td>
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PICO Question: __________________________________________
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<tr>
<th>Inclusion Criteria:</th>
<th>Exclusion Criteria:</th>
<th>Quality Criteria:</th>
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Flow Chart Template:

Add or Remove Squares from Flow Chart depending on your searches and criteria:

# of records identified through Medline database searching:

# of records identified through CINAHL searching:

# of records after duplicates removed:

# of records after duplicates removed:

# of records screened:

# of records excluded:
Reason 1:
Reason 2:
Reason 3:

# of records screened:

# of full-text articles assessed for eligibility:

# of full-text articles assessed for eligibility:

# of full-text articles excluded:

# of full-text articles excluded:

# of articles included:

# of articles included:

# of articles included through citations:

# of articles included:

# of records reviewed:

# of records reviewed:

# of records excluded by title:

# of records excluded by title:

# of articles excluded:

# of articles excluded:

# of unique articles included:
## Analyzing the Evidence:

### Study Design:

**Sample:**
- Representative?
- Chosen in similar ways? If RCT randomly?
- Similar groups in important ways (other than exposure or treatment; Randomized)

### Methods:
- Was measurement of exposure or provision of interventions similarly managed in all groups?
- Was timing of exposure or intervention appropriate? Was blinding used?
- Was measurement appropriate?
- Were scales used validated?

### Outcome Assessment:
- How were outcomes assessed?
- Were assessors blind to exposure or intervention group?
- Was follow up period appropriate length?

### Analysis:
- Were appropriate tests used to evaluate outcomes? Adequate power? Effect Size?
- Were results significant? ITT analysis?

### Evaluation of Evidence:
- Is there any evidence supporting causation – (dose-response; exposure preceded outcome; biologic explanation; consistent results)
- Are conclusions supported by data or evidence?
- How does this sample compare to your patient or population of interest?
- Would your patient or setting be open to this intervention?
- Are there alternatives available?
**Data Extraction Tool**

**Table of Relevant Papers or Evidence** Entries should be concise/brief; include columns

Specify what is important to your question

<table>
<thead>
<tr>
<th>Author (yr), country</th>
<th>Sample or Patient Group Setting</th>
<th>Study type</th>
<th>Exposure/ intervention</th>
<th>Outcomes studied</th>
<th>Key results (include quantitative effect estimates)</th>
<th>Study strengths &amp; weaknesses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Iennaco (2010) US</td>
<td>N=7566 Heavy industrial workers 6 yr period Manufacturing plant (11 locations)</td>
<td>Retrospective cohort study</td>
<td>Effects of high demand, low control based on JCQ completed by plant managers</td>
<td>Depression diagnosis from health claims data</td>
<td>High demand significantly increases risk of depression dx OR: 1.39 (95% CI: 1.04-1.86) Low control not significant OR: 0.78 (95% CI: 0.56-1.08)</td>
<td>Strengths: Large longitudinal study; uses objectively ascertained demand &amp; control Limitations: Health claims data used; expect this is underestimate of depr cases</td>
<td></td>
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**Implementation Planning**

**Assessment:**
What is the Problem or Question?
Why is it happening now?
Who does it affect?
  - what is experienced?
What information do you have about the problem? (i.e. data)
What information do you need?
How does the problem affect the surrounding systems?
How is the organization involved?

**Pre-Planning:**
What are current practices r/t this problem?
What are the ‘best practices’ r/t this problem?
How do the ‘best practices’ found relate to your population?
How would a change affect the system or organization?
What else would need to be adjusted to integrate the ‘best practice’?
How will you measure and use data to know baseline vs. post-intervention outcomes?
Who must be involved in the planning?
What is the goal of implementing change?

**Preparing for change:**
How will administration be involved?
Are there training needs?
What roadblocks do you expect?
Identify the steps needed and a timeline for change.

**Planning the intervention or change:**
Engage all effected in problem solving
  - Get input & feedback r/t plans
  - Share results of data collection and evidence identified
Revise plan based on clinical wisdom and feedback of participants
Seek support of team

**Evaluation of Implementation:**
Outcome information
Fidelity to best practice
Costs
Efficiency
Sustainability
  - Maintaining change
  - Extending & Improving change
  - Adaptation of ‘best practice’ models