

# What is the PICO Process?

PICO is a mnemonic used to describe the four elements of a clinical question to be formulated prior to starting one's research.

The clinical question needs to identify:

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**P**atient or population we intend to study

**I**ntervention or treatment we plan to use

**C**omparison of one intervention to another

**O**utcome we anticipate

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Once a well-structured question is formulated, researchers will be in a better position to search the literature for evidence that will support their original PICO question.

See reverse side for PICO question examples 

In newborns experiencing pain, is there evidence to suggest that skin to skin contact is more effective than administering oral sucrose to reduce pain?

**PICO Elements**

**Keywords**

- |                         |                                |
|-------------------------|--------------------------------|
| <b>P (Population)</b>   | Newborns experiencing pain     |
| <b>I (Intervention)</b> | Administering oral sucrose     |
| <b>C (Comparison)</b>   | Skin to skin care              |
| <b>O (Outcome)</b>      | Reducing preterm neonatal pain |

In cardiac patients who have undergone an angioplasty procedure, is there evidence to suggest that early ambulation is more effective than late ambulation to reduce complications?

**PICO Elements**

**Keywords**

- |                         |  |
|-------------------------|--|
| <b>P (Population)</b>   | Patients undergoing a transfemoral coronary procedure      |
| <b>I (Intervention)</b> | Early ambulation   |
| <b>C (Comparison)</b>   | Late ambulation  |
| <b>O (Outcome)</b>      | Reducing complications in transfemoral coronary procedures |

In patients with a port-a-cath, is there evidence to suggest that flushing the central venous catheter with normal saline is more effective than a heparin flush to reduce occlusion rates?

**PICO Elements**

**Keywords**

- |                         |   |
|-------------------------|---|
| <b>P (Population)</b>   | Patients needing central venous catheters flushed                                 |
| <b>I (Intervention)</b> | Using normal saline   |
| <b>C (Comparison)</b>   | Heparin flush   |
| <b>O (Outcome)</b>      | Reducing occlusion rates in percutaneously inserted central venous access devices |

In patients on ventilators, is there evidence to suggest that oral hygiene involving toothbrushing is more effective than oral hygiene using chlorhexidine to prevent ventilator-associated pneumonia?

**PICO Elements**

**Keywords**

- |                         |   |
|-------------------------|---|
| <b>P (Population)</b>   | Patients with ventilators                         |
| <b>I (Intervention)</b> | Oral hygiene involving toothbrushing              |
| <b>C (Comparison)</b>   | Oral hygiene using sponge soaked in chlorhexidine |
| <b>O (Outcome)</b>      | Preventing ventilator-associated pneumonia        |

In patients requiring intravenous delivery of medication, is there evidence to suggest that using needleless intravenous systems is more effective than standard intravenous needle systems to reduce rates of needlestick injuries?

**PICO Elements**

**Keywords**

- |                         |                                      |
|-------------------------|--------------------------------------|
| <b>P (Population)</b>   | Patients requiring IV insertion      |
| <b>I (Intervention)</b> | Using needleless intravenous systems |
| <b>C (Comparison)</b>   | Standard intravenous needle systems  |
| <b>O (Outcome)</b>      | Reducing rates of needlestick injury |