

# Effective Use of the “E” in EBM

- **The Well-Built Clinical Question:**

  - **“PICO” Model**

  - ***P***atient / Population / Problem (***among*** \_\_\_\_\_)
  - ***I***ntervention / Exposure (***does*** \_\_\_\_\_)
  - ***C***omparison (***versus*** \_\_\_\_\_)
  - ***O***utcome (***affect*** \_\_\_\_\_)

# I = Intervention or Exposure

- What interventions are you interested in knowing more about (therapeutic, diagnostic, preventive or other)?
  - What strategies are you interested in comparing?
  - Example: For medical students starting internship is checking hepatitis B titers required .....
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- [See comment in PubMed Commons below Ann N Y Acad Sci.](#) 1998 May 1;840:649-55.
  - **The influence of psychological stress on the immune response to vaccines.**
  - [Glaser R<sup>1</sup>, Kiecolt-Glaser JK, Malarkey WB, Sheridan JF.](#)
  - [Psychosom Med.](#) 1992 Jan-Feb;54(1):22-9.
  - **Stress-induced modulation of the immune response to recombinant hepatitis B vaccine.**
  - [Glaser R<sup>1</sup>, Kiecolt-Glaser JK, Bonneau RH, Malarkey W, Kennedy S, Hughes J.](#)
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- [See comment in PubMed Commons below Environ Health Perspect.](#) 2001 Aug;109(8):757-64.
  - **Vaccine-induced antibody responses as parameters of the influence of endogenous and environmental factors.**
  - [Van Loveren H<sup>1</sup>, Van Amsterdam JG, Vandebriel RJ, Kimman TG, Rümke HC, Steerenberg PS, Vos JG.](#)
  - [Author information](#)

# C = Comparison of Interest

- • Is there a comparison to be evaluated against the intervention?
- Example: For medical students starting internship is checking hepatitis B titers required in addition to immunization records....

# O = Outcome of Interest

- What is the desired outcome to be evaluated?
- How will the intervention and/or outcome affect the stakeholder...

Example: For medical students starting internship is checking hepatitis B titers required in addition to immunization records to ensure immunity.

<b>P</b>	<b>Patient, Population, or Problem</b>	<b>How would I describe a group of patients similar to mine</b>
<b>I</b>	<b>Intervention, Prognostic Factor, or Exposure</b>	<b>Which main intervention, prognostic factor, or exposure am I considering?</b>
<b>C</b>	<b>Comparison to Intervention (if appropriate)</b>	<b>What is the main alternative to compare with the intervention?</b>
<b>O</b>	<b>Outcome you would like to measure or achieve</b>	<b>What can I hope to accomplish, measure, improve or affect?</b>
<b>T</b>	<b>What type of question are you asking?</b>	<b>Therapy/Treatment, Diagnosis, Prognosis, Harm/Etiology (may be referred to as “domains” in PubMed)</b>
<b>T</b>	<b>Type of study you want to find</b>	<b>What would be the best study design/methodology?</b>