

# **NURSING PICOT QUESTIONS IN PUBLIC HEALTH**



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### **Nursing PICOT questions in public health**

The study will concentrate in examining the application of PICOT formula in the field of public health. Some of the issues that will be used include Alzheimer's disease, vasectomy, furunculosis, premature birth, pregnancy, and the Down's syndrome. The selected issues will be used to discuss how nurses use PICOT formula to acquire necessary information needed for effective intervention.

The PICOT format is often used to formulate questions in Nursing Evidence-Based Practice. PICOT is an acronym, which stands for patient problem/population, intervention, comparison, outcome, and time (Lipman 35). The patient problem/population guides a practitioner to understand the patient, sex, age, health status, or the population under consideration. Intervention leads one to ask the question regarding the plan for the patient in question, that is, specific medications, therapies, and tests. Comparison implies the available alternatives for the chosen plan. In that case, there can be no treatment or various treatment options. The outcome helps the practitioner to narrow down to what is sought. The field can include certain elements including full health, no symptoms, and less symptoms among others (Mateo and Marquis 87). Time is another fundamental component of Evidence-Based Practice. The timeframe for any case is always enlisted. In some cases, the T can also imply the type of study.

PICOT questions fall into four types, namely: prevention/therapy, diagnosis, etiology, and prognosis. The PICOT format assists in creating a useful clinical question and searching for relevant publications and studies. For instance, if a nurse desires to understand the effect of flu vaccination on the advancement of pneumonia in an old adult, the professional can fill in the blank spaces like this:

In ----- (P), how does ----- (I) compare to----- (C) effect ----- (O) over ----- (T). The question will then appear as follows; in a patient aged 65 years, how does the application of an influenza vaccine compare to the failure to receive vaccine influence the risk of contracting pneumonia during a flu season?

In most cases, questions may be formulated based on the four categories. For intervention, it will cover a wide span of activities emanating from drug treatments, clinical therapies, social activities, and lifestyle changes among others (Lipman 59). Interventions can encompass either population health activities or individual patient care. For example, a 30-year old male experiences recurrent furunculosis for the past seven months. The episodes keep recurring despite being treated with drainage and various courses of antibiotics. The patient inquired whether the recurrent skin boils could be prevented. The case can be converted into an answerable question, using the PICOT formula as follows: In patient with persistent skin boils, does prophylactic antibiotics, compared to no treatment, lessen the recurrence rate? The question effectively satisfied the population, intervention, control, and outcome requirements.

Etiology and risk factors are questions that assist in examining possible causes of illness or disease (Freshwater and Gary 32). They are the opposite of intervention questions since they target harmful outcomes of exposure or activities.



Such questions often emerge regarding public health issues, like increased risk of cancer due to exposure to an environmental chemical or increased risk of heart disease because of consuming certain foods. Example: Walter desires to discuss the possibility of a vasectomy. He has been informed that vasectomy increases the risk of testicular cancer later in life. As a practitioner, you understand that the risk is low, but want to give Walter a more precise answer. A PICO question for the case will go like: In men, does undergoing a vasectomy, compared to not having one, heighten the risk of development of testicular cancer in the future?

Population – adult males

Intervention – Vasectomy

Control – no vasectomy

Outcome – Testicular cancer

The questions for frequency or rate concern the number of people in a population facing a health problem (Freshwater and Gary 46). The questions may concentrate on issues, such as the rate of Alzheimer's disease in individuals over 70 years or prevalence of hearing problems among infants. It becomes a question of rate if it includes a time period, for instance, the cases of influenza in summer versus winter. Example: Dorothy is an 8-week-old baby undergoing her routine follow-up. The baby was born prematurely at 36 weeks. As a professional, you want to inform the parents about her likelihood of developing hearing problems. PICO question: In prematurely born infants, compared to those born normally, what is the consequential prevalence of sensory deafness?

Population – infants

Intervention – premature

Comparator – full-term

Outcome – Sensory deafness



Diagnosis questions revolve around the accuracy of diagnostic tests in different patient groups in comparison to other alternative tests. The accuracy of tests includes specificity and sensitivity (Sturmey 12). Example: June is having her second pregnancy. At 33, she had her first baby and underwent amniocentesis to establish whether the baby had the Down's syndrome. Although the tests were negative, it was not a good experience because she received it at 18 weeks. Currently, she is one month pregnant at the age of 35. She desires to have a test that can produce an earlier result. According to her local hospital, nuchal translucency ultrasound and serum biochemistry are the available first trimester tests for the disease. As a professional, you desire to establish whether the options are as reliable as the traditional amniocentesis. PICO question: For a one-month pregnant woman, is serum biochemistry testing plus nuchal translucency ultrasound as accurate as the traditional amniocentesis for Down's syndrome?

Population – pregnant woman

Intervention – Serum biochemistry plus nuchal translucency ultrasound

Comparator – Conventional amniocentesis

Outcome – Accurate diagnosis

#### Works Cited

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