PICO/PS Video Transcript

Hello everyone - this is Cari from the library and this video will focus on developing your research question using the PICO and PS tools.

There are two major types of questions we run into when it comes to research: background questions: and foreground questions. Background questions tend to look for general information about a topic - the type of question you may be able to answer by browsing your nursing textbook or perhaps later on with a guideline. For example, “What are the symptoms of schizophrenia?” or “What are the possible treatment options for type 1 diabetes?” - these are important questions, but they are not our focus today. Foreground questions tend to emerge out of a clinical or practice setting, and involve looking for evidence to guide your decision making as a health practitioner. They tend to be specific to a patient or population, and they often involve the impact of a specific intervention, therapy, or exposure. For example, “Do school breakfast programs lead to higher levels of student achievement?” would be considered a foreground question. What we expect to find with a foreground question is the type of question someone might do a research study to answer.

There are two tools we can use to help us create our foreground questions as well as build an effective search strategy: PICO and PS. PICO is the tool we use with questions that involve quantitative research. So if you remember, quantitative research looks at questions where we are trying to measure something or quantify it - so measuring the impact or effectiveness of a therapy or whether or not there is a relationship between two variables. PICO stands for the following: patient or population, intervention or exposure, comparison, and outcome. In the patient or population category, make sure you note anything that is unique about the individual or group you are working with. Are they very young or very old? Do they have preexisting conditions that might factor in when we look at the kind of research that would be applicable? In terms of interventions, they do not have to be drugs: they could be educational programs or other health promotion strategies. Exposure here refers to being exposed to a particular environmental situation – so, for example, an example of an exposure might be the use of a cell phone. People have done studies looking at whether or not that exposure leads to an outcome of increased risk of brain cancer. I will note that comparison - the C - doesn't always have something noted because there may not be a clear comparison that you're trying to make. You might not be, for example, trying to decide between two different treatment options. Sometimes the comparison could be doing nothing at all. If I was interested in knowing whether or not receiving the flu vaccine in pregnancy led to an increased risk of miscarriage, the intervention is the flu vaccine, the comparison is not receiving the vaccine, and the outcome I'm interested in is whether or not it leads to an increased risk of miscarriage.

Not all questions are best answered with quantitative studies. That is why we have the PS tool. PS is best used with questions that might involve qualitative research. Qualitative research is trying to capture the thoughts, feelings, beliefs, and attitudes of individuals, often in their own voices and they typically use methods like interviews, focus groups, and diary entries to collect their data. Because we are not trying to measure anything or establish relationships between variables, it is very difficult to fit those kinds of scenarios into the PICO model, so we just look for two aspects: the patient or population and the situation.

Let me give you some examples of how to apply these two tools. The first scenario we are working with is whether or not babies who are formula fed are more likely to be obese as children than breastfed babies. Let's use PICO to try and break this scenario down into important parts. The patient or

population we are interested in is babies. The intervention is formula feeding versus breastfeeding (comparison), and the outcome we are wondering about is whether or not there is an increased risk of childhood obesity. Once we have identified our key parts, I'm going to write it out as a research question: Do babies who are fed formula have higher rates of childhood obesity than babies who are breastfed?

In the second scenario, you would like to know more about the experiences of mothers who are breastfeeding when they return to work. We are not trying to look at the effectiveness of a particular strategy, therapy, or intervention, and we are not trying to establish a relationship between variables. This looks like something that might be answered with a qualitative research study. For that reason, I'm going to use PS to identify the key parts. So P - patient or population - in this case, women who are breastfeeding - and the situation I would like more information about are their experiences when they return to work. When writing out a PS scenario as a question, I can use this rough template - how do the (insert your patient or population) experience (insert the situation)? So that works out to - How do women who are breastfeeding experience returning to work?

If you are still not clear about how this all works, please don't hesitate to get in touch. I can be reached by phone, by email, and you can also schedule an individual appointment with me on both the Nursing and Midwifery guides through the library website. Good luck!