

## Asking clinically relevant questions – DOQs and POQs

To be clinically useful, a question must be both clinically relevant (to the patient or the doctor) and must be answerable. Unanswerable questions are often useful in generating new ideas but they are not useful in current patient care.

Sackett and colleagues have divided questions into two general categories: background questions and foreground questions. I prefer to take an idea from Shaughnessy and change it slightly and call these:

- DOQs – Disease Oriented Questions, and
- POQs – Patient Oriented Questions.

DOQs are intended to give us general information about the disease process under consideration.

**What** causes a disease?

**Who** gets it?

**Why** do they get it?

**Where, when, and how** do they get it?

DOQs are always disease oriented; they are intended to give us information about a disease, not the patient with the disease.

Examples of DOQs are:

“What are the common causes of pancreatitis?”

“What are the causative organisms in community acquired pneumonia?”

“Why are some people more likely to have chronic diarrhea after infection with cryptosporidium than others?”

“What is the age distribution of coronary artery disease and is it different in men and women/blacks and whites/rich and poor?”

POQs are intended to give us specific information about caring for a particular patient.

1. What is the specific clinical problem that we are addressing in this patient? Patients may have multiple, on-going problems and we need to be specific in deciding which one (and what aspect of it) we are addressing with our question.
2. What is the test, intervention, or other clinical information (prognosis, patient’s perception of their illness, etc.) we want to know about the patient?
3. Is there a comparison test, intervention, etc. which should be considered?
4. What is the clinical outcome that we are going to assess?

POQs are always patient oriented; they are intended to give us information about a specific patient and problem. It is obvious that information about the disease – DOQs – will often be necessary to answer POQs.

Examples of POQs are:

“Does keeping a patient with acute pancreatitis n.p.o. (nothing by mouth) speed recovery?”

“Are antibiotics useful in the treatment of acute bronchitis in adults?”

“What is the best antibiotic for community acquired pneumonia?”

“Is there any treatment for cryptosporidiosis in patients with AIDS?”

“What are the relative and absolute contraindications to beta-blocker therapy after myocardial infarction?”

Some further examples of the differences between DOQs and POQs might help settle any remaining confusion.

DOQ	Possible corresponding POQ
“Is high cholesterol a risk factor for heart disease?”	“Does giving a patient a statin drug, which lowers cholesterol, reduce the risk of heart disease without unacceptable side-effects?”
“Is <i>Haemophilus influenzae</i> a common infecting organism in patents with exacerbations of COPD?”	“What is the most appropriate antibiotic in the treatment of exacerbations of COPD?”
“Does glycosylation of neuronal proteins in diabetes contribute to the neuropathy seen in this disease?”	“What percentage of type 2 diabetics develop clinically important neuropathy?” <i>or</i> “Does intensive treatment of type 2 diabetes reduce the likelihood of developing neuropathy?” <i>or</i> “What is the best treatment for the pain of diabetic neuropathy?”
“Is osteoporosis a risk factor for hip fracture?”	“Does giving a bisphosphonate to women with osteoporosis decrease the likelihood of hip fracture without unacceptable side-effects?”

DOQs and POQs can, to some extent, overlap and there is sometimes not a clear distinction between the two. DOQs and POQs are both important – but they are important in different ways. When you are at the beginning of your training, you mostly ask DOQs; as you progress you ask more POQs (with the assumption that you already know the answers to the DOQs). Even experienced clinicians, however, often return to asking DOQs.

This course is about clinical epidemiology and so we will be concentrating on POQs and downplaying DOQs. This is not to downplay the importance of DOQs; merely to point out that they are not the focus of this part of the course.

Your assignment in this segment is:

1. Pick a POQ (not DOQ) that is relevant to an issue you are studying in this segment. The question should be related to one of the following:
  - a. diagnostic testing (including history and physical examination)

- b. prognosis
- c. therapy or prevention
- d. harm

Examples of POQs might be:

*Does pneumococcus vaccine reduce the risk of pneumonia?*

*What is the sensitivity and specificity of the "rapid strep test"?*

POQs can be difficult to formulate and you should take some time and effort in making yours clear and unambiguous. Try to pick a question that is relevant to what you are studying. Pick a question that is not so broad that you will end up with thousands of references but not so narrow that you have no references (or only one). Your clinical question should be stated in one sentence – at most two. You are allowed to modify your question after your first pass through the literature – you should definitely do this if you're coming up with more than about 100 references.

2. Search the medical literature for articles relevant to the question. **You're not expected to assess the articles for quality – that comes next segment – simply find them.** You want to find articles that deal directly with your question – not editorials, overviews, meta-analyses, policy statements, economic analyses, etc.
3. Turn in the results of your work:
  - a. The clinical question.
  - b. Your search strategy (in detail including the MeSH and keywords used, any experts you consulted, tree search strategies, etc.).
  - c. A list of the articles you retrieved.

Use the style of the International Committee of Medical Journal Editors; Uniform Requirements for Manuscripts Submitted to Biomedical Journals (the "Vancouver" style).

Go to <http://www.icmje.org/index.html#manuscripts> for details.

Include with the list the abstract of the article if available from PubMed. For example:

1. Tabar L, Fagerberg CJG, Gad A, et al. Reduction in mortality from breast cancer after mass screening with mammography - Randomised trial from the Breast Cancer Screening Working Group of the Swedish National Board of Health and Welfare. *Lancet* 1985;i:829-32.  
[Put abstract here]
2. Tabar L, Fagerberg G, Duffy SW, Day NE, Gad A, Grontoft O. Update of the Swedish Two-County program of mammographic screening for breast cancer. *Radiolog Clin N Am* 1992;30:187-211.  
[Put abstract here]

You should have picked your POQ by Friday 27<sup>th</sup> at 1600. Please e-mail your POQ to Dr. Ewart at [rewart@siumed.edu](mailto:rewart@siumed.edu) and Tracey Smith at [tsmith@siumed.edu](mailto:tsmith@siumed.edu) as soon as your tutor group has decided on a POQ so that we can make sure you're not going off on the wrong track. Your final write-up of your search strategies and literature list is due on October 11 by 1600. Please e-mail these again to Dr. Ewart and Tracey Smith. Do not print out these materials, everything should be electronic.

Like all of the assignments in this streamer, this is a "group assignment"; that is, you are expected to do it as a tutor group and you will be given a group grade – that is your individual grade will be the same as the group grade.