**Chapter 4 Evidence based health care – answers**

Self assessment

Question 1 of 5

Answer D – randomised controlled trial. This is the gold standard for testing interventions

A well-conducted cohort study and a case control study are observational designs. Dramatic uncontrolled experiments are lower down the so-called hierarchy of evidence. The report of an expert committee is prone to bias and personal opinion.

Question 2 of 5

Answer D – qualitative study. We need detailed information on the experiences and perceptions of participants. This might be gathered through a series of interviews, for example.

Case series’ are used to explain the clinical experience of a group. Case control studies are ideal for eliciting aetiology. Cohort studies are used to determine prognosis.

Question 3 of 5

Answer C – Cochrane database. The Cochrane library provides systematic reviews which are secondary sources of evidence.

Journal articles are sources of primary literature. Narrative reviews are not sources of evidence. Although the World Wide Web is a tool to access some of the sources, it is not itself a source.

Question 4 of 5

Answer C – conference abstracts. These are hard to access and their quality is uncertain.

Medline is publicly available through the National Library of Medicine. The Cochrane database is readily accessible. [Cochrane Reviews | Cochrane Library](https://www.cochranelibrary.com/)

Question 5 of 5

Answer D. In meta-analysis results of individual studies are combined to produce one single result.

Narrative reviews are a verbal summary without any mathematical combination of results. Systematic reviews may or may not include the calculation of a pooled summary estimate. Evidence synthesis denotes a summary without mathematical synthesis.

Short answer questions

Question 1 of 7

Sackett defined evidence based medicine (EBM) as ‘the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research’.

Question 2 of 7

The five steps in practising evidence based health care are:

* Converting information needs into answerable questions by asking a focused question
* Tracking down best evidence
* Appraising evidence critically
* Changing practice in the light of evidence
* Evaluating your performance Question 3 of 7

In the PICO approach, P is for patient or population, I denotes intervention, C the comparison intervention, and O the outcome of interest. Some add a T, which is the time component.

Question 4 of 7

A hierarchy is used to rank the strength of evidence obtained from different study designs and other evidence sources. Here is one of the commonly used hierarchies.

* (I-1) a well-done systematic review for 2 or more randomised controlled trials (RCTs)
* (I-2) an RCT
* (II-1) a cohort study
* (II-2) a case-control study
* (II-3) a dramatic uncontrolled experiment
* (III) respected authorities, expert committees, etc…
* (IV) someone once told me… Question 5 of 7

Qualitative studies use methods such as interviews, diaries and direct observation to provide detailed information to describe the experiences of populations. Then these data are analysed to arrive at conclusions. Qualitative methods can generate a wealth of knowledge to contextualise many of the decisions we take as health professionals.

Question 6 of 7

The attributes are relative advantage, compatibility, complexity, observability and trialability. Question 7 of 7

There is good evidence to support the following interventions in changing professional behaviour:

* Multifaceted interventions – By targeting different barriers to change, these are more likely to be effective than single interventions
* Educational outreach – This is generally shown to be effective in changing prescribing behaviour
* Reminder systems