Promoting Learning about Evidence-Based Practice

Promoting good practice

Core knowledge and skills should be used throughout the course, so that the discipline of understanding evidence is not seen as a dry academic subject, but as a central part of being a GP who understands the needs of the patient, society and the NHS. We suggest the use of a developed framework to answer questions derived as part of problem-based learning groups or to develop future GPs as they present subjects to their peer group, using an experiential learning cycle to develop good practice.

Learning could include:

- A core course to develop skills and explore areas of development
- Work-based learning in other clinical areas: using a strategy for facilitators to encourage critical questioning of clinical and management ideas, and their relevance to general practice
- Non-work-based learning in the development of portfolios, reflective learning and CPD strategies
- Using a case-based journal group to look at the evidence and its applicability in context.

The following questions could be used as a way of working with evidence-based practice during training.

1 The architecture of health research (and its application to family practice):

- What is research? How can it inform practice?
- Quantitative research: observational, controlled trials, cohort studies, case studies, etc.
- Qualitative research: case studies, phenomenology, grounded theory, ethnography, meta-ethnography, discourse analysis and narrative methodology
- Evaluation and action research: design and integration of multiple methodologies
- Research in the management of change: using evidence from within and outside health care.

2 What makes a good piece of research?

- Revision of basic statistics, defining narrative and systematic reviews
- Introduction to parametric and non-parametric statistics: a guide to why these are used. A look at diagnostic and screening statistics
- Relevance of research to practice: is the right question being answered? Is it relevant to the patient in front of you?
- Critical reading: developing a framework to assess and understand research papers efficiently. A look at critically assessing local guidelines.

3 Finding the research:

- How to ask the right questions

- Using multiple databases
- Evaluation of reviews (journal and web-based)
- Developing an individual database to underpin continuing professional development (CPD)
- What makes a good review or summary article on a subject?

4 Putting research into practice:

- Designing your own studies: understanding research ethics, application of appropriate statistics, appreciation of the importance of negative results
- Audits: using research to set standards and implement changes
- Evaluating your research: was it worth it and does it work?
- Understanding pharmaceutical marketing and the necessity for a critical review of the information
- Research ethics and the philosophy behind these and current UK best practice (Research Ethics Committees).

5 Change management:

- How can you integrate your findings so that they are most useful for the patient, his or her family and the team?
- Team dynamics and implementation: how to develop a change in practice and user-friendly guidelines, developing a team approach to implementation and policy
- How to implement changes outside the immediate organisation: looking at the wider NHS; good and less good examples; national strategies
- Budgeting for change management: time and financial considerations.

Appendix 1

The Sicily statement on evidence-based practice

This statement was conceived by the delegates at the second international conference of Evidence-Based Healthcare Teachers and Developers held in Sicily in September 2003 (Signposting the Future of EBHC). The proposed statement was developed at the conference, all delegates were sent a further questionnaire and the statement published in 2005. Eighteen professions allied to health from 18 countries were represented in the consensus document.

The change in the name from EBM or EBHC to EBP was suggested to reflect the benefits of the discipline of entire healthcare teams and their organisations. The Sicily statement endorses the five steps of EBP; from the original statement in 1992 (for evidence-based medicine), most of the steps have now been subjected to trials of teaching effectiveness.[4] The steps are:

1 Translation of uncertainty to an answerable question

2 Systematic retrieval of best evidence available

3 Critical appraisal of evidence for validity, clinical relevance and applicability

4 Application of results in practice

5 Evaluation of performance.

Many teachers in EBP will use this step as an additional section, thus promoting a more comprehensive evaluation of the effect of the change.

The statement goes further to suggest that:

> *'it is a minimum requirement that all practitioners understand the principles of EBP, implement evidence based policies, and have a critical attitude to their own practice and to evidence. Without these skills and attitudes healthcare professionals will find it difficult to provide best practice. Teachers, commissioners, and those in positions of leadership will require appraisal skills that come with higher training and continued use.'*

The authors point out that the most difficult step ('step 0') is to get students and colleagues to recognise uncertainties.

Appendix 2

Types of evidence: POEM AND DOE

A study addressing quality-of-life issues, mortality and morbidity is called a POEM, for *patient-oriented evidence that matters*. Studies classified as POEMs deal with patient *outcomes* and may lead physicians to alter their patterns of practice.

A study addressing factors such as organ function or biochemical levels in the blood deals with *disease-oriented evidence* and is called a DOE. Our knowledge and understanding of aetiology, prevalence and pathophysiology is enhanced by the DOE study.

'Is this article a POEM or a DOE?'

Asking the question: 'Is this article a POEM or a DOE?' is fundamental. A great deal of the medical literature focuses on DOE studies. An example of a DOE study (one that deals with changes in organ systems, blood levels or investigative procedures) can be drawn from the cholesterol debate, which also illustrates the fundamental difference in the approach to patients used by family physicians and specialists.

The *cardiologist* focuses on the effect of cholesterol-lowering agents and their impact on the LDL or serum cholesterol, and the reduction of cardiac event rates. These changes are DOE, although one could argue that a reduction of cardiac event rates falls between a POEM and a DOE. In contrast, the *GP* is focused on longevity and quality of life and, in jargon, 'all-cause mortality' (POEM).

The table provides a series of examples of POEM outcomes, outcomes of studies that would be intermediate between a POEM and a DOE, and study outcomes on the same topic that would be DOE.

	DOE	*Intermediate*	*POEM*
Cholesterol lowering	Lower serum cholesterol	Reduced cardiac events	Improved all-cause mortality
Consuming a low-fat diet	Lower serum cholesterol	Improved self-esteem	Improved life expectancy
Hormone replacement therapy	Increased bone density	Increased bone density	Improved life expectancy and quality

Source: Rosser and Shafir.[10]

POEMs have to meet three criteria

1 They address a question that we face as physicians.

2 They measure outcomes that we and our patients care about: symptoms, morbidity, quality of life and mortality.

3 They have the potential to change the way we practice.

The POEM concept was developed by Professors David Slawson and Allen Shaughnessy, educators in family practice in the United States.[11]

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