Introduction

There has been increasing awareness of the need for all clinicians to acquire skills in critically appraising all aspects of their professional life. In effect this means taking one step back and objectively appraising the rationale for every aspect of practice to try to ensure that actions are based on logic and science rather than emotion and past habits.

Critical appraisal encompasses all aspects of professional life, including the theory and the practice behind clinical tasks, managerial and business decision-making and professional development. All Faculty assessments are based on evidence-informed practice, which in turn is based on the best available research. Clinicians therefore need to have the skills to appraise the evidence.

This pack aims to help readers to acquire the necessary skills. It does so by briefly describing the different areas of critical appraisal that are relevant to oral health clinicians, be they dentists or other dental care professionals (DCPs) and then suggesting key publications (both printed and electronic) that help readers to acquire the necessary skills. The pack does not set out to assess readers’ ability in the different areas of critical appraisal, as such assessment already takes place in the Faculty’s different examinations. However, most of the recommended publications include exercises to help readers check that they have understood the processes involved in critical appraisal and can be used to provide readers with informal, individual assessment.

As there are constant developments in both the techniques of critical appraisal and the relevant literature, this pack is presented online rather than as a printed document. This enables it to be updated as required and for users to feedback their comments and suggestions.

Topics Covered

This pack covers the following aspects of critical appraisal:

1. Appraising literature- what can be believed and why.
2. Evidence-informed oral health care.
3. The role of peer review, audit and research.
4. Reflection and analysis.
5. Professional development planning
6. Mentoring
7. Practice Management and Finance
8. Section for Feedback and Suggestions
1. Appraising Literature – What can be believed and why?

There are an ever growing number of books, journals, papers, articles and other information both in hard copy and online. The problem is to know which ones to believe. The skills required to appraise the literature, sometimes known as critical reading, are therefore fundamental to critical appraisal and to evidence-informed practice. Fortunately, there are a number of excellent books on this topic, one of which is:


It explains which general points to look for in the different sections of any paper (title, introduction, aims, methods, etc) and then specific points in different types of paper.

This book costs £20.99 and can be purchased online from BMJ books at www.blackwellpublishing.com/Medicine/bmj

2. Evidence-informed Oral Health Care

The principles of evidence-based medicine apply to evidence-informed dentistry. However, some aspects are unique to dentistry and oral health clinicians need to understand how the general principles can be applied to dental practice.

A most useful publication which covers this topic is currently (April 2008) at the printers and should be available from mid-summer 2008. It is:


3. The Role of Peer Review, Audit and Research

Outside the United Kingdom (UK) and Dentistry, peer review is generally taken to refer to the process in which scientific papers are reviewed by knowledgeable people who work in the same area as the authors of the papers they are asked to review. However, since the early 1990s in UK general dental practice the term peer review has related to the process in which a group of dentists (usually between two and ten in number) meet to discuss and compare their current modes of practice. In general dental practice, but not in other areas of health care, clinical audit grew out of peer review. Both processes seek to improve standards of care. Clinical Audit usually involves only one clinician and seeks to compare performance against an agreed standard and then to take any necessary steps to improve performance prior to re-auditing to establish whether or not there has been an improvement.

A useful resource to help gain an understanding of Clinical Audit is:
It is a natural progression from clinical audit to research. Understanding research is a part of the critical appraisal process. It should be stressed that although desirable, it is unnecessary to undertake research in order to understand it. The publications recommended previously for appraising the literature and understanding evidence-informed oral health care cover some aspects of research. However, a more comprehensive basic guide can be found in:


4. Reflection and Analysis

According to Donald Schön (1991), professionals learn most effectively through a process of reflection. Each time a dentist undertakes a procedure (root canal therapy (RCT) of an upper central, say), they intuitively consider their previous training and experience and apply it to the situation in front of them. This latest experience then adds to their bank of knowledge and will inform them when they next perform RCT on an upper central. Schön’s concept highlights the enormous educational value of experience. Learning is directly related to the professional’s practice, with all its complexities of people, finance, time constraints and so on. Academic learning (from a lecture, for instance) is limited by its inability to relate directly to the individual context of every learner in the room.

However, professional development restricted to just doing it has significant limitations, too. The practitioner may get more and more efficient at doing a procedure that, in the world outside his surgery, has been outdated by progress to another, more effective approach. This calls for another form of reflection. Instead of just relying on a reactive, un-thinking process of getting on with the job, the practitioner can also employ a more proactive stance of becoming critically reflective. This involves taking a step back from practice every now and again and viewing his/her practice from a wider perspective – as if they were a critical friend sitting on their shoulder. The developments of the outside world can also be considered during this process, essentially giving the practitioner a chance to learn from others’ experience as well as their own.

This form of learning can be very powerful. It maximises the value of the practitioner’s own experience (which will become more significant as the opportunities to treat dental diseases decline in line with the improvements in oral health). It also helps the practitioner to take account of the rapidly changing world outside. The learning can be
further enhanced by working with a small group of trusted colleagues. Talking and listening aids learning!

There are a number of tools available for the busy GDP and their teams to help them become more critically reflective. The FGDP Key Skills programme is a good place to start. This widely acclaimed programme focuses on the basic elements of practice that contribute to the complexity of primary dental care. Thoughtful completion of the programme (as opposed to a tick-box exercise) will train the practitioner in becoming more critically reflective.

Other tools are available to help the practitioner reflect on a more specific situation, they include Significant Event Analysis (SEA) and Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis.

SEA has been used for many years to improve quality management in an organisation. It is a structured process for looking back at a problem or complaint, and is designed to ensure that lessons are learnt and acted upon. This presumes, that the organisation is recording problems and complaints in the first place. A recent article, in the July 2007 Education Supplement to the British Dental Journal, gives a good description of the use of SEA in dentistry. It is Wright PD, Franklin CD The use of significant event analysis and personal development plans in developing CPD: a pilot study. *BDJ* 2007; 203: 43 – 47.

SWOT is an acronym for ‘Strengths, Weaknesses, Opportunities and Threats’. This tool can be used for looking at anything from setting up a new practice, to comparing prospective employees, to buying a new piece of equipment. The ‘Strengths’ and ‘Weaknesses’ sections can be used to describe the key points about the present situation, and ‘Opportunities’ and ‘Threats’ to describe possibilities in the future. Don’t forget to consider the possible weakness that can accompany a strength (and vice versa, of course). For instance, a ‘strength’ within a practice may be a highly trained and experienced team. The ‘weakness’ may be a higher wage bill. The same is true of opportunities and threats. Finally, there is a need to also consider how a weakness can be converted into an opportunity by the use of a quality improvement exercise.

Primary dental care is, by its nature, a wide-ranging and complicated business – a ‘swampy lowland’ as Donald Schön would describe it. No one is more expert on a dentist’s own practice than the dentist themselves. Adding the professional skill of *critical reflection and analysis* to one’s armamentarium provides the potential to gain the most from experiences gained at every stage of a career.

5. Professional Development Planning

Over 11 years ago the theme of professional development planning, through the use of the personal development plans, was introduced into Higher Education. The concept of a lifelong official record of achievement, which monitored, built and reflected on personal development, was embraced by the Quality Assurance Agency. It has subsequently been included in clinical governance and is now a requirement for all health care workers including dentists and all members of the dental team.

Commitment to continuous professional development and education within dentistry, professional development planning and personal development plans are seen as crucial to the enhancement of professional practice and to raising treatment standards. Crucially the principles of professional development planning enable the application and practice of personal reflection through self-analysis and evaluation. Additional benefits include providing a structured portfolio of verifiable and non verifiable CPD, past and contemporary, achievements and evidence for revalidation to present to the General Dental Council.

The publication *Personal Development Planning for Dentists* translates the theoretical model of professional development planning into a variety of useful practical tools which facilitate and encourage individual participation and involvement. However, more recently it is increasingly recognised that, irrespective of job title or role, commitment to the concept of lifelong learning and continuous professional development is an essential characteristic of an engaged dental professional embedded within a modern, motivated dental health care team.


6. Mentoring

Mentoring (which includes coaching) has enormous potential as a development tool for individual healthcare practitioners. Used appropriately, it can serve as a quality assurance tool; a tool to support motivation, career development, team development, leadership and training, as well as support of patients who need guidance in taking decisions about their future healthcare direction.

In the form of career mentoring, it inter-relates with the domain of Professional Development Planning. The practitioner equipped with mentoring skills can apply them to great benefit in many group environments, from the practice team, to the practice partners’ meeting, to the study group learning process or to the peer review group situation.

Where career decisions are taken involving commitment to further education and assessments for higher diplomas and degrees, mentoring can support the practitioner concerned by offering the availability of a respectful and caring colleague who will encourage self-examination, reflection, professional and career goal-setting and give support with maintaining a sense of direction and motivation.
However, mentoring does not just offer support for the mentee. The very acts of training to be a mentor and working with a colleague in the learning relationship which is mentoring, provide enormous benefits to the mentor as well as the mentee in terms of personal growth, psychological maturity, and the realisation of personal strengths and virtues.

A very accessible and readable recommended text is


For the reader who would like a more comprehensive approach to the subject then an excellent text is:


Both books may be purchased on-line from Amazon at [www.amazon.co.uk/](http://www.amazon.co.uk/)

### 7. Practice Management and Finance

In all areas of dental practice these are crucial elements, none more so than in general dental practice. No matter how skilled a clinician may be, without the ability to make sound and objective managerial and financial decisions he or she will find professional life extremely difficult.


It covers all aspects of practice management including staff appraisal.


### 8. Feedback and Suggestions

New material on all aspects of critical appraisal is frequently published. Furthermore, the Faculty is constantly developing or modifying its assessments. The critical appraisal pack therefore needs constant development and updating. All Faculty members and other users are therefore invited to provide feedback and suggestions for the development of the pack. To do so, please e-mail its editor Professor Kenneth (Ken) Eaton (keaton@rcseng.ac.uk).