BDA advice

Continuing professional development, clinical governance, clinical audit and peer review

Quality assurance in dental practice is an ever-developing issue which is managed through a variety of regulations and requirements. Some of these are defined by the regulatory bodies, such as the General Dental Council (GDC) or the national quality standards bodies - the Care Quality Commission (CQC) in England, Healthcare Inspectorate Wales (HIW) and the Regulation and Quality Improvement Authority (RQIA) in Northern Ireland. Others are part of contractual requirements within the National Health Service (NHS) or the Health and Social Care (HSC) service in Northern Ireland. This advice explains the regulations and their implications for your practice.

Contents

Continuing professional development (CPD)

The GDC introduced mandatory CPD for dentists in 2002, phasing it in over a three-year period from 2002-2004. In 2008, the GDC introduced a compulsory CPD scheme for dental care professionals (DCPs), modelled on the dentists' CPD scheme.

CPD allows dental registrants to demonstrate that they are keeping up to date with the latest research, new developments and modern techniques and also offers greater protection and reassurance for patients.

CPD is mandatory for all dentists and DCPs to retain their names on the GDC's registers and is monitored in discrete five-yearly cycles. An individual's CPD cycle is determined by their registration date and continues regardless of career breaks or other absences from the register.

All dentists must undertake the following CPD for recertification every five years:

- 250 hours over a five-year period
- 75 hours of verifiable CPD, 175 hours of general CPD
- An average of 50 hours of CPD per year, 15 of which must be verifiable
- The CPD cycle for dentists runs from January to December

All DCPs must undertake the following CPD for recertification every five years:

- 150 hours over a five-year period
- 50 hours of verifiable CPD, 100 hours of general CPD
- The CPD cycle for DCPs runs from August to July

Complying with the CPD requirement is an individual responsibility, so registrants need to maintain and retain their own records. Random sampling is undertaken by the GDC and failure to comply can lead to erasure from the Register. CPD is the first step towards revalidation.

The CPD cycle

Dentists who were registered with the GDC before 1 January 2002 were brought into mandatory CPD cycles depending on their year of registration[1]. From 2002, newly qualified dentists and first-time registrants start their five-year CPD cycle from 1 January following their registration date. For example, dentists registering in September 2011 will begin their CPD cycle on 1 January 2012; it will end on 31 December 2016. All CPD relevant to this cycle needs to be undertaken between these dates.

CPD for DCPs started in August 2008. The CPD cycle runs from 1 August to 31 July and first time registrants start their five-year CPD cycle from 1 August following registration. For example, DCPs registering in in November 2011 will start their CPD cycle on 1 August 2012; it will end on 31 July 2017. The GDC sends reminders in May/June each year to encourage DCPs to log their CPD.

Mandatory requirements

Dentists have to undertake 250 hours of CPD in each five-year cycle. Of these, a minimum of 75 hours have to be verifiable, the rest can be general.

DCPs have to undertake 150 hours of CPD in each five-year cycle. Of these, a minimum of 50 hours have to be verifiable, the rest can be general.

All registrants have to comply with a number of compulsory subjects as part of their CPD. All dentists and DCPs are required to undertake the following verifiable CPD in each five-year cycle:

- Medical emergencies (minimum of 10 hours)
- Disinfection and decontamination (minimum of 5 hours)
- Radiography and radiation protection (minimum of 5 hours)

The cardiopulmonary resuscitation (CPR) aspect of medical emergencies training should be undertaken each year.

Dentists and DCPs in general practice should also undertake CPD in legal and ethical issues, and handling complaints. The GDC has not specified a minimum number of hours for these subjects and CPD can be verifiable or general.

Dental technicians can replace the radiography requirement with verifiable CPD in dental materials.

[1] Dentists registered after 1 January 1990 began their first CPD cycle on 1 January 2002; those registered between 1 January 1980 and 31 December 1989 began their first cycle on 1 January 2003; those registered before 31 December 1979 began their first cycle on 1 January 2004.

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Verifiable CPD

Verifiable CPD has concise educational aims and objectives, clear anticipated learning outcomes and a means of quality control. A verifiable course should make you aware of what you can expect to learn from it and provide you with the opportunity to feed back to the provider on whether the course fulfilled its aims and that you learnt what you expected to learn. The provider of a verifiable course should give you an attendance certificate stating the course title, your name and registration number, and the verifiable hours. Verifiable CPD includes:

- courses organised by postgraduate dental deaneries
- courses organised by professional or scientific organisations, which comply with the above criteria - for example, courses provided by the BDA, the FGDP (UK), Royal Colleges
- vocational training (VT) / dental foundation training (FT) study days
- commercially-run courses
- distance learning incorporating a verifiable component

Flexibility

The GDC's CPD scheme has been designed to be highly flexible and to accommodate personal situations as far as possible. Although the GDC recommends that you spread your CPD evenly across the five years (for dentists 50 hours of CPD per year, of which 15 hours should be verifiable), the five-year cycle allows flexibility for special circumstances, for example family needs, ill health, time abroad or other career breaks. If you think that you will not achieve your target CPD in any given year, particularly if you are making a 'zero' declaration, the GDC will note this. Consider letting the GDC know about your situation and how you plan to make up the hours during the following years.

In theory, vocational dental practitioners/foundation dentists can fulfil a lot of their CPD requirements through their VT/FT study days, but it is vital that young dentists get into the habit of undertaking CPD and develop training contacts in their local area. Full participation in CPD from the start is important for career development. For those who start VT/FT in August, it is also important to remember that only the study days which took place from the start of their CPD cycle (that is, from 1 January) can be counted.

If you are planning a career break or a time of working abroad, the BDA recommends remaining on the Dentists Register and continuing to stay in touch with developments through CPD - the need to undertake CPD continues, even if you are not practising. If you leave the Register with the intention of returning at a later date, you will need to provide proof of the CPD that you have undertaken whilst absent before the GDC will re-register you. This can cause problems if you have not undertaken CPD or if your certificate does not show the real-time hours of courses undertaken abroad. If you need additional CPD hours and are not a current GDC registrant, some courses may not be available to you.

The GDC will accept overseas courses but you must have a certificate or accompanying letter from the course provider that states the number of verifiable hours. In subjects such as radiography or radiological protection, you need to ensure that your update course encompasses the UK's regulations, rather than the requirements from another country.

Recording CPD

You must maintain records of your own CPD, as records are not kept centrally on your behalf. Course providers might not be able to confirm your attendance at a verifiable course at a later date; they do not take on this responsibility when organising an event. It is important therefore that you develop a system to record your attendance at verifiable events and retain your certificates of attendance. Time spent on general CPD, such as reading professional journals, should also be recorded. A prototype recording form is provided by the GDC, but any method of recording will be accepted.

CPD can be logged online with the GDC via an *eGDC* account, which you will need to set up.

Keep your records in a safe place where they cannot be lost or forgotten. Being unable to provide proof of CPD will have serious consequences on your professional life.

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Declaring CPD

At the beginning of each year, the GDC will ask about the CPD you have undertaken in the previous year and record your response. You can also submit this CPD declaration online via your eGDC account.

The GDC recommends that you spread your CPD over the five-year period and undertake 50 hours per year. The system is flexible, however, and it is up to you how many hours per year you undertake – provided you fulfil your total of 250 hours at the end of the five-year cycle. The GDC can audit your CPD records at the end of your five-year cycle.

Monitoring and compliance

The GDC maintains a tally of your CPD activity from your annual CPD declaration. If, at the end of five years you have not met your 250-hour requirement, you will be sent notification of erasure. You can, however, apply for a six-month period of grace to complete the outstanding CPD.

A random sample of dentists who have complied with the 250-hour requirement will be asked to submit their CPD records (including certificates as proof of verifiable CPD) for the five-year cycle to the GDC for checking.

Non-compliance

Compliance with the requirement is necessary for renewal of registration (known as recertification) after the dentist's five-year cycle. If you have not complied and you have exhausted the period of grace, your name will be erased from the Register. To be restored to the Register, you would have to:

- show that the necessary CPD hours have been completed
- produce a health certificate signed by a doctor, and
- pay a restoration fee, which is higher than the regular GDC registration fee.

There is a right to appeal against erasure, but as CPD requirements are defined in law, your argument would most likely be based on the assertion that you have complied. The appeal will be to an independent review panel in the first instance, and then to the Privy Council. If your appeal is turned down, your erasure will take effect and you will not be able to practise again until you have fulfilled your CPD commitment and been restored to the GDC Register.

Planning your CPD

Selecting CPD activities requires you to identify your needs and the best way of meeting them. The mandatory core subjects for CPD cycles (medical emergencies, disinfection and decontamination, and radiography and radiation protection) should account for a minimum of 20 verifiable CPD hours per cycle. It is for you to decide how to fulfil the remaining verifiable CPD requirement bearing in mind any identified training needs, your interests and relevance to your practice. You can undertake as much verifiable CPD as you wish; the GDC's requirements only define the necessary minimum amount.

Personal development plans

The GDC recommends using a personal development plan (PDP) to formalise your approach to CPD. NHS regulations reinforce this by requiring dentists to ensure that they fulfil the GDC's CPD rules. A PDP could also help to demonstrate compliance with the requirements of the CQC in England.

A PDP does not need to be elaborate; it is a personal tool to help you consider your training needs, your reasons for identifying these needs and when/how you plan to fulfil them. It can be a simple document including, as a minimum, the following:

- Your name
- Date of creation of plan
- Identified training needs

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- Reasons for training needs (for example, to find out more about new research or techniques, patient demand for a particular procedure, to address a lack of confidence relating to a certain procedure or in response to a patient complaint)
- Prioritisation of training needs
- Approach to dealing with a training need (for example, a formal course, or online research)
- Expected date of completion
- Periodic review of the training plan, including next review date.

A PDP allows you to consider the mandatory requirements and identify a range of other subjects; it will be most valuable if it includes the compulsory core subjects, as well as those of personal interest and those identified as a result of any underperformance or complaint. It provides a single document clearly showing your strategy to address training needs throughout your career. Ideally, the PDP should be reviewed by a colleague, for example through an appraisal meeting. Although not yet common practice, pilot projects on PDP appraisal are being undertaken in some areas.

Your objectives should be realistic – do not set yourself too many objectives over the review period and then find that you were unable to fulfil them. Instead, prioritise them according to urgency, need and interest, and review them at appropriate time scales. Your learning objectives should be SMART – Specific, Measured, Agreed, Realistic, and Time-based.

Choosing the right educational activity

An educational activity can take a variety of forms. Your PDP might lead you to general CPD activities such as reading a book, surfing the internet or work shadowing a colleague. Your PDP may also identify a need for verifiable activity such as attending a course or undertaking some distance-learning training.

If attending a course is the best way for you to meet a need, take care to choose the right course for you. You may be faced with a wide range of activities and providers in an area you have identified on your PDP. The following questions and statements may help you to narrow your choice:

Does the course fulfil one of the CPD objectives in your PDP?
It is tempting to go on the most convenient course rather than the one you really need, so check that the course relates to your defined objectives; otherwise you may fail to address your main areas of development. Once you are satisfied that the course matches your needs, consider whether a single course will fulfil all your learning needs; be realistic, however, and do not expect all your CPD objectives to be addressed at once. You may need more than one course to satisfy your PDP evaluation.

Is this course for you?
The course information should make clear who it is aimed at and what level of knowledge and experience is necessary to benefit fully from attending. Is the course open to both newly qualified and experienced dentists or is it specific about the prior level of knowledge and experience needed by the delegates? Will the course be suitable for other members of the team as well?

Is the course provider reputable?
Ask your colleagues and friends if they know the course provider. It is useful to have a personal recommendation, as neither the GDC nor the BDA recommend or accredit course providers.

Does the course literature provide you with a programme for the course?
A programme of the event will show how time is allocated for each session and speaker to help you decide if the balance matches your needs.

Will you need anything else to implement what you have learned?
On your return to work, will you be able to develop and put into practice everything you learned? Consider if you will need to buy new equipment or train other members of the team to get up to speed with your new knowledge.

Is a list of relevant reading material provided so that you can prepare yourself for the course?
It can be helpful to have access to resource material before the event, including website references and recent articles.

Is the event sponsored?
Is the sponsorship proportionate to the aims of the course or does it adversely affect the usefulness of the course by causing bias or limiting its scope? Sponsorship is acceptable if it is clearly stated on the course information and you are made aware of it in advance.

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What about the speakers?
Speakers should provide a biography and state their business interests. Is there enough information to judge the suitability of the presenter(s) to teach the proposed subject and an indication of whether they are experts in their field? Can you judge whether they are presenting original material so that you can avoid attending a talk that you have heard before? The course information should also give the speakers' interests and credentials, and information on their professional background.

Is the method of presentation clear and appropriate?
Various options are available including lecture, video, group discussion, interactive computer presentations and distance learning. You need to be comfortable with the method of learning and know in advance if you are required to bring any equipment.

If the course is distance learning-based does it have adequate support?
Distance learning activities require good technical and personal support. You may have questions and need to talk to someone about them, so a live customer help facility is essential. You will also need to know how feedback will be provided.

Is there an opportunity to comment on the event if it is verifiable?
A verifiable event must give you the opportunity to comment and give the course provider feedback. This allows you to review the objectives set for the event and indicate if the course provider has achieved them. It will help to improve the course, if necessary, or maintain the existing quality.

Is the venue appropriate?
Can you get there in reasonable time? Is it easy to park your car or is it accessible by public transport? Will refreshments be provided? The wrong venue can often overshadow the event if you arrive late because of lack of parking or an unexpected need for a taxi from the station.

NHS allowances

Help with CPD costs can be available from the NHS or, in Northern Ireland, the HSC.

In England and Wales, a training allowance is included in the NHS contract value but NHS dentists can still claim reimbursement for travel and subsistence linked to Section 63 courses. The deaneries provide form FP84-0306 for this purpose, which should be completed and passed to your primary care organisation for payment.

In Scotland and Northern Ireland dentists receive a CPD allowance (CPDA). Details on the rates can be obtained from the *NHS Education for Scotland* and the *Northern Ireland Medical and Dental Training Agency*.

CPD course checklist

Learning need identified – what type of course should you look for:

- Workshop
- Conference
- Hands-on course
- Distance learning.

Is this course for you?

- Are the aims and objectives clear?
- What is the target audience?
- What level of knowledge and experience is required of the delegates?

Course literature

- Has the course programme been provided?
- Is the length of the event given?
- Is there time allocated for questions?
- Do you know how time is allocated between speakers?

Additional costs after the event

- Will additional training be required?
- Will staff training be required?

Pre-course learning

- Has a reading list been provided in advance?
- Has the organiser recommended any other sources of learning material?

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Venue and administration of event
- AV facilities
- Disabled access
- Will refreshments be provided?
- Parking facilities
- Public transport access
- Has a map been provided?

Sponsorship
- Is the sponsorship declared?
- Is it in proportion to the aims of the course?

Speakers
- Have biographical notes been provided?
- Are they experts within their field?
- Is original material being presented?

Method of presentation
- Lecture
- Video
- Group discussion required
- Interactive video/computer
- Workshop
- Hands on
- Distance learning

At the event
- Is there a course attendance certificate?
- Has a course evaluation form been provided?

Revalidation

Revalidation for health professions has been supported by the government. It describes a professional's responsibility to demonstrate at regular intervals that

- they are fit to stay on the Register
- their knowledge is up to date
- they work in accordance with the standards set by the regulator.

The GDC is currently working on introducing a revalidation scheme. It consulted on its proposals in 2009 and 2010 and has held a number of stakeholder events. Following much criticism, the GDC is revising its proposals and a further consultation is anticipated. Revalidation for dentists is not expected to start until 2015. The timescale for revalidation of DCPs has not yet been determined.

A revalidation scheme for dentists is expected to include the following general provisions:

- Five year cycle
- Declaration of compliance to the regulator at the end of the five years
- It will apply to all dentists on the register, regardless of sphere of practice
- There will be a standards and evidence framework in the four domains of clinical, communication, management and leadership and professionalism
- All four domains will be of equal importance, but there will be flexibility with respect to a dentist's sphere of work
- There will be a three-stage process at the end of each cycle:

  Stage 1
  compliance check for all dentists

  Stage 2
  remediation phase, providing an opportunity for dentists who fail Stage 1 to remedy deficiencies

  Stage 3
  in-depth assessment for dentists who fail to demonstrate their compliance at the end of the remediation phase

In addition:

- There is likely to be a requirement for patient feedback
- Dentists on long-term career breaks or those who have worked abroad for a significant time will need to take advice in advance of returning to practice
- Dentists might be faced with an exam before returning to the register.

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Clinical governance

Clinical governance was devised as an NHS framework for quality assurance to improve the quality of health care and to make providers accountable for delivering a consistent standard on which patients can rely. Dentists in NHS general dental practice have a clinical governance obligation through their contract with their Primary Care Trust (PCT) or local Health Board (LHB). National quality standards bodies (CQC, RQIA, HIW and HIS) are concerned with services offered by providers and consider the standard of all service provision (NHS and private) or only private.

Quality standards

Clinical governance is regulated on a national and a local level, so the details of the various frameworks vary. The standards for NHS practices were originally defined and monitored through national systems:

England - *Primary Care Contracting*
Northern Ireland - *Department of Health, Social Services and Public Safety (DHSSPS)*
Scotland - *NHS Scotland*
Wales - *Welsh Government*

Regardless of your location, you and your team can work with a clinical governance framework within your practice by making sure that:

- everyone understands what the practice is supposed to do
- everyone understands their role in delivering the service
- you have monitoring systems to tell you whether you are doing it
- you have processes for continuous improvement.

Clinical governance affects dental practices in the following areas:

- Infection control
- Radiography
- Health and safety
- Communications/consent
- Confidentiality
- Child and vulnerable adult protection
- Evidence-based practice
- Prevention
- Staff training and involvement
- Patient information and involvement
- Accessibility
- Quality assurance and self-assessment (audit, peer review)

Monitoring clinical governance compliance varies throughout the UK:

- In England, clinical governance is reflected in the CQC's *Essential standards of quality and safety* and compliance is checked through the CQC's routine monitoring activities.
- In Northern Ireland, Scotland and Wales, practices providing patient care under NHS or HSC arrangements are monitored by the relevant NHS/HSC body (LHB, HB or NI body).
- In Northern Ireland practices offering private dental care are required to register with the *RQIA*.
- In Wales dentists providing private dental care must register with *HIW*. These bodies have responsibility for ensuring for monitoring compliance with quality standards, including clinical governance requirements
- In Scotland, systems for monitoring the practices or dentists offering private dental care have not yet been introduced but will, most likely, be governed by *HIS*

BDA support

The BDA provides advice on how to comply with quality standards and details are available on the BDA's website's national pages:

England - CQC
Northern Ireland - RQIA
Scotland - HIS
Wales - HIW

BDA Expert provides various template policies and procedures that you can personalise to help you to demonstrate compliance. Working through the BDA's Good Practice Scheme's practice self-assessment programme will help you to identify and work to recognised standards of good practice and meet your legal and professional obligations. For some PCTs/LHBs, membership of the *Good Practice Scheme* demonstrates adequate compliance with clinical governance requirements.

Getting started – identifying and minimising risks

The individual circumstances in any dental practice define where to start. Your approach should depend on your practice size, the types of treatment being offered, the number of staff, and the level of staff turnover.

For a large number of everyday tasks, your approach can be straightforward, especially where everyone in the team understands what should be done, there is an obvious rationale for how they are done and there is a minimal risk of mishap. But alongside this, you need to identify procedures that might be forgotten or carried out incompletely, and then discuss and prioritise these with the whole team, so that best practice can be established and observed.

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What needs to be done?

Establish work processes, highlight potential problems and define responsibilities within your team. Aim to formalise and document what is required to ensure a shared understanding and consider the impact of your practice procedures on patient care.

Your clinical governance system is strengthened by regular staff meetings where ideas can be shared and better working methods devised and everyone can check that they understand what is expected of them. Staff training needs should be identified and training provided, so that staff are properly equipped to undertake their duties. Readily available written procedures for all work processes will help to ensure consistency in the way things are done and provide a useful aide-memoire; it is not possible for everyone to remember everything.

Work as a team and talk about what is done and how; let things evolve gradually:

- identify tasks which are undertaken in different ways, discuss the pros and cons of each and identify a 'best practice' approach to be adopted by everyone routinely
- *BDA advice publications* are a useful source of guidance and *BDA Expert* contains various useful model policies and protocols that can be tailored to suit your needs.
- Survey patients for their views and discuss the findings at a practice meeting (a model patient satisfaction survey is available in BDA Expert).

Written procedures

Develop a portfolio of practice procedures that is readily available for everyone to refer to; it makes it easier for staff to work consistently. You will need to develop a system for reviewing and updating these written procedures at regular intervals – and when any are updated, you will need to ensure that staff are aware of the changes and are given the opportunity to comment (they may make some useful suggestions).

A practice manual provides a useful resource for new staff working through an induction programme and will give them confidence to check for themselves anything that they are unsure of.

Staff appraisals and training are an essential part of clinical governance and demonstrate a positive attitude to ensuring that staff are properly equipped to undertake their work duties and contribute to providing patients with a high quality service. You should maintain records of individual appraisals and training and practice-wide training.

Clinical audit and peer review

Clinical audit and peer review are part of clinical governance and allow you to assess the quality and effectiveness of aspects of your service and to demonstrate compliance with quality outcomes of the various national quality standards bodies (CQC, RQIA, HIW and HIS).

Clinical audit is undertaken by individuals, whereas peer review is a group process:

- Clinical audit encourages individual dentists to examine aspects of their practice, make improvements where necessary and, periodically, to re-examine areas that have been audited to make certain that the quality of service is being maintained or further improved.
- Peer review provides an opportunity for groups of dentists to get together to review aspects of practice. The aim is to share experiences and identify areas in which changes can be made to improve the quality of service offered to patients.

Local arrangements

PCTs and LHBs are responsible for ensuring compliance with clinical governance, which includes audit and peer review. The approach to audit by PCTs and LHBs varies. Some identify a list of audit projects and require their local dentists to undertake a prescribed number of hours on one or more of the projects listed; an indication that the PCT/LHB may have identified clinical areas in need of improvement. The PCT/LHB may provide information or run courses to help with the projects and contribute to a local public health strategy.

Others wait for dentists to contact them about their project proposals and strategy. Unless the PCT/LHB is working on implementing a particular local policy, it may be satisfied to know that local dentists are being proactive. There is no required minimum time requirement for clinical audit and peer review: PCTs/LHBs can dictate their own.

Clinical audit is a contractual requirement, so if the PCT/LHB has not requested that you undertake clinical audit or peer review, consider making contact with them about a project you are planning. Keep full project data and minutes of meetings as the PCT/LHB may, at a later stage, ask for proof of participation.

In Northern Ireland, Scotland and Wales, audit schemes are organised nationally. More information can be obtained from:

Northern Ireland - *NI Medical and Dental Training Agency*
Scotland - *NHS Education for Scotland*
Wales - *Wales Deanery*

Can clinical audit count towards CPD?

Audit is an NHS requirement but the GDC accepts that time spent undertaking an audit project can count towards CPD. Projects approved by a PCT/LHB can be regarded as verifiable CPD and PCTs/LHBs should provide a certificate verifying this. Other clinical audit projects count as general CPD.

Audit projects

Contact your PCT/LHB for guidance on clinical audit and peer review projects. The BDA website is a good source of information and includes suggestions for audits. If you already have an idea for an audit project, the *BDA Library* may be able to help with a literature search to help you set your standards.

A project outline should include:

- a brief description of the aims and objectives of the project as well as the standard to be set
- a summary of the methodology, including details of data sample sizes, recording methods and proposed methods of data analysis
- a timetable of activity (if possible)
- proposed educational source materials.

You might wish to start with an audit that has a pre-set methodology (cookbook audit). An example is described below and others are available on the *BDA website*.

Members of the *BDA Good Practice Scheme* are required to carry out a number of audits, including an annual audit of record-keeping. More information is available on the BDA website.

Audit project sample - the quality of radiographs

Regular audits of radiographs are a legal requirement. The taking of radiographs must be justified; radiographs will only benefit patients if they lead to the correct treatment decision using the minimum radiation dosage. Image quality is important and, if poor, can compromise an accurate diagnosis. It should be remembered that although individual patient dose may be low, dental radiographs represent one of the most frequently undertaken radiological investigations in the UK. An audit of dental radiography could encompass:

structure – by evaluating your own facilities against the standards laid down in *Guidance notes for dental practitioners on the safe use of x-ray equipment* (Department of Health / NRPB, 2001)

process – by examining what was done (whether the correct exposure time was set or the radiographs properly processed, or an audit of image quality, for example)

outcome – by looking at the diagnostic yield or treatment decisions. This might include, for example, using radiographs to assess the extent of dental caries and the impact on the decision to restore the affected teeth.

An audit of image quality can be fairly straightforward and a good one to start with. Image quality may be marred by errors involving:

- patient preparation
- positioning
- exposure
- processing
- film handling.

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The Department of Health guidance defines standards for dental radiographs on a three-point scale: excellent, acceptable and unacceptable:

1: Excellent
No errors of patient preparation, exposure, positioning, processing or film handling
2: Diagnostically acceptable
Some errors of patient preparation, exposure, positioning, processing or film handling, but which do not detract from the diagnostic utility of the radiograph
3: Unacceptable
Errors of patient preparation, exposure, positioning, processing, or film handling, which render the radiograph diagnostically unacceptable

The guidance also specifies minimum and interim targets for radiographic quality:

Rating 1:
Minimum: not less than 70%
Interim: not less that 50%
Rating 2:
Minimum: not greater than 20%
Interim: not greater than 40%
Rating 3:
Minimum: not greater than 10%
Interim: not greater than 10%

How to undertake an audit of bitewing radiographs

- Decide whether the audit is to be retrospective (easier) or prospective (better)
- Define the individual features to be audited:
  - Patient preparation – make sure the patient has removed any dental appliances, for example
  - Positioning:
    Do the radiographs cover the area from the mesial surface of the first premolar to mesial surface second molar (distal surface if an impacted third molar is present)?
    Do the radiographs show an equal amount of interdental bone in the maxilla and mandible?
    Are there any overlapping contact points?
    Is the occlusal plane parallel to floor? is the film the right way round?
  - Exposure: Is the radiograph too dark/too light? A film properly processed in fresh chemicals should be used as a standard
  - Processing: too dark/too light
  - Film handling: there should not be, for example, any fogging, nail marks, chemical splashes
- Use seven pairs of bitewings to calibrate your technique and identify any problems. Make sure your ratings are consistent (reproducible). You will need to decide what level of overlapping contrast points is acceptable/unacceptable. You may decide that less than one-half thickness of enamel is acceptable but more than one-half thickness is unacceptable
- Audit 30-50 pairs of bitewings, depending on workload and duration of audit.

Data collection
You will need to collect the following data:

- patient identification
- date of radiograph
- rating 1, 2 or 3 (see above)
- if 2 or 3, identify why?

Presentation of findings
You will need to prepare a simple chart showing results of the audit:

- percentage of ratings for 1, 2 and 3
- frequency of faults identified under the five headings included above.

Making changes
Having completed your first audit, you can identify any potential sources of error(s) and implement corrective procedures. Correcting some of the faults you have identified may require discussion with colleagues, for instance the practice owner or the nurses.

- Patient preparation: do the nurses have a protocol to ensure, for example, patients' spectacles are removed?
- Positioning: will film holders help?
- Exposure: when was the last radiation protection survey carried out? Is there a chart showing exposure factors?
- Processing: is time and temperature for processing correct for manual processing? How frequently are the chemicals changed? Is a test object used? How frequently are automatic processors cleaned?
- Film handling: who is responsible for training nurses?

Once the changes have been implemented you will be in a position to repeat the audit in six months' time to see how effective it has been. Even if you only meet the interim targets, you are on your way to achieving the definitive standards.

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Peer review

Peer review can be organised as an alternative to clinical audit. The aim is to share experiences with dentists from other practices and identify areas of practice where changes can be implemented to improve the quality of service offered to patients.

Peer review groups

The thought of working together in a group with other colleagues may at first appear daunting for some dentists but the benefits of this type of activity are now widely accepted.

A peer review group can decide on its composition and the range and type of topics to discuss and review. This freedom and lack of central direction can create some difficulty if the group is uncertain of where to start.

All groups will require a leader or convenor to:

- provide the impetus to get the group together
- keep a record of what has been reviewed
- act as a point of contact for other members
- produce a report at the end.

The membership, length and frequency of meetings, venue(s) and topics for discussion should be agreed by the group, which can then take ownership of the project. Participating dentists must be willing to have some aspect of their practice reviewed. A group normally consists of 4 to 8 dentists and is usually organised through personal initiative.

Needs and aims of peer review

The needs and aims of peer review groups will depend upon the areas for quality improvement and individual professional development. It is impossible to provide an exhaustive list of activities, but peer review may be used as:

- a method of sharing knowledge between colleagues
- a stimulus for individual learning
- a tool to change and improve practice performance
- a method of supporting daily practice activity
- a way to reduce inter-dentist or inter-practice variation
- a way of agreeing standards for a clinical audit.

Setting up the projects

As with clinical audit, the first step is to check the PCT's/LHB's strategy for clinical governance. Some will require their dentists to undertake specific audit projects, and it might be difficult to persuade them to consider an individual approach. If, however, the PCT/LHB expects dentists to comply with clinical governance requirements independently, you should have no problem in setting up your group and agreeing the project of your choice. Source materials are widely available: *BDA advice publications*, the FGDP's *Standards in Dentistry*, and professional journals are good sources of information about current guidelines and in-practice realities.

The meetings

Peer review meetings should have a structure and a plan; the group needs to know when, where and why it is meeting. Set a timetable for the project, have an agenda and meeting notes for each meeting – recording the time and place, members present, what was discussed, and what was agreed (or not).

A tried and tested way of organising meetings is to delegate in advance, giving individual group members a particular topic or aspect to consider, getting them and to lead discussion on it and encourage full participation. Dentists enjoy talking about dentistry and in a successful group the discussion will be both free flowing and wide-ranging. At the end of the peer review project, individuals will be surprised at how much knowledge they have both shared with and gained from their colleagues.

The report

A report of the peer review project should be compiled, noting discussions at meetings, trial implementations of processes in participating practices, and how working methods have changed as a result. All participants should have a copy of the report for their files, to use both for showing compliance with legal requirements and, where applicable, for providing an evidence-base for practice procedures and protocols.

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