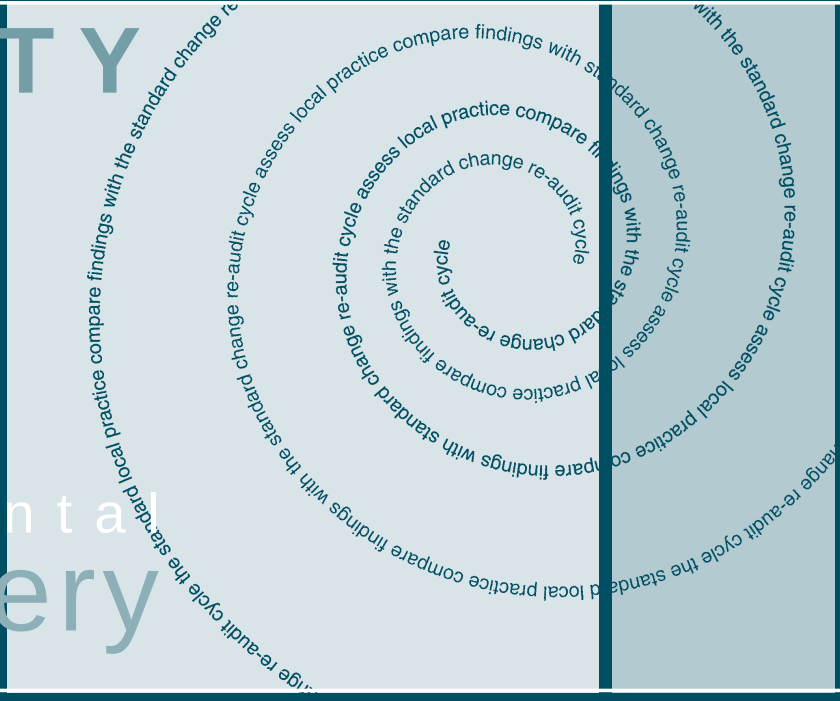
Methodologies for Clinical Audit in Dentistry

FACULTY *of* Dental Surgery



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The Faculty of Dental Surgery has been actively promoting the development and use of clinical audit for many years. This publication is designed to improve the practical application of the audit process at the local level by describing audits which have already been found by our specialist committees to be useful. The audit project recommendations arise out of actual experience, and it is hoped that they will provide the stimulus for you to carry out new projects.

The variety of topics addressed illustrates how extensively the audit process can be used to improve services and the care delivered to patients. The audits are grouped by speciality – but you may well find that ideas developed in areas other than your own will be of value. The Faculty Clinical Effectiveness Committee welcomes feedback. Your comments will be of assistance to us in improving the effectiveness of the audit process.

The Faculty is indebted to all the members of the Clinical Effectiveness Committee and the Speciality Audit Committees, as well as to the many individual authors involved in this publication.

John K Williams

Chairman
Clinical Effectiveness Committee
Faculty of Dental Surgery
The Royal College of Surgeons of England

Clinical audit has had an uneven impact on practice since its introduction to routine clinical work about ten years ago. There is still considerable uncertainty and confusion regarding its role and how to conduct effective and important audit projects.

This booklet draws upon the excellent publication of the Royal College of Radiologists.[1] The methodical approach is particularly suited to routine daily practice so that data collection for audit purposes is no different from, and adds little to, keeping contemporaneous clinical records. The methodologies are presented in an identical format for clarity and to emphasise that the process is the same whatever one chooses to audit. The format should also allow generation of more methodologies based on previous audit projects and give clear educational guidance for formulating and conducting future projects.

It is essential that any clinical audit project is seen to be worth doing. It should result in improved clinical practice, increased efficiency, better clinical outcomes or more cost-effective service, all of which are now part of clinical governance. It should also provide opportunities for learning for all staff involved in the care of patients. Short-term gains may be achieved because of the Hawthorne effect and so it is important that the projects are updated and repeated at suitable intervals to sustain and advance upon the gains made (the audit 'spiral'). It is thus an iterative process.

The standards within each methodology are derived from research evidence, national or accepted guidelines or from consensus on best practice. These need to be explicit, whatever their origin. Targets are then set against the standard. Data are collected to check the indicators against the standard. The numbers chosen for an audit project do not have to meet the statistical requirements of research though sufficient numbers should be included to make the audit representative of the practice.[2, 3]

Given the central importance of audit in clinical governance, it is assumed that all Units will have some central resource and personnel for conduct of clinical audit projects and data analysis. The resource required for each project, as indicated in each of the methodologies, is thus estimated as costs above this central provision. Such costs will clearly vary between Units but an approximation has been made as follows:

£	=	< £100
££	=	£101 - £750
£££	=	£751 +

The references, where they appear, are merely indicative. Obviously, the publication of research papers, audit results or clinical guidelines in the future could alter the tenor of each of the methodologies.

The results of an audit may confirm that local practice meets or exceeds standards but in some cases this may not be so. It is important that all audit is formally reported (an ideal specimen report is presented in Appendix 2). The report should be made available to all individuals with responsibility for clinical governance and authority to initiate changes. It is recommended that efforts should be made to introduce the changes within six months of the results being obtained so that the impetus gained from the conduct of the audit is not lost and, more importantly, staff do not lose enthusiasm and become demoralised.

R I Joshi
Editor

1 Goodwin R, de Lacey G and Manhire, eds. *A Clinical Audit in Radiology.* The Royal College of Radiologists; 1996.

2 Bull A. Audit and research. *BMJ* 1993; 306:67.

3 Reeves B Emberton M. Tackling the quality agenda in surgery: Taking comparative audit into the next century. *Ann R Coll Eng (Suppl)* 1999; 81:138-143.

Effectiveness of Dietary Counselling for Children

Background: Why is this audit worth doing?

Although preventive advice should be given to all, children who are in the high caries risk group should be specifically targeted. Dietary control requires much compliance from the children/parents and should be monitored. If the clinicians are effective in counselling, there should be a change in the child's dietary habits.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	Patients should be classified into low and high caries risk group.[1] All patients who are in the high risk group should be given a three to four day diet diary to complete followed by appropriate and specific counselling. After three months, a new diet diary should reveal greater than 80% compliance.
2 Assess local practice	**The indicators** ■ % of the high risk group are given dietary counselling. ■ % of the counselled patients showing improvement in their diet. ■ % of returned diet sheets. **Data items to be collected** ■ The number of patients in high risk group. ■ The number of patients receiving dietary counselling. ■ The number of patients returning the diet sheet. ■ The number of patients who show improvement in their diets. **Suggested number** 25 patients seen consecutively.
3 Compare findings with standard	
4 Change *(some suggestions)*	Present the results at the departmental audit meetings and discuss why (if any) the target is not met and ways to improve the effectiveness of dietary counselling.
5 Re-audit	Annually.
Resources required	**Data collection:** From patients' records. **Assistance required:** Data analysis by Clinical Audit Dept. **Estimated clinician's time:** One hour. **Estimated cost:** £

[1] Shaw L. Prevention of dental caries in children. In: *National Clinical Guidelines for Paediatric Dentistry*. Royal College of Surgeons of England; 1997.

Management of Non-vital Immature Permanent Incisors

Background: Why is this audit worth doing?

The correct management of non-vital immature permanent incisor will increase the long term prognosis of the teeth. However, a report[1] shows that 92% of root-treated permanent incisor teeth in children and adolescents were considered to be unsatisfactory.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	50% of calcium hydroxide dressed teeth to have apexified after six months. 80% of apexified teeth should have satisfactory endodontic obturation of the canal.
2 Assess local practice	**The indicators** ■ % calcium hydroxide dressed immature incisors becoming apexified in six months. ■ % of satisfactory endodontically treated incisors after apexification. **Data items to be collected** ■ The number of patients who have non-vital traumatised incisors. ■ The time for apexification to occur. ■ The number of satisfactory endodontically treated incisors. **Suggested number** 30–50 non-vital permanent incisors.
3 Compare findings with standard	
4 Change *(some suggestions)*	Identify the type of injured teeth where apexification does not occur. Discuss and improve the technique of endodontic treatment.
5 Re-audit	Annually.
Resources required	**Data collection:** Review radiographs and clinical records. **Assistance required:** Data analysis by the Clinical Audit Dept. **Estimated clinician's time:** 10 minutes of clinical time per case. **Estimated cost:** £

[1] Mackie IC. Management and root canal treatment of non-vital immature permanent incisor teeth. In: *National Clinical Guidelines for Paediatric Dentistry*. Royal College of Surgeons of England; 1997.

The Time Taken for Reply Letters to Referring Practitioners

Background: Why is this audit worth doing?

It is the policy of most NHS Trusts that there should be a letter to the referring practitioners within 14 days of the examination of the patient. This will enhance communication and collaboration between primary and secondary care workers for the well-being of patients.

THE AUDIT CYCLE	
1 The Standard *(locally agreed)*	95% of reply letters should be sent within 14 days.
2 Assess local practice	**The indicators** ■ % of reply letters sent after examination of the patient. **Data items to be collected** ■ The name of the clinician. ■ The number of patients seen in clinic. ■ The number of patients for whom letters are written. ■ The time between examination and instructions to secretary. ■ The time between secretary receiving information and the typed letters for signature. ■ The time between examination and the letters being sent. **Suggested number** 100 new patients seen.
3 Compare findings with standard	
4 Change *(some suggestions)*	Alter clinic appointments, renegotiate secretarial services.
5 Re-audit	Annually.
Resources required	**Data collection:** From clinic diary, patient's record and secretary's diary. **Assistance required:** Data analysis by the Clinical Audit Dept. **Estimated Secretary's time:** Two hours. **Estimated cost:** £

Longevity of Fissure Sealants

Background: Why is this audit worth doing?

The increased proportion of fissure caries in recent years has led to the use of fissure sealants or preventive resin restorations in stained fissures. The fissure sealants must be intact to prevent caries progression.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	At least 90% of the fissure sealants should be intact after six months.[1]
2 Assess local practice	**The indicators** ■ % of fissure sealants still intact after six months. **Data items to be collected** ■ The number of teeth fissure sealed. ■ The number of these teeth which have intact fissure sealants at six months. **Suggested number** 30–50 fissure sealed teeth.
3 Compare findings with standard	
4 Change *(some suggestions)*	Identify the reason why the fissure sealant failed and discuss ways to improve the technique of application.
5 Re-audit	Annually.
Resources required	**Data collection:** Numbers of teeth fissure sealed. **Assistance required:** Data analysis by Clinical Audit Dept. **Estimated clinician's time:** 25 minutes per patient. **Estimated cost:** ££

[1] British Society of Paediatric Dentistry. A policy document on fissure sealants. *Int J Paediatric Dent*; 1993 3:99-100.

Quality of Clinical Record-keeping

Background: Why is this audit worth doing?

A permanent, faithful and accurate contemporaneous record is required for the appropriate management of patients by clinical dental teams and may be required for medico-legal and clinical governance reasons.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients' records must: ■ Have clear identifying details. ■ Be legible. ■ Be dated and filed chronologically. ■ Have clinician's signature with his/her printed name and designation. ■ Have clear history, diagnosis and treatment plan for the patient. ■ Only use approved abbreviations. ■ Have cancellation and failure to attend recorded. ■ Retain the original record if any alterations are made.
2 Assess local practice	**The indicators** ■ % of records meeting the above standards. **Data items to be collected** ■ Number of records which are clear and legible recorded on a *pro forma*. **Suggested number** 20 clinical records per clinician are assessed.
3 Compare findings with standard	
4 Change *(some suggestions)*	Identify clinicians whose record keeping is consistently below standard and advise improvement. Consider digital input to have a printed record.
5 Re-audit	Annually.
Resources required	**Data collection:** Assess and grade clinical record on pro forma. **Assistance required:** Data collection and analysis by Clinical Audit Dept. **Estimated clinician's time:** Nil. **Estimated cost:** £

Management of Avulsed Permanent Teeth in Children

Background: Why is this audit worth doing?

The correct management of replanted avulsed teeth will improve the chances of success.[1]

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients who have dental trauma should be seen within 15 minutes in the department responsible for the management of child casualties. More than 90% should have good/excellent standard of care and 70% should achieve a satisfactory standard.
2 Assess local practice	**The indicators** ■ % of patients with avulsion being seen within 15 minutes of arrival. ■ Quality of management on the avulsed teeth as assessed by consultant. **Data items to be collected** ■ The number of patients who arrive with avulsed teeth. ■ The time between the arrival of patients and when the patients are treated. ■ Clinical records. **Suggested number** 20 cases of avulsion.
3 Compare findings with standard	
4 Change *(some suggestions)*	Identify the reason if the patients are not seen within 15 minutes and improve the performance. Discuss ways to improve the standard of care in audit meetings.
5 Re-audit	Annually.
Resources required	**Data collection:** Record time of patient's arrival and seen by the clinician. Assess clinical records. **Assistance required:** Nurse/clerk and clinician to record information and data analysis by the Clinical Audit Dept. **Estimated clinician's time:** 1-2 hours. **Estimated cost:** £

[1] Gregg T, Boyde DH. Treatment of avulsed permanent teeth in children. In: *National Clinical Guidelines for Paediatric Dentistry*. Royal College of Surgeons of England; 1997.

Use of Stainless Steel Crowns for Primary Molars

Background: Why is this audit worth doing?

Stainless steel (SS) crowns are widely recognised as the most effective and durable restorations for primary molars. They are specifically indicated as the restoration for primary molars that have had pulp therapy.[1]

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	At least 90% of pulp-treated primary teeth should be restored with SS crowns. At least 95% of these crowns should still be intact after one year.
2 Assess local practice	**The indicators** ■ % pulp treated primary molars restored with SS crowns. ■ % SS crowns still intact after one year. **Data items to be collected** ■ The number of pulp-treated primary molars. ■ The number of these teeth restored with SS crowns. ■ The number of these crowns still intact after one year. **Suggested number** 30–50 pulp-treated primary molars.
3 Compare findings with standard	
4 Change *(some suggestions)*	Identify the reason why pulp-treated molars are not restored with SS crowns. Identify why the SS crown fails and improve the technique.
5 Re-audit	Annually.
Resources required	**Data collection:** Review clinical records of patients who have pulp-treated primary molars on pro forma. **Assistance required:** Review of records and data analysis by Clinical Audit Dept. **Estimated clinician's time:** Five minutes per patient. **Estimated cost:** £

[1] Fayle, SA. Stainless steel metal crown for primary molars. In: *National Clinical Guidelines for Paediatric Dentistry*. Dental Practice Board; 1999.

The Usefulness of Routine Post-operative Review Appointments following Dentoalveolar Surgery and their Impact on the New/Old Out-patient Ratio

Background: Why is this audit worth doing?

Many consultants automatically review all of their patients following dentoalveolar surgical procedures. Evidence suggests that no clinical benefit is conferred on the patient by a routine post-operative appointment for the majority of patients undergoing uncomplicated dentoalveolar surgery.[1] By reducing the number of review patients seen, more clinical time is available in which to see new patients and reduce out-patient waiting times and inconvenience to patients.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	Less than 5% of patients not offered a routine post-operative review appointment should experience any increased incidence of complications or require emergency treatment. None of these patients should experience reduced treatment satisfaction.
2 Assess local practice	**The indicators** ■ % of patients requiring an emergency appointment post-operatively in either the primary or secondary care sectors. ■ The post-operative complication rate. ■ Patients' perception of standard of care and satisfaction with the review arrangements. **Data items to be collected** ■ All patients who have had dentoalveolar surgical procedure. ■ % of patients who were reviewed/not reviewed post-operatively. ■ For each of the two groups identify procedure performed, degree of difficulty (eg whether bone removal or not for third molars), incidence of post-operative complications, requirement for emergency appointment, and patient satisfaction. **Suggested number** All patients seen in a six-month period.
3 Compare findings with standard	
4 Change *(some suggestions)*	Local clinical practice for post-operative review. New/old out-patient clinic booking rules ratio. Information given to patients and local primary care practitioners.
5 Re-audit	Annually.
Resources required	**Data collection:** From medical records and patient questionnaires. **Assistance required**: Postal and stationary charges for patient questionnaire. Database for data analysis by Clinical Audit Dept. Secretarial and clinical staff assistance. **Clinician's time:** Nil. **Estimated cost:** £

[1] Worrall, SF. Are post-operative review appointments necessary following uncomplicated minor oral surgery? *Br J Oral Maxfac Surg* 1996; 34:495-499.

The Appropriateness of Facial Bone Radiographs Taken in Accident and Emergency Departments

Background: Why is this audit worth doing?

Large numbers of facial bone radiographs are taken in accident and emergency departments for the investigation of suspected facial bone fractures but it has been suggested that only 30% of these are justified on clinical grounds.[1] The necessity for many of the views routinely requested to assess suspected midfacial fractures has been questioned as a single occipito-mental radiograph has been shown to be sufficient in the majority of cases.[2] A request for 'facial bone views' is wasteful of resources, increases patients' exposure to ionising radiation and does little to aid clinical diagnosis.[3] Recommendations include local guidelines to be available in accident and emergency departments detailing which facial bone radiographs should be requested and under what circumstances.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients with facial injuries should only have radiographs in accordance with the local guidelines (devised in conjunction with accident and emergency clinicians and colleagues).
2 Assess local practice	**The indicators** ■ % of facial bone radiographs requested and taken that comply with the local guidelines. **Data items to be collected** ■ All patients who had facial bone radiographs taken during the audit period. ■ % of cases where facial bone radiographs identified a fracture. ■ % of cases where a facial bone fracture was missed. **Suggested number** All patients seen in a six-month period.
3 Compare findings with standard	
4 Change *(some suggestions)*	Facial bone radiograph requesting practice of clinicians. Grade/ experience/speciality of staff requesting facial bone radiographs. Reassess local guidelines.
5 Re-audit	Annually.
Resources required	**Data collection:** From case notes, A & E notes, radiography records including the source which records all films taken (not just those that appear in the radiograph packet) to ensure 're-takes' are included. **Assistance required:** Secretarial, clinical and radiography staff. Data analysis by the Clinical Audit Dept. **Clinician's time:** Ten minutes per patient. **Estimated cost:** £

1 Davidson MJC, Russell, JR. An audit of the radiological investigation of facial trauma patients in two accident and emergency departments. *Br J Oral Maxfac Surg* 1991; 29:418.

2 Rogers SN, Bradley S, Michael, SP. The diagnostic yield of only on occipito-mental radiograph in cases of suspected midface trauma or is one enough. *Br J Oral Maxfac Surg* 1995; 33:90-92.

3 Malins TJ, Stewart A. An audit of 'facial-view' radiographs in an accident and emergency department. *Br J Oral Maxfac Surg* 1991; 29:415.

Delays in the Management of Patients with Malignancy

Background: Why is this audit worth doing?

The overall outcome of the management of malignancy is improved the earlier the lesions are detected and treatment commenced. Delays occurring before referral to a specialist centre may be beyond the specialist's control, but subsequent delays can be minimised by appropriate patient identification and suitable protocols for management. This audit will assess the appropriateness of practitioner's referral letters to allow early identification of potentially malignant conditions and the ability of the hospital system to identify those patients who require urgent consultation.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All referral letters from practitioners for patients with a potentially malignant condition should contain the necessary information for the specialist centre. Such patients should be identified early (irrespective of the local hospital policy for managing practitioner referral letters) and be seen within one week of receiving the referral letter.
2 Assess local practice	**The indicators** ■ % of referral letters without adequate information. ■ % of patients seen within the agreed timescale. **Data items to be collected** ■ Number of patients with malignant disease. ■ Number of such patients seen within the agreed standard. ■ The number of adequate referral letters. **Suggested number** Over a three-month period.
3 Compare findings with standard	
4 Change *(some suggestions)*	Education programme for referring practitioners. Consider changing the hospital policy for new referrals if delays beyond agreed standard.
5 Re-audit	At six months if change has been implemented.
Resources required	**Data collection**: From medical records and letters. **Assistance required**: Clinical and secretarial staff. **Clinician's time**: Five minutes per patient. **Estimated cost**: £

Clinicians' Attendance at Departmental/Regional Audit Meetings

Background : Why is this audit worth doing?

It is a Department of Health requirement that all clinicians working within the NHS take part in regular clinical audit.[1,2,3] Attendance and participation are pre-requisites for successful audit and subsequent improvement in clinical services. Clinicians of all grades should take part though it is recognised that everyone may not be able to attend all sessions because of other commitments. This audit may lead to identification of the problems leading to poor attendance and facilitate change to allow greater participation.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	At each grade, at least 75% of clinicians should attend the appropriate regular scheduled audit meetings. Each clinician should attend at least 75% of audit meetings within any one year.
2 Assess local practice	**The indicators** ■ % of meetings attended by the clinicians who are scheduled to attend. ■ % of clinicians attending 75% or more of the meetings. **Data items to be collected** ■ Names of clinicians attending. ■ Apologies received. ■ A record of those clinicians scheduled to attend. ■ Requested reasons for non-attendance. **Suggested number** Complete for one annual cycle.
3 Compare findings with standard	
4 Change *(some suggestions)*	Consider the reasons for non-attendance and ways to overcome these reasons, eg timing of meetings.
5 Re-audit	Annually.
Resources required	**Data collection:** By chair of the Speciality Clinical Audit Group. **Assistance required:** Data analysis by the Clinical Audit Dept. **Clinician's time:** Nil. **Estimated cost:** £

1 Department of Health *Working for Patients: Working Paper 6*. HMSO Publications; 1989.
2 Department of Health *Clinical Governance: Quality in the New NHS*. HSC, England; 1999/065
3 Secretary of State for Health. *A First Class Service: Quality in the New NHS*; 1998

Surgical Management of Third Molars

Background: Why is this audit worth doing?

The Department of Health has become concerned that a number of third molar teeth are being removed for inappropriate reasons and this has led to the recent publication of guidelines.[1] This audit will assess locally whether or not the published guidelines are being followed.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients requiring with third molar problems should be assessed and managed in accordance with the nationally produced guidelines.
2 Assess local practice	**The indicators** ■ % of third molar removals that comply with the guidelines. **Data items to be collected** ■ All patients undergoing third molar removal. ■ The reasons for third molar removal in these patients. **Suggested number** Two-month period.
3 Compare findings with standard	
4 Change *(some suggestions)*	Local criteria for arranging third molar removal. Education of members of clinical team. Education of local referring practitioners.
5 Re-audit	After six months.
Resources required	**Data collection:** From medical records. **Assistance required:** Secretarial and clinical staff. Data analysis by the Clinical Audit Dept. **Clinician's time:** Five minutes per patient. **Estimated cost:** £

[1] Faculty of Dental Surgery *The Management of Patients with Third Molar Teeth.* Royal College of Surgeons of England; 1997.

The Problems Associated with the Use of Labial Porcelain Veneers to Alter Shape and Colour of Vital Teeth

Background: Why is this audit worth doing?

The porcelain veneer is recommended as a potentially minimally invasive, colour and contour stable restoration for discoloured, malformed or malaligned teeth.[1,2] This restoration should not compromise the pulpal vitality.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients provided with labial porcelain veneers should have no signs and symptoms of pulpal involvement at Day 1, Day 7 and Day 30 following placement.
2 Assess local practice	**The indicators** ■ % of patients with labial porcelain veneers with no signs and symptoms. **Data items to be collected** ■ Patient's name, age and hospital/unit number. ■ Type of problem. ■ Tooth/teeth treated. ■ Extent of preparation and use of any local analgesia. ■ Method of 'temporisation'. ■ Porcelain type. ■ Cement type. ■ Any signs of and symptoms. **Suggested number** 100 consecutive veneers.
3 Compare findings with standard	
4 Change *(some suggestions)*	Present at department and hospital meetings. Change preparation techniques. Note relationship with age and cement type and consider changes. Provide appropriate training courses.
5 Re-audit	Every two years.
Resources required	**Data collection:** Data form. **Assistance required:** Notes retrieval, data analysis by Clinical Audit Dept. **Estimated clinician time:** Five minutes per patient visit. **Estimated costs:** £

1 Faculty of Dental Surgery. Restorative Indications For Porcelain Veneer Restorations. In: *National Clinical Guidelines*. Royal College of Surgeons of England; 1997.

2 Garber DA, Goldstein RE, Feinman RA. *Porcelain Laminate Veneers*. Chicago: Quintessence; 1988

Funding Priorities for the Use of Dental Implants in Hospital Services

Background: Why is this audit worth doing?

Osseointegrated implants have been shown to be highly predictable in providing support for replacement of missing teeth and related structures.[1] However, this form of treatment is relatively more expensive (at the time of provision) than other current treatment. Thus agreed local priorities have been set. There is anecdotal evidence of variation in funding of treatment.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients meeting the national criteria[2] for the use of dental implants should be funded for treatment.
2 Assess local practice	**The indicators** ■ % of eligible patients funded in each financial year. **Data items to be collected** ■ Patient name and hospital/unit number. ■ GDP name and address. ■ Reason for referral. ■ Type of problem and relation to priorities. ■ Any local discussion of priority grouping. ■ Funding decision. **Suggested number** All patients referred for implant treatment.
3 Compare findings with standard	
4 Change *(some suggestions)*	Reconsider priorities. Continuing education courses for directors of Dental Public Health and referring practitioners and clinicians involved in providing treatment.
5 Re-audit	Every year.
Resources required	**Data collection:** From letters and patient notes. **Assistance required:** Notes retrieval and data analysis by the Clinical Audit Dept. **Estimated clinician time:** 15 minutes per referral. **Estimated cost:** £.

1 Adell R, Eriksson B, Lekholm U et al. A long term follow-up study of osseointegrated implants in the treatment of totally edentulous jaws. *Int J Oral Maxillofac Implants* (1990) 5: 347-359.

2 Faculty of Dental Surgery. Guidelines for selecting appropriate patients to receive treatment with dental implants: Priorities for the NHS. In: *National Clinical Guidelines.* Royal College of Surgeons of England; 1997.

Evidence of Screening of Patients for Periodontal Diseases in the Referral Letters from General Dental Practitioners

Background: Why is this audit worth doing?

Screening of patients for periodontal diseases is recommended as a routine procedure in general dental practice.[1,2] Patients with advanced or severe diseases may be referred for specialists treatment. If BPE and related information is routinely provided in referral letters then priorities of appointments may be more easily identified.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All referral letters for advice/treatment of periodontal diseases should have (at least) the BPE scores.
2 Assess local practice	**The indicators** ■ % of referral letter with BPE scores or equivalent. **Data items to be collected** ■ Patient name & hospital/unit number. ■ GDP name and address. ■ Reason for referral. ■ Record of BPE scores. ■ Record of other periodontal information present. **Suggested number** 100.
3 Compare findings with standard	
4 Change *(some suggestions)*	Advise all GDPs on referral information. Continuing education courses. Pattern of referral clinics.
5 Re-audit	Every year.
Resources required	**Data collection:** From letters (or patient notes). **Assistance required:** Data analysis by the Clinical Audit Dept. **Estimated Clinician time:** Two to three minutes per referral. **Estimated cost:** £

1 Mosedale RF, Floyd PF, Smales FC, eds. *Periodontology in General Dental Practice in the United Kingdom. A First Policy Statement*. British Society of Periodontology; 1986. Eds. Mosedale RF, Floyd PF and Smales FC.

2 Faculty of Dental Surgery. Screening of Patients to Detect Periodontal Diseases. In: *National Clinical Guidelines.* The Royal College of Surgeons of England; 1997.

Impression Trays for Crown and Bridge Prosthodontics

Background: Why is this audit worth doing?

The majority of publications related to master impressions for crown and bridges recommend the use of a rigid tray to prevent distortion.[1] However, it has been identified that this rarely occurs in general dental practice in the UK.[2]

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All impressions for crown and bridge work should be taken in a metal stock tray, a rigid plastic tray, or a custom tray.
2 Assess local practice	**The indicators** ■ % of impression trays of the above types out of the total number. **Data items to be collected** ■ Type of impression tray. ■ The nature of the work requested. ■ Source (GDP, hospital, community, etc). ■ Clinician and patient names/unit numbers. **Suggested number** All cases received in a dental laboratory over a period of time (and a number of visits). Approximately 50–100 cases.
3 Compare findings with standard	
4 Change *(some suggestions)*	Provide appropriate continuing education courses, change purchasing policy, advise via publications, information to health authorities.
5 Re-audit	Every two years.
Resources required	**Data collection:** Data information form. **Assistance required:** Access to dental laboratory, data analysis by Clinical Audit Dept. **Estimated clinician's time:** 10 minutes per case. **Estimated costs:** £

1 Christensen GJ. Now is the time to change to custom impression trays. *J Amer Dent Assoc* 1994; 125: 619-620.

2 Winstanley RB, Carrotte PV, Johnson A. the quality of impressions for crowns and bridges received at commercial dental laboratories. *Br Dent J* 1997; 183:209-213.

Quality of Communication with the Dental Laboratory

Background: Why is this audit worth doing?

Incorrect completion of work forms (especially concerning an external dental laboratory) results in wasted administrative, nursing and clinical time.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All forms will contain sufficient and appropriate information to ensure that technical work can be completed satisfactorily and returned in time for the patient's next appointment.
2 Assess local practice	**The indicators** ■ Copies of completed dental laboratory work forms will be obtained and scrutinised for necessary details. **Data items to be collected** For each completed dental laboratory form: ■ Names of patient, names of dental surgeons, dental laboratory. ■ Location of dental surgery. ■ Dental appliance or work such as study models requested. ■ Specific clinical technical requests. ■ Shade of teeth (if relevant). ■ Date and time of next appointment. **Suggested number** All forms despatched each month for three months.
3 Compare findings with standard	
4 Change *(some suggestions)*	Collaborate with dental laboratories to provide user-friendly forms and identify clinical/administrative time to ensure that improved standards are met and maintained.
5 Re-audit	12–24 months.
Resources required	**Data collection:** Copies of completed dental laboratory work cards. **Assistance required:** Data analysis by the Clinical Audit Dept. **Estimated clinician's time:** Nil. **Estimated costs:** £

Usefulness of Treatment Plans Provided by Consultants in Restorative Dentistry for Referring General Dental Practitioners

Background: Why is this audit worth doing?

Significant proportions of referrals to consultants in restorative dentistry are managed by providing a letter containing a treatment plan and/or advice on the management of the patient's clinical problem. Such letters should address the referring practitioner's queries and provide a plan capable of being followed by the practitioner.[1]

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All letters providing treatment plans should clearly state a diagnosis and outline a plan in an understandable form.
2 Assess local practice	**The indicators** ■ % of treatment plans which the referring practitioner could understand and felt capable of undertaking. **Data items to be collected** ■ A clear diagnosis of the patient's clinical problem. ■ Whether the treatment plan suggested was readily understandable. ■ Whether the practitioner felt able to undertake the suggested plan. ■ What factors preclude undertaking the plan. ■ Whether the letter addressed the original reason for referral. **Suggested number** 100 letters providing treatment plans.
3 Compare findings with standard	
4 Change	Revise format and content of letters as appropriate; provide information to practitioners on the remit of consultants in restorative dentistry; provide additional postgraduate education to address identified deficiencies in practitioners' knowledge and clinical skills.
5 Re-audit	Every 12 – 24 months.
Resources required *(some suggestions)*	**Data collection:** Questionnaire to referring general dental practitioners. **Assistance required:** Audit staff to collate, produce, mail and analyse information from questionnaires. **Estimated clinician's time:** Three to five hours. **Estimated cost:** ££

[1] Joshi RI. The value of treatment plans and advice given to GDPs for patients referred to consultants in restorative dentistry. *Clinical Audit in Restorative Dentistry Newsletter*; February 1999.

Service Specifications for Dental Treatment Provision

Background: Why is this audit worth doing?

Service specifications form the basis of contracts for healthcare services.[1] They provide the framework and direction for the delivery of high quality services based on a review of local needs, standards, the scientific and clinical evidence, and local and national policies. They also form the basis for monitoring, quality assurance and outcomes.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All services should have service specifications, jointly negotiated between the commissioners and the providers, which cover the contents described in methodology document developed by the Audit Group. All service providers should be aware of these specifications. High quality service with health gain.
2 Assess local practice	**The indicators** ■ % of service specifications following above procedures. ■ Evidence of joint negotiation. ■ Evidence of needs assessments and associated literature review and working groups. ■ % with description of needs, client groups and expected outcomes and processes. ■ % with description of values underpinning service. ■ % with description of service, access, client assessment, skill mix, interventions and standards of facilities. ■ % with description of monitoring mechanisms and audit. **Data items to be collected** ■ Service specifications ■ Analysis for above indicators **Suggested number** Previous three years', or all current, specifications.
3 Compare findings with standard	
4 Change *(some suggestions)*	Ensure new contracts are based on methodology of service specification standard.
5 Re-audit	Every three years depending on service.
Resources required	**Data collection:** Discussion with various providers of services, review of documents, review of monitoring mechanisms and returns, review of audit within service. **Assistance Required:** Secretarial service and meetings with providers. **Estimated cost:** ££

[1] South West and Wales Audit Group in Dental Public Health. *Methodology of Writing Service Specifications.*1998.

BASCD Co-ordinated Epidemiological Surveys of Children's Dental Health

Background: Why is this audit worth doing?

An increasing number of planning decisions are now being made using dental epidemiological data.[1,2] Audit of the process can ensure that data are used appropriately. This will ensure better use of resources.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All dental epidemiological surveys shall conform to the national and regional standards and have clear and specific aims and objectives. All surveys will have been carried out to an agreed local protocol which meets the national standards. All field work will be overseen by a manager approved by the local commissioners. All examiners and recorders will be trained and calibrated to the national standard.
2 Assess local practice	**The indicators** ■ Is there a local protocol? ■ % that meet the national and regional standards. ■ % with clear and specific aims and objectives. ■ % which identify the major criteria. ■ Has a field work manager been appointed who is approved by the local commissioners? ■ Have the examiners been named and have they been suitably trained and calibrated? **Data items to be collected** Local protocols.
3 Compare findings with standard	
4 Change *(some suggestions)*	Depending on the results of the comparison of practice with the regional standard, the following activities may need to be reviewed: the training of examiners and recorders, the service agreement between the commissioners and fieldwork providers and the system for quality control by the fieldwork manager. This list is not exhaustive.
5 Re-audit	12 months.
Resources required	**Data Collection:** By the regional trainer and co-ordinator, local commissioners and examiners and recorders. **Assistance required:** Clinical Audit Dept. **Estimated costs:** £££

1 Standards for conducting dental epidemiological surveys required to be carried out to comply with HSG(93)28 - West Midlands and Trent Quality Improvement Group 1996.

2 NHS Management Executive *HSG(93)28. Monitoring the Dental Health of the Population.* 1993.

The Commissioning of Emergency Dental Services (EDS) for Registered and Non-registered Patients

Background: Why is this audit worth doing?

Health authorities have a statutory responsibility to ensure adequate access to emergency dental service for registered and non-registered patients. This service should be regularly monitored.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All EDS should meet the national standards as set out in the Patients' Charter and any local standards derived from the Charter.
2 Assess local practice	**The indicators** ■ % of EDS meeting the local standards for availability, access and appropriate treatment. **Data items to be collected** ■ Needs assessment carried out. ■ EDS for CDS and GDS registered and non-registered patients. ■ Response time (enquiry) and treatment. ■ Hours of availability. ■ Accessibility ■ Publicity. ■ Reduced complaints. ■ Emergencies seen by dentists only. ■ Good relationships with GMPs. ■ Specific contracts in place.
3 Compare findings with standard	
4 Change *(some suggestions)*	Change areas where there is potential change.
5 Re-audit	Annually.
Resources required	**Data collection:** Computer records, current data recording, questionnaires to patients and GDPs, DPB records. **Assistance required:** Data collection and analysis by the local Clinical Audit office. **Estimated costs:** ££

The Dental Public Health Standards Associated with Oral Health Strategies and Health Improvement Programmes

Background: Why is this audit worth doing?

All health authorities should have had an oral health strategy in accordance with current national policy.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All oral health strategies/HImPs must have explicit purpose and be relevant to local needs. All implementation stages must be explicit and agreed with local communities.
2 Assess local practice	**The indicators** ■ Extent of consultation, clarity of purpose. **Data items to be collected** ■ All strategies for examination of targets.
3 Compare findings with standard	
4 Change *(some suggestions)*	Training in development of strategies and wider publicity.
5 Re-audit	Annually.
Resources required	**Data collection:** BASCD/National Survey data and DPB data; questionnaires to patients and health advice providers. **Assistance required:** Data collection and analysis by Clinical Audit Office. E**stimated costs:** ££

An Assessment of Cross-infection Control in the Orthodontic Clinical Area

Background: Why is this audit worth doing?

Cross-infection control measures are not only mandatory but considered a part of good clinical practice. The cross-infection control policy adopted within the clinical area should adhere to the *BDA's Control of Cross-Infection in Dentistry Guidelines*. [1,2]

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	100% compliance with these guidelines.

2 Assess local practice	**The indicators**
	■ % of cross-infection control infringement episodes per individual operator.
	
	Data items to be collected
	■ The number of patients seen by each clinician per session.
	■ For each patient seen, whether any of the following cross-infection control measures were infringed:
	  ■ Gloves to be changed between each patient.
	  ■ Gloved hands to be washed before handling any objects which might come into contact with patients.
	  ■ Contamination of work surfaces to be kept within the defined clinical zones.
	  ■ Disposable items to be used once only.
	
	Suggested number
	All patients seen over a four-week period during all treatment sessions.

3 Compare findings with standard	
4 Change *(some suggestions)*	Training and reassessment of guidelines.
5 Re-audit	After four weeks and then annually.
Resources required	**Data collection:** On appropriate pro forma by the dental nurses. **Assistance required:** Clinical Audit Office for data analysis **Clinician's time:** Nil **Estimated costs:** £

1 Dancer, JM. *Orthodontic Audit Newsletter* 1996; 9:5-6.
2 BDA Advisory Service. *Control of Cross-Infection in Dentistry Guidelines*. Sheet no. A12. 1993.

Quality of Cephalometric Radiographs

Background: Why is this audit worth doing?

Cephalometric radiographs are useless unless they are of sufficiently high quality to identify cephalometric points.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All cephalometric radiographs must be made with: ■ Correct head position. ■ Important structures centred on the film. ■ Name and hospital number recorded. ■ Label not obscuring radiograph. ■ Soft tissue visible. ■ Teeth in occlusion. ■ Good contrast. ■ 'A' point identifiable. ■ 'B' point identifiable. ■ Nasion identifiable. ■ Sella identifiable. ■ Incisors visible and their angulation measurable.
2 Assess local practice	**The indicators** ■ % of radiographs that are of satisfactory quality. **Data items to be collected** ■ Assess each radiograph record for the above parameters on a pro forma. **Suggested number** 20 cephlometric radiographs chosen at random.
3 Compare findings with standard	
4 Change *(some suggestions)*	Reinforce correct procedures for taking lateral skull radiographs. Introduce regular quality control methods to maintain consistency of the quality of radiographs. New equipment may be required. Advice may be required from experienced radiographers. Establish better communication between those taking radiographs and the clinicians who are identifying landmark structures.
5 Re-audit	Every two years.
Resources required	**Data collection:** Assessment of films on pro forma. **Assistance required:** Staff to randomly collect the radiographs. **Radiographers and clinicians.** Clinical Audit Office to analyse data. **Clinician's time:** Five minutes per patient. **Estimated costs:** £

The Age of Patients when First Referred to an Orthodontist with Unerupted Ectopic Palatal Canines

Background: Why is this audit worth doing?

Patients with unerupted palatal maxillary canines should be referred by the age of 12 years.[1] Early referral may allow some improvement to be made in the position of palatal canines without surgical intervention and furthermore, failure to identify the problem early can have medico-legal implications.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	All patients with misplaced unerupted palatal canines, who regularly attend their dentist, should be referred by the age of 12 years. All such referred patients should be seen within six months by an orthodontist.
2 Assess local practice	**The indicators** ■ Age at which patients were referred by their GDP. ■ % with correct diagnosis of the problem. ■ % seen within six months. **Data items to be collected** ■ Age at referral. ■ Name of referring practitioner. ■ Whether the patient was a regular attender. ■ Was the problem diagnosed by the GDP. ■ Date the patient was referred. ■ Date the patient was seen in the orthodontic department. **Suggested number** At least 250 consecutively referred patients with this problem.
3 Compare findings with standard	
4 Change *(some suggestions)*	A letter outlining the audit should be sent to all referring general dental practitioners pointing the benefits of early referral together with a laminated aide memoir to follow when checking the position of developing canines. All hospital staff should ensure that these patients are seen by an orthodontist within six months of referral.
5 Re-audit	Every 2 years.
Resources required	**Data Collection:** Consultants within the region to complete a pro forma with details of every consecutive patient referred with at least one ectopic, palatal canine. **Assistance required:** Data analysis by Clinical Audit Office. **Clinician's time:** Five minutes per patient. **Estimated Costs:** ££

[1] Ericson S Kurol J. Early treatment of palatally erupting maxillary canines by extraction of the primary canines. *Euro J Orthodon* 1988; 10:283-295.

The Causes and Incidence of Unscheduled Visits to an Orthodontics Clinic

Background: Why is this audit worth doing?

Unscheduled visits encroach upon clinical time and are often made for avoidable reasons. If these reasons can be identified then steps can be taken to reduce or prevent their occurrence.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	Less than 5% of visits by patients under treatment should be unscheduled.
2 Assess local practice	**The indicators** ■ % of unscheduled visits. **Data items to be collected** ■ The number of unscheduled visits over a six-month period. ■ The number of treatment visits. ■ The reason for each unscheduled visit recorded on a pro forma. **Suggested number** All unscheduled visits over six-month period.
3 Compare findings with standard	
4 Change *(some suggestions)*	Review clinical procedures. Written instructions for patients.
5 Re-audit	Every two years.
Resources required	**Data collection:** Form filled in clinic at time of unscheduled visit. **Assistance required:** Dental nurse to fill in form, Clinical Audit Office for data analysis. **Clinician's time:** Nil **Estimated costs:** £

Patient Satisfaction with Orthodontics

Background: Why is this audit worth doing?

To improve communication and delivery of orthodontic care.

THE AUDIT CYCLE	
1 The standard *(locally agreed)*	100% satisfaction with the service provided.
2 Assess local practice	**The indicators** ■ % satisfied with the various aspects of delivery. **Data items to be collected** See questionnaire in the Appendix. **Suggested number** 100 consecutive patients attending the clinic.
3 Compare findings with standard	
4 Change *(some suggestions)*	All clinicians should provide clear explanation of the treatment, an appropriate progress report and ensure that time allocated for treatment matches the procedure so that patients are not kept waiting.[1] All reception staff should request the patients to report back to the desk if they have been kept waiting longer than ten minutes.
5 Re-audit	Annually.
Resources required	**Data collection:** By questionnaires to 100 patients (Appendix 1) **Assistance required:** Data collection and analysis by the Clinical Audit Office. **Clinician's time:** Nil. **Estimated costs:**£

[1] Richmond, S. *Orthodontic Audit Newsletter* 1993; 4:10-11.

Patient Satisfaction Questionnaire

This questionnaire is related to the orthodontist and facilities you are visiting today. Please feel free to make any comments you wish.

Please tick the appropriate column.	(% Patients) Never	Sometimes	Always
1 Orthodontist-Patient Relations			
a) My orthodontist treats me with respect.	☐	☐	☐
b) My orthodontist explains what he/she is going to do	☐	☐	☐
c) I have confidence in my orthodontist	☐	☐	☐
d) My orthodontist is friendly.	☐	☐	☐
e) My orthodontist is caring.	☐	☐	☐
f) My orthodontist provides me with the information I need.	☐	☐	☐
2 Technical Quality of Care			
a) My orthodontist is thorough.	☐	☐	☐
b) I have complete confidence in my orthodontist.	☐	☐	☐
c) The treatment I receive is of a high standard.	☐	☐	☐
3 Access			
a) I can arrange an appointment when it suits me.	☐	☐	☐
b) I find it easy to contact my orthodontist to make an appointment.	☐	☐	☐
4 Patient Waiting Time			
a) I see my orthodontist on time or within 10 minutes.	☐	☐	☐
b) I am happy waiting even when the clinic is running late.	☐	☐	☐
c) I am certain that they know that I have arrived.	☐	☐	☐

Please tick the appropriate column.

	(% Patients) Never	Sometimes	Always
5 Facilities			
a) The waiting room is clean and neat.	☐	☐	☐
b) The waiting room has a friendly atmosphere.	☐	☐	☐
6 Continuity			
a) I see my orthodontist each time I come.	☐	☐	☐
b) My treatment is going well.	☐	☐	☐
7 Surgery Atmosphere			
a) My orthodontist and staff work well together.	☐	☐	☐
b) The surgery is neat and clean.	☐	☐	☐
c) The surgery has all the equipment necessary for my treatment.	☐	☐	☐

Do you have any other comments or ideas for improvements?

Please write suggestions below.

'Ideal' Clinical Audit Report Format:

This report was published in the *Clinical Audit Newsletter for Restorative Dentistry*, February 1999. It presents a clear and succinct report format which could be used for internal and external circulation of audit reports with an easy-to-follow sections.

AUDIT TOPIC

Management of acute dental trauma presenting to the Accident and Emergency Department in a district general hospital.

AUTHOR

Dr Heather Beckett, Consultant in Restorative Dentistry, Queen Alexandra Hospital Portsmouth.

WHY CHOSEN

It was the observation of the clinicians on a joint Restorative Dentistry/Orthodontics clinic, where a number of patients with previously traumatised teeth were seen, that a wide variation in the acute management of these teeth existed.

CRITERIA AND STANDARDS

A flow chart for management of all categories of dental traumatic injury was developed following discussion within the multispecialty (oral and maxillofacial surgery, orthodontics and restorative dentistry) departmental audit group, based on the management recommendations given by Andreasen and Andreasen.[1]

100% compliance with the criteria was set as the gold standard for the audit.

DATA COLLECTED

Initially, data were collected for a one-month period on a *pro forma*, listing the patient details, injury and management.

RESULTS

There was a 0% compliance with the agreed standard criteria, due to the lack of facilities for periapical radiography in the A & E Department.

CHANGES

- There were discussions on the possibility of obtaining a periapical radiographic facility for out-of-hours work in the A & E department. For a number of reasons, this was declared to be impractical.

- The management protocol of traumatised teeth was therefore altered, (see end of report), to enable practical acute management in the A & E department to limit damage and control patient discomfort, and allow further comprehensive management, if indicated, under optimum, fully staffed working day conditions in the Maxillofacial Unit where all appropriate facilities, including periapical radiography, are available.

- A triplicate form was developed on which details of traumatic dental injuries and their acute management are recorded. The sections of the form, when completed and detached, act as a permanent record in the A

[1] Andreasen J O, Andreasen F M. *Essentials of Traumatic Injuries to the Teeth*. Munksgaard; 1990.

& E notes, an audit record for the Maxillofacial Unit, and a communication to the patient's general dental practitioner who will be taking on the follow-up care.

- Through the district dental liaison committee, links with the Community Dental Service were established whereby it was agreed that they would accept the after-care of traumatic injuries (but not the routine dental treatment), of patients who did not have a regular general dental practitioner.

DATE OF RE-AUDIT

Ongoing

AUDIT TEAM MEMBERS

Maxillofacial Unit clinicians, Queen Alexandra Hospital, Portsmouth

Revised Protocol

Wherever possible, ie during normal working hours and where other injuries do not preclude it, the patient should be transferred to the Maxillofacial Unit, where comprehensive facilities exist for diagnosis and acute management of these injuries.

In every case of traumatised teeth, a 'traumatised tooth' *pro forma* must be completed, with one copy being given to the patient to take to their dentist, one filed in the A & E notes and one placed in the folder kept behind reception in A & E. The records kept in this folder are essential for the ongoing audit.

There are four broad classes of injury, whose acute management in A & E should be as follows:

(*Patients brought to the department should have comprehensive diagnosis and acute management carried out in line with the teaching of Andreasen and Andreasen.*)

1 Deciduous Teeth

Coronal fractures: Advise visit to GDP.

Displacements: If there is any possibility of the displaced root having impinged on the developing successor, or if there is interference with the occlusion, the tooth should be extracted, admitting the patient if required so this can be carried out as soon as possible.

2 Coronal fractures of permanent teeth

Clearly annotate the 'traumatised teeth' pro forma **'No Intraoral Radiographs Taken'**, so that it is clear that a radiographic diagnosis has not been carried out. Account for all missing teeth or fragments, radiograph chest if required to do this.

Enamel fractures only: Advise visit to GDP.

Dentine exposure: Cover exposed dentine with glass ionomer cement and advise visit to GDP as soon as practicable.

Pulp exposure: Cover exposure with a calcium hydroxide preparation (eg Dycal) and glass ionomer cement, prescribe soft diet and chlorhexidine mouthwash and advise visit to GDP as soon as practicable.

3 Mobile or displaced permanent teeth (other than intrusion)

Clearly annotate the 'traumatised teeth' pro forma **'No Intraoral Radiographs Taken'**. If possible, reduce displacement, under local analgesia as required. Avulsed teeth are candidates for replantation if the extraoral period is less than one hour, or if they have been stored in milk. Splint teeth, using multistrand spiral wire and glass ionomer cement or composite. If there is difficulty in reducing displacement or splinting by this means in the A & E situation, splint with Coepak to assist with patient comfort. Prescribe soft diet, chlorhexidine mouthwash and antibiotics. Check tetanus vaccination status and take action as appropriate. Arrange to see the patient on the next normal working day in the Maxillofacial Unit for appropriate assessment, planning and necessary treatment.

4 Intruded permanent teeth

Clearly annotate the 'traumatised teeth' pro forma **'No Intraoral Radiographs Taken'**. Prescribe chlorhexidine mouthwash and antibiotics. Arrange for patient to see an orthodontist in the Maxillofacial Unit on next normal working day.

February 1999

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Faculty of Dental Surgery Clinical Effectiveness Committee 1998-1999

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Restorative Dentistry

R I Joshi (Chairman), I C Benington OBE, D H Edwards, I Harris, C Morgan, B G N Smith, A G Vaughan, R B Winstanley

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The Royal College *of* Surgeons *of* England

35-43 Lincoln's Inn Fields, London WC2A 3PN
T: 020 7405 3474 F: 0171 831 9438
W: www.rcseng.ac.uk

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