

Public Health Institute of Scotland



Needs Assessment Report on
Oral and Maxillofacial Surgery
December 2002

MEMBERSHIP OF THE SNAP GROUP ON ORAL AND MAXILLOFACIAL SURGERY

Mr G Ball (Chairman)	Consultant in Dental Public Health, Fife, Lothian and Borders NHS Boards
Mr G Bruce	General Dental Practitioner, Cupar, Fife
Mr N Hammersley	Consultant Oral and Maxillofacial Surgeon, Monklands Hospital
Mr N Malden	Associate Specialist – Oral Surgery, Edinburgh Dental Institute
Mr A Morris	Consultant in Plastic Surgery, Ninewells Hospital
Mr B O'Regan	Consultant Oral and Maxillofacial Surgeon, Fife Acute Hospitals NHS Trust
Miss M Taylor	Consultant in Dental Public Health, Lanarkshire NHS Board
Dr G Topping	Specialist Registrar in Dental Public Health, Fife NHS Board
Miss A White	Consultant in Otolaryngology and Head and Neck Surgery, Royal Alexandra Hospital

THE GROUP ALSO GRATEFULLY ACKNOWLEDGES THE ADVICE AND ASSISTANCE OF:

Mr R McNicol	Information and Statistics Division, Common Services Agency
Mr S Young	Information and Statistics Division, Common Services Agency
Ms D Hastie	Information and Statistics Division/Fife NHS Board
Mr W Boyd	Information and Statistics Division/Fife NHS Board
Mr R Black	Information Services Manager, Fife NHS Board
Ms A Simpson	Information and Statistics Division, Common Services Agency

And secretarial assistance from Ms Karen Scott, Fife NHS Board.

December 2002

FOREWORD

The Scottish Needs Assessment Programme (SNAP) was set up in 1992 across all Scottish Health Boards to assist them in carrying out their required task of health needs assessment. It developed into a key resource in the commissioning process and produced over 60 reports on a wide range of health issues.

With the establishment of the Public Health Institute of Scotland in January 2001, the decision was made to incorporate the SNAP programme within the overall work programme of the Institute. This report on Oral and Maxillofacial Surgery was commissioned before January 2001 and therefore makes reference to the SNAP processes.

CONTENTS

Executive Summary	
Recommendations	8
1. Introduction	10
2. Defining the problem	13
3. Minor Oral Surgery Procedures in General Dental Practice	16
4. Oral Surgery in the Community Dental Service	19
5. Oral and Maxillofacial Surgery (OMFS) Activity in Acute Hospitals	20
6. Current service provision	26
7. Effectiveness of current OMFS provision	33
8. Changes to current service provision	36

Appendices

Appendix 1: Inaccuracies in records of dental and OMFS activity	40
Appendix 2: Oral and Maxillofacial Surgery – Diagnostic and procedure groupings	44
Appendix 3: Inter NHS board variations in rate of provision of OMFS procedures	45
Appendix 4: Developing secondary and tertiary hospital services	46
References	47

EXECUTIVE SUMMARY

1. INTRODUCTION

- 1.1 The specialty of Oral and Maxillofacial Surgery (OMFS) is broadly concerned with the diagnosis and treatment of a wide range of diseases, injuries and defects of the human jaws and associated structures.
- 1.2 OMFS is a medical specialty but is closely related to the dental specialties of Surgical Dentistry and Oral Surgery.

2. CLINICAL ACTIVITY

- 2.1 General Dental Practitioners (GDPs) carried out nearly 49,000 minor oral surgery procedures in 2000/01. However, there were considerable differences in the rate of provision of these procedures between NHS Board areas. The rate of provision of minor oral surgery procedures in primary care is likely to have a significant effect on hospital OMFS workload.
- 2.2 The same principle applies to minor oral surgery procedures carried out by the Community Dental Service (CDS), although this constitutes a very small proportion of total activity.
- 2.3 Hospital OMFS activity has fluctuated considerably over the decade 1990/91 to 2000/01. Although there was a rise in the total number of in-patient and day case 'oral surgery and oral medicine' procedures over the decade there was a significant fall in the latter half of the decade. Thus, by 2000/01, activity had fallen to a level below that achieved in 1992/93.
- 2.4 Further monitoring over time is required to confirm any trend but it should be noted that more subtle changes in case mix and complexity have probably taken place in hospital OMFS practice over this period and this should be borne in mind when interpreting these data.
- 2.5 The number of new out-patient attendances in Scotland for 'oral surgery' has fallen each year for the past four years. These figures suggest a decrease in demand for such services. Like new out-patient attendances, the number of total out-patient attendances has also fallen. This reduction may reflect changed clinical practice such as fewer post surgical follow up visits.

2.6 In recent years, the proportion of hospital OMFS activity classified as “dento-alveolar” has fallen gradually from 86% in 1995/96 to 76% in 2000/01. Not surprisingly, using 2000/01 figures, a greater proportion of day case procedures (85%) are for dento-alveolar surgery than is the case for in-patient procedures (66%). Most of an 8% fall in numbers of day cases between 1995/96 and 2000/01 is accounted for by reduced numbers of dentoalveolar cases rather than more complex procedures. It should also be noted that dentoalveolar activity contributed, to a lesser extent, to a 24% fall in in-patient activity over the same period.

2.7 More complex workloads are difficult to quantify in a system that counts episodes of care rather than time per case. Current data collection needs to address this anomaly since OMFS surgery includes much work that is both complex, time consuming and interdisciplinary.

3. SERVICE PROVISION

GDS

3.1 Most generalist GDPs carry out some oral surgery procedures in their practices. Almost all possess at least a basic set of surgical instruments.

3.2 A significant proportion of hospital referrals from dental primary care are avoidable. This may be through more procedures being carried out in dental practice, or through treatments such as endodontics being carried out to a higher standard, thereby removing the need for subsequent surgery.

Specialist Practice

3.3 Specialist oral surgery practice may also have an impact on hospital activity. Indeed, the report of the Working Group on Specialist Dental Training stated that most orthodontic and oral surgery treatments could be performed outside the hospital environment.

3.4 One major disincentive to increasing the proportion of oral surgery treatment carried out in the GDS is that of patient charges.

3.5 Within the managed primary care dental service, the notion of salaried specialists in surgical dentistry is supported as a way of pump-priming this aspect of high street specialisation.

Hospital Service

3.6 One third of OMFS consultants in Scotland who were recently surveyed said that they worked an on-call rota of 1:2 or higher; whilst over three quarters reported the need to operate at night on trauma cases, citing insufficient theatre time during normal working hours.

3.7 Overall, the OMFS Consultant workforce is below the level recommended by the OMFS specialty. The SNAP working group supports an increase in Consultant numbers but within the context of the development of clinical networks.

RECOMMENDATIONS

SERVICE PROVISION

1. It is recommended that several managed clinical networks in OMFS are established within Scotland.
2. An increase in the number of OMFS Consultant posts in Scotland is recommended.
3. OMFS referral pathways for patients both within primary care and between primary and secondary care must be clear, seamless and supported by appropriate protocols.
4. Protocols should be in place within each network to ensure that inappropriate referrals from primary care practitioners are minimised.
5. It is recommended that the Scottish Executive undertakes a review of oral surgery GDS charges.
6. The Scottish Executive should consider how primary care surgical dentistry practice might be encouraged to develop.

CLINICAL EFFECTIVENESS

7. Further work should be undertaken to develop appropriate clinical outcome indicators for OMFS.
8. The concept of recommending threshold patient numbers for surgical competence should be considered in some specialised areas of OMFS practice.
9. Clinical audit in OMFS should, where appropriate, include the primary care setting.
10. A Scottish Intercollegiate Guideline Network (SIGN) guideline on the treatment of cancer of the head and neck should be considered.
11. NHS Trusts, through Medical Directors, should agree local protocols on the management of a range of 'interface' procedures. These could also specify clinical leads, surgical volumes and required skills/competencies.

EDUCATION AND TRAINING

12. The workforce requirements for Specialist Registrars in Surgical Dentistry should be systematically planned and this should be linked to a strategy to pump-prime specialist primary care practice in Surgical Dentistry.
13. A review of the role of the dentally qualified SHO working in OMFS units in Scotland and the service implications of this should be progressed.
14. Deans of Dental Schools, Primary Care Trusts and Directors of Postgraduate General Dental Practice Education should consider action to address a range of GDP skills and competencies – especially relating to minor oral surgery and endodontics.
15. Suitable local training programmes in minor oral surgery should be available for primary care dentists.

16. Non Consultant Career Grade posts in OMFS should have a clear job plan, protected time for CPD, audit and study leave. Each post should have an educational development plan that is regularly reviewed.

PREVENTION

17. Water fluoridation is an effective public health intervention and should be promoted.
18. Inequalities in access to healthy nutritious food should continue to be a major driver for change in Scotland.
19. Further research and development is required into the production of safe toughened glassware to reduce the severity of facial injuries.
20. Oral cancer prevention should be part of a common risk factor approach addressing both smoking and high alcohol intake.

RECORDING CLINICAL ACTIVITY

21. Implementation of the report of the National Dental Information Working Group should proceed as a priority.
22. There should be agreed protocols governing data collection for Community Dental Service activity.
23. OMFS should be recognised as a national standard specialty by Information and Statistics Division.
24. All hospitals carrying out oral surgery or OMFS procedures should audit how cases are classified (e.g. as day case, in-patient etc).
25. The issue of the accurate recording of OMFS out-patient procedures should be urgently considered.
26. An abbreviated list of procedure and diagnostic codes should be compiled for use by clinical staff.
27. Hospital activity data for consultant services should be collected separately from that relating to casual patients attending for primary care non-specialist services.

ONE

INTRODUCTION

- 1.1 The specialty of Oral and Maxillofacial Surgery is defined as that branch of surgery which deals with the diagnosis, surgery and adjunctive treatment of diseases, injuries and defects of the human jaws and associated structures. The scope of the specialty has been agreed internationally to include but not be specifically limited to:
- Management of cranio-maxillofacial trauma (hard and soft tissues);
 - Dento-alveolar surgery (surgery of the tooth bearing components of the jaws);
 - Supportive care and the management of pain and anxiety;
 - Pre-prosthetic surgery including implantology (surgery prior to rehabilitation of the dentition);
 - Surgical and non-surgical management of diseases of the temporomandibular joint (between the lower jaw and skull-base);
 - The management of head and neck cancer;
 - Reconstructive surgery of the head and neck to include hard and soft tissue grafts, mobilisation of regional composite flaps using micro-surgical techniques;
 - Surgical correction of acquired and congenital facial deformity (orthognathic surgery);
 - Surgical treatment of other congenital abnormalities including clefts of the lip and palate;
 - Cranio-facial surgery including skull base surgery;
 - Aesthetic facial surgery;
 - Oral Medicine;
 - Interdisciplinary co-operation with a broad spectrum of other disciplines, in particular ENT, Ophthalmology, Neurosurgery, Plastic Surgery, Psychiatry, Palliative Care and Medical Oncology, Oral Medicine, Oral Pathology, Restorative Dentistry, Orthodontics and other specialised services.
- 1.2 It is thus a medical specialty dealing with an anatomically defined region which includes the oro-facial complex including the maxillofacial skeleton and surrounding tissues.
- 1.3 Oral and maxillofacial surgery (OMFS) services are provided in most District General Hospitals as well as in specialist units and teaching centres.

- 1.4 The specialty of OMFS largely evolved from the hospital based dental specialty of Oral Surgery. The publication of the Calman Report on specialist medical training¹, the Chief Dental Officer's report (1995) on Specialist Dental Training², the European Primary and Specialist Qualifications Regulations 1998³ and subsequent regulations from the General Dental Council⁴ have resulted in the establishment of three specialist lists relating to the practice of oral and maxillofacial surgery.
- 1.5 OMFS itself is distinctive in that it is registered under the Medical Directives and is therefore a medical rather than a dental specialty. As a consequence, the detailed arrangements for training and registration of this specialty are different from those which apply to the dental specialties⁵. The emergence of OMFS as a medical specialty dates back to 1982 when guidelines were agreed by the British Association of Oral and Maxillofacial Surgeons that it should be mandatory for all those appointed to an NHS Consultant position in OMFS to hold a registerable medical qualification.
- 1.6 The three specialist lists are those of OMFS, Oral Surgery and Surgical Dentistry. In the UK (but not Europe) the specialist list for Oral Surgery now relates specifically to practitioners who have undertaken an academic training programme and who are dentally but not necessarily medically qualified.
- 1.7 The need to distinguish academic Oral Surgery was driven by a recognition that the requirement to hold a registerable medical qualification (mandatory for consultants in OMFS) placed an unfair burden on potential recruits to academic Oral Surgery who were already required to pursue a higher research degree.
- 1.8 An alternative training pathway was therefore agreed where a registerable medical qualification was not essential. Trainees who pursue this route into academic Oral Surgery became largely involved with the teaching of undergraduates, supervision of postgraduate students and research, as well as the surgical practice of some aspects of the specialty of OMFS.
- 1.9 Surgical Dentistry is a specialty of dentistry which deals with the diagnosis and surgical management of anomalies and pathological processes of the teeth and their supporting structures. Trainees undertake a three year specialist training programme in Surgical Dentistry. Most will work in primary care specialist practice or within District General Hospitals.
- 1.10 Despite these differences, it should be clear that there are considerable areas of overlap within the specialties of OMFS, Surgical Dentistry and Oral Surgery and between the surgical workload which spans the primary, secondary and tertiary care settings. In addition, there is an important interface between OMFS and other surgical specialities.
- 1.11 During 1999 much debate took place within Scotland and the UK regarding the number of Specialist Registrars needed in OMFS and Surgical Dentistry. The Chief Dental Officer (Scotland) subsequently commissioned the Oral Health Group of the Scottish Needs Assessment Programme (SNAP) to produce a report reviewing the need for the range of OMFS services and which addressed the implications of the emergence of the specialty of Surgical Dentistry.

1.12 The terms of reference were to consider:

- The health needs in relation to a range of oral conditions;
- The opportunities to commission effective prevention strategies for this range of oro-facial conditions;
- The evidence base for this range of interventions;
- The appropriateness of the present configuration of oral and maxillofacial services in Scotland.

In addition, the report was asked to:

- Make recommendations for any changes in service configuration (including workforce issues) and to specifically consider the implications of the establishment of the specialty of Surgical Dentistry.

1.13 A core working group (see page 1) has been responsible for much of the initial work on the report and a consultation process has included input more widely from within the profession.

1.14 Because of the considerable areas of overlap, the scope of this report is necessarily broader than for hospital based OMFS services alone.

1.15 Much of the routine workload of the OMFS specialty has to do with the diagnosis and management of conditions relating to the mouth and jaws including dentoalveolar surgery. It is here that the interface with primary care is so important, since some of these conditions are capable of being managed outwith the acute hospital environment. The report considers this interface in some depth and makes recommendations for change.

1.16 At the other end of the spectrum is the diagnosis and management of more complex conditions relating to the head and neck⁶. The treatment of congenital abnormalities of the face and the management of mouth and jaw cancer provide two examples of OMFS workload where there is significant co-operation with the work of other surgical specialties⁷.

1.17 The report will not specifically consider the need for out-patient dental general anaesthetic and sedation services where no specialist surgical input is required. The only exception to this is where patients are hospitalised because of a medical condition and treated by the OMFS service.

1.18 Out-patient dental general anaesthetic and sedation services have been reviewed in many NHS Board areas following the Poswillo report⁸ and the publication of revised ethical guidance from the General Dental Council⁹. More recently, the report of a Fatal Accident Enquiry¹⁰ in Edinburgh and a report from the Department of Health¹¹ made recommendations for change in this area.

1.19 Finally, related reports from the SNAP Oral Health Group should be noted as follows:

- SNAP Report on Oral Cancer¹²
- SNAP Report on Cleft Lip and Palate¹³
- SNAP Report on Adult Oral Health¹⁴

TWO

DEFINING

THE PROBLEM

2.1 The range of treatments and conditions within the scope of this report can be summarised as follows:

CRANIO-MAXILLOFACIAL TRAUMA

2.1.1 Maxillofacial trauma includes injury to the soft tissues of the face (sometimes the head and neck too) as well as to the bones of the face. The surgical management of cranio-maxillofacial trauma has rapidly become more complex both in terms of the precision of anatomical reconstruction and the techniques applied. The management of severe facial injuries is often undertaken in a patient with multi-system trauma. Part of the on-call work of an oral and maxillofacial surgeon also includes the management of orofacial infections and haemorrhage. OMFS services are thus an essential part of the multi-disciplinary team in Accident and Emergency departments at District General Hospital (DGH) level as well as in regional trauma centres.

DENTOALVEOLAR SURGERY

2.1.2 The alveolus is the part of the bone of the jaw that supports the teeth. Dentoalveolar surgery is the surgical management of diseases of the teeth and the supporting hard and soft tissues.

PAIN AND ANXIETY

2.1.3 A considerable amount of time is devoted to the investigation and relief of facial pain, which may arise from a variety of structures in the head and neck region.

PRE-PROSTHETIC SURGERY AND IMPLANTOLOGY

2.1.4 Pre-prosthetic surgery encompasses a range of procedures designed to restore form and function which has been lost following loss or absence of teeth and alveolus. It includes the provision of dental implants. A separate SNAP report on dental implants is in preparation. Facial and cranial implantology may be required by some patients.

TEMPOROMANDIBULAR JOINT DISEASES

2.1.5 Temporomandibular joint (TMJ) disorders range from TMJ dysfunction to disorders where there is formal joint disease including arthritis and ankylosis which may need release and reconstruction.

TWO DEFINING THE PROBLEM

HEAD AND NECK CANCER

2.1.6 The management of malignancies of the oral cavity and other parts of the head and neck is an area where OMFS surgeons work closely with other surgical specialties and oncologists. The SNAP report on Oral Cancer¹² has summarised the major health needs in relation to this group of neoplasms.

OMFS services are also used by people who have benign orofacial neoplasms or who need reconstructive surgery.

RECONSTRUCTIVE SURGERY

2.1.7 Post surgical reconstruction and rehabilitation involves work at the interface with other dental specialties (particularly Prosthodontics and Implantology) as well as the use of hard and soft tissue grafts and flaps for aesthetic and functional reconstruction.

ACQUIRED AND CONGENITAL FACIAL DEFORMITY

2.1.8 The surgical correction of facial deformity and defects in the alignment of the face and jaws is broadly known as orthognathic surgery. Most of the conditions requiring such correction are congenital although some may be due to the effects of early injury and, rarely, infection. Orthognathic surgery usually involves complex multidisciplinary planning prior to operation. The Orthodontist plays a key role in planning and treatment.

CLEFT LIP AND PALATE AND OTHER CONGENITAL ABNORMALITIES

2.1.9 The health needs for this range of congenital disorders have been fully described in a recent SNAP report¹³. OMFS surgeons are involved in the multi-disciplinary management of patients with clefts.

CRANIOFACIAL SURGERY

2.1.10 Craniofacial surgery is mainly concerned with the treatment of patients with rare and complex congenital acquired conditions affecting the head and face. A craniofacial service includes the full assessment (primarily imaging) and surgical treatment of patients with severe congenital, traumatic or tumour related deformities of the cranium, facial and orbital region. Many of these patients are children (often less than two years old) with severe congenital abnormalities.

ORAL MEDICINE

2.1.11 This includes the management of oral mucosal disorders such as leukoplakia and recurrent oral ulceration as well as hard and soft tissue diseases of the jaws.

OTHER CONDITIONS

2.1.12 Finally, patients sometimes require hospitalisation for routine dental extractions because of a concomitant medical condition (e.g. haemophilia, severe cardiovascular disorders, unstable insulin dependent diabetes). These cases too are often managed by OMFS services.

2.1.13 It is difficult to categorise this diverse range of conditions and specialist areas and it is certainly not possible to conform to SNAP methodology by defining the subject in terms of the incidence and prevalence of a single condition. Nor is it possible to summarise what is currently being done (except in the most general way) to address the subject in terms of detection, diagnosis, prevention, cure, rehabilitation and palliation.

2.2 Section 3 of the report will therefore describe total OMFS activity and enumerate trends over time. Differences in case mix will be identified. Some general comments on prevention are pertinent by way of introduction.

PREVENTION

- 2.2.1 Some conditions currently treated by OMFS and other services are susceptible to primary prevention.
- 2.2.2 Dental caries is a preventable disease¹⁵ yet the treatment of its effects contributes significantly to surgical workload.
- 2.2.3 The burden of dental decay also falls unequally on those living in the most disadvantaged circumstances¹⁶. Preventive measures are well evidenced¹⁷ and include the promotion of water fluoridation and regular toothbrushing with a toothpaste containing at least 1000 parts per million of fluoride.
- 2.2.4 The influence of diet and nutrition in the prevention of a range of oral diseases is well recognised. Inequalities in access to healthy, nutritious food should continue to be a major driver for change.
- 2.2.5 Maxillofacial trauma is related to many causes including assault, road traffic accidents (RTAs) and household accidents. The proportion of all maxillofacial trauma caused by RTAs is declining, whilst that associated with assault is rising proportionately^{18,19,20}.
- 2.2.6 Violence has now become recognised as the leading cause of serious facial injury in the UK²¹. A proportion of this is alcohol related. The use of glassware as a weapon has been identified as an important cause of permanently disfiguring injuries. Attempts at producing safe "toughened" glassware have not yet had a significant effect and further research and development is needed in this area²².
- 2.2.7 The incidence of malignancy of the oral cavity is increasing²³ and is more common in Scotland than in other parts of the UK. Surgical management is highly complex and often takes place in a multi-disciplinary environment.
- 2.2.8 The most important risk factor associated with intra-oral squamous cell carcinoma is cigarette smoking²⁴. High alcohol intake is the second major risk factor. Each raises the risk status for oral cancer and the two risk factors result in a synergistic effect – together carrying an attributable risk of 75-95%²⁵.
- 2.2.9 Prevention using a common risk factor approach should be stressed. Work on addressing the effects of deprivation as a major determinant of ill health, including oral disease, should be supported. Alcohol abuse, unhealthy diets, public safety, smoking and sun exposure are all lifestyle and public policy issues which should be addressed as part of generic health improvement work.

SECTION SUMMARY

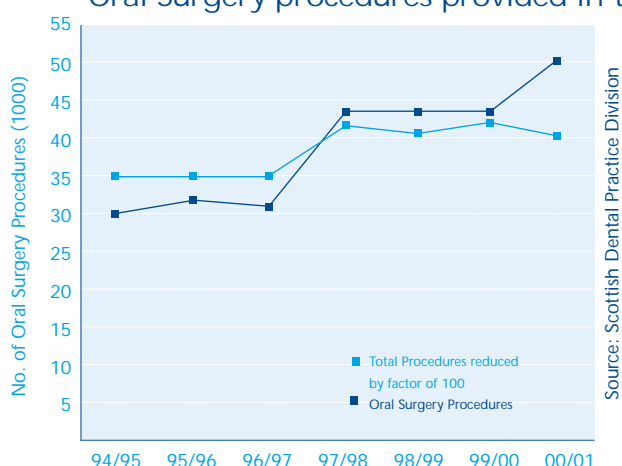
- The specialty of OMFS encompasses a wide range of pathologies and surgical treatments.
- The treatment of the effects of dental caries (a preventable disease) contributes significantly to OMFS workload.
- Measures to prevent dental caries (including the place of water fluoridation as a key effective public health intervention) should be promoted.
- The management of oral and maxillofacial trauma is complex and resource intensive.
- Assault (much of it alcohol related) is an increasingly common cause of maxillofacial trauma.
- The incidence of oro-facial malignant disease is rising.
- The surgical management of oro-facial malignant disease is complex, resource intensive and often takes place in a multi-disciplinary environment.
- A common risk factor approach should be taken to address such aetiological factors as smoking, poor diet, excessive alcohol intake and sun exposure.

THREE

MINOR ORAL SURGERY PROCEDURES IN GENERAL DENTAL PRACTICE

- 3.1 In the year ending 31 March 2001 48,926 minor oral surgery procedures* were provided by general dental practitioners.
- 3.2 Figure 1 illustrates the rise in the number of oral surgery procedures provided by general dental practitioners since 1994/95 compared with the rise in the total number of courses of treatment authorised in the General Dental Service (GDS). Figure 1 shows both oral surgery procedures and total treatments authorised – to allow for both to appear on the figure the total treatments authorised are reduced by a factor of 100.
- 3.3 The rise in the rate of provision of oral surgery procedures in general dental practice thus appears to be more pronounced than the rise in total GDS activity over the same period.

Figure 1:
Oral Surgery procedures provided in the GDS

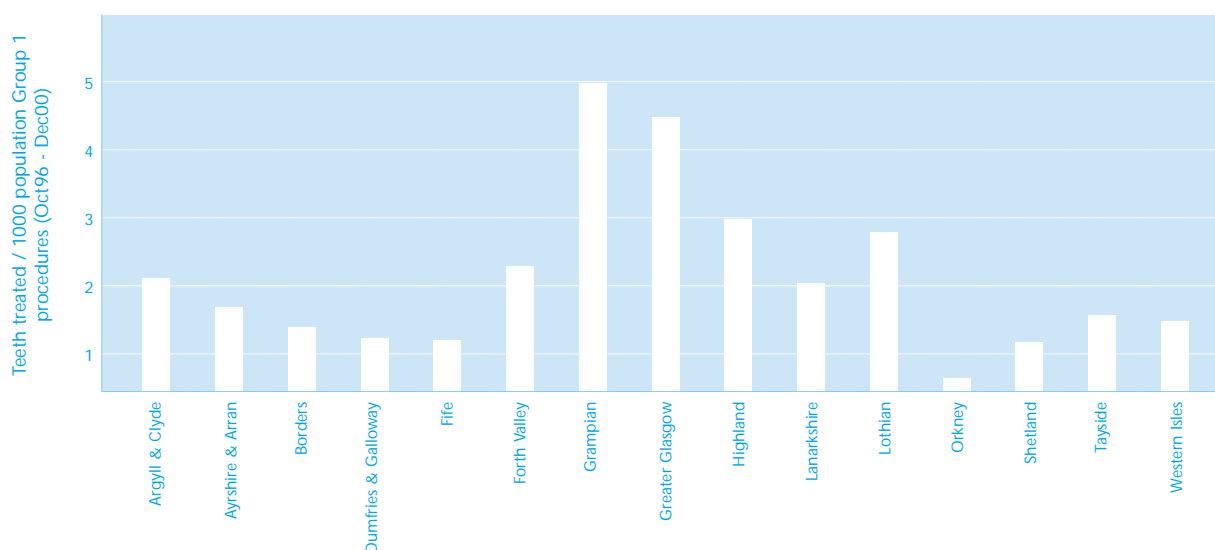


* "Minor oral surgery procedures" comprise the following categories within the Statement of Dental Remuneration (SDR): Endodontic treatment – all apicectomies; Extractions of special difficulty; Miscellaneous treatments – patho/bacterio examinations and re-implantation of a luxated tooth; Occasional treatment – re-implantation of a luxated tooth and removal of buried root'.

- 3.4 There are, however, differences in the rate of provision of oral surgery procedures in the GDS between different NHS Board areas. To illustrate this, the rate of provision of two groups of oral surgery procedures is presented by NHS Board in Figures 2 and 3.

- 3.5 Group 1 procedures (claims for “apicectomy” and “removal of impacted lower third molars”) are considered to represent the activity of GDPs who have some specialist interest in oral surgery.
- 3.6 Figure 2 illustrates the rate of provision of group 1 procedures in all NHS Board areas. For mainland Boards this varies from 1.1 teeth treated per 1000 population in Fife and Dumfries & Galloway to 5.0 teeth treated per 1000 population in Grampian.
- 3.7 Group 2 procedures (claims for the removal of “buried roots”) are considered to indicate the willingness or ability of GDPs to undertake a more basic level of minor oral surgery in their practices.
- 3.8 Figure 3 shows that inter-board variations are larger for group 2 procedures.
- 3.9 The differences in the rate of provision for both these marker procedures emphasise the effect that GDS oral surgery activity may have on the workload of local hospital OMFS departments.
- 3.10 There are of course a number of factors which may influence the provision of GDS oral surgery procedures. Variations in dentist to population ratio, caries rates and availability of specialist GDS oral surgery practices are all possible factors which might explain the variation between NHS Board areas.
- 3.11 The number of GDPs in Scotland who carry out a larger amount of oral surgery in practice is limited. Figure 4 shows that the majority of dentists in Scotland carried out between 1 and 30 oral surgery procedures* over a three year period. Only 25 dentists carried out in excess of 500 procedures.

Figure 2:
Rate of GDS provision of Group 1 (complex) oral surgery procedures by NHS Board



Source: Scottish Dental Practice Division

THREE MINOR ORAL SURGERY PROCEDURES IN GENERAL DENTAL PRACTICE

Figure 3:
Rate of GDS provision of Group 2 (simple) oral surgery procedures by NHS Board

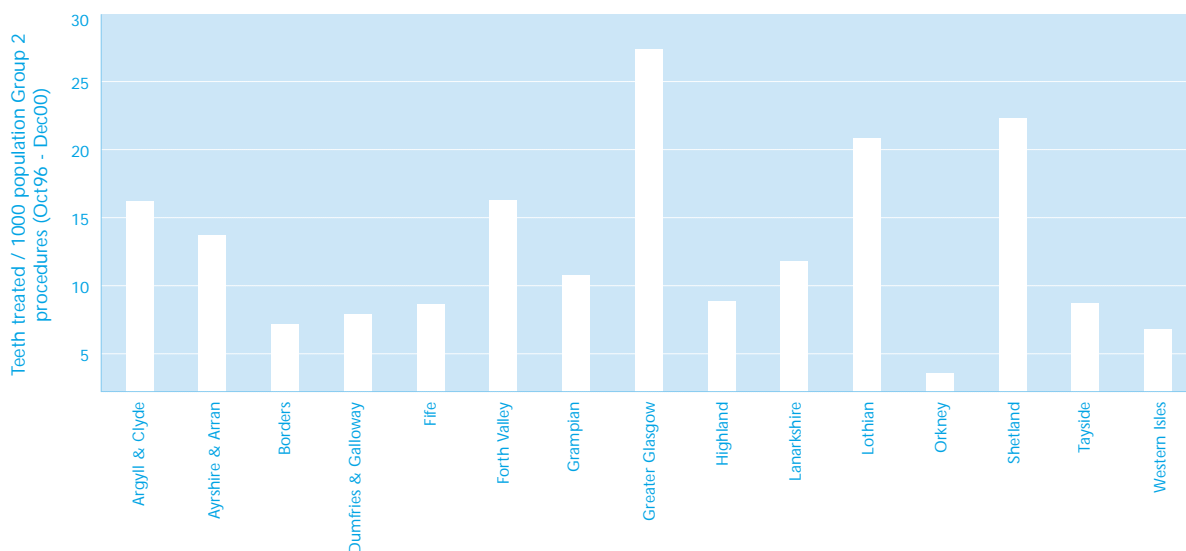
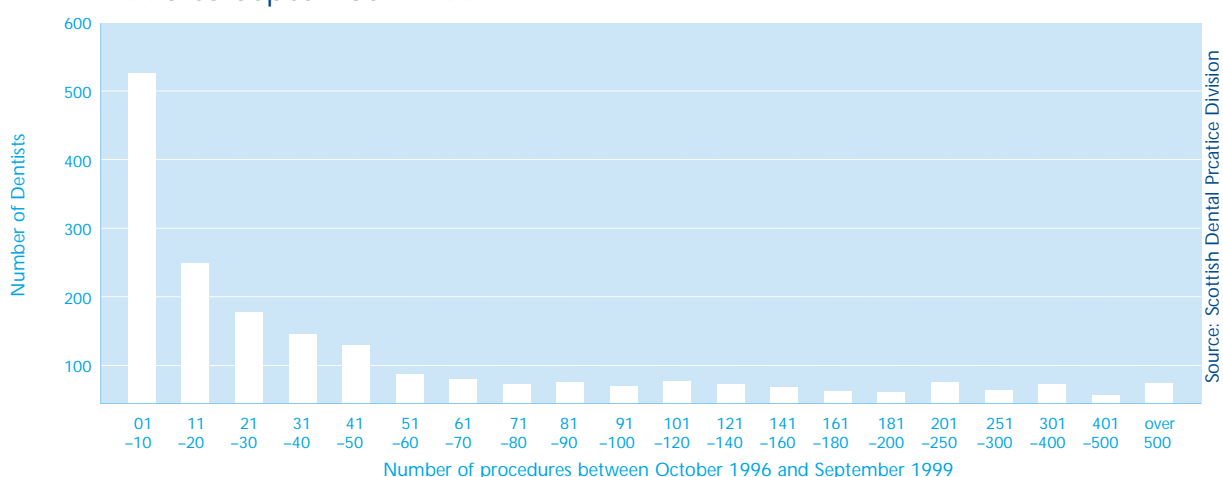


Figure 4:
Oral surgery procedures by number of dentists for the period October 1996 to September 1999



SECTION SUMMARY

- Nearly 49,000 minor oral surgery procedures were carried out in the GDS in 2000/01.
- The rise in the rate of provision of GDS oral surgery procedures was more pronounced than the overall increase in GDS activity.
- There were considerable differences in the rate of provision of GDS oral surgery procedures between NHS Board areas.
- The rate of provision and threshold for referral and acceptance of oral surgery cases from the GDS is likely to have a significant effect on hospital OMFS workload.
- Most GDPs carried out less than 30 minor oral surgery procedures over the 3 year period 1996-99.
- 25 GDPs in Scotland carried out in excess of 500 oral surgery procedures in the same period.

FOUR

ORAL SURGERY IN THE COMMUNITY DENTAL SERVICE

- 4.1 The Community Dental Service undertakes a range of functions including the provision of some minor oral surgery. However, in the year ending 31 March 2000, only 281 minor oral surgery procedures were recorded by the CDS (source: SMR13).
- 4.2 In addition, 11,478 general anaesthetic procedures were carried out by the CDS in the year ending 31 March 2000. Most of these anaesthetics were given on an out-patient or day case basis to patients having uncomplicated tooth removal.
- 4.3 It is now clear that a significant number of such cases are double counted – with SMR13 and SMR01 forms being completed. Whilst this does not necessarily have a direct bearing on the OMFS service, the practice of double counting means that it is difficult to be precise about total dental day case activity.
- 4.4 Because of local variation in coding arrangements (see appendix 1), it is also possible that some hospital activity currently coded to “Oral Surgery and Oral Medicine” is actually carried out by the CDS and vice versa. The work of the National Dental Information Group²⁶ in seeking to ensure greater consistency in this area is strongly supported.
- 4.5 The CDS currently only has a minor role in the provision of oral surgery services and it is not expected that this will change significantly. However, section 6.3 will suggest possible future developments in the role of salaried GDS practitioners who will, in many cases, be managed by the CDS.

SECTION SUMMARY

- The Community Dental Service (CDS) carries out a limited number of minor oral surgery procedures and a larger number of uncomplicated extractions under general anaesthesia.
- Some CDS activity is double counted on SMR13 and SMR01 and because of this the total activity carried out in Scotland is unclear.
- There should be agreed protocols for activity data collection for CDS activity.

FIVE

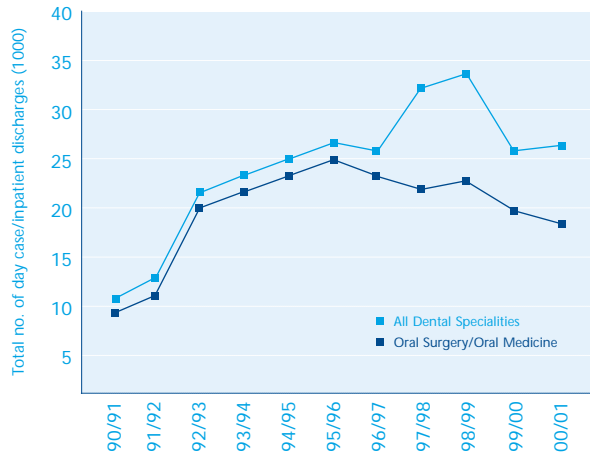
OMFS ACTIVITY IN ACUTE HOSPITALS

TRENDS IN OVERALL ACTIVITY

- 5.1 Hospital OMFS activity is recorded on SMR00 (out-patient visits) and SMR01 forms (day case and in-patient procedures). There may be an element of double counting (see section 4.3) in that many, but not all, procedures carried out by the CDS in a hospital setting are recorded using both SMR01 and SMR13.
- 5.2 However, SMR01 records the bulk of OMFS in-patient and day case workload in acute hospitals and SMR01 derived data is thus of fundamental importance to this report.
- 5.3 During the course of its work, the group discussed at length the question of the accuracy of SMR01 data in general and procedure coding in particular. Appendix 1 summarises in detail the concerns raised relating to the validity and accuracy of this data and makes some detailed recommendations on the future recording of OMFS activity.
- 5.4 For the purposes of this report, SMR01 data was obtained to the third digit level for a selected group of procedures (OPCS 4 codes) and diagnoses (ICD10 codes). Advice on coding was provided by the ISD Clinical Coding Service and their help is gratefully acknowledged. The final list of codes used is included at Appendix 2.
- 5.5 Between 1990/91 and 2000/01 the number of day case and in-patient dental procedures (carried out by all dental specialties, including OMFS) rose by 140%. The rise in activity was highest between 1990 and 1998/99 and then fell as shown in the upper line in Figure 5. It should be noted that more accurate coding or more rigorous adherence to definitions may have had some influence on these fluctuations.
- 5.6 This “All dental specialties” activity does not represent OMFS activity alone but includes any day case or in-patient activity undertaken by other dental specialties as well as all uncomplicated dental extractions performed by the CDS. Although this additional activity does not have a direct bearing on OMFS services, the boundary can be difficult to define.
- 5.7 It should be noted that day cases in two Dental Hospitals (Glasgow and Edinburgh) were not included in SMR01 records until 1992. This accounts for some of the apparent rise in dental activity in the decade between 1990/91 and 2000/01.

Figure 5:

'All dental specialties' and 'Oral surgery and oral medicine' in-patient and day case activity (Scotland): 1990-2001



However, there was still a rise in dental in-patient and day case activity of 26% between 1992/93 and 2000/01. In some Boards the rise in activity in this period was more marked, with an increase of 215% in Ayrshire & Arran and 238% in the Borders.

- 5.8 It is difficult to know whether these increases are real or artefactual. Since the early 1990s and the publication of the Poswillo report⁸ there has been a very significant shift of dental general anaesthesia from the GDS to the hospital service. This may partly explain the rise. Other factors may also be important, such as the fact that emergency dental GA extractions are recorded as emergency in-patients at Glasgow Dental Hospital.
- 5.9 When these data are expressed as a rate per 1,000 resident population over the same time period (see appendix 3) the wide inter-NHS Board variations become apparent.
- 5.10 In 2000/01 the four NHS Boards with the highest rates of hospital dental activity were the Borders (11.8 cases/1000 population), Ayrshire & Arran and Lothian (7.5), and Dumfries & Galloway (6.1). Whilst it is difficult to draw robust conclusions from the data, it should be noted that the Borders, Ayrshire & Arran and Dumfries & Galloway are among those areas with lower rates of oral surgery activity in the GDS and this may tend to confirm their accuracy.
- 5.11 However, activity is best summarised by restricting the selected SMR01 codes to 'Oral Surgery and Oral Medicine'. This is also presented in Figure 5. The figures are more useful from 1992 onwards due to the inclusion of Edinburgh and Glasgow Dental Hospital day cases.
- 5.12 Hospital 'oral surgery and oral medicine' activity (day cases and in-patients) rose in the decade between 1990/91 and 2000/01. Some of this rise is due to the fact that day cases at Edinburgh and Glasgow dental schools were not included in the figures until 1992. Between 1992/93 and 1995/96 activity rose, however in the following year the activity dropped to a level below that recorded in 1992/93. As a result, there was an overall reduction of 4% in hospital oral surgery and oral medicine activity between

FIVE OMFS ACTIVITY IN ACUTE HOSPITALS

1992/93 and 2000/01. In contrast, during the same period, in-patient and day case activity in hospitals across all specialties in Scotland rose by 40%. Although there has been a drop in the actual number of procedures, this does not reflect changes in case mix, complexity of cases and the actual workload.

- 5.13 Finally, some treatment is provided under private contract. This is difficult to estimate since no activity data is publicly available.
- 5.14 Williams²⁷ estimated that 11.9% of total 'dental operations' were privately funded in England and Wales in 1997-98. The proportion of private treatments in Scotland is widely regarded to be lower.

SECTION SUMMARY

- Day case and inpatient activity across the dental specialties rose from around 22,000 cases to just under 35,000 cases across Scotland between 1992/93 and 1998/99. However, the activity fell thereafter.
- Borders, Ayrshire & Arran, Lothian and Dumfries & Galloway had the highest rates of hospital dental activity per 1000 population in 2000/01.
- Day case and inpatient activity in oral surgery and oral medicine rose across Scotland in the first half of the 1990s. However, in the second half of the decade the activity fell giving an overall reduction in activity of 4% between 1992/93 and 2000/01.
- The change in the numbers of OMFS day case and inpatient procedures is not uniform across NHS Board areas.
- CDS activity for day case extractions may complicate these figures.
- Detailed recommendations are made in appendix 1 relating to the recording of OMFS activity.

TRENDS IN OUT-PATIENT ACTIVITY

- 5.15 The total number of new out-patient attendances in Scotland for oral surgery and oral medicine has fallen each year for the past four years, from just over 60,000 in 1997/98 to less than 57,000 in 2000/01 as shown in Table 1.
- 5.16 The figures suggest a decrease in demand for both oral surgery and oral medicine services in Scotland during the past four years. However, this reduction was due to a decrease in the number of new oral surgery appointments which masked a slight rise in new oral medicine appointments.
- 5.17 Like new out-patient attendances, the number of total out-patient attendances has fallen. It is thought that this reduction may reflect changed clinical practice such as a reduction in post-surgical follow-up visits.

Table 1: Oral Surgery and Oral Medicine new out-patient attendances from 1997/98 – 2000/01

	97/98	98/99	99/00	00/01
Total oral surgery and oral medicine	60,041	59,082	57,732	56,910
Oral surgery	50,559	50,317	48,673	46,235
Oral medicine	9,482	8,765	9,059	10,675

TRENDS IN CASEMIX

5.18 Of the 19,738 hospital oral surgery and oral medicine discharges (day case and in-patients) in 2000/01, 76% were for dentoalveolar procedures* including the removal of impacted wisdom teeth. In general this activity (as opposed to activity for “all dental specialities”) does not include uncomplicated removal of teeth (see 5.6) but for reasons already explained it is not certain that all such work is excluded.

5.19 In recent years, the proportion of the oral surgery and oral medicine activity which is dento-alveolar has fallen gradually from 86% in 1995/96 to 76% in 2000/01. Not surprisingly, using 2000/01 figures, a greater proportion of day case procedures (85%) are for dento-alveolar surgery than is the case for in-patient procedures (66%).

5.20 There was a fall of 8% in hospital oral surgery day cases between 1995/96 and 2000/01, most of which is accounted for by reduced numbers of dentoalveolar cases rather than more complex procedures. In comparison, the number of in-patient procedures to treat facial fractures rose by 8% from 1,318 to 1,429 cases in Scotland over the same period.

5.21 In 1999, dentoalveolar surgery as a proportion of total hospital oral surgery activity was highest in the three NHS Boards with dental hospitals and is presumably due to the fact that the oral surgery workload of the two undergraduate teaching hospitals and the Edinburgh Dental Institute largely consists of dentoalveolar surgery.

Table 2: Day cases as a % of all elective episodes (day cases and in-patients 2000/01) by NHS Board

NHS Board of residence	Day case as a % of all elective episodes (2000/2001)
Scotland	64.6
Argyll & Clyde	20.3
Ayrshire & Arran	46.2
Borders	95.9
Dumfries & Galloway	63.3
Fife	79.8
Forth Valley	75.3
Grampian	84.6
Greater Glasgow	13.7
Highland	44.6
Lanarkshire	40.0
Lothian	93.5
Orkney	87.7
Shetland	86.1
Tayside	76.3
Western Isles	61.8

* Procedure codes for ‘tooth removal’ and ‘other tooth and gingiva’.

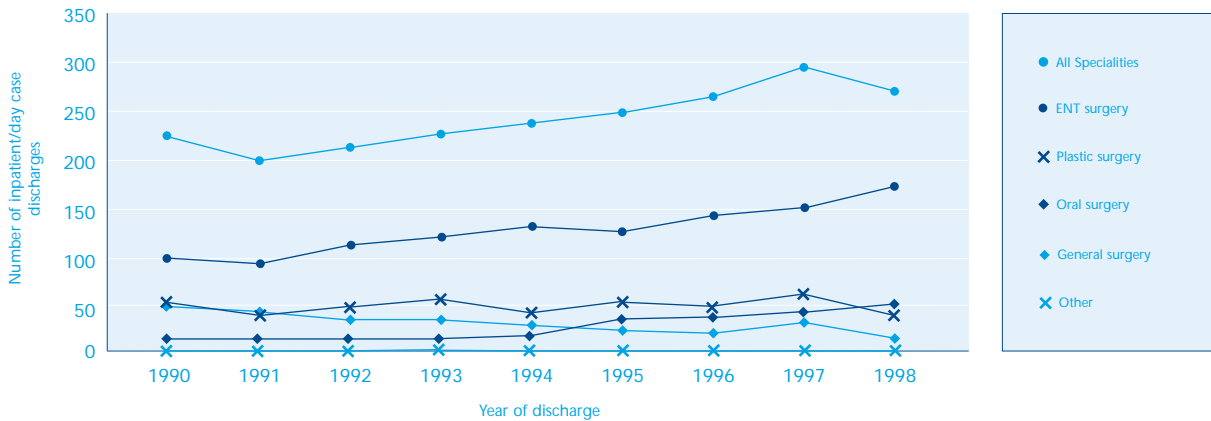
FIVE OMFS ACTIVITY IN ACUTE HOSPITALS

- 5.22 However, even in the NHS Board with the lowest ratio of dentoalveolar surgery to total oral surgery workload (Forth Valley), 58% of total workload comprised dentoalveolar surgery procedures. This is consistent with the SIGN guideline²⁸ on the management of unerupted and impacted third molar teeth which noted that a significant proportion of patients on OMFS waiting lists were awaiting third molar surgery.
- 5.23 Table 2 presents day case activity as a proportion of all elective episodes for NHS Boards.
- 5.24 The low proportion of cases recorded as day cases in Greater Glasgow NHS Board relates to the practice of recording emergency day case procedures as emergency in-patient procedures.
- 5.25 A section on case mix would not be complete without reference to the difficulty of recording more complex surgical workloads. Two problems arise. The first is that increased specialisation and complexity of surgical workload is not adequately reflected in a system which simply counts episodes of care in the form of total day case and in-patient numbers. Dentoalveolar surgery constitutes the largest proportion by number of oral surgery procedures in each NHS Board area (and by implication the largest portion of the waiting list). In contrast, complex oral surgery cases take up a disproportionate amount of theatre time and have considerable resource implications.
- 5.26 The second problem is that it is not clear how accurately SMR01 recording is able to reflect work that involves simultaneous input from more than one surgical team.
- 5.27 Consultants providing hospital oral surgery services may be singly qualified (a dental qualification) or doubly qualified (see section 1.5). Doubly qualified OMFS Consultants appear to have a more complex case mix of surgical procedures coded to them than their singly qualified colleagues. Nonetheless, it should be noted that 40% of dentoalveolar procedures were coded to doubly qualified OMFS Consultants.
- 5.28 This dentoalveolar workload may not necessarily be carried out by an individual consultant and reflects the work of the team as a whole. However, dentoalveolar surgery is a significant component of the surgical workload in each District General Hospital and specialist OMFS unit and this is clearly demonstrated by the available activity data.

INTERFACE WITH OTHER SPECIALTIES

- 5.29 Complex cases (although fewer in number) often involve work with other specialties and where joint surgical activity takes place, SMR01 may not adequately record this. Examples include the treatment of some head and neck cancers, some craniofacial anomalies and some cases of maxillofacial trauma. It is recommended that these recording anomalies are addressed as a priority. Appendix 1 gives a more detailed summary of these recommendations.
- 5.30 It is also the case that Consultants from other specialties may undertake similar procedures. Figure 6 illustrates this by using the example of parotidectomy. SMR01 data is presented for all parotidectomy procedures undertaken between 1990-1998 by specialty.

Figure 6:
Parotidectomy by specialty – Scotland 1990 -1998



5.31 Over this period ENT surgeons appeared to be undertaking most parotidectomy procedures but general surgeons, OMFS surgeons, plastic surgeons and other specialties were also represented.

5.32 A similar picture may well apply to other 'interface' procedures and it is recommended that NHS Trusts, through Medical Directors, agree on how such procedures are managed at a local level to ensure adequate audit of outcome and to ensure appropriate maintenance of surgical skills.

5.33 This should include the use of clear local agreements to define which specialist team provides the clinical lead in each area. Agreements could also go further to include surgical volumes and specialist skills/competencies required for certain low incidence conditions.

SECTION SUMMARY

- In 2000/01 76% of hospital oral surgery workload (expressed as episodes of care) comprised dentoalveolar surgery. However, present methods of collecting and recording activity do not reflect the subtle casemix variations of more major procedures.
- Most of the decrease in hospital oral surgery activity from 1995/96-2000/01 was due to reduced numbers of dentoalveolar procedures.
- SMR01 data may not adequately reflect the trend towards specialisation and increased surgical complexity.
- The total number of new outpatient planned attendances for oral surgery fell in Scotland between 1997/98 and 2000/01 suggesting a decreased demand for such services.
- Some 'interface' clinical procedures are carried out by a variety of specialties.

SIX

CURRENT SERVICE PROVISION

PRIMARY CARE

6.1 Generalist GDPs

- 6.1.1 Approximately 2,000 dentists practise within the General Dental Service (GDS) in Scotland. Most are generalists and many carry out some oral surgery treatments of varying complexity in the course of their daily clinical practice.
- 6.1.2 It is clear that this provision varies widely (see section 3.4 onwards) and that individual practitioners have differing referral thresholds for minor oral surgery procedures.
- 6.1.3 This may be partly related to time of qualification. Mathews²⁹ showed that new UK dental graduates undertake more oral surgery in practice and suggested that this may be a reflection of improved surgical teaching.
- 6.1.4 A pilot study by Shepherd³⁰ looked at patterns of surgical work and instrument availability in the GDS. In a survey of fifty practices he found that 90% possessed at least a basic set of instruments although 16% said that they would not attempt the surgical removal of retained roots.
- 6.1.5 There is considerable variation in the provision of simple GDS oral surgery procedures already identified in this report and the consequent impact on OMFS new patient referral rates is self evident. It is recommended that this variation is addressed by local actions in order to minimise avoidable referrals to the hospital service.
- 6.1.6 However, there is a further factor pertinent to primary dental care which has a direct impact on OMFS activity. This is the issue of 'avoidable' problems where the referral is judged to be due to sub-optimal treatment having been provided in the primary care setting.
- 6.1.7 For example, Oral Surgery departments commonly receive referrals for opinions and further management of cases with peri-radicular problems. Data from the West of Scotland suggests that 20% of crowned teeth with radiographic signs of peri-radicular pathology were not root treated and half of the crowned teeth which were root treated had signs of peri-radicular pathology³¹.

- 6.1.8 A separate investigation revealed a significant level of sub-optimal endodontic skills associated with this pathology³². The proportion of cases which might better be treated through primary or repeat orthograde root treatment rather than apical surgery is unknown but would benefit from further investigation.
- 6.1.9 The study concluded that more continuing education courses were required to update clinical (endodontic) skills. This principle almost certainly applies in other procedures too and it is therefore recommended that Deans of Dental Schools, Primary Care Trusts, NHS Education for Scotland (through Directors of Postgraduate General Dental Practice Education) and others should consider action to address these broad areas of GDP skills and competencies. Skills and competencies related to the provision of minor oral surgery and endodontic procedures in generalist practice are considered to be particularly important in the context of this report.
- 6.1.10 Staff from Dental Schools are significant providers of both undergraduate and postgraduate dental education in this context. Any expansion needs to be properly funded.

6.2 Specialist Practitioners

- 6.2.1 It is not known how many specialist GDS oral surgery practices exist in Scotland although it is clear that a small number of GDPs undertake significantly more oral surgery treatments than average (see section 3.11).
- 6.2.2 Specialist GDS oral surgery practices may have some impact on OMFS activity in District General Hospitals. Such 'High Street' specialist practices are not a new concept. The report of the Working Group on Specialist Dental Training (1994)³³ recognised that most orthodontic and oral surgery treatments could be performed outside a hospital environment.
- 6.2.3 Clark³⁴ argued that oral surgery specialisation in the GDS was viable and suggested a ratio of one full time specialist practitioner to 310,000 population. Other authors support the financial and service viability of specialist oral surgery practice^{35, 36, 37}.
- 6.2.4 In a GDP survey in Grampian in 1995 the vast majority of practitioners felt that there was a need for a specialist oral surgery practice and 85% said that they would be willing to refer to one – despite the majority reporting that their current hospital OMFS service was good or satisfactory. Identified problem areas with specialist oral surgery practice included the issue of patient charges (payable if a patient is treated in the GDS but not the hospital) and perceived difficulties in managing post operative complications.
- 6.2.5 It is therefore recommended that the Scottish Executive undertake a review of oral surgery GDS charges which considers the issue of equity and the possible disincentive to treatment in the primary care setting.
- 6.2.6 In a recent study of referral patterns to oral surgery, Coultard³⁸ found that the most important factors for GDPs in choosing an oral surgery service to refer to was the length of waiting list followed by personal knowledge of the surgeon, ease of patient access and standard of treatment.

SIX CURRENT SERVICE PROVISION

- 6.2.7 Coultard's study also showed that (in Greater Manchester) 25% of responding practitioners had undertaken a short postgraduate course (e.g. section 63) in oral surgery, 2% had an MSc qualification in oral surgery and 10% had worked at house officer or senior house officer level in oral surgery.
- 6.2.8 Fifty seven registered dental practitioners in Scotland are currently on the GDC Specialist List in Surgical Dentistry (nearly half of whom are OMFS consultants) suggesting that the pool of appropriately skilled 'High Street' oral surgery specialists is limited.
- 6.2.9 Nonetheless, the concept of developing a network of specialist GDS oral surgery practices is an important one and the consequent workforce planning requirements should be linked to training programmes for Specialist Registrars in Surgical Dentistry. This requires further work involving the Scottish Advisory Committee on Dental Workforce and NHS Education Scotland.
- 6.3 Community Dental Service**
- 6.3.1 The role of the CDS as a complementary part of primary care dentistry is well known and the concept of a more integrated and seamless primary care dental service is supported in the Action Plan for Dental Services in Scotland (2000)³⁹.
- 6.3.2 Although the number of surgical treatments currently carried out by the CDS is limited (see section 4), there is no reason why this should not increase in line with a general increase in the proportion of oral surgery treatments carried out in the primary care setting (see section 6.2.2).
- 6.3.3 The notion of salaried specialist practitioners in surgical dentistry is one way of developing this further. This will be considered in more detail in section 8 of this report as part of a proposal for managed clinical networks in OMFS.

SECTION SUMMARY

- Differences in GDP referral thresholds and avoidable referrals consequent on sub-optimal GDS treatment can impact significantly on OMFS activity.
- Skills and competencies in procedures such as minor oral surgery and endodontics are an important area for continuing education for primary care practitioners.
- The majority of minor oral surgery procedures could be provided in specialist GDS oral surgery practice.
- Specialist GDS oral surgery practices should be developed as part of an OMFS managed clinical network.
- Training programmes in surgical dentistry should be developed as part of a managed process.
- The concept of salaried specialist practitioners in surgical dentistry offers a way of pump priming the development of new oral surgery services in the primary care setting.

6.4 Hospital Services

6.4.1 OMFS services are provided mainly in District General Hospitals (secondary settings) and a limited number of Regional Centres (tertiary settings). There is currently no agreed formal designation of regional OMFS centres in Scotland although there are several designated supra-regional UK centres. These are for highly specialised services such as craniofacial surgery.

Survey of OMFS units

6.4.2 A questionnaire was sent out by the SNAP working group to all members of the Scottish Oral and Maxillofacial Society (SOMS) network to ascertain details of service provision and workforce in the secondary and tertiary settings.

6.4.3 Each grade of staff was asked to fill in a separate questionnaire. The response rate was 82%.

6.4.4 Table 3 shows the number of each career grade staff group by NHS Board area. Western Isles, Shetland and Orkney NHS Boards are not included in the table because there is no dedicated OMFS service based in these areas.

Table 3: Number of funded established hospital posts by NHS Board in Scotland as at August 2001

NHS Board	Consultant Staff (wte)	Associate Specialists (wte)	Staff Grades (wte)
Ayrshire & Arran	2	0	1
Borders	0	0	1
Fife	2	0	1
Greater Glasgow and Argyll & Clyde	5 (+ 1.5 Honorary)	3.5	3
Highland	1	0	1
Lanarkshire	2	1	0
Grampian	2	1	1
Lothian	4	1	3
Tayside	2 (+ 1 Honorary)	2	1
Forth Valley	1.7	0	1
Dumfries & Galloway	1	0	1
TOTAL	22.7 (2.5 honorary)	8.5	14

Note: there is an increasing trend to view OMFS services regionally. For instance, the most recent consultant post in the West of Scotland is jointly established between Forth Valley/Greater Glasgow.

On-call commitments

6.4.5 Nine of the consultants reported working an on-call rota of 1:3 or less but 4 reported a 1:2 and two reported being on-call all the time. These latter consultants included one who was temporarily on-call all the time due to the absence of a colleague, and the other who was permanently on-call (Highland). The burden of on-call will vary and be influenced by the number of junior staff.

Availability of facilities to operate during normal working hours

6.4.6 Most of the consultants (83%) indicated that facilities were usually available to operate on trauma cases during normal working hours, and two others said they were sometimes available.

Time availability to operate during normal working hours

6.4.7 Thirteen consultants (72%) said there was insufficient time to do all the operating within working hours and this tended to relate to trauma cases. Most of the consultants (78%) reported operating out-of-hours once a week or less in the evenings and a similar number reported operating less than once a week in the early hours of the mornings.

Other time commitments

6.4.8 These related to an average of four to ten hours per week by consultants on administrative work and three hours or less per week on audit and research. Thirteen of the consultants spent between one and four hours studying and other time commitments included teaching at a Dental Hospital, attendance at college committees, travelling time, flights to remote islands, undergraduate teaching and management meetings.

Discussion of survey

6.4.9 NHS Consultant numbers (approx 23 wte) are somewhat below specialty guidelines⁴⁰ which are usually expressed as one Consultant: 150,000 population.

6.4.10 It is difficult to argue for or against the appropriateness of such guidelines since the case is generally made on the basis of benchmarking against other areas in the UK and Europe. This is not a particularly scientific exercise taking into account geographical and demographic differences. It is unclear how a move towards establishing managed clinical networks in OMFS (see chapter 8) would impact on numbers.

6.4.11 It is also important to link any workforce developments with population need. Treatment services are required which range from simple dento-alveolar surgery to complex interface procedures with the balance in terms of case numbers lying towards dento-alveolar surgery.

6.4.12 With all this in mind, the SNAP Working Group believes that OMFS Consultant numbers in Scotland are low (particularly in some regions) and it is recommended that this is addressed as networks develop.

6.4.13 However, it will be up to individual regional networks to recommend precisely how the OMFS workforce should be matched with case mix and local geography. There is a general policy commitment that expansion of the consultant workforce should take place in preference to expansion in Non Consultant Career Grade (NCCG) Staff and this too will have to be carefully balanced at local level.

6.4.14 Where NCCG posts exist it is essential that they have clear job plans and that there is protected time for CPD, audit and study leave and that each post has an educational development plan that is regularly reviewed.

6.4.15 It is particularly important that no Consultant is expected to work permanently on-call. It is also important that trauma is able to be managed within day time hours where possible within theatres designated as a result of CEPOD (Confidential Enquiry into Peri-Operative Deaths). A Consultant should always be available to cover Specialist Registrars (SpRs) on-call to ensure quality of training.

- 6.4.16 The ability to train SpRs in OMFS and Surgical Dentistry is vital. Dental workforce planning in Scotland is the responsibility of the Scottish Advisory Committee on Dental Workforce (SACDW). SACDW considers the numbers of Specialist Registrars required to meet the NHS requirements for Consultants.
- 6.4.17 The current establishment of 9 SpRs in OMFS is projected to supply an OMFS Consultant workforce of 30. This should therefore suffice but SACDW should continue to review demand.
- 6.4.18 The workforce requirements for SpRs in Surgical Dentistry would also benefit from systematic planning. It is unclear at present how many specialists in Surgical Dentistry will be required and this process should eventually be linked into managed clinical networks (see chapter 8).
- 6.4.19 It is accepted that the development of specialist practice in the primary care setting will always be influenced by market forces and that this will constrain the ability to plan SpR numbers. However, it is recommended that there should be a much more systematic approach in Scotland (led by SACDW and NES) to enable enhanced opportunities for specialist training in Surgical Dentistry linked with pump priming of specialist practice (see section 8.9).
- 6.4.20 Dental Senior House Officer (SHO) training is also undertaken in all secondary and tertiary OMFS units.
- 6.4.21 There is much current interest in the role and competencies of dental SHOs who work in these environments (and in other dental specialties) and it is recommended that NES undertakes work to identify these and any changes that need to take place as a consequence.

Academic Units

- 6.5 There are Departments of Oral Surgery in the Universities of Dundee, Glasgow and the Edinburgh Dental Institute. Research, teaching and service provision are undertaken.
- 6.6 The academic units for Oral Surgery are small but play an important role within the specialty. They should be properly resourced and form part of the development of a clinical OMFS network.

INTERFACE WITH DENTAL SPECIALTIES

Oral Medicine

- 6.7 OMFS Consultants in District General Hospitals and Regional Centres provide oral medicine advice as part of their core service commitment since specialist oral medicine advice is normally only available within the dental hospitals in Dundee, Edinburgh and Glasgow.
- 6.8 A study by Smith and Crighton⁴¹ looked at the workload of 4 Oral Medicine Units and 11 Maxillofacial Units and concluded that oral medicine activity constituted about 20% of the out-patient workload in a typical District General Hospital. The distance from each District General Hospital to the nearest dental hospital did not appear to influence the proportion of Oral Medicine activity seen within each District General Hospital.

Orthodontic

6.9 Most District General Hospitals and Regional Centres have orthodontic consultant input available. This is important since there are a range of interface conditions where joint clinic consultations are desirable.

Other dental specialties

6.10 Other dental specialties including Restorative Dentistry and Paediatric Dentistry are available in some District General Hospital settings.

SECTION SUMMARY

- One third of OMFS Consultants in Scotland who were recently surveyed (of whom 82% replied) said that they worked on an on call rota of 1:2 or higher.
- Over three quarters of Consultants reported the need to operate at night on trauma, citing insufficient theatre time during normal working hours.
- An increase in the number of OMFS Consultant posts in Scotland is recommended. The level of one Consultant:150,000 population is suggested by the specialty organisation.
- Oral medicine activity constitutes about 20% of the outpatient OMFS workload in an average hospital department.

SEVEN

EFFECTIVENESS OF CURRENT OMFS PROVISION

General

- 7.1 OMFS services within the hospital, community and primary care (including specialist practice) settings have developed in different ways but there have been few examples of truly integrated service development across these settings.
- 7.2 However, current interest in seamless patient care, service redesign and the development of managed clinical networks have all served to increase awareness of this aspect of effective service provision. Section 8 will deal with this in more detail.

Waiting Times

- 7.3 One measure of the effectiveness of service provision is that of the waiting time for initial consultation and subsequent treatment for both secondary and tertiary OMFS services.
- 7.4 Waiting time information in Oral Surgery and Oral Medicine is currently of limited use due to a number of changes in the way that data has been collected over the years. Up until 1996 there was no way of separating Oral Surgery from Oral Medicine activity and changes were phased in across Scotland during 1996/97. Furthermore, prior to 1997/98, there was no mechanism to select new out-patient attendances only. The data prior to 1997 therefore includes all out-patient attendances.

The median waiting time for in-patient and day case Oral Surgery and Oral Medicine has altered little in the past few years as illustrated in Figure 7. It should be noted that data for 1996/97 combined both specialities.

This matches the general trend seen elsewhere in the health services where waiting times for treatment have changed little in recent years (Scottish Health Statistics 1999).

- 7.5 However, it should be noted that in many (if not all) NHS Board areas, mechanisms would exist for urgent cases to be seen immediately – often following discussions between the referring practitioner and the OMFS Consultant.
- 7.6 There is a reduced proportion of Oral Surgery new out-patients being seen within nine weeks and a rise in the proportion of patients waiting between nine and 18 weeks (Figure 8).

SEVEN EFFECTIVENESS OF CURRENT OMFS PROVISION

Figure 7: Oral surgery (OS) and oral medicine (OM) new out-patient appointment waiting times

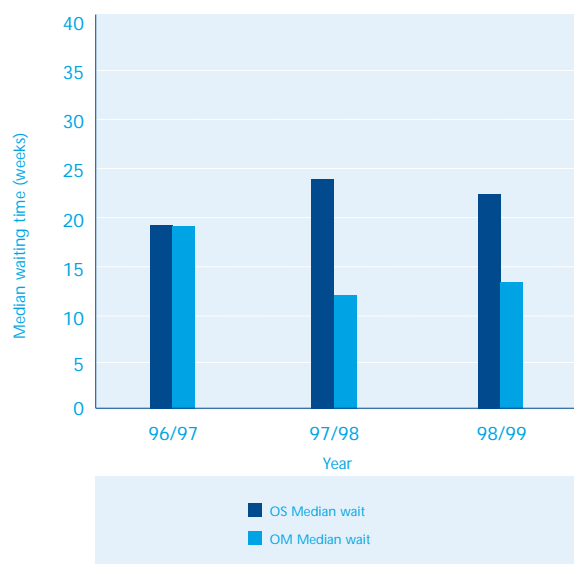
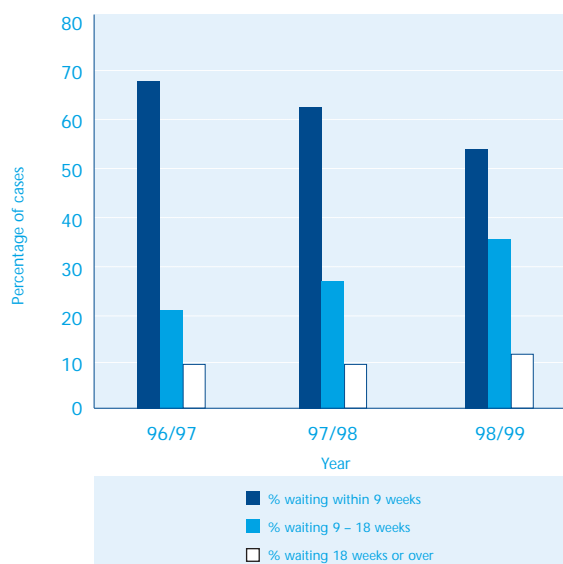


Figure 8: Median waiting times for oral surgery in-patient/daycase appointments



Clinical Outcome Indicators

7.7 The role of the surgical Royal Colleges will be important in developing clinical outcome indicators (including the Clinical Effectiveness Unit and Committee of the Royal College of Surgeons of England).

7.8 It is important to recognise however that the practicalities of this in a specialty such as OMFS are challenging. Most oral and maxillofacial surgery involves a range of operations with no easily measurable early outcomes; performed in every District General Hospital by surgeons who do variable (and sometimes quite small) numbers of each procedure; and for which there are no well established risk scoring or comparative audit systems⁴².

7.9 Further work on this should be developed.

Surgical Skills/Volume

7.10 The SNAP report on cleft lip and palate addressed the issue of maintaining surgical skills in low volume sub-specialty areas in some detail. The report noted that the minimum standards for the management of cleft lip and palate from the Surgical Audit and Epidemiology Unit of the Royal College of Surgeons of England suggested a minimum case load of 30 new patients annually for primary surgery, 20 cases for alveolar bone grafting and surgery for velopharyngeal incompetence and 15 cases for maxillary osteotomy.

7.11 These recommended threshold numbers for competence were based partly on the recognition that meaningful audit required a minimum case load. A high volume operator is no guarantee of high quality outcome, but units with high numbers of cases do have the opportunity of timely audit of outcome and this principle is equally

important in other sub-specialist areas of OMFS including some head and neck cancer surgery, complex trauma and craniofacial surgery.

7.12 The issue of surgical skills and volume is equally important in the primary care setting.

Clinical Guidelines

7.13 The Scottish Intercollegiate Guidelines Network (SIGN) has published a clinical guideline on the management of unerupted third molars²⁸.

7.14 The implementation of SIGN guidelines is an active area of research and this should continue to be a priority in order to understand the key factors in influencing change in clinical practice.

7.15 Further guidelines relevant to the dental specialties should be considered. For instance, recent publication of the document 'Cancer Survival Trends 1971-1995⁴⁴ by the Information Services Division (ISD) suggests some variations in survival from cancer of the oral cavity across the fifteen NHS Board areas. Consideration should be given to a SIGN guideline on the treatment of cancer of the head and neck.

Clinical Audit

7.16 SIGN guidelines also include suggested areas for clinical audit. Such audit can often span the primary, secondary and tertiary care settings and this should be facilitated at a local level.

SECTION SUMMARY

- Waiting times in OMFS have shown little significant change since 1996/97.
- The concept of recommending threshold patient numbers for surgical competence should be considered in some specialised areas of OMFS practice.

EIGHT CHANGES TO CURRENT SERVICE PROVISION

GENERAL

- 8.1 The structure of secondary and tertiary hospital services has been the subject of much debate over the last decade (appendix 4).
- 8.2 In principle, it is likely that District General Hospitals will continue to operate as a basic unit of hospital provision with more emphasis on flexibility, teams and networks amongst health professionals, although more recently the concept of a central in-patient facility has come to prominence. This could service a population of one million or so and could be surrounded by a network of district general hospitals offering day surgery and out-patient care.
- 8.3 This final section of the report will therefore address the need for possible structural change by considering the three main settings – primary, secondary and tertiary.

CHANGES TO CURRENT SERVICE PROVISION: PRIMARY CARE

GDPs/Community Dental Officers (CDOs)

- 8.4 It is important that high quality diagnosis and treatment of oral surgery conditions is available as locally as possible. This in turn requires an appropriately trained primary care workforce who can assess patient needs and make appropriate treatment or referral decisions.
- 8.5 For many simple minor oral surgery problems, treatment is appropriately provided in the primary care setting.
- 8.6 Where referrals are made there should be clear criteria and agreed clinical protocols with seamless referral pathways into the specialist primary care or secondary care service. The secondary care service should also provide back up in the event of complications encountered in the primary care setting. This requires efficient communication pathways between primary and secondary care – and this may be optimised by the use of electronic communication.
- 8.7 Primary care practitioners should be included in clinical audit initiatives which span both settings.
- 8.8 The identification of GDP/CDO training needs in relation to minor oral surgery procedures should be matched by the provision of suitable local training. This process

should involve Dental Practice Advisers and others and should be directed on a local or regional basis. A regional managed clinical network in OMFS would be an ideal vehicle in which for this to happen.

Specialist Practitioners

8.9 There is a clear case for encouraging more specialist Surgical Dentistry practice in Scotland. However, there are also barriers, including:

- Limited numbers of specialists in Surgical Dentistry;
- Financial risk for practitioners to set up in practice;
- Need to maintain an adequate 'dento-alveolar' caseload in the hospital setting for training and maintenance of surgical skills;
- Lack of suitable managed clinical network.

8.10 It is therefore proposed that posts are established where specialist practitioners are able to work part-time in specialist surgical dentistry practice and part-time in the acute hospital setting within an OMFS unit.

8.11 Arrangements for establishing and piloting new models of specialist practice cannot be made in isolation. It is recommended that such posts should be established as part of a managed process within a regional OMFS network. A target of establishing a specialist surgical dental practice in each NHS Board area is recommended.

8.12 Practitioners who undertake such hybrid specialist posts should eventually all have been accredited as specialists in surgical dentistry.

CHANGES TO CURRENT SERVICE PROVISION: SECONDARY/TERTIARY CARE

Managed networks in OMFS

8.13 It is recommended that several regional managed clinical OMFS networks are established within Scotland.

8.14 The concept of managed clinical networks (MCNs) was emphasised in the Review of Acute Services. The definition of a MCN from the original guidance⁴⁵ is highly relevant to this proposed OMFS model.

'MCNs are defined as linked groups of health professionals and organisations from primary, secondary and tertiary care, working in a co-ordinated manner, unconstrained by existing professional and Health Board boundaries to ensure equitable provision of high quality clinical effective services throughout Scotland'.

8.15 These proposed OMFS networks should operate on a regional basis with a lead clinician and it is recommended that a co-ordinator post be established to ensure a consistent approach across all the networks.

8.16 Each regional network would have a co-ordinating and facilitating role for all OMFS services within each region – from primary to tertiary. Each network would develop a defined structure with agreed clinical and service improvement goals.

8.17 This model would ensure a much more integrated approach to the provision of OMFS services and would influence a range of areas from skills, competencies and training for generalist GDPs; to referral protocols and audit within specialist practice.

8.18 It is envisaged that the clinical lead roles would be a key function of Consultants in OMFS working within District General Hospitals, but that each network could be centred around an in-patient OMFS unit serving a large population. It is suggested however, that the network should enable OMFS Consultants to work between the secondary and tertiary settings with consequent opportunities for sub-specialisation.

Each managed OMFS network would have responsibility, through its Clinical Director, to contribute to decisions on the numbers of SpRs in Surgical Dentistry and to ensure that this links closely with projections from NES and SACDW. Each network would also ensure audit and monitoring of clinical outcomes for Oral Surgery procedures in primary, secondary and tertiary settings.

SECTION SUMMARY

- It is likely that District General Hospitals will continue to operate as the basic unit of hospital provision in the medium term.
- There should be clear referral criteria and clinical protocols in place between primary and secondary care.
- Local GDP/CDO training in Oral Surgery needs to be available and matched to local needs.
- A number of Surgical Dentistry specialist practitioner posts should be established – together with appropriate higher specialist training pathways.
- A number of OMFS managed clinical networks should be established.

APPENDICES

APPENDIX ONE INACCURACIES IN RECORDS OF DENTAL AND ORAL AND MAXILLOFACIAL SURGERY ACTIVITY

1. INTRODUCTION

1.1 Activity in the General Dental Service (GDS)

The Dental Practice Division records activity in the GDS. It is directly related to the payment of dental practitioners and the data are detailed and robust. Data are extracted from the GP17 form which records dental treatment carried out in the NHS.

1.2 Activity within Hospitals and the Community Dental Service (CDS)

The Information and Statistics Division (ISD) of the Common Services Agency records dental activity within hospitals and within the Community Dental Service (CDS). Data concerning individual patients are extracted from the Scottish Morbidity Record (SMR) forms that are usually completed by hospital medical records staff or entered onto computerised patient administration (PAS) systems installed at individual hospitals.

Community Dental Service activity

Community Dental Service activity is recorded on the SMR 13 form. However, some activity carried out within a hospital setting by CDS dentists is also recorded on the SMR forms completed for dental activity within hospitals.

Dental activity within Hospitals

Dental activity within Hospitals is recorded according to whether a patient is an outpatient (SMR00) or an inpatient/day case (SMR01). Table 1 overleaf indicates the type of information collected.

APPENDIX ONE INACCURACIES IN RECORDS OF DENTAL AND ORAL AND MAXILLOFACIAL SURGERY ACTIVITY

Table 1:
Description of SMR forms used to record dental activity within Hospitals

Form	Information collected	Content of Data
SMR00	First (mandatory) and return (optional) attendances at out-patient clinics in all specialties (except Accident and Emergency); includes procedural information.	Individual patient records, each based on a single episode of care. Three basic areas of information are captured: patient's identification and demographic details; episode management details (includes contract data); clinical information (optional).
SMR01	Hospital in-patient and day case episodes in general & acute specialties.	Individual patient records, each based on a single episode of care. Three basic areas of information are captured: patient's identification and demographic details; episode management details (includes contract data); clinical information.

2. PROBLEMS IN RECORDING DENTAL ACTIVITY WITHIN HOSPITALS

- 2.1 There are a number of anomalies in recording OMFS activity in hospitals. Some of the anomalies are due to coding errors, whilst others are systematic problems associated with how patients are classified and who is recorded as the "responsible clinician". It is difficult to adjust for these systematic errors which makes obtaining an accurate picture of the activity that is actually taking place in the area of Oral and Maxillofacial Surgery (OMFS) problematic.
- 2.2 Currently OMFS is not recognised in its own right as a national standard specialty and any activity carried out by OMF Surgeons has to be recorded under other specialty headings. Mainly this will be under the Oral Surgery specialty however some activity may be recorded under other specialties, e.g. Plastic Surgery. This means that it is difficult to determine OMFS activity accurately and this issue should be addressed.
- 2.3 Some of the anomalies encountered in the process of this SNAP report are listed below but it should be noted that there is a great deal of variation between hospitals:
- 2.3.1 **Recording procedures carried out on an outpatient basis**
The way in which outpatient activity is recorded needs to be addressed. There are two issues here: SMR00 records for return outpatients are not mandatory, and the recording of procedures in SMR00 (new or return) is not mandatory. Outpatient activity therefore is poorly and incompletely recorded which may contribute to a considerable underestimation of the amount of clinical activity in the outpatient setting since these procedures constitute a large part of OMFS activity. The procedures carried out may vary from complex and diverse treatments to straightforward extractions and consideration should be given to how such activity can be recorded accurately. At present some hospitals may record surgical procedures carried out on outpatients as "day cases" so that the activity does not go unrecorded. At least one hospital is known to record all of its outpatient procedures in this way.

2.3.2 Recording procedures carried out on a day case basis

Children's general anaesthetic cases for simple extractions may account for a large part of day case activity. In some hospitals however, these cases are apparently recorded as "inpatients".

2.3.3 Errors in the completion of the data recording form

Completion of the data recording form is an important step in ensuring that accurate activity data are collected. At present there appears to be a great deal of variation between institutions as to who takes responsibility for this task. Those who might do this include the Surgeon/assistant/nursing staff; Clerical/medical records staff and the Coding clerk. The surgeon or staff assisting him/her is probably best placed to record details of the diagnosis/procedure accurately, however the process is not always quick and simple, as there are numerous codes for procedures and diagnoses. Where the activity data are not recorded by the operator or an assistant, (and are therefore extracted from hospital notes) there is a greater chance of error. There is additional complication since some procedures involve more than one operator/specialty or more than one procedure, e.g. head and neck cancer cases. It may be difficult to determine which of them should be recorded as the principal one. Where more than one operator is involved in care for a single patient, there is provision in SMR00 and SMR01 for recording both the "responsible clinician" and other clinician(s) carrying out (or responsible for) specific procedures.

2.3.4 Recording "new patient" out-patient attendances

The term "new patient" is generally reserved for cases that cannot be managed in general practice and who have been referred to hospital for a more complex procedure. However, in dental hospitals there is a problem in recording casual dental attenders since these patients are usually recorded as a new patient in SMR00 under the specialty of the consultant in charge of the receiving unit. This is highly unsatisfactory, as it is not reflective of the nature of the care in the receiving unit, and a second new attendance is recorded if the patient is subsequently referred to another specialty for further care (e.g. Oral Surgery). In this way, two new attendance records for the same patient health problem may be recorded.

2.3.5 Community Dental Service activity within the hospital setting

There is a data recording issue surrounding Community Dental treatments carried out in a hospital setting (e.g. Day Bed Unit, or ward). This can result in double counting in that the hospital regards the patient as a day case and completes SMR01, and the Community Dentist also completes SMR13 for the same treatment episode. Furthermore, defining the "responsible clinician" for the purposes of the SMR01 record can be difficult. Common variations include the Community Dentist, the OMFS Consultant in charge of the Unit or ward and the Consultant Anaesthetist involved in a case. Part of the problem is that there is a specialty of Community Dentistry valid in SMR01 which can be used to record hospital activity, and the dividing line between that specialty and the work of Community Dental Practitioners which is supposed to be recorded in SMR13 is not clear.

2.3.6 Activity by non Consultant career grade staff

Only consultants, associate specialists and GPs working in the capacity of a consultant (e.g. in a community hospital) are allowed to be recorded in SMR00 and SMR01 as the "responsible clinician" as they are legally responsible for the care of the patient

and/or the carrying out of that specific operation. Therefore, cases completed by many non consultant career grade staff and training grade staff are credited to a named consultant which may inflate the consultant's activity data and give an inaccurate picture of the case-mix of that clinician.

3. QUALITY CONTROL

The quality assurance work provided by ISD Scotland has elements that are unique within the NHS. These are mainly the co-ordinated national approach, size of the samples audited, the regular nature of the sampling, the inclusion of all items from a dataset, and the ongoing commitment of resources to the work. Similar work does take place elsewhere in the UK, but it appears often to be restricted to clinical coding in smaller samples on a less regular basis. There appears to be no other nationally co-ordinated quality assurance programme on this scale.

The main methods adopted by ISD of ensuring data quality include the provision of SMR completion manuals, data definitions and standards, national-based training programmes, data accreditation, data validation and retrospective sampling. Some of these are described below. In addition to routine validation, other quality checks are carried out. The Quality Assurance Team at ISD regularly visits sites taking a sample of health records and check that the codes on the form correspond with information in the casenotes. If the number of inconsistencies is substantial, Clinical Coding Tutors may visit hospital coders to offer retraining or discuss interpretation of codes.

3.1 Data Accreditation

Traditionally SMR records go through rigorous national validation procedures at ISD. This means those records with errors and queries over them must be returned to Trusts to be amended and/or confirmed and resubmitted. There may be several iterations of this process so that the SMR processing cycle, i.e. the time between the patient being discharged and a fully validated SMR record being available, may be several months. To improve this situation trusts that fulfil the agreed criteria can be authorised to send 'accredited SMR data'.

3.2 Data validation

Data validation occurs when SMR records are being processed prior to addition to the national databases. Validation comprises a series of validity and feasibility checks and crosschecks designed to test that data are collected to the agreed set of standards. The validation is changed/updated to take account of changing methods/practices in an ever-changing NHSIS. Validation may take place both in local computer systems and as part of national processing.

3.3 Retrospective sampling

Since 1990, the quality and completeness of SMR records have been subject to rigorous, retrospective scrutiny. Samples of data have been taken for comparison against hospital source documentation and results reported. These checks have been done to evaluate the accuracy and completeness of data to the agreed set of standards. They are also done to assess the consistency in application of data definitions and recording rules.

4. CONSIDERATIONS FOR THE FUTURE

- 4.1 As illustrated, there are a number of problems in recording, and consequently interpreting, activity figures for Scotland within the area of OMFS. ISD is in the process of consulting the NHS in Scotland about introducing OMFS as a national standard specialty for activity data recording purposes that will allow the discrete identification of this work at a national data level and this is strongly supported.
- 4.2 Whilst the problems, if they are systematic differences rather than random errors, might not be of such great impact on trends in clinical activity, it is apparent that they need to be addressed. It would appear that the biggest issue may be that of the variation between hospitals in how activities are classified. It is apparent that the definitions of inpatient, outpatient and day case are being interpreted differently throughout Scotland which makes obtaining an accurate picture of OMFS activity difficult.
- 4.3 ISD are already considering a solution to the problem of how casual attenders (dental emergency attendances) at dental hospitals are classified which involves designating the emergency receiving unit as a Dental A&E facility where attendance would be clocked up on a headcount basis. Any further outpatient or day case care in a further specialty would still rightly result in a new attendance in that specialty. This potential solution has yet to be consulted upon by ISD.

RECOMMENDATIONS

- Implementation of the report of the National Dental Information Working Group should proceed as a priority.
- There should be agreed protocols governing data collection for Community Dental Service activity.
- OMFS should be recognised as a national standard specialty by Information and Statistics Division.
- All hospitals carrying out oral surgery or OMFS procedures should audit how cases are classified (e.g. as day case, in-patient etc).
- The issue of the accurate recording of OMFS out-patient procedures should be urgently considered.
- An abbreviated list of procedure and diagnostic codes should be compiled for use by clinical staff.
- Hospital activity data for consultant services should be collected separately from that relating to casual patients attending for primary care non-specialist services.

APPENDIX TWO ORAL AND MAXILLOFACIAL SURGERY – DIAGNOSTIC AND PROCEDURE GROUPINGS

Diagnostic Groups

Group	Description	OCD10 codes
1	Infectious & Parasitic Disease	A00-B99
2	Malignant neoplasms of lip, oral cavity and pharynx	C00-C14
3	Malignant neop of respiratory and intrathoracic organs	C30-C39
4	Melanoma and other malignant neoplasms of skin	C43-C44
5	Other malignant neoplasms	C15-C26, C40-C41 & C45-C97
6	In situ, benign and uncertain neoplasms	D00-D48
7	Diseases of the respiratory system	J00-J99
8	Diseases of teeth	K00-K03 & K08
9	Diseases pulp, periapical, gingival and periodontal	K04-K06
10	Dentofacial anomalies	K07
11	Oral region and jaw	K09-K10
12	Stomatitis and other diseases of lip and oral mucose	K12-K13
13	Diseases of tongue	K14
14	Other digestive	K20-K93
15	Diseases of skin and subcutaneous tissue	L00-L99
16	Diseases musculoskeletal system and connective tissue	M00-M99
17	Congenital malformations etc.	Q00-Q99
18	Injury head	S00-S09
19	Other injuries	T00-T19 & S10-S99 & T20-T98
20	Follow-up and aftercare incl. Procedure not carried out	Z42-Z54
21	Any other	

Procedure Groups

Group	Description	OPCS4 codes
1	Tooth (surgical removal and extraction)	F09-F10
2	Other tooth and gingiva	F11-F20
2	Lip	F01-F06
3	Tongue	F22-F26
4	Palate	F28-F32
5	Tonsil	F34-F36
6	Mouth (reconstruction & repair)	F39-F40
7	Other mouth	F38&F42
8	Salivary glands	F44-F58
9	Bone of face	V07-V13
10	Mandible	V14-V19
11	Temporomandibular joint	V20-V21
12	Skin	S01-S60
13	Cranial Nerves	A24-A36
14	Peripheral Nerves	A59-A73
15	Orbit, eyebrow and eyelid	C01-C22
16	Nasal sinuses	E12-E17
17	Lymph nodes	T85-T92
18	Any other	
19	No operation/procedure	

APPENDIX THREE INTER NHS BOARD VARIATIONS IN RATE OF PROVISION OF OMFS PROCEDURES

Total Dental Day Cases/In-patients Per 1,000 Population By NHS Board

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Scotland	4.3	4.7	5.1	5.6	5.5	6.7	6.8	5.4	5.4
Argyll & Clyde	3.5	3.4	3.5	3.5	3.5	4.5	4.3	3.9	3.7
Ayrshire & Arran	2.4	3.4	5.5	6.3	6.2	8.7	7.8	8.1	7.5
Borders	3.6	4.2	5.4	4.7	10.5	8.7	11.2	11.5	11.8
Dumfries & Galloway	5.6	5.8	2.8	8.3	4.6	8.3	8.9	7.3	6.1
Fife	5.1	5.2	4.8	6	5.6	9.4	13	5.4	5.5
Forth Valley	2.4	2.9	3.6	3.7	3.7	3.9	3.6	3.3	3.6
Grampian	2.5	2.7	3.0	3.3	3.6	4	5.9	5.1	4.8
Greater Glasgow	3.3	5	5.1	5.7	5.6	5.6	5.2	4.2	4.
Highland	3.1	3	2.8	3.2	3	8.1	5.4	5.7	2.8
Lanarkshire	4.2	5	5.1	5.7	5.3	5.4	5.2	4.3	5.1
Lothian	6.9	7.2	7.4	7.4	7.6	7.1	7.3	6.2	7.5
Orkney	6.0	6.9	6.5	5.3	6.3	7.3	9.1	5.7	6.0
Shetland	7.9	7.5	8.6	9.3	9.6	8.5	8.2	7.9	5.2
Tayside	3.3	5.6	6.8	8.8	7.8	9.2	8.4	6.4	5.4
Western Isles	2.7	2.4	3	4	4.1	3.1	3.1	2.8	2.2

APPENDIX FOUR DEVELOPING SECONDARY AND TERTIARY HOSPITAL SERVICES

The Standing Medical Advisory Committee (SMAC) published a report in 1997 entitled 'Future Patterns of Medical Care'⁴⁶. Several issues affecting district services were considered:

- The need to concentrate clinical activities to provide a comprehensive service versus the need to make such services accessible to patients;
- Self-sufficiency within specialist units in District General Hospitals requires more resources than are needed to provide high quality care on a collaborative basis;
- District General Hospital specialists must maintain generalist skills whilst developing further special skills;
- An awareness of the present policy of developing commissioning to local level versus different approaches to common clinical issues;
- The facilities required for emergency specialist care may conflict with those required for non-urgent care;
- A pattern of care that best meets the needs of patients may not offer specialist trainees the best training opportunities.

Following the SMAC report, a number of further documents relating to acute hospital care were published. These included the consultation document 'Provision of Acute General Hospital Services'⁴⁷ by a joint working party of the British Medical Association, the Royal College of Physicians of London and the Royal College of Surgeons of England; a paper entitled 'organisation of Acute General Hospital Services'⁴⁸ from the Joint Consultants Committee and a report from the Central Committee for Hospital Dental Services entitled 'Reconfiguration of Acute General Hospital Services – Implications for the Dentally Based Specialties' (1999)⁴⁹.

In Scotland, the Chief Medical Officer's Review of Acute Services⁵⁰ reported in 1998. It made many proposals, including the introduction of managed clinical networks in various acute services.

Several of these reports have areas of commonality. Many see that, for the foreseeable future, DGHs serving a population of 200,000 – 300,000 are likely to continue as the basic unit of hospital provision for elective and emergency services.

The CCHDs report⁴⁹ laid out a number of possible issues for the future, predicated upon further integration of hospitals such that populations in excess of one million people were served by a team of OMFS consultants who in turn developed sub-specialist interests.

This would have a number of consequences including:

- The need for further expansion of OMFS consultant numbers to meet the recommended ratio of one OMFS surgeon to 150,000 population;
- The need to develop 'hub and spoke' reconfiguration with centralised in-patient and trauma services;
- The need for peripheral day care and consultation facilities;
- Potential difficulties of assessment of maxillofacial injuries and oro-surgical emergencies;
- The need to continue clinical audit;
- Increasing sub-specialisation;
- Implications for provision of consultant cover.

REFERENCES

- 1 DEPARTMENT OF HEALTH (1993) Hospital Doctors: Training for the Future, Report of the Working Group on Specialist Medical Training.
- 2 NATIONAL HEALTH SERVICE EXECUTIVE (1995) UK specialist dental training: report from the Chief Dental Officer. Leeds, UK: NHS Executive.
- 3 HMSO (1998) The European Primary and Specialist Dental Qualifications Regulations 1998. Statutory instruments: 811. The Stationery Office.
- 4 GENERAL DENTAL COUNCIL (1998) The General Dental Council (Distinctive Branches of Dentistry) Regulations.
- 5 HMSO (1995) The European Specialist Medical Qualifications Order 1995 Statutory Instruments: 1995: 3208. The Stationery Office.
- 6 BRITISH ASSOCIATION OF HEAD AND NECK ONCOLOGISTS(1998). Provision and quality assurance for head and neck cancer care in the United Kingdom: A Nationally co-ordinated multi-disciplinary approach.
- 7 SCOTTISH OFFICE (1996). Scottish Cancer Co-ordinating and Advisory Committee: Commissioning Cancer Services in Scotland.
- 8 DEPARTMENT OF HEALTH/DENTAL ADVISORY COMMITTEE (1990). General Anaesthesia, Sedation and Resuscitation in Dentistry: Report of an Expert Working Party (The Poswillo Report).
- 9 GENERAL DENTAL COUNCIL (1997) Maintaining Standards: Guidance to the Dental Team on Professional and Personal Conduct – Revised May 1999
- 10 EDINBURGH SHERRIF COURT (1999) Fatal Accident Inquiry into Death of Darren Denholm
- 11 DEPARTMENT OF HEALTH (2000) A Conscious Decision. A review of the use of general anaesthesia and conscious sedation in primary dental care. London
- 12 DAWSON C, BAIN M, MCCALL D ET AL (1996) Oral Cancer. Scottish Needs Assessment Programme, Glasgow.
- 13 BALL G, MCLENNAN G, MCMANNERS J ET AL (1998) Cleft Lip and Palate. Scottish Needs Assessment Programme, Glasgow.
- 14 TAYLOR M., ALLAN C, BAIN M ET AL (1997) Adult oral health. Scottish Needs Assessment Programme, Glasgow.
- 15 BALAKRISHNAN M et al (2000) Dental caries is a preventable infectious disease. Australian Dental Journal, 45(4): 235-45.
- 16 ACHESON, D (1998) Great Britain Independent Inquiry into Inequalities in Health. The Stationery Office
- 17 SCOTTISH INTERCOLLEGIATE GUIDELINES NETWORK (2000) Preventing Dental Caries in Children at High Caries Risk.
- 18 DIMITROULIS G (1991). A 7 year review of maxillo-facial trauma in a central London Hospital. British Dental Journal, 170: 300-302.
- 19 ELLIS E ET AL (1985). Ten year of mandibular fractures: an analysis of 2,137 cases. Oral Surgery, Oral Medicine and Oral Pathology, 59(2): 120-129.
- 20 ELLIS E ET AL (1985). An analysis of 2,067 cases of Zygomatico Orbital Fracture. Journal of Oral and Maxillofacial Surgery, 43:417-428.
- 21 SHEPERD JP (1997). Injury research leads to national glass replacement initiative (letter). Br J Oral-Maxillofac-Surg, 35(6):454.
- 22 WARBURTON AL; SHEPHERD JP (2000). Effectiveness of toughened glassware in terms of reducing injury in bars; a randomised controlled trial. Inj Prev, 6(1): 36-40.
- 23 MCCANN M (2001) Oral Cancer in Scotland: The Future. Health Bulletin, 59(5)
- 24 BLOT W J ET AL (1988). Smoking and drinking in relation to oral and pharyngeal cancer. Cancer Research, 48: 3282-3287.
- 25 JOHNSON N W, WAMAKYLASURIYA K A A S (1993). Epidemiology and aetiology of oral cancer in the United Kingdom. Community Dental Health 10 (Suppl 1): 13-29.
- 26 DENTAL INFORMATION WORKING GROUP (2000). Dentistry in the new Millennium: An Information and Technology Strategy for Dentistry in Scotland.
- 27 WILLIAMS B ET AL (2000). Private funding of elective hospital treatment in England and Wales 1997-98: national survey. British Medical Journal 320: 904-905.

REFERENCES

- 28 SCOTTISH INTERCOLLEGIATE GUIDELINES NETWORK (2000) Management of Unerupted and Impacted Third Molar Teeth.
- 29 MATHEWS, SCULLY (1991). Confidence level of new UK dental graduates. *Journal of Restorative Dentistry*, 70: 726.
- 30 SHEPHERD J P, SHORE C (1986). Oral Surgery in General Practice – a pilot study, *Journal of Restorative Dentistry*, 65 (4): 516.
- 31 SAUNDERS WP; SAUNDERS EM (1998). Prevalence of periradicular periodontitis association with crowned teeth in an adult Scottish subpopulation. *Br Dent J*, 185(30): 137-40.
- 32 SAUNDERS-WP; CHESTNUTT IG; SAUNDERS EM (1999). Factors influencing the diagnosis and management of teeth with pulpal and periradicular disease by general dental practitioners. Part 2. *British Dental Journal*, 187 (10): 548-54.
- 33 WORKING GROUP ON SPECIALIST DENTAL TRAINING (1994). *Training for Dental Specialists in the future*, London: Department of Health.
- 34 CLARK S (1995). Minor oral surgery ‘specialisation’ in general dental practice. *British Dental Journal*, 179:209-213.
- 35 SADLER A, DAVIDSON M, HOUPIS C, WATT-SMITH S (1993). Specialist practice for minor oral surgery: a comparative audit of third molar surgery, *British Dental Journal*, 174: 273-277.
- 36 WOOD G D, CORCORAN J P (1988). Oral Surgery Specialisation in General Practice. *British Dental Journal*, 164: 331-333.
- 37 CLARK S (1995). Professional attitudes to specialisation and minor oral surgery in general dental practice. *British Dental Journal*, 179: 209-213.
- 38 COULTARD ET AL (2000). Referral Patterns and the referral system for oral surgery cases - Part 1: GDP referral patterns. *British Dental Journal*, 188: 142-144.
- 39 SCOTTISH EXECUTIVE (2000). *An Action Plan for Dental Services in Scotland*.
- 40 HARDEEP , HOLMES S,CARTER J, COGHLAN K, BRADLEY P, ALI N, SONGRA A, CANNELL H , HUTCHISON I (1999) Planning the consultant workforce in oral and maxillofacial surgery, *Br J Oral Maxillofac Surg*, 37(3): 245-6
- 41 SMITH G, CRIGHTON A (1998). Oral Diagnosis Prevalence Study. Personal Communication.
- 42 CAMPBELL B, EARNSHAW J (2001). Getting governance to work in surgery. *Annals of Royal College of Surgeons England (Suppl)*, 83; 56-57.
- 43 SHAW W C, WILLIAMS A C, SANDY J R, DEVLIN H B (1996). Minimum standards for the management of cleft lip and palate: efforts to close the audit loop. *Annals of Royal College of Surgeons*, 78: 110-114.
- 44 BLACK R, BREWSTER D, BROWN H, LESLEY F, HARRIS V, KIDD J, STEWART A, STOCKTON D AND WEIR J (2000) *Trends in Cancer Survival in Scotland 1971-1995*. Edinburgh: ISD Publications
- 45 SCOTTISH OFFICE (1999). NHS MEL(10)1999: Introduction of managed clinical networks within the NHS in Scotland. The Stationery Office.
- 46 STANDING MEDICAL ADVISORY COMMITTEE (1997) *Future patterns of medical care*. Department of Health in: *Central Committee for Hospital Dental Services (1999) Reconfiguration of Acute General Hospital Services - Implications for the Dentally Based Specialties*. British Dental Association
- 47 BRITISH MEDICAL ASSOCIATION (1998) *Provision of acute general hospital services: consultation document*. in: *Central Committee for Hospital Dental Services (1999) Reconfiguration of Acute General Hospital Services - Implications for the Dentally Based Specialties*. British Medical Association
- 48 JOINT CONSULTANTS COMMITTEE (1999) *Organisation of Acute General Hospital Services*. London, British Medical Association
- 49 CENTRAL COMMITTEE FOR HOSPITAL DENTAL SERVICES (1999) *RECONFIGURATION OF ACUTE GENERAL HOSPITAL SERVICES Implications for the Dentally Based Specialties*. British Dental Association
- 50 SCOTTISH OFFICE (1998) *Acute Services Review Report*. The Stationery Office

Public Health Institute of Scotland

Clifton House,
Clifton Place, Glasgow G3 7LS
Telephone 0141 300 1010
Fax 0141 300 1020
www.phis.org.uk

ISBN 1-904196-08-X