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"AN INVESTIGATION IN ORAL SURGERY SERVICES AND TRAINING
WITH PARTICULAR REFERENCE TO SOUTH AUSTRALIA."

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Declaration

This thesis is submitted in part fulfilment of the requirements for the Degree of Master of Dental Surgery in the University of Adelaide. Candidature for the Degree was satisfied by a Qualifying Examination in 1976.

This thesis contains no material which, except where due mention is made, has been accepted for the award of any other degree or diploma in any University. To the best of my knowledge, this thesis contains no material previously published or written by another person, except where due reference has been made in the text.

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Abstract

In order to provide efficient oral surgery services of the highest standard, there must be competent oral surgeons and general practitioners who have graduated from training programmes of an appropriate quality.

Précis

Whereas all forms of surgery originally were performed by the medical profession, it became evident that the study of dentistry was of prime importance to the treatment of disorders of the mouth and jaws. Therefore, oral surgery developed as a specialty of dentistry.

Previous publications have presented the general opinion that oral surgery is a specialty of dentistry and necessarily must be based on that profession (Thoma 1957, Amies 1966, Cameron 1968, Hayward 1968, Shira 1969, Hayward 1971, De Fries 1971, Hale 1974).

Some controversy also is evident regarding the need or otherwise of a medical as well as a dental qualification for this specialty. The concensus of opinion evidently is opposed to the claim that both qualifications are necessary, partly on the basis of perceived waste of resources. Whilst medical courses were relevant to this discipline, they evidently offer no advantage that could not be obtained from a dental course with subsequent postgraduate training tailored to the needs of the specialty (Christensen 1963, Fitzpatrick 1965, Amies 1966, Hayward 1971, Laskin 1972, Hillenbrand 1973, Hall 1973, Eisenbud 1973, Edelberg Tryon and Jerge 1973, Porterfield 1973, Pleasants 1974).

It is considered essential that training programmes should be so structured that graduates are competent to manage all aspects of oral surgery (Shira 1969, Revzin 1973, Hall 1973, Pizer 1973, Bear 1973, Pleasants 1974).

The present socio-political benefits for oral surgeons to possess a medical qualification nevertheless are noted (Christensen 1963, Fitzpatrick 1965, Hayward 1971).

A number of writers have stressed the competence of oral surgeons in the complete management of oral surgery (Hayward 1961, North 1965, Hillenbrand 1967, Cameron 1968, Hayward 1968, Shira 1969, De Fries 1971, Levant 1971, Hillenbrand 1973, Hall 1973, Pizer 1973, Poore 1973, Wilson 1973, Eisenbud 1973, Hale 1974), and the philosophy of a team approach to the oro-facial region has been presented (North 1965, Hayward 1968, Glass 1970, Levant 1971, Chase 1971, Small 1971, De Fries 1971, Fickling 1972, Sissman 1973, Wilson 1973, Bear 1973, Bright 1973, Health Services Seminar 1974). With the desirability of a multidisciplinary approach, emphasis is placed on the apparent need for equal status of all members of the team, with the oral surgeon being accorded primary responsibility for areas within his scope.

In a review of training programmes, some variation has been found in the lengths of oral surgery courses and the requirement for a medical qualification. Even so, the indispensibility of dental training is stressed unanimously, and a common grouping of essential subject matter is evident.

According to the standards outlined at the Madrid Workshop (1974), adequate training is attainable in Australia, but only in Adelaide where the course is the sole one accepted by the Royal Australian College of Dental Surgeons as a satisfactory pre-requisite for the Diploma at an Advanced Level in Oral Surgery.

A survey by questionnaire of 990 registered dentists in South Australia and Queensland elicited information regarding their descriptive characteristics. The decision of general practitioners and dentists, who were "approved" by the Commonwealth Department of Social Security for their patients to receive reimbursement for some oral surgery, was analysed with regard to the provision of certain aspects of oral surgery.

Similar information was obtained for "approved" dentists throughout Australia and some comparisons made between information for dentists classified according to various descriptive features.

The purpose of the survey was to discern what oral surgery services were being provided by these personnel, who were expected to provide a representative range of dental practice. Associations between these services and certain descriptive characteristics were analysed.

Information from the survey revealed that advanced training was required for the provision of comprehensive oral surgery services.

At present the full scope of practice is being provided by only a few practitioners, and the provision of care is concentrated mainly in the capitals.

It seems that undergraduate training has been orientated towards the treatment of hard as opposed to soft tissues. The survey revealed that general practitioners were less likely to provide oral surgery that is not directly "tooth related".

Generally, Queensland dentists were more likely to provide oral surgery treatment than their South Australian counterparts.

From the information compiled, certain conclusions were drawn and recommendations made to facilitate the more ready availability of high quality oral surgery services throughout urban and rural areas.

Further investigation is required to detail specific quantitative oral surgery needs in individual locations.

Country areas might require general practitioners with extended oral surgery training plus specialist oral surgery centres supported by rapid transit systems.

To guarantee appropriate standards of care, national accreditation of training courses and specialty registration seem relevant, with specialty hospital appointments restricted to registered specialists.

Oral surgeons without medical backgrounds should not receive prejudicial treatment. In fact, the author considers that the pursuit of a medical degree as a precursor to specialising in oral surgery should be discouraged.

Preface

During the period from Fauchard and Paré to Hüllihen and Garretson (16th - 18th Centuries), oral surgery was in its infancy and was practised by members of the medical profession, but evidently it became apparent that a medical qualification was not an adequate preparation for an appreciation of this field. Consequently, those who contributed to oral surgery's early development often were members of the medical profession, who became pre-occupied with diseases of the oral cavity and subsequently attained a dental qualification as well (Bremner 1946).

Dentistry branched away from medicine as a separate professional entity and for a number of years concentrated on the development of technical expertise in the field of restorative care, as opposed to surgery. Nevertheless, there were qualified dentists, who were not physicians, but who maintained a profound interest in the surgical art. These dentists frequently considered that the dental profession should be the main base for oral surgery, but that there were limitations imposed by dental undergraduate courses (Bremner 1946, Revzin 1973).

Later, oral surgery began to develop rapidly following the introduction of the biological sciences and the acquisition of more sophisticated surgical skills from other disciplines. These developments led to a rare combination of basic sciences, manual dexterity and surgical skill (Bremner 1946).

Possibly the greatest stimulus to further development was the perceived need to establish postgraduate training programmes in oral surgery, which was followed later by the establishment of minimum training standards in the United States and a single examining body to ensure the graduation of competent specialists (Hillenbrand 1973).

With the introduction of industrialisation, and motorised transport in particular, there followed a great increase in traumatic injuries to the face and jaws. The skills of oral surgeons apparently were seen to be relevant to the treatment of these injuries and therefore gained acceptance (De Fries 1971, Revzin 1973, Rowe 1973).

This development was augmented during the two world wars when the abilities of oral surgeons were often immensely valuable in the treatment of facial injuries caused by high velocity missiles. The need for a multidisciplinary team to provide these treatments became obvious and the team concept developed where members shared a common formal status (Fickling 1972, Revzin 1973, Rowe 1973, Ward 1975).

Following this phase of treatment of traumatic injuries, the additional field of elective correction of developmental abnormalities evolved and oral surgery apparently made a major contribution to associated methods of care (De Fries 1971, Bear 1973, Ward 1975).

It is unlikely that sophisticated developments in these fields would have eventuated without the contribution of specific postgraduate oral surgery training (Fitzpatrick 1965, Stanhope 1972).

It appears that the development of oral surgery services in Australia since early colonisation has resulted largely from the initiative of a small number in the dental profession, who saw the need for this

community service (Fitzsimons 1973). Interest in surgery and the skills derived from dentistry have led to a gradual widening of contribution in oral surgery that has paralleled the broadening of skills in all aspects of the healing arts (Fitzsimons 1973).

In Australia today, specialist oral surgery services are provided by private practitioners and university staff, and almost all the staff directly employed for oral surgery services in hospitals are those undergoing training programmes. It seems evident that hospital administrations consider that there is a need for such a service and for training in an appropriate clinical environment with the relevant academic support.

It is probable that for many years, and especially when Australian dentistry was in its infancy, oral surgery was limited and was performed almost entirely by general dental practitioners. General practitioners still provide considerably broad oral surgery services in areas not yet serviced by specialists.

Until recently, oral surgery that was beyond the training of general dental practitioners was provided by members of the medical profession (Fickling 1972). Whilst many of the latter were trained to a high level in general surgery, it was evident that they lacked the relevant expertise that could be obtained only in undergraduate dental courses (Goldberg 1972, Ward 1974, Pleasants 1974). Consequently, many surgeons completed both the dental and medical undergraduate courses, but even this undertaking seemed insufficient for the development of necessary skills in oral surgery (Amies 1966, Shira 1969, Goldberg 1972, Eisenbud 1973).

Increasingly intensive undergraduate training has meant that the completion of both medical and dental courses has become a formidable, time-consuming and expensive exercise that still seems an inadequate preparation for oral surgery (Amies 1966, Hayward 1971, Goldberg 1972, Hillenbrand 1973).

It seems to the author that training should be designed solely to produce oral surgeons, and that it should follow a basic undergraduate dental course and incorporate such medical knowledge as is required for patient management in consultation with medical specialists. Moreover, it would seem appropriate that training programmes be designed quantitatively and qualitatively to meet community needs.

Introduction

It seems that there has been a tendency for Australians to denigrate things Australian even though many Australians have become distinguished internationally. This attitude apparently has resulted in the need for many dentists to pursue postgraduate education overseas, and this seems to have hindered the development of appropriate educational programmes in Australia.

This is exemplified in the specialty of oral surgery where the anomaly has been corrected only recently. In 1971, the Department of Oral Pathology and Oral Surgery of the University of Adelaide inaugurated an oral surgery training programme. In order to assess the specific requirements of such a programme, it was recently decided that the oral surgery services provided by general dental practitioners and "approved"* dentists, including specialist oral surgeons, together with relevant training facilities, should be investigated. The study was undertaken with the intention that resulting information would guide the future development of the Adelaide Oral Surgery Training Programme, and it was hoped that this information also would assist programmes elsewhere in Australia.

* --- "Approved" dentists are those recognised by the Commonwealth Department of Social Security for specified Government reimbursement of fees for oral surgery.

Originally it was intended that a survey would include general practitioners in each Australian State and New Zealand, but it became evident that such a project was beyond the scope of available resources. Accordingly, the survey was confined to dentists of all types in South Australia and Queensland, and to "approved" dentists, including specialist oral surgeons, throughout Australia and oral surgeons in New Zealand. Available time did not permit the inclusion of New Zealand data in this report, despite the small number of New Zealanders sampled. The survey provided a great deal of information related to location of practice, postgraduate qualifications, postgraduate training in oral surgery and the provision of various types of care. The decisions of general practitioners were used to classify treatments as relevant to the realm of the general practitioner, an intermediary category, or the province of the specialist oral surgeon.

It was anticipated that the intermediary category of treatments possibly would be the most important to consider when contemplating extended training for dentists in regions where oral surgeons are not readily available.

A review of background information was undertaken that was based on published literature and personal correspondence with those in training and service institutions in Australia and overseas. The purpose was to assess broad views concerning appropriate future developments in oral surgery. This review seemed particularly appropriate in view of rapid changes in philosophies that underlie the provision of health services.

Relevant publications were limited in number and personal views of the author have been interspersed with the review. Unless substantiated, statements presented should be regarded as contentious.

The survey has been confined to services provided by the dental profession, because the concensus of reviewed opinion indicates that oral surgery is a dental specialty (Thoma 1957, Amies 1966, Cameron 1968, Hayward 1968, Hayward 1971, De Fries 1971, Irby 1971, Hillenbrand 1973, Pleasants 1974). Nevertheless, it should be realised that some oral surgery procedures are being implemented by disciplines associated with areas of anatomical overlap. Similar overlap pertains throughout the various surgical disciplines and is not unique to oral surgery.

The limitation of the review of training to the dental profession seems justified, as all training programmes are associated with dental schools with only a few exceptions. For example, in the United States, some training is administered by hospitals, which receive guidelines from the Council for Dental Education.

Aim

The aim of the survey was to discover what oral surgery services were being provided by general practitioners, and "approved" dentists, including specialist oral surgeons, and whether these services were commensurate with the expectations of academic staff at the University of Adelaide.

It was anticipated that the investigation might reveal associations between the services provided and such features as type of practice, location of practice, the possession of postgraduate qualifications and the availability of hospital facilities and anaesthetic services. Moreover from the data received, it was expected that conclusions would be possible concerning the types of developments in undergraduate and postgraduate training programmes that were appropriate for the future.

Review of background information

A. Attitudes concerning the appropriate scope and pre-requisites for oral surgeons.

In 1946, Bremner observed that the first oral surgical operation probably was a tooth extraction performed in palaeolithic times by individuals who had noticed a similar effect resulting from trauma and finally performed the procedure on an elective basis for the relief of pain, religious motives or other reasons. As in other healing arts, oral surgery gradually evolved also as a science, and this progressed through the stages associated with barber surgeons, commercial exploitation and professionalism.

Initially, techniques were extremely crude, consisting of the "knocking out" of teeth by medicine men, but such instruments as forceps and elevators gradually were developed. It is known that these instruments were used by the Greeks and refined by the Romans and Arabians, but still they were extremely crude until comparatively recent times (Bremner 1946).

Probably an important factor in the development of surgical techniques was the production of steel and the skills of early craftsmen like Evrard and Collins (Fickling 1972). With the production of suitable materials and instruments, exodontists developed techniques for removing impacted teeth and were encouraged by advances in prosthetics to expand their role to include dento-alveolar surgery.

As individuals knowledgeable in matters pertaining to the teeth and jaws, such as the requirements of occlusion and function, it seemed understandable that their expertise extended to the treatment of fractures of the jaws (De Fries 1971). Apparently as progress led to superior techniques, oral surgeons adopted extra oral approaches, and their field was broadened further.

This progression was accompanied by a close liaison with other specialties and adoption of techniques used by such specialists as orthopaedic surgeons (Fickling 1972). It was evident that oral surgeons also contributed to the development of other specialties (Levant 1971). Understandably oral surgery played the major role in the evolution of orthognathic surgery in view of the relevance of dental knowledge to achieving a result acceptable both functionally and cosmetically (De Fries 1971).

The development of oral surgery has not been uneventful. Perhaps it is understandable that some members of the medical profession resisted the growth of this field as a dental specialty, considering that it should be practised exclusively by their colleagues (Hillenbrand 1971, Revzin 1973, Bear 1973). An associated lack of recognition of dentists in this field seems to have prompted frustration and resentment and retarded development of the specialty (Christensen 1963, Shira 1969, Blum 1973, Campbell 1975).

The dental profession seems to the author to have encouraged opposition in some instances by reluctance to operate outside normal working hours, by concentrating their efforts mainly on technical intra-oral procedures mostly associated with the hard tissues, by not fully

accepting diagnostic and treatment responsibilities, and by according the term "oral surgeon" to non-specialists with little training in this field, who limited their attention largely to dento-alveolar oral surgery. This latter situation probably would have been avoided had there been official specialist registration. The development of oral surgery as a specialty of dentistry in Australasia appears to have been hampered by a lack of training facilities and the exclusion of dentists from certain hospitals (Jolly 1970, Campbell 1975). It seems to the author that the future of the specialty depends on training programmes and on the correction of these anomalies.

Bremner (1946) recorded that in 1369, early surgeons in the City of London stressed the importance of adequate training standards. In 1376, barber surgeons successfully petitioned for the right to impose examinations to guarantee standards. According to Bremner, the first man deserving the title of oral surgeon was a Spaniard named Abulcasis, who practised in the eleventh and twelfth centuries. Two other notable oral surgeons were Guy de Chauliac of France in the fourteenth century and Ambroise Paré in the sixteenth century (Bremner 1946, Fickling 1972).

During the first World War, the relevance of the skills of dentists to the treatment of facial injuries became recognised and these skills were extended further in this field during the second World War (Fickling 1972).

The multidisciplinary surgical teams formed during wartime established a basis for the application of this team approach after the war. The influence of these events was important to the development of oral surgery as a specialty of dentistry. Oral surgery developed rapidly with the

advent of anaesthesia and asepsis as did surgery in general, and also the amalgamation of surgical techniques with knowledge drawn from dentistry and the basic sciences (De Fries 1971, Fickling 1972, Stanhope 1972, Rowe 1973).

Oral surgery currently is at an important stage of development. Whilst there is a fairly constant theme of justification for oral surgery as a specialty of dentistry, there is considerable contention regarding the clinical tasks that are appropriate, the nature of the training and need or otherwise for a medical qualification. Further controversy has surrounded the need for patient evaluation and assessment (Thoma 1957, Christensen 1963, Fitzpatrick 1965, Amies 1966, Cameron 1968, Hayward 1968, Shira 1969, Walker 1969, Abrahams 1969, Hayward 1971, De Fries 1971, Laskin 1972, Goldberg 1972, Bear 1973, Hillenbrand 1973, Guralnick 1973, Hall 1973, Eisenbud 1973, Edelberg, Tryon, Jerge 1973, Porterfield 1973, Pleasants 1974, Hale 1974).

It seems that in the present climate of change and educational review, accredited training programmes for oral surgeons may develop and this may enhance the acceptance of dental specialists in this field and prompt an adequate supply of these personnel (Laskin 1973).

In 1973, Hillenbrand made the following points with regard to oral surgery in the United States.

1. It is necessary to have a central examining and accreditation board or society.
2. Such a board or society has done much to assure that there is a consistency in the level of education offered in all accredited institutions and that the oral surgeons trained in accredited programmes have a predictable level of competence.

3. "Oral surgery has established itself and needs to concentrate its best efforts ... on improving its own professional competence and the service to the patient and the public."
4. In countries where the oral surgeon has in the past been medically as well as dentally qualified, the need for a medical degree has been deleted or will be deleted.
5. With the shortage of dental manpower, it is not reasonable to envisage a longer training period for oral surgeons by the addition of a medical qualification to the dental degree.
6. With burdened medical schools and shortages of medical manpower, it is not reasonable for university staff and facilities to provide medical qualifications for oral surgeons when an oral surgery training programme can provide adequate training in all areas.
7. It is more realistic to look at possibilities within the existing methods of preparing dentists for specialist oral surgery than to create an entirely new approach of questionable value.

These views also seem pertinent to Australia and New Zealand today, the sixth point having particular significance in Australia where it seems extremely difficult, if not almost impossible, to gain entry to a medical school after having gained a postgraduate dental qualification. Even if this were possible, it appears that a dental and a medical qualification together do not provide complete training for an oral surgeon. Apparently there should be a training programme designed specifically to produce specialist oral surgeons (Fitzpatrick 1965, Amies 1966, Shira 1969, Laskin 1972, Hall 1973, Eisenbud 1973, Porterfield 1973, Revzin 1973, Pizer 1973, Rowe 1973, Bear 1973, Pleasants 1974, Hale 1974).

Hayward (1971) indicated that "Many believe that specialty preparation time has reached a maximum. For more than fifty years a qualification in dentistry has been the basis for the oral surgical specialty. Additional knowledge has been sought in applied biologic science and through medical training in hospitals ... and several institutions are developing programs of combined qualification in medicine and dentistry as the basis for oral surgery specialisation. Although this appears to solve some of oral surgery's old problems of integration in hospitals, it reverses several strong trends for conserving time. In spite of the desirability of broad knowledge, the application of a full medical and full dental education to the present scope of oral surgery seems inefficient."

Goldberg (1972) expressed both alarm and anger at what he saw as assaults on oral surgery in the form of, among other things, restriction of surgical privileges and nefarious journal attacks, and was very doubtful that the acquisition of a medical qualification would solve the problems. In his words "As I have been down that long, frustrating and expensive 'double-degree' road, and am currently very much involved in both practice and education I am certain of the futility of such a program ..."

Claims regarding unnecessary length of training and expense involved in a "double-degree" programme were supported also by Holden (1968), and these comments seem to support the contention that oral surgery should be based on a dental course with a science curriculum in common with medicine. Subsequent postgraduate oral

surgery training could incorporate the clinical application of these basic sciences as in medicine (Amies, 1966, De Fries 1971, Allred et al 1972, Revzin 1973, Hale 1974, Ward 1974).

Hayward (1971) made the following statements:

"The accumulation of knowledge in medical practice is so vast that the oral surgeon can apply only a selected and appropriate fraction. However he needs the total scientific knowledge of dentistry to provide the best surgical care for patients with oral problems. In this way, the oral surgeon delivers a service that is unique and helpful." These remarks seem pertinent to the future development of oral surgery services and training in Australia and New Zealand. Shira (1969), in delivering the Lyons Memorial Lecture, stated some relevant views:

1. The specialty of oral surgery is most worthy of survival and growth as evidenced by the steady progress it has made in the past fifty years.
2. Our educational programmes should produce a well-rounded, fully qualified oral surgeon, who can take his place with specialists in other surgical fields.
3. The future of oral surgery depends upon the abilities of the oral surgeons produced in our training programmes.
4. There is no doubt that limitations in the scope of oral surgical practice exist in some hospitals with instances of harassment, limitation of privileges, seizure of cases, adverse rulings and frank antagonism.
5. However there are many instances where oral surgeons operate in hospitals entirely on the basis of their ability and the contributions they are making to patient care.

Shira (1969) also commented that "Once the oral surgeon has an opportunity to demonstrate his competence, acceptance by his medical colleagues logically will follow ... To expand into fields that are beyond the recognised scope of his practice would result in censure and discredit to oral surgery. The oral surgeon must realise that areas of overlapping interest with specialists in other fields will continue to exist and he must seek an amicable understanding of mutual responsibilities with his colleagues in those specialties, if at all possible."

Conversely, it seems that if those, who are medically qualified only, were to practise oral surgery without adequate training, they should invite censure and discredit of their particular discipline. Much has been said of the advantages of an oral surgeon's obtaining a medical degree, but Shira (1969) expressed a common opinion when he stated without reservation, "... however, it (a medical course) would not train the individual to perform oral surgical procedures. Such procedures are performed in and about the mouth and jaws. Proficiency in these procedures requires a dental education and a minimum of three years of concentrated graduate training in this surgical field." He continued, "... our advanced training programs should insure that our trainees possess the background to qualify them as the most competent group in this area of surgical practice."

Revzin (1973) termed those who were medically qualified only, to be arrogant if they considered that only they had the intellectual capacity and capability to treat oral surgery problems. He stressed the need for a sound knowledge of basic sciences and a training in general physical examinations for oral surgery. He also emphasised

that the broad scope of oral surgery should be defined and students trained to this standard irrespective of whether they ultimately practised to this extent. He considered that "The specialty should no longer remain defensive."

Amies (1966) stated that " ... in terms of Thoma's definition, our work can be adequately performed by a dental graduate with a higher dental qualification and proper and adequate postgraduate training." Amies considered that oral surgeons should not pretend to be what they are not nor pretend not to be what they are, but should honestly state their assessments of their capabilities. It would appear reasonable that medical colleagues, who work in closely associated areas, also should adopt the same dictum.

Amies (1966) further wrote with regard to dental graduates, who proceeded to obtain a medical qualification with a view to practising oral surgery, " ... we have always indicated to them that the possession of a medical degree would not make them oral surgeons. In other words, irrespective of whether a man has dental, or both medical and dental qualifications, he still requires an appropriate training for the specialty of oral surgery."

In contrast to most opinions reviewed, Walker (1969) claimed that "It is becoming increasingly obvious that the dental consultant of the future will take a degree in medicine ...". He further stated that "The universities are finding it impossible to include all the desirable subjects in the undergraduate course." As training time is an important consideration, it seems better to develop training programmes to produce a particular specialist product (Hayward 1971, Hillenbrand 1973).

Guralnick (1973) defended his combined "Oral Surgery - M.D." programme thus: "My proposal for training doubly-qualified oral surgeons has not been motivated by personal frustration, pique, vanity or irresponsibility. What has motivated me is a conviction that there is an educational deficit in our current training program; that it consists of insufficient medical and surgical background; and that it can be corrected best by obtaining a medical degree and general surgical, in addition to oral surgical experience." He cited many advantages of dual qualification to support his argument and promoted the concept of a three year general dental course that included a combined undergraduate basic science course with the medical course. Nevertheless, it seemed that subsequent applied dental training would lead to courses of prohibitive length. Guralnick's view suggested that in the five years subsequent to the third year of dental school, students could be trained both in general medicine and surgery as well as postgraduate oral surgery. This seems somewhat optimistic and does not allow for experience in general dental practice that seems an important part of the preparation of an oral surgeon. The five-year training period proposed by Guralnick presumably includes the stipulated requirement of one year as Resident Medical Officer for medical registration.

Completion of a dental undergraduate course, experience in general practice and the acquisition of a postgraduate dental qualification, which requires postgraduate competence in the basic sciences

of anatomy, physiology, pathology, biochemistry and microbiology, would seem to provide an adequate basis for further specialist training in oral surgery. It also seems that a course in clinical medicine should be included in training programmes to give clinical contact and exposure in internal medicine to prospective oral surgeons.

Hayward (1961) stated that " ... we fully appreciate that our particular goals in education require the teamwork of agencies in organized dentistry, medicine and hospitals. This triad pattern is complex but essential for producing the competent oral surgeon ... Two essential and complex requirements have been to educate the educators to our needs and to develop the respect of physician colleagues."

Hall (1973) asked, "Do oral surgeons receive the training to conduct a history and physical examination with the same degree of ability as their physician peers? Certainly they can and do, at least in some instances."

His residents pursue the following training programme:

1. They read a textbook on physical diagnosis.
2. The next two weeks are spent in a concentrated course provided by a member of the Department of Medicine.
3. After this introductory experience, the trainee spends the following six weeks attached to the general medical service.

The professor of medicine initially was sceptical about this approach, but subsequently indicated that, when the rotation was

completed, the oral surgical trainees were performing at about the same level as his own interns. Therefore, it appears that oral surgical trainees can be trained readily to obtain a good medical history and perform a physical examination in an oral surgery training programme.

Moreover, Hall (1973) cited two reasons which frequently are given for obtaining a medical degree by the oral surgeon, namely:

1. To achieve increased competence in dealing with oral surgical patients.
2. To obtain the necessary credentials for use in combating restrictions placed on some oral surgeons.

With respect to the first reason, Hall made these remarks, "Are we currently training individuals capable of competent management of oral surgical patients? A look at our best programs suggests that this is obviously the case."

Hall also commented, "Can we significantly improve the competence of our trainees with a combined program? The answer to this question probably will not be clear for 10-15 years, during which time we will have been able to observe a significant number of people trained in this manner."

Inspection of medical school curricula suggests that little content, apart from that already applicable to dental training, is of direct importance to the practice of oral surgery (Amies 1966, Shira 1969, Goldberg 1972, Eisenbud 1973). This fact seems relevant when comparing the desirability of a medical course with a postgraduate course specifically designed to produce oral surgeons.

Such a programme organised to follow the basic dental course, general practice, postgraduate study, training and experience seems to compare favourably with the similar progression required for specialisation in other surgical areas (Browne 1963, Joint Committee on Higher Surgical Training 1971).

Pizer (1973) also supported the case for the performance of a general physical examination and claimed that it should be part of an oral surgeon's training and should be mastered by the competent oral surgeon. Where concurrent medical problems are discovered, these should be managed by the physician.

Eisenbud (1973), an oral pathologist, provided a critical appraisal of the combined "Oral Surgery - M.D." programmes on the future of dentistry and arrived at the following conclusions:

1. The addition of formal medical training is not the best method of improving oral surgery training.
2. The addition of medical training will not in itself elevate the standards of care for hospitalised oral surgical patients.
3. Hospital dental staff structure will be seriously disrupted if all oral surgeons have the M.D. (medical) degree since they will migrate to the department of surgery, to the detriment of the specialty.
4. Interdisciplinary friction will increase rather than decrease because of the inevitable tendency of the "M.D. oral surgeons" to expand into more exciting and rewarding areas of practice.
5. Statistical documentation has been presented to demonstrate that the proliferation of double-degree programmes will divert manpower from dentistry into the medical surgical specialties.

Hayward (1971) drew attention to the possible threat to the unity of the specialty of oral surgery posed by a small number of training programmes that required the acquisition of a medical degree. He stressed the desirability of experimentation in education, but claimed that there might be more efficient training methods for oral surgery. He forcibly attracted attention to the danger of political polarisation within the oral surgery specialty based on differing qualifications. In a specialty which forms a unique link between the medical and dental professions, and which serves the patients of general dental practitioners and their medical colleagues, a philosophy of unity seems particularly necessary.

At a time when government in Australia apparently is not aware of the content of dental courses in the areas of basic sciences and clinical training, when it denies dentists the right to prescribe various medications for their patients, and denies patients access to insurance rebates for such medications and also for operative procedures as would be the case if provided by a medical colleague, it is understandable that specialist oral surgeons become frustrated when they do not possess a medical degree. It seems that these circumstances rather than clinical necessity have prompted some oral surgeons to obtain a medical qualification.

In today's environment, when educational approaches are being reviewed, it is hoped that a need for dual qualifications, if based solely on expediency, will cease.

Christensen (1963), a world renowned oral surgeon with numerous qualifications, poignantly expressed the views of many oral surgeons when he wrote:

"I speak from personal experience, having practised as an Oral Surgeon for six years without the benefit of a medical qualification, and during that time suffered countless pangs of indignation at daily occurrences when I was hamstrung by legal restrictions. Patients required certain drugs in the treatment of their condition and I was legally unable to prescribe them; with every hospitalised case I had to suffer the humiliation of asking the anaesthetist to prescribe the post-operative morphia or other drug, and put up with the patient's complaints of them having to pay £4-10-0 a bottle for their antibiotics when their local medical general practitioner could prescribe it on the free list."

Fitzpatrick (1965), when questioned about the desirability of obtaining a medical degree in addition to a dental qualification for oral surgery practice, adamantly replied "No, because the time and expense required to obtain a medical degree are scarcely commensurate with the limited benefits, these being primarily of a political nature in regard to hospital and medical benefits."

Pleasant (1974) expressed the view that oral surgeons do not need a medical degree, whereas a medically qualified practitioner, in order to practise oral surgery, needs a dental qualification. In his opinion, the only requirements necessary for competent oral surgeons without medical qualifications to practise their profession effectively were changes to the Medical and Dental Acts to permit these oral surgeons to obtain medical histories and perform general physical examinations on patients. He pointed out that when the oral surgeon discovered a condition requiring evaluation beyond his scope, he would obtain a consul-

tation from the appropriate specialty, which is the normal practice in other medical areas. He further considered that the benefits of a medical qualification for oral surgery were small and contended that resources, which were devoted to this end, were not used efficiently, and quoted a general surgeon as saying: "Now there are fights between the M.D. plastic surgeon, the M.D. otolaryngologist and the D.D.S. oral surgeon. With the double degree oral surgeon it will be fights between the M.D. plastic, the M.D. otolaryngologist and the M.D. oral surgeon."

Poore (1973) contended that there were two important reasons for an oral surgeon to be capable of performing a general physical examination, viz:

1. To enable him to assess and evaluate that patient correctly and to refer the patient, if necessary, to other clinics for combined management.
2. To enable him to recognise any of the medical or surgical complications as early as possible, as would any other surgical specialist.

He recognised that the first reason had legal implications and required resolution by enlightened legislation, and considered that the second reason also was important. Although a medical practitioner could make the initial examination, the oral surgeon must be able to recognise possible complications. He stressed that the development of skills for the latter requirement must be a mandatory part of oral surgery training programmes.

Hale (1974) commented that " ... physical evaluation of a surgery patient is as important to the oral surgeon as it is to any other surgical specialty."

Blum (1973) sympathised with the frustrations of oral surgeons who had completed years of sophisticated training, and then were confronted with constraints to the practice of their skills.

The following extract is attributed to Edelberg, Tryon, and Jerge (1973):

"Certainly no informed person can argue with the fact that a basic education in dentistry is required to practise oral surgery properly. But, ideally, should a formal medical education also be required?" In their conclusion, they stated that " ... this survey has not produced overwhelming evidence that oral surgeons support the double degree." These authors mentioned some of the problems encountered by oral surgeons with respect to access to hospitals, status and integration into the total health care system, and indicated that there was contention as to whether double-degree programmes should be established, or whether consideration should be given to other alternatives such as the introduction of more medical background knowledge to oral surgery training programmes or the addition of a year of basic surgical training.

Longmire (1968) felt that a training system could be evolved whereby all personnel intending to follow a surgical career could be given a common basic education in surgical principles which would be followed by definitive training in each particular surgical specialty, whereas Schwartz (1968) was opposed to a set basic surgical training

programme for future specialists and felt that the training should be tailored to the specialty.

Porterfield (1973) agreed with the view of Goldberg (1972), that a year in general surgery before concentrating on oral surgery would be preferable to the acquisition of a medical degree.

Irby (1971) reviewed the history of the pursuit of double degrees in the United States of America, and noted that those initially interested in oral surgery were doubly qualified, but there was controversy even then and these individuals, although possessing both medical and dental degrees, were apparently unanimous in the view that dentistry was the more important of the two as a base for oral surgery. These early oral surgeons evidently retained a stronger interest in the dental than the medical profession. Subsequently, oral surgeons without medical degrees obtained increasing recognition for their skill.

Hale (1974) commented that "Today's oral surgeon is 'honed' out of the crucible of the hospital experience and formal training over a three to four year extended period of training after he has already earned the dental degree." He claimed that there was no monopoly on learning but unfavourable legal restrictions were placed on oral surgeons.

It seems important for the future of the specialty, and for the community to be best served, that existing restrictions on oral surgeons be removed (Christensen 1963, Hayward 1968, Wilson 1973).

As early as 1957, Thoma stated that the oral surgeon was primarily a dentist, and oral surgery as a specialty was inaugurated and

developed by men with both dental and medical qualifications. Furthermore, he was of the opinion that these early oral surgeons generally considered that oral surgery properly belonged to dentistry and that they supported this view by maintaining close relationships with that profession. He also stated that as a dentist and a member of the oldest specialty of dentistry, the oral surgeon desired " ... not to practise medicine, but to practise intelligently a specialty of his own profession. He does not have to be proficient in all fields; he will, like his medical confreres, seek consultations for his patients if necessary. The postgraduate courses and practical training for the oral surgeon from the earliest times have been, and are, offered by dental institutions."

Hayward (1968) deplored restrictions placed on oral surgeons by some hospital administrations and claimed that the oral surgeon should be judged on the basis of training and competence. He drew attention to the necessity for strict control of training and accreditation in order to prevent discredit to oral surgery and the dental profession by the appointment of poorly qualified dentists mislabelled as oral surgeons.

Cameron (1968) unequivocally wrote that oral surgery is not, and has never been, a specialty of medicine, and emphasised that a dentist who receives an appointment as an oral surgeon should be as carefully evaluated regarding his competency, as is normally the practice for appointees in other surgical specialist posts. If an inadequately trained dentist is appointed as an oral surgeon, the prestige of the specialty may suffer a severe setback.

It could well be that hospital administrations often have appointed as oral surgeons individuals with inadequate training. The deficiencies of these appointees possibly have led hospitals to impose restrictions on the adequately trained oral surgeon.

It seems imperative that accredited training programmes be established, standards set and rigorously upheld, and specialist registration be introduced so that only fully trained graduates will be entitled to practise this specialty. Otherwise the specialty may not attain full recognition and the community will not receive a full service (Reade 1961, Cameron 1968, Henning 1969, Nairn 1969, Coady 1973, Hillenbrand 1973, Paynter 1973).

Hayward (1968) indicated that dentistry was regarded as the central core of oral surgery, and this fact was supported by the definition of dentistry, viz: "The correction of disease, injury and malformation of the mouth, jaws and associated structures." He stated that hospitals where oral surgery consultation was not available could be associated with incomplete diagnosis and treatment of problems of the mouth and jaws, with the consequences of deformity and dysfunction. He asserted that the dentist had the responsibility of the full maintenance of the health of the mouth and jaws and should direct the therapy required for that region, not as an ancillary or paramedical, but as a primary health provider.

Sissman (1973) supported these views when he stated that in all instances of facial trauma, those in charge of the "emergency room" should call a staff dentist (in the present situation, an oral surgeon)

for consultation. Furthermore, he asserted that "... close contact and consultation between physicians and dentists produce a higher quality of care for both medical and dental patients."

In the opinion of Wilson (1973), comprehensive health care includes dental care, and the relationship between general health and dental health generally is accepted. Therefore, he claimed that dentists should be full members of medical staffs with equal status and privileges. Oral surgeons as dental specialists should be employed fully to avoid substandard care.

When discussing oral surgery, Eisenbud (1973) cited the Long Island Jewish Hillside Medical Centre, and stated: "The problem of the scope of oral surgery has been dealt with successfully at L.I.J. where the hospital dental program has had the full support of the board of trustees, the administration and two successive directors of surgery. Their encouragement, combined with a most scrupulous auditing of performance, has led to the development of a program in which oral surgery has realized its full potential as a health service. In response to this show of confidence, strict requirements have been set for the granting of oral surgical privileges."

He pointed out that oral surgeons on the staff had graduated from formal training programmes and were recognised as fully qualified for practice of the specialty. Furthermore, general dental practitioners were not permitted to perform oral surgery in the operating theatre, except for extractions and periapical surgery.

In the development of the service at the Long Island Jewish Hillside Medical Centre, certain rules were evolved concerning the distribution

of case material and the scope of service, viz:

1. The dental service is responsible for the diagnosis and treatment of diseases, injuries, and malformations of the teeth, jaws and adjacent structures.
2. The dental service does not treat malignant tumours beyond initial workup and biopsy.
3. Patients admitted to the emergency room with major facial trauma are triaged by the general surgical resident.
4. The dental intern is called for all patients with facial injuries or swellings, and is supported by the oral surgery resident and a panel of attending oral surgeons on call.
5. Complex facial injuries are handled co-operatively by plastic, ear-nose-throat, eye and oral surgeons, who act as a team.
6. The treatment of jaw fractures is the responsibility of the dental service.

At the time of writing, the medical histories and general physical examinations for dental admissions were undertaken by medically qualified staff, but the possibility that those with dental qualifications only might perform medical histories and physical examinations for these patients was being examined. This suggested that the dental staff had demonstrated competence in these areas.

"The rapid and continued increase in the number of oral surgeons who have gone into academic life has been impressive" according to Bear (1973). He considered that one of the reasons for the development of oral surgery in recent years was the intention of these academics to improve patient care by establishing and improving training programmes and adjusting the scope of practice.

Bear's opinions supported those of Laskin (1972) that for oral surgery to progress as a specialty, it must continue to contribute more than a technical service based on the current knowledge of its practitioners. There was a need for on-going research to resolve unanswered questions and to develop new techniques. In view of this it seems important therefore that universities provide oral surgery departments staffed by personnel orientated towards improving oral surgery services for the common good. This would require the provision of postgraduate training programmes of a high standard, which incorporate research as an essential component.

The importance of a research requirement in a well balanced clinical training programme was recognised by Hayward (1967).

There is overwhelming support in the literature for the establishment of specific, well-planned training programmes in oral surgery, and a number of authors have contributed to current knowledge and philosophies in this field (Thoma 1957, Fitzpatrick 1965, Hayward 1967, Hayward 1968, Shira 1969, Henning 1969, Laskin 1969, Jolly 1970, Laskin 1972, Bear 1973, Hillenbrand 1973, Laskin 1973, Pizer 1973, Poore 1973, Revzin 1973).

Bohannen and others (1972) pointed to the escalating costs of professional education for both the public and the individual student. At the present time it appears that health manpower shortages and the increased technological sophistication in various health fields requires that there be a reassessment of traditional methods of training.

The possibility of streamlining the production of specialists in particular areas without requiring exposure to a tremendous quantity

of peripheral information has been considered. As Wells (1966) commented, "Much of the detail fed to medical students is forgotten, almost deliberately forgotten, once the relevant examination has been passed." If this is true of the medical student, who presumably is intending to practise medicine, how appropriate is the formal medical course for a specialist oral surgeon?

Laskin (1973) indicated that one of the important considerations that could influence the future training of the oral surgeon was the state of flux in dental and medical education. He felt that both professions were undergoing radical changes in curriculum that would permit greater flexibility and an earlier progression toward specialisation.

In speaking of the situation which pertains in the United Kingdom with regard to medicine, surgery and dental surgery, Rowe (1973) stated that students now entering these professions may be required to devote too much time to acquiring knowledge that is of no practical value. He felt that consideration should be given to streamlining these courses, and found that training programmes, and particularly those for the specialty of oral surgery, were becoming longer and more arduous.

The dental profession was exhorted by Hale (1974) to broaden the educational base and clinical training to produce competent oral surgeons. He considered that the oral surgeon must be dentally trained and medically orientated, and that certification by the American Board of Oral Surgery should be a pre-requisite for oral surgeons in that country.

In the Australasian context, the Royal Australian College of Dental Surgeons could be the counterpart of the American Board, with the Advanced Diploma in Oral Surgery a requirement for specialist oral surgeons in Australasia.

According to Cooper (1973), medical schools have abandoned the notion of producing a plenipotentiary individual capable of differentiating into any of the broad spectrum of careers available to the physician, and the student now enters a narrower programme as soon as he has decided on his ultimate career.

This concept, if applied to oral surgery, supports the philosophy of present postgraduate training programmes designed to produce a specialist oral surgeon.

Paynter (1973) and Coady (1973) drew attention to the importance of accreditation of training programmes in the specialty fields on a national basis for the benefit of both the profession and the public.

Fitzpatrick (1965) expressed the view that neither a university Master's degree nor a Dental Fellowship, without a period of specific training, is sufficient to produce an oral surgeon. Fitzpatrick (1965) and Campbell (1971) advocated the apprenticeship system that has been applied in surgical training in the United Kingdom. Fitzpatrick considered that even though oral surgery was a well established dental specialty in Australia, it still lacked total recognition by the medical profession: the specialty had an important role to play in representing dentistry in the medical and surgical fields and highlighting the relevance of the dental profession in an overall health programme.

In deploring the limited approach of some oral surgeons to their specialty, Fitzpatrick considered that they hindered further development of that field of specialisation. He contended that this limited approach resulted from inadequate postgraduate training.

Henning (1969) spoke of the need for specialist registration, and suggested that in view of the small population in Australia, consideration be given to establishing a limited number of postgraduate centres rather than centres in each State. This could afford a simple regulating mechanism for the control of "the face and pattern" of specialisation within dentistry.

Referring to the apparent discrimination against oral surgery by government, Hayward (1971) stated that as a dental specialty where medical training and hospital activities were required, oral surgery often had been misunderstood or overlooked. He further stated that: "... the agencies of government ... that are entrusted with the administration of public funds for health care cannot afford to remain ignorant of the oral surgeons' legal and necessary responsibilities in health services. These agencies must be made aware of the indispensable patient care provided by our specialty." Thoma (1957) also felt that it was important that both the members of allied health professions and the public should be aware of the training that dental graduates received in postgraduate oral surgery courses.

Blum (1973) discovered that oral surgery was perceived differently in different places, and this highlighted the need for standardised accredited training programmes on a nationwide basis.

In the United Kingdom, Nairn (1969) welcomed the establishment of specialties in dentistry and stated that specialists should possess qualifications equivalent to those demanded by specialty boards in the United States.

Jolly (1970) claimed that there was an urgent requirement for improved facilities for the training of oral surgeons, and indicated the need for adequate dental departments in general hospitals to support training programmes.

An objective of central certifying bodies was considered by Walker (1969) to be that of assessing the fitness and competence of candidates by examining their ability to integrate and correlate knowledge, critically analyse data, evaluate clinical and radiographic evidence, and apply principles of diagnosis and treatment. The prime purpose was to protect the public against incompetent practitioners.

The right to obtain a legally acceptable history, and to perform a general physical examination, appeared to Laskin (1972) to be the main reason for the acquisition of a medical qualification in addition to the dental degree. Laskin was concerned at the consequent waste of training resources and the possibly inadequate training time devoted to experience in clinical oral surgery. Without obtaining a medical degree, it seemed that the oral surgeon was being trained adequately. All that seemed necessary was for the performance of general medical histories and physical examinations by oral surgeons without medical degrees to be legally accepted.

Laskin emphasised that there must be constant review of standards and continued efforts to upgrade training, as accomplishments would not be evaluated by formal qualifications so much as by the quality of the service.

Hillenbrand (1967) considered that oral surgery had established its position as an essential health service and its scope should be judged, not by arbitrary definition, but by the education, experience, and competence of the individual practitioner. This attitude was supported by Choukas (1973), who wrote that it was not the degree that was important but the demonstrated competence of the surgeon.

Oral surgery's uniqueness as an area of overlapping interest for the medical and dental professions, where both groups contribute to training, was mentioned by Small (1971). His comment particularly was directed at the management of maxillo-facial trauma. North (1965) emphasised that it was wrong to contend that dentists should be excluded from oral and maxillo-facial surgery, as they had the greatest experience in operating in the mouth.

De Fries (1971) similarly pointed out that the development of dentistry as a profession related to, but separate from, medicine had resulted in the evolution of a surgical specialty known as oral surgery.

The need for dentists of high calibre to receive oral surgery training was raised by Laskin (1969) as a means of maintaining the status of oral surgery as an equal partner in the health team. He claimed that training courses were necessary to graduate surgeons of satisfactory competence.

Todd, et al (1968), Henning (1969), Nairn (1969), Walker (1969), Hayward (1970), Hillenbrand (1973), Paynter (1973) and Hale (1974) referred to the necessity for accreditation of training programmes, while Paynter (1973) claimed that the accreditation of training programmes according to national standards was difficult, if those programmes were assessed by different teams. Apparently, it would be unfortunate if different assessment teams were introduced in Australia and New Zealand. Perhaps it should be mandatory that means be established for ensuring equivalent standards in all programmes, as this seems essential for the complete recognition of the specialty.

Bear (1973) stressed the importance of training programmes and, in particular, the continual evaluation and maintenance of training standards for reasons of performance as well as apparent credibility. He also chided the profession for the discrepancy between what is said to be the practice of oral surgery and what actually is performed in some instances, and emphasised the need for the minimal level of practice to be brought into step with the broader scope of training that was appropriate today.

In this regard, Fitzpatrick (1965) contended that dento-alveolar surgery frequently was misrepresented as specialist oral surgery, whereas this care in fact often could be managed by a general practitioner.

Bear (1973) acknowledged that the quality of training had improved rapidly as a result of vigorous application by teaching staff and the improved calibre of students.

The present situation in Australia and New Zealand is amenable to the inclusion of all components that are essential in an oral surgery programme. Members of the specialty should ensure that the following aspects are included:

1. Adequate training programmes.
2. Postgraduate students of high calibre.
3. High quality teachers.
4. Accreditation of training programmes.
5. Specialty registration.
6. Establishment of dental departments in hospitals.
7. University oversight of training programmes.

Bear (1973) claimed that progress in training programmes had led to a broader philosophy of patient care. Young dentists (presumably the best qualified in the relevant areas of practice) were educated in broader concepts of surgery and to appreciate that the total patient was being treated. Surgeons should be patient-orientated rather than merely technique-minded. Bear considered that enlightened administrators perceived the oral surgeon as a supportive member of the dental profession as well as an integral part of the hospital team. These administrators appreciated the need for specialised educational experiences and recognised the right and obligation of oral surgeons to practise the full scope of oral surgery. He stated that no person who was familiar with progress in the care of the maxillo-facial region would question the major contribution of oral surgeons and their unexcelled ability to manage related problems.

De Fries (1971), when referring particularly to the management of maxillo-facial injuries, indicated the predominant role played by dentists in the development of techniques necessary to restore damaged jaws and facial bones. This contribution related both to the earliest techniques of reducing simple fractures of the mandible, where teeth were used for intermaxillary fixation, and also to current advanced surgical techniques applied to congenital malrelations of the teeth and jaws. In so doing, he drew attention to a number of important facts, viz:

1. Dentistry has developed as a profession related to, but separate from medicine.
2. This has resulted in the evolution of a surgical specialty called oral surgery.
3. As part of its field of activity, this specialty deals with maxillo-facial injuries.
4. In its broad scope, dentistry is a complex medical-surgical specialty.
5. Dental graduates always have been trained in the basic medical sciences.
6. The development of curricula in dental schools has been orientated increasingly towards basic training in clinical medicine, whilst maintaining extensive training in clinical dentistry.
7. The oral surgeon has been a natural evolutionary product of this environment.

It is interesting to note, when considering the term oral and maxillo-facial surgeon, that Abrahams (1969) reported that this term was used by the Medical and Dental Council in South Africa

when it established the specialty. The Council described the field as a specialty of dentistry and confined the use of the title to dentists.

Levant (1971) mentioned that in a properly organised unit composed of oral surgeons, plastic surgeons and other relevant medical specialists, oral surgeons played a major role in the management of facial skeletal injuries.

In Britain, according to Fickling (1972), almost every district general hospital had a competent oral surgeon. The disadvantages of an inadequate concentration of expertise were highlighted, and he advocated the concept of maxillo-facial centres for Australia coupled with the continued use of air ambulances in view of large sparsely populated regions. With regard to the team approach, Fickling mentioned associated problems of interpersonal relationships, but claimed that this approach enabled a concentration of skills with resultant advantages in the quality of care. He claimed that harmony often required the presence of an outstanding leader.

It seems that such a leader would need to be clinically competent and furthermore appreciate that all members of the team have important responsibilities and should be accorded equal status.

Hanlon (1968) drew attention to the competition which existed between some specialists interested in their own influence and empire building within the hospital environment, while Wolfort and Hoopes (1974) emphasised the need for broad co-operation and frequent consultation on an amicable basis to improve the quality of care in the treatment of facial fractures.

Glass (1970) cited professional jealousy as one of the reasons for disharmony in surgical teams, and stated that the "jack of all trades" must be unceremoniously removed so that the combined skills of specialists can be exercised and the best results obtained.

Fickling (1972) mentioned that Sir William Arbuthnot Lane, the renowned British surgeon, realised that to achieve the best results in facial surgery, the team approach was necessary.

Glass (1970) conceived of a special surgical centre staffed by members of three specialties, that is, plastic, dental and maxillo-facial, and ophthalmic surgeons. He stated that "The distribution of the work has been evolved over the last twenty-five years and has now reached a high degree of co-ordination." The responsibilities of each specialised unit were outlined as follows:

Plastic and reconstructive surgery unit

1. General plastic and reconstructive surgery.
2. The treatment of burns.
3. The repair of soft tissue deformities associated with cleft lips and palates.
4. The provision of bone grafts for these patients.
5. The treatment of cranio-facial deformities affecting soft tissues.
6. The treatment of maxillo-facial injuries related to soft tissues.

Dental and maxillo-facial unit

1. The management of maxillo-facial injuries affecting the bony skeleton of the face.
2. The provision of oral surgery.
3. Orthodontic care for patients with clefts of the lip and palate.

4. Dental surgery associated with oral surgery, and that dental care relevant to the care of "high speed" injuries in children.
5. Orthodontic care related to the long-term rehabilitation of cranio-facial deformities.

Corneoplastic surgery unit

1. The treatment of pathology of the eye.
2. The provision of corneal grafts.
3. The care of cranio-facial deformities affecting the eyes.
4. The provision of odonto-kerato-protheses in close conjunction with the dental unit.

It seems obvious that many patients need the skills of more than one specialty, and Glass (1970) emphasised the necessity for multi-disciplinary treatment planning, and stressed that "... the most important consideration is complete co-ordination among departments with free discussion on procedures and searching enquiries into failures."

De Fries (1971), writing on the medical aspects of the management of maxillo-facial injuries, stated that plastic surgeons have had to deal with many anatomical areas and although they have concentrated their training and skills heavily in the maxillo-facial area, they cannot be considered complete specialists in maxillo-facial surgery.

De Fries regarded the oral surgeon as pre-eminent in managing injuries where there were derangements of the teeth and jaws. The oral surgeon's knowledge of dental occlusion, dental and bone pathology, and reconstruction of the dental arch by prosthesis was considered to be unsurpassed, but while his knowledge of the anatomy of the surrounding

structures of the face and mouth seemed detailed, De Fries felt that it did not exceed that of the otolaryngologist or plastic surgeon.

With regard to the specialty of otolaryngology, De Fries believed that these specialists were competent in the surgery of cancers of the head and neck and plastic surgery, and also were interested in maxillo-facial surgery.

In his opinion a fourth group, namely ophthalmologists, were becoming increasingly interested in the management of orbital injuries and were pursuing this interest independently.

Even though individual specialist groups possessed unique skills, De Fries asserted that their talents overlapped, and this predisposed to competition for control of the patient, which frequently undermined the quality of care. The basis for distributing responsibilities should be the patients' needs and the respective skills of specialists rather than a struggle for power amongst health providers. De Fries stated, "All too frequently, pettiness, obliquity, pride, ignorance and downright prejudice combine to obscure the real need, the need to provide to the patient all of those skills which are available to restore him to health."

When looking to the future, he asked the question, "... would it not be better to fully train someone known as a maxillo-facial surgeon?", and he posed these queries:

1. Is the oral surgeon really competent to perform major surgery under general anaesthesia, utilising blood transfusions and repairing wounds, and also to administer antibiotics and other potent drugs which can affect the metabolism of the entire body?

2. Can the oral surgeon recognise subtle impending complications affecting areas outside his sphere?
3. Does the oral surgeon understand the significance of the patient's past medical history or physical findings?
4. Should a non-physician administer intravenous fluids, and regulate and evaluate a patient's fluid and electrolyte balance?
5. Should oral surgeons be grafting tissue?

De Fries considered that answers should be relevant to the existing skills of oral surgeons, viz:

1. Oral surgeons are performing these services without apparent detriment to the patient.
2. No evidence has been produced proving that maxillo-facial injuries, which have been managed by oral surgeons, have fared worse than those treated by physicians.

De Fries cited the following reasons for the impressive depth of medical knowledge apparent in oral surgery residents, who had rotated through his hospital, viz:

1. By virtue of his training, the oral surgeon has vastly increased his knowledge of general clinical medicine above that of the graduate dentist.
2. The oral surgeon seeks out expert medical advice early in the management of his patients in order to prevent difficulties before they arise.
3. If systemic complications do develop, these usually are managed by the physician best qualified to do so, but oral surgeons become familiar with general aspects of this care through their participation in the immediate health team.

In summation, De Fries asked these pointed questions:

"Is this not the essence of modern medicine? With the increasing emphasis on multispecialty group practice, on institutional medicine, as practised in our military hospitals and civilian medical teaching centres, is it not true that the entire group of specialists becomes the patient's physician? Isn't it true that current plans for medical education call for earlier specialisation of the physician, with less training for the specialist in other fields of medicine? And has this development not been brought about by the simple fact that such vast quantities of knowledge have been amassed within individual specialties, that mastery of the specialty itself leaves one somewhat remote from his medical origins? Under these circumstances, perhaps those questions concerning the oral surgeon might be asked of all specialists."

He considered that otolaryngologists and plastic surgeons were not sufficiently trained to be maxillo-facial surgeons as some formal dental training was necessary.

After these statements, it seems surprising that De Fries advocated the production of a specific medical specialist, that is, the maxillo-facial surgeon. This proposal seems inconsistent with his attitude that oral surgeons without medical degrees were competent and that medical specialists became remote and no longer familiar with general medicine.

As far as Australia and New Zealand are concerned, the author considers that it would seem more appropriate to develop the present training programmes for oral surgeons to encompass all relevant areas, and to foster the approach of the multidisciplinary team when indicated.

In conclusion, De Fries offered this advice: "... each of us should keep an open mind; our competition should be friendly. We must strive to be reasonable men of good will. We must remember that it is the patient, not ourselves, who should benefit. If we remember this our controversy will be meaningful."

Hillenbrand (1971) reported that at meetings on oral surgery between representatives of the American Dental Association and the American Medical Association in the early 1950's, it was recognised that precise and acceptable definitions of the scope of surgical specialties were not possible - a position which both the American Medical Association and the American College of Surgeons have continued to support subsequently.

In its September-October Bulletin in 1965, the American College of Surgeons (Administrative Director - North) published a statement on "Oral Surgery in Hospitals", which described the essential collaboration required between surgical specialties for the treatment of facial injuries. The important contributions of oral surgeons in the surgical team were highlighted.

With regard to training, Fickling (1972) stressed the importance of main centres with sufficient patients to provide trainees with an adequate quantity and scope of material. Some diversity in teaching centres was necessary for different approaches and technological progress.

At the time of writing, Hayward (1970) mentioned that there were 158 accredited training programmes in the United States and that trainees should be certified by the American Board. The Board

would assess the trained oral surgeons against established standards and so consider their eligibility for certification.

Todd et al. (1968) endorsed specialist registration as a means of regulating the qualifications of those in specialist practice. They stated that with the enormous expansion in medical and scientific knowledge during the past thirty years, there have been demands for new content in training programmes, but no increase in the time allotment. This, they considered, had caused such congestion in medical courses that the quality of training had become questionable.

They also emphasised that the undergraduate course in medicine should not aim to produce a fully competent doctor so much as an educated graduate, whose competence would develop with subsequent postgraduate training.

These views were supported by a Royal Commission. They raise doubts concerning the value of a basic medical course to an oral surgeon, who has graduated from dentistry and can be regarded as an educated graduate. By simply obtaining a medical qualification and not proceeding with medicine subsequently, the oral surgeon does not become fully medically competent in the terms of the Commission's report.

The Commission pointed to the differences between the present pattern of medical care and the likely development of vocational specialties. Each specialty would require particular skills and training and be associated with a level of esteem relevant to its role in the health system.

It seems that a similar view should be adopted for vocational specialties that are not medically based. Each should have its own training requirements for the acquisition of relevant skills, and in that regard, dentistry could be considered a prime example.

Allred et al. (1972) considered that " ... the future dentist should receive the same expanded basic education as the future medical practitioner ... both require the same broad foundation."

When considering the value of investments in training, the report of the Chief Medical Officer of the Department of Health (1972) regarding the British National Health Service, is relevant, viz:

1. Barely one consultant in forty was under the age of thirty five years.
2. The average age of appointment to the grade was over thirty seven years.
3. Almost half the Senior Registrars were aged thirty five years or more.
4. Even amongst Registrars, two thirds were over thirty years of age.

He claimed that the profession and hospital authorities needed to redress a system which was wasting resources in training and the overall preparation for various careers.

When considering the training of surgeons, the International Federation of Surgical Colleges posed a number of queries regarding the need for conventional medical education for intending surgical specialists (Wells 1966), viz:

1. Is it reasonable to expect every medical student to master and satisfy the examiners in approximately 20 separate disciplines?

2. Is it necessary for all medical students to be exposed to every discipline during the clinical component of the course?
3. Is there an earlier stage at which a core educational programme for all medical students could be terminated?
4. If so, would it be possible to arrange subsequent, alternative, broad streams of vocational training in place of the present attempt to make every young doctor a specialist in every subject.

With these points in mind, the following ideas were proposed as relevant to future planning:

1. Young doctors in general and surgeons in particular are retained under tutelage for too many years and finally reach their chosen occupations when they are past their best.
2. Too little attention has been paid to the possibility of pruning the period of medical education at its roots.
3. Much of the detail fed to medical students is forgotten, almost deliberately forgotten, once the relevant examination has been passed.

The report included the proposal that there be a basic science course with subsequent options pertaining to the following:

1. Teaching and research in the basic and paraclinical sciences.
2. General practice and internal medicine.
3. Specific surgical disciplines.

When referring to obstetrics and gynaecology, Gosling (1965) wrote, "The basic question to which we must address ourselves is based on the assumption that we are, in fact, a distinct professional

discipline ... and ... the specialty ... must evolve further during the years ahead. Basically this requires a willingness to experiment with programmes."

Wells (1966) continued, "Only a selective teaching programme for intending obstetricians and gynaecologists can ensure that their precious time in their early, able, formative years is spent to the best advantage. Once wasted upon the cluttering up of their minds with irrelevant and unwanted matter, the opportunity is lost forever."

In the field of oral surgery, the health professions seem to be presented with a unique opportunity to arrange a system of training that bypasses much of the general medical course and is open to evaluation. In the opinion of Holden (1968) some surgical boards were adopting a "more venturesome and permissive attitude" in their approach to experimentation and innovation in surgical education.

Despite the trend in thinking towards streamlining courses for specialists, Walker (1969) suggested that a medical as well as a dental degree, plus special training, was necessary for the practice of oral surgery.

In Australia, it is evident that training in oral surgery includes:

- (i) the basic dental degree with its incorporated basic science subjects,
- (ii) the advanced training in basic sciences associated with the Fellowship of the Royal Australian College of Dental Surgeons and
- (iii) courses for Master's degrees offered by the universities.

Therefore, there seems an adequate base for experimentation. The establishment of the oral surgery training programme by the Department

of Oral Pathology and Oral Surgery of The University of Adelaide with the co-operation of departmental heads of various clinics of the Royal Adelaide Hospital seems a significant development which could lead to a satisfactory and streamlined course for oral surgeons. By reducing the time for training, more years are left for the specialist to practise his specialty. The course leads to the qualification of Diploma at an Advanced Level in Oral Surgery.

It is interesting to note that in the United Kingdom, the obstetricians and gynaecologists have established their own independent Royal College. McClure Browne (1963) wrote, it is "... difficult to see the justification for the obstetrician and gynaecologist to be a general surgeon as well."

With the establishment of the Royal Australian College of Dental Surgeons and its Fellowship and Advanced Diploma in Oral Surgery, there seems no need for oral surgeons of the future to be medically qualified.

Government, the medical profession and hospital boards could view this training as a fore-runner of similarly-styled courses for other surgical specialties.

Scott (1961) claimed that the development of specialisation has been of incalculable value to the acquisition of existing surgical knowledge and skills, although various specialty Boards varied greatly in their official concepts of graduate surgical education.

He stated that experience in general surgery was of paramount importance in the education of surgical specialists, and therefore any individual selecting a career in general surgery or a related specialty should receive a fundamental grounding in the principles of surgical care.

Chase (1971) expounded the view that not only was there an overlap of interest of specialists in the care of patients, but similar overlaps applied to training also. Therefore, collaboration between separate training programmes for specialists was essential.

He considered that the various surgical specialties should recognise that they require, as a surgical basis, knowledge in such topics as:

1. Wound healing.
2. Bleeding and clotting.
3. Shock.
4. Responses to injury.
5. Surgical nutrition and metabolism.
6. Surgical endocrinology.
7. Surgical anatomy.
8. Infections and antibiotics.
9. Anaesthesia and respiratory care.
10. Psychological problems common in surgical patients.
11. Common surgical complications.
12. Clinical pharmacology.
13. Resuscitation.
14. Surgical neurophysiology (e.g., evaluation and relief of pain).

This seems to satisfy the requirements for fundamental grounding in the principles of surgical care outlined by Scott (1961) and should be incorporated into training programmes for oral surgeons.

B. Training programmes for oral surgeons.

1. Undergraduate training.

Before proceeding with a review of postgraduate training in oral surgery, it seems relevant to consider the scope of undergraduate teaching.

Subsequent to a workshop on the principles of undergraduate education in oral surgery, Hale (1966) concluded that this education should provide skills to perform the following:

1. Diagnose disease and provide surgical management, but appreciate the relevant needs for referral.
2. Administer local anaesthetics effectively and safely.
3. Select and administer pre- and post- operative medications effectively and safely.
4. Employ basic surgical skills judiciously and understand how each instrument should be used to the best advantage.
5. Prevent and manage syncope, early shock and other potential emergencies.
6. Evaluate the potential difficulty of an extraction, and gain a high degree of proficiency in uncomplicated extractions.
7. Remove fractured or retained roots from the alveolus.
8. Perform alveoloplasties but recognise those cases to refer.
9. Treat periapical pathologies and similar conditions of the alveolar process surgically.
10. Incise and maintain drainage for intraoral abscesses; and treat or refer other infections.
11. Biopsy suspected lesions or neoplasms, and submit surgical specimens for microscopic study.

12. Recognise the need for adequate post-surgical care, and provide this care when indicated.
13. Perform apical and gingival surgery.
14. Treat haemorrhage from bone and soft tissue.
15. Conform to established procedures in operating theatres and hospitals.

The undergraduate also should acquire a knowledge of oral surgery problems that may extend beyond his ability; for example, the treatment of facial trauma, neoplasms, severe infections, and congenital and acquired deformities of the jaws. It is basic that the dentist be competent to diagnose and refer for treatment those conditions that are beyond his scope. The student should be introduced to the art of maintaining patient rapport when seeking consultation with a specialist.

These views conform with the content of undergraduate courses in Britain, as described by Seward et al. (1973). The content of courses usually is the responsibility of the professor or head of a department in a particular school, and so the courses vary.

From personal experience in oral surgery departments in The Universities of Queensland and Adelaide, the author considers that variations occur for similar reasons in Australia.

2. Postgraduate training.

2.1 United Kingdom

In a personal communication, Rayne (1974) stated that neither the General Medical Council nor the General Dental Council maintains a

register of specialists. A specialist is recognised because his training and postgraduate qualifications (awarded by a University or by one of the Royal Colleges) indicate that he is an expert, but there are no legal restrictions confining him to a normally-accepted range of practice.

Most surgeons are consultants at a State hospital, and this role may be full-time or combined with private practice. The consultant role adds credibility to the specialist. Therefore, the aim of the newly qualified doctor or dentist, who elects to specialise, usually is to become a consultant. This might be difficult since the number of consultant posts is limited by the service requirements of the State and there is considerable competition. Some individuals who have fulfilled the "training requirements" for a specialty, do not achieve consultant status and return to general practice.

In Britain, it appears that there is no recognised position of Consultant Oral Surgeon, but rather that of Consultant Dental Surgeon. This confuses the task of defining the appropriate type and scope of training. It seems that there is a tendency to demand an "all-round" dental specialist, which Rowe (1973) termed a "Superdent". This situation does not appear consistent with the most economical use of training resources, particularly when associated with training directed at dual medical and dental qualifications.

No specific oral surgery training programme as such seems to exist in Britain. The Joint Committee for Higher Training in Dentistry (1972) envisaged (though it could not presuppose) a situation in which consultant appointments would apply to three branches of

dentistry with three separate training programmes, viz:

1. Oral Surgery and Oral Medicine.
2. Orthodontics.
3. Restorative Dentistry (including Conservative Dentistry, Periodontology and Prosthetic Dentistry).

In 1973, this committee suggested that in general it should become the aim of those who wished to obtain a consultant appointment in the British Isles or Ireland to do so by fulfilling a training programme approved for certification. Training programmes had been devised in oral surgery and oral medicine, and it was recommended that a specialist advisory committee be instituted that would:

1. Recommend appropriate programmes in general terms for higher training.
2. Regularly assess training programmes.
3. Recommend certification of candidates, who had fulfilled satisfactory training requirements.
4. Submit recommendations for change in training programmes.

In general, it was suggested that a broad training in dentistry follow the basic dental training, and then that candidates enter an approved post-fellowship training period. It was recommended that the post-fellowship training for the Consultant Dental Surgeon in oral surgery and oral medicine extend for four years to include the following:

1. The role of Senior Registrar, or its equivalent, for at least three years, with one of these years in an approved overseas institution.

2. Clinical training in:
 - (a) routine oral surgery.
 - (b) oral medicine, including pathology, microbiology, immunology, therapeutics and related disciplines.
 - (c) maxillo-facial injuries and major elective oral surgery.
3. Linked appointments in general hospitals, specialised units and dental teaching institutions.

The proposals of this Committee apparently have not been implemented. Rayne (1974) did not refer to the post of specialist oral surgeon, but used the term consultant, and stated that it was necessary for a consultant to possess the Fellowship in Dental Surgery of one of the Royal Colleges of Surgeons and to occupy a post in the Senior Registrar grade for at least three years.

Seward et al. (1973) concluded that the dental consultant should:

1. Be a broadly educated and widely experienced clinician and diagnostician.
2. Hold the appropriate higher dental qualification and have spent the requisite time in approved training appointments.
3. Be a registered medical practitioner, because the physical state of an increasing number of patients is such that a decision on their correct management requires a detailed appreciation of problems outside the normal scope of dentistry.

With the advent of specialisation in other fields of dentistry such as prosthodontics, periodontics and crown and bridge, it does seem that complete proficiency at the specialist level in all fields is not possible. Training aimed at developing an "all-round" specialist

could lead to a highly competent generalist with skills that were not developed fully in any one specialty. This surely contradicts the basic premise of specialisation. It would be necessary for the specialist to possess an understanding of the scope of general practice and the skills of those in other specialties. This knowledge would follow from undergraduate training and subsequent general practice.

The case for dual medical and dental qualifications, together with "specialty" standard in periodontics, prosthetics, advanced restorative treatments and the construction of appliances, would be similar to a case that consultants also should be competent specialists in plastic surgery, otorhinolaryngology and even ophthalmology.

According to Seward et al. (1973), a potential consultant who has completed his training should ideally have acquired an adequate degree of competence in the following:

1. Medicine and surgery in general and the related aspects of pathology, microbiology, pharmacology, biochemistry and genetics.
2. Oral diagnosis, oral medicine and therapeutics.
3. Minor oral surgery.
4. Restorative dentistry, including:
 - (a) the management of patients experiencing difficulty with dentures.
 - (b) the construction of obturators, skull-plates and other surgical prostheses.
 - (c) the assessment of the relative indications for the use of advanced restorative treatments and appliances.

- (d) the diagnosis and treatment of common periodontal conditions.
- 5. Management of maxillo-facial injuries.
- 6. Major oral surgery including surgery related to jaw deformity, the resection and reconstruction of the jaws and the surgery of the salivary glands.
- 7. Applied statistics.
- 8. Research and teaching.
- 9. Administration, management and jurisprudence.

There are, it would seem, two methods of producing a Consultant Dental Surgeon in the United Kingdom, one catering for the dentally qualified trainee and the other for the dentally and medically qualified trainee.

The sequence of appointments for each of these categories is as follows:

- 1. For the dentally qualified trainee:
 - (a) six months as a non-resident House Surgeon.
 - (b) six months as a resident House Surgeon.
 - (c) one year as a Senior House Officer (Primary Fellowship in Dental Surgery - F.D.S.).
 - (d) two years as a Registrar (Final F.D.S.). This would provide general experience.
 - (e) four years as a Senior Registrar, which would offer specialist training.
- 2. For the dentally and medically qualified trainee:
 - (a) one year prior to medical registration with a house appointment.

- (b) two and a half years as a House Officer, Senior House Officer and Registrar with a dental appointment (Final F.D.S.). This would constitute the period of general experience.
- (c) four years as a Senior Registrar, which would offer specialist training.

There is no mention in the latter programme of the Primary F.D.S. If the possession of a medical qualification exempts the candidate from the primary examination, an anomaly is apparent when compared to the system of progression for a medical graduate to the general surgical fellowship.

Also, it would seem that if the personnel involved in selection committees for Senior Registrar posts have both dental and medical qualifications, then it is not inconceivable that there could exist a situation of self-perpetuating discrimination against applicants without a medical degree, who might not receive serious consideration.

2.2 United States of America

It seems that training in oral surgery in the United States developed separately from medicine, because of the earlier recognition of specialisation in dentistry and the need to provide a system of preparation and recognition in the specialties (Hillenbrand 1973).

Hayward (1961) reported that medicine and dentistry became separate professions about one hundred and fifty years ago, and oral surgery evolved as a dental specialty. This specialty afforded a close communicating link between the two groups. Although oral surgery was the first of the specialties of dentistry, a formal education programme for the training of graduates is only about fifty years old.

Currently in the United States, there are many institutions that provide training in oral surgery. The American Society of Oral Surgeons has endorsed a document on standards entitled "Essentials of an Advanced Educational Program in Oral Surgery." This document provides standards that are considered appropriate for the training of oral surgery trainees.

In addition, a document named "Guidelines for Biomedical Science Education in Oral Surgery" has been produced by the Council on Dental Education to assist hospitals to develop oral surgery training programmes which incorporate instruction in biomedical science.

As these documents are regarded as authoritative, they now will be quoted.

2.2.1 "Essentials of an Advanced Educational Program in Oral Surgery"

I. "Introduction"

It is essential that all institutions participating in the education of oral surgeons meet the fundamental requirements to be described. The specialty education program should be designed to provide advanced knowledge and skills. The institutions may provide the educational opportunities either alone or in collaboration, but a comparable quality of training and amount of experience must be assured in all instances. Programs should adhere to the fundamental concepts and basic principles of advanced education. They must not only prepare the student for the practice of the specialty, but also provide the foundation for the continued acquisition of new knowledge and skills, for teaching and for clinical investigation. Such

education involves the discipline of the mind to resolve problems by critical selection of relevant facts, constructive thought, and imagination. It is essential, therefore, that the programs emphasize fundamentals as well as specific techniques and that the educational process be directed toward the reinforcement of efficient learning habits.

II. General Requirements

a) The dental service of a hospital conducting an advanced educational program in oral surgery must be approved by the Council on Hospital Dental Service, and the oral surgery program must be accredited by the Council on Dental Education of the American Dental Association for a specific number of trainees. The number for which a program will be accredited is based on the adequacy of the annual inpatient and outpatient census.

b) Size and Type

Satisfactory training is possible in hospitals of variable size and type. It is essential to have sufficient clinical patients to offer a diversity of experience in understanding the management of oral surgical problems. The number of service or ward beds, rather than the total bed capacity, is often of greatest significance for achieving training objectives.

Programs conducted in hospitals associated with dental and medical schools can offer ideal facilities for a progressively graded comprehensive education. Hospitals not directly associated with a professional school also can organize programs of advanced study

which comply with all of the requirements of the Council on Dental Education. Hospitals of this type may supplement their educational program through affiliation with dental, medical, and graduate schools, or with other teaching hospitals which are able to augment the trainee's experience in those phases that might otherwise be lacking.

All approved programs must provide a complete three-year sequence of progressive experience under a single responsible director.

c) Staff

A well-organized and qualified staff is one of the most important requisites. The teacher develops character in his students which is a reflection of himself, and only through the careful selection of teachers, can high professional standards be assured. Continuing education must be stressed by the teacher whose progressive intellectual growth and creative attitude transfers the spirit of learning to the student.

The oral surgery staff should consist of well qualified, experienced, and proficient individuals who primarily confine their professional endeavour to this specialty. The major portion of the clinical training must be under the authority and supervision of an oral surgeon certified by the American Board of Oral Surgery or its foreign equivalent. The other members of the clinical oral surgical staff involved in the educational program must be recognized specialists in oral surgery as defined by the American Dental Association. Members of the staff should have high professional standing, evidence of

scholarly activity, and possess the attributes of a teacher. They should be selected on the basis of intellectual ability, clinical aptitude, and teaching interest.

d) *Clinical Supervision*

The effectiveness of the oral surgery education depends largely on the quality of its organization and supervision. The department offering an advanced program should have a staff of sufficient size to provide careful student guidance. Merely providing clinical material and facilities does not compensate for an overburdened staff which is unable to devote the time required to direct the thinking, and develop the judgement and ability of the trainee.

It is imperative that the person responsible for the clinical oral surgery training maintain direct and close supervision of the program. The hospital administration must grant him a position, having the authority commensurate with this responsibility. Preferably the program director should be a full-time staff member. Other qualified staff members should be assigned specific duties insofar as teaching and supervision of surgery are concerned. Supervision by the teaching staff is required during complex cases in the clinic and in the operating room.

e) *Outpatient Department and Emergency Service*

Since a large portion of the practice of oral surgery is performed on ambulatory patients, the activities of the outpatient department provide an essential part of the educational program. This clinic must have the necessary physical facilities for the

performance of the usual oral surgical procedures. It also must provide an adequate number and variety of oral surgery patients. The trainee should be assigned to scheduled clinics which are integrated with the activities of the inpatient service.

Operation of the outpatient clinic should not be delegated entirely to the house staff. The educational value of this activity is largely dependent upon the interest and participation of the teaching staff. At least one staff member should be available at all times to supervise and instruct in the outpatient clinic.

The emergency service also provides a very important aspect of oral surgery education. The management of traumatic conditions involving the oral and facial structures is a large part of oral surgery practice. An educational program which does not offer this aspect of training would be unacceptable. A member of the oral surgery house staff should be available at all times so that he may be called to make the differential diagnosis, render emergency treatment, and assume the major responsibility for the care of injuries to the mouth, circum-oral structures, mandible, maxilla, and zygomatic complex. A member of the oral surgery attending staff also must be available for supervision and teaching in the care of such cases. Without competent supervision and guidance, the teaching value of the emergency service is restricted and the best patient care is not attained.

f) *Collaborating Intramural Services*

Integrated activity with other departments and surgical services is a significant adjunct to clinical education. The principles of good surgery are not confined to any one specialty and can be attained

best by a definite plan of selective participation in other surgical services and departments of the hospital. These may include such specialty areas as general, plastic and orthopaedic surgery, otolaryngology, medicine, pathology and radiology. Contact with these disciplines helps to correlate oral disease with systemic diseases and the problems of total patient care. The collaborating services must understand the objectives of oral surgical education and provide a planned program of appropriate experiences. Except for anaesthesiology, it is recommended that no more than three months in any one year of the three-year program be assigned to rotations on related services.

g) Records

The records kept by the oral surgery department must be sufficiently comprehensive for teaching purposes. Although the ultimate responsibility for the completed record lies with the staff member in charge, responsibility for the preparation of parts of the record should be delegated to the house staff. These include the history and physical examination, preoperative and postoperative orders, progress notes, description of the surgical procedures and discharge summary. Records should conform to requirements of the hospital's records committee and be sufficiently detailed in description of the oral pathology and the appropriate therapy.

h) Library

Adequate library facilities with appropriate dental and medical journals, text, and reference books must be readily available to the house staff. The ability to read the literature critically

should be developed early in the educational program. The program should, therefore, include a method for providing formal library assignments for the house staff.

i) *Seminars and Conferences*

Departmental seminars, attended and directed by a participating member of the teaching staff, must be conducted on a weekly basis to augment the clinical and biomedical science program. Various topics related to oral surgery and patient management should be assigned for the trainee to develop reports or act as a discussion leader. Another essential learning exercise is the clinical conference for the presentation of data pertaining to the diagnosis and treatment of interesting cases. Such conferences permit the correlation of the biomedical sciences with clinical practice and provide stimulating discussion between the attending and house staffs.

The journal club is an excellent means of creating interest in scientific literature and teaching the ability to read critically. In smaller institutions, the journal club may be conducted as a joint activity with allied departments.

As the oral surgery house staff rotates through other departments of the hospital, they should also participate in the teaching activities of that service. In addition, they should attend and participate in all of the coordinated general teaching activities of the hospital, such as clinical-pathological conferences, tumour boards, staff meetings, and medical and surgical rounds.

III. Specific Requirements

a) Duration of Training

A minimum of 36 months of advanced education in a program approved by the Council on Dental Education of the American Dental Association is necessary for the training of a specialist in the field of oral surgery. This period of education shall include a progressively graduated sequence of clinical and hospital experiences into which the comprehensive study of the basic biomedical sciences as they relate to oral surgery is integrated.

b) Organization of Program

Ideally, an advanced education program should be offered entirely at one institution. While this may not be feasible in some institutions at the present time, it should be their ultimate goal. In the interim, this objective may be approached by affiliation with another institution having complementary resources.

To be acceptable, no more than one of the three years should be offered at an affiliated hospital. Moreover, programs utilizing affiliations must be under the over-all supervision of a single director from the designated parent institution. The specific level of study at each institution must be clearly delineated in order to prevent repetition and to provide continuity of clinical and didactic instruction. Only in this way is the trainee assured of an adequate education during which he is given progressively graded experience and responsibility.

c) Short-Term Affiliations

Many hospitals have excellent facilities and clinical material for the greatest part of an approved three-year program, but are

deficient in some particular phase of activity that can be provided in another teaching hospital. These hospitals may also collaborate with a second institution to provide a well-rounded and complete program. Such short-term services (6 months or less) in affiliated institutions, and within the confines of a specifically designated year, need not be approved independently. However, their contribution is considered and recognized when evaluating the over-all program.

d) *Scope of Clinical Experience*

Advanced education in oral surgery must offer the opportunity for increasing diagnostic ability and the development of surgical judgement and skill within the scope of the field as defined by the American Dental Association. It should also offer some experience in closely related medical and surgical areas so as to provide the trainee with an understanding of total patient care. It is particularly important that the trainee be given meaningful practice in physical diagnosis.

The clinical material should be of sufficient quantity and variety to provide a broad surgical experience. Among the procedures performed by the trainee, but not limited to these, must be such operations as removal of teeth, corrective hard and soft tissue surgery, biopsy and excision of lesions, open and closed reduction of fractures of the mandible, maxilla, and zygomatic complex, condylectomy, arthroplasty of the temporomandibular joint, intra- and extra oral incision and drainage of odontogenic infections, sequestrectomy and saucerization

of osteomyelitis, sialolithotomy, peripheral neurectomy, closure of oro-antral and oro-nasal fistulas, and the surgical correction of congenital, developmental, and acquired deformities of the mouth and jaw regions. Experience should also be provided in the use of general anesthesia for ambulatory patients and extraoral local anesthetic block techniques.

Under ordinary circumstances, the support of an oral surgery training program requires a minimal annual admission census of approximately 1500 outpatients for each trainee in the first and second year and 100 inpatients for each trainee in the third year. At least 45 of the latter cases must be of a major nature. This generally excludes such procedures as odontectomy and other forms of dentoalveolar surgery, incisional biopsies, closed reduction of uncomplicated fractures and minor forms of preprosthetic surgery.

In hospital where beds are allocated to specific services, it is recommended that the oral surgery department should have an assignment of a minimum of four service beds per third-year resident. In hospitals where beds are unassigned, there must be adequate availability to provide for the recommended number of patient admissions.

The program should be organized so that the house staff will hold positions of increasing responsibility for the care and management of patients. Instruction in surgical technique must be sufficient to enable residents to undertake operations under supervision, and to acquire the skill and judgement ultimately necessary to reach full responsibility for the procedures. Quantity of material cannot substitute for competent teaching. If the patients available are utilized

efficiently for teaching purposes, the volume may be at a reasonable minimum and still provide for an effective training program.

e) *Biomedical Science Education*

Competence in clinical oral surgery requires a knowledge of the biomedical sciences. Such knowledge may be acquired through instruction of an applied nature closely integrated with the clinical experiences of the trainee as well as through the use of some formal didactic courses. Regardless of the method of acquisition, the biomedical science education must be on an advanced level stressing practical application to oral surgery. The educational concepts and suggested curriculum are outlined in the 'Proceedings of the Fourth Conference on Graduate Education in Oral Surgery', American Society of Oral Surgeons, 1961, and in the 'Guidelines for Biomedical Science Education in Oral Surgery'. It is recommended that these guides be used to develop the material to be included in the several biomedical science areas.

Depending upon the philosophy of the director of the educational program, the facilities of the institution, and the availability of resources to the trainee, the biomedical science program is usually presented in one of the following ways:

1. A series of formal courses integrated within a complete three-year program offered at a university affiliated institution.
2. Teaching of the biomedical sciences, concurrent with patient management, by a competent hospital staff. The time devoted to such informal teaching must be equivalent to that provided in a structured program. The objectives and content of such programs should

be carefully planned by the director to avoid both deficiencies and unnecessary repetition.

The biomedical science education for oral surgery must provide knowledge in:

1. Surgical Anatomy
2. General, Oral, and Clinical Pathology
3. Pharmacology and Therapeutics
4. Physiology
5. Microbiology

It is assumed that certain disciplines which are closely allied to these biological sciences will be taught concurrently. Among these are local and general anesthesiology, physical diagnosis, roentgenology, and diagnostic clinical laboratory procedures. Such other related subjects as may be deemed appropriate by the program director for the training in oral surgery also may be included. Cognate courses in the behavioural sciences that help provide the student with a better understanding of the principles of human conduct and the influences of environmental factors also may be worthy of inclusion in the educational program.

f) Anesthesiology

The utilization of general anesthesia as an integral part of office oral surgery practice is so widespread and universally accepted that the subject requires special consideration in the requirements for an adequate oral surgery education. No program can be considered complete without adequate training and experience in this area. The ultimate goals in the teaching of anesthesiology are:

1. To equip the oral surgeon to evaluate his patient adequately and effectively as a physiologic risk for the administration of a general anesthetic.
2. To provide a full understanding of the anatomy and physiology of the respiratory, circulatory, and nervous systems and their responses to the various pharmacologic agents used in preoperative medication, general anesthesia, and pain control.
3. To develop the oral surgeon's technical skill in the administration of anesthetic agents and related drugs.
4. To enable the oral surgeon to become thoroughly proficient in the maintenance of respiration and circulation, in establishment of an immediate airway, and in emergency care and resuscitation.

The period of time required to attain clinical proficiency in this area will vary in accordance with facilities, teaching staff, and patient load. Three to six months should be devoted exclusively to the learning of anesthesiology in the operating room. During this time, the trainee should be completely committed to the anesthesiology service to permit his active participation in all of the departmental teaching and clinical sessions. This experience must be under the supervision of an anesthesiologist. Following the rotation period in the Department of Anesthesiology, the trainee must be given additional experience in the administration of general anesthesia for ambulatory patients under the supervision of members of the oral surgery attending staff at least one-half day per week during the remainder of the program. This arrangement will afford the trainee the necessary clinical and didactic experience in anesthesiology recommended by the Council on Dental Education.

g) *Clinical Oral Surgery Training*

Clinical training during the first year should emphasize participation in hospital routine and should provide a broad scope of clinical experience correlating oral disease with systemic diseases. During this period the trainee also must learn the basic principles of surgery and develop his technical skills by performing clinical procedures in the outpatient department and by assisting the more advanced trainees and attending staff in the operating room. The program should be conducted at a level which will permit the trainee to increase his knowledge, ability, and skill under careful supervision. A definite schedule of rotation to other services of the hospital for supervised instruction is often a feature of the first year. It is an ideal time for the introduction of training in anesthesiology. Other services may include medicine, surgery, pathology, and roentgenology.

In the second year the trainee should begin to apply his knowledge and skill in a more independent manner. He should be responsible for such duties as the preliminary evaluation of the oral surgical patient, the performance of appropriate laboratory procedures, and the ordinary preoperative and postoperative patient care. He also should be responsible for seeing that proper instruments and materials are available for operative procedures, and should exercise every possible means to insure operating efficiency.

A designated period should be spent in the outpatient department with ample opportunity for performing intraoral surgical procedures and managing diagnostic problems. Experience in administering general

anesthetics for ambulatory patients and learning to operate under such conditions should also be provided. The trainee must be available for emergency-room calls. Working with the more advanced trainees, and under supervision of the attending staff, he may see and treat all forms of emergency oral and maxillofacial trauma.

Periods of rotation on other services of the hospital may be instituted during the second year where such were not attained during the first year of the program. On each of the assigned services there should be a definite outline of duties and responsibilities. In general, the trainee works under the supervision of an attending staff member or a senior house staff member on that service. He may, for example, help in the taking of histories and doing physical examinations, prepare patients for surgery, assist at operations, and follow patients postoperatively. In pathology, the assignment should include the supervised examination of gross and microscopic specimens and participation in autopsy procedures. When possible, the trainee should have the opportunity of examining the surgical specimens from the oral surgery department so that he may learn to correlate the clinical and histopathologic findings.

In the third year, the trainee assumes increased responsibilities. The opportunity for greater clinical and operating-room experience is an important aspect of this period of the program. He should be given ample opportunity to perform a sufficient number and variety of complex oral surgical procedures, particularly in the later stages of his training. On completion of his education, he should be able to assume full responsibility for any major oral surgery problem.

In the third year, the trainee may have teaching responsibilities as his experience increases. This valuable phase of the educational program may include conducting ward rounds, lecturing to nurses, dental and medical students, and supervising the activities of the intern.

All members of the house staff must participate in clinical-pathological conferences, tumour board meetings, surgical and medical grand rounds, and other interdepartmental teaching activities of the hospital. Intellectual curiosity and good reading habits are encouraged by these endeavours and enhanced by the functions of the journal club.

h) Research

The planning and completion of an investigative project greatly enhances the value of an oral surgery training program. The application of research methods and the evaluation of investigative data develop intellectual growth, a creative attitude, a better interpretation of scientific literature, and a desire for continued study. The investigations may take the form of research in the laboratory, review and summary of scientific literature, or the preparation of statistical analyses based on case reports. Intelligent direction and supervision must be provided both in the selection of the project and in its development. The trainee, either individually or in collaboration with other members of the house or attending staff, should be encouraged to prepare a formal paper suitable for publication. In this way he will begin to learn the art of scientific writing, while at the same time make a contribution to the scope of knowledge in oral surgery."

2.2.2 "Guidelines for Biomedical Science Education in Oral Surgery"

"The biomedical science education for oral surgery must provide knowledge in (1) surgical anatomy, (2) general, oral and clinical pathology, (3) pharmacology and therapeutics, (4) physiology, and (5) microbiology. Certain disciplines closely allied to these subjects should be taught concurrently. Among these are local and general anesthesiology, physical diagnosis, roentgenology, and diagnostic clinical laboratory procedures. Other related subjects deemed appropriate by the program director may also be included. The teaching must be on an advanced level, stressing the practical application and correlation with oral surgery. Moreover, it must be supplemented with seminars, journal clubs, library assignments and attendance at pertinent hospital rounds and special clinics.

The proposed program should constitute about one third of the three-year hospital educational period. It can be divided into the following four main areas:

- I. Medical Orientation (one month)*
- II. Surgical Orientation (three months)*
- III. Anesthesiology (three to six months)*
- IV. Pathology (three months)*

The assignments to medicine, surgical and other services of the hospital for educational purposes must be under the supervision of the director of the oral surgery training program. The director of the oral surgery program should have the cooperation of the heads of other hospital departments utilized in the educational program.

I. Medical Orientation

The trainee should have his orientation in medicine early in the educational program since it is upon this experience that much of his remaining education will be based. Approximately one month should be devoted to this assignment. During this time, emphasis should be placed on learning physical evaluation of the patient, the recognition of systemic diseases and in developing an understanding of medical therapeutics. This period of service will also enable the trainee to become oriented to hospital protocol and to develop rapport with the other members of the medical staff.

a) *Physical Evaluation:* The trainee should learn the art of history taking and comprehensive physical examination. He must learn how to evaluate his findings in terms of total patient care as well as in relation to specific oral diseases. During this time, he also should learn the routine of patient admission and discharge, how to write orders and progress notes, and, in general, how to use and maintain the hospital record.

b) *Recognition of Systemic Diseases:* In addition to learning from his observation of patients and from discussion with members of the medical staff, the trainee also should use this time for a comprehensive review of the various organ systems with particular emphasis on cardiovascular, pulmonary, hepatic, renal and endocrine physiology and pathology. This will greatly enhance his ability to recognize systemic disease processes and relate this knowledge to circumstances pertinent to his specialty.

c) *Therapeutics:* The trainee is expected to learn the principles of medical management and the accepted therapeutic agents employed in such care. An excellent opportunity presents itself at this time for the trainee to review the pharmacologic action of many of the drugs that he subsequently will encounter in the treatment of oral surgery patients.

II. *Surgical Orientation*

An orientation to the care of the surgical patient is necessary for the oral surgery trainee. The assumption of responsibility for the oral surgical patient demands a comprehensive working knowledge of the general principles of surgery, surgical anatomy, the various aspects of preoperative, operative and postoperative patient management, and the prevention and treatment of emergencies and complications. The ability to recognize medical and surgical complications is of crucial importance to the oral surgeon in order that he can consult immediately with the appropriate service when such situations occur in his patients.

A rotation on a surgical service, with the trainee functioning at least at the level of a first-year surgical resident, is a helpful method of obtaining a satisfactory orientation in this area.

a) *General Principles of Surgery:* The director of an oral surgery program should assume full responsibility for developing in his trainees an understanding of the principles of surgery. The trainee should learn about aseptic operating procedure, sterilization,

handling of tissues, hemostasis and the care of surgical wounds. He also should learn about preparation of the patient for surgery, and general operating room technique.

b) *Surgical Anatomy:* While considerable anatomy is learned at the operating table, the trainee must also spend adequate times in supervised cadaver dissection of the head, neck and thorax. These dissections should emphasize surgical approaches to specific areas and duplication of various oral surgical procedures rather than classical descriptive anatomy.

c) *General Management of Surgical Patients:* In this aspect of the program, the trainee should learn about preoperative evaluation of surgical risks, corrective treatment of associated medical diseases, and selection of appropriate anesthetic techniques. Maintenance of proper nutrition, various aspects of fluid and electrolyte balance, blood replacement and routine postoperative patient care should also be stressed.

d) *Emergencies and Complications:* Considerable experience in the prevention and treatment of surgical emergencies and complications is essential for the trainee. He should be knowledgeable in the principles involved in the management of shock and hemorrhage, renal, pulmonary and cardiovascular complications as well as other preoperative, operative and postoperative problems. This experience should be supplemented by additional time spent in the hospital emergency room. The

emergency service is an important area for increasing the trainee's basic surgical education. A member of the oral surgery house staff should be on call at all times. The oral surgery attending staff should correlate clinical experiences in the emergency room with principles of patient management and teach the trainee the value of consultation with other services.

III. Anesthesiology

The utilization of local and general anesthesia as an integral part of care for the ambulatory oral surgery patient is so widespread and universally accepted that the subject requires special consideration in the definition of an acceptable oral surgery education. No program can be considered complete without adequate training and experience in this area. The ultimate goals in the teaching of anesthesiology should be:

1. To equip the oral surgeon to adequately and effectively evaluate the physiologic state of the patient prior to the administration of an anesthetic agent.
2. To provide an understanding of the anatomy and physiology of the respiratory, circulatory and nervous systems and their response to the various pharmacologic agents used in preoperative medication, general anesthesia, and pain control.
3. To develop the oral surgeon's technical skill in the administration of anesthetic agents and related drugs.

4. To enable the oral surgeon to become thoroughly proficient in the maintenance of respiration and circulation, immediate establishment of an airway, and emergency care and resuscitation.

The period of time required to attain clinical proficiency in this area will vary in accordance with facilities, teaching staff and patient load. Three to six months should be devoted to the learning of anesthesiology in the operating room. During this time, the trainee should be completely committed to the anesthesiology service to permit his active participation in all of the departmental teaching and clinical sessions. This experience must be under the supervision of an anesthesiologist. Following the rotation period in the Department of Anesthesiology, the trainee must be given additional experience in the administration of local and general anesthetics for ambulatory patients. Qualified members of the oral surgery attending staff should supervise the training in this area.

IV. Pathology

This phase of the educational program should be designed to provide the trainee in oral surgery with knowledge of the various aspects of pathology and their application to the overall treatment and care of the oral surgery patient.

a) Chemistry (Clinical Laboratory Diagnosis): Experience in this area should correlate knowledge of biochemistry and physiology with the application of the various clinical laboratory procedures. While other areas of the training program also will provide such

experience, the clinical laboratory is an excellent starting point for learning how laboratory tests are used as an aid in the diagnosis of disease processes.

b) Hematology: The assignment in this area should help the trainee to develop an understanding of the mechanisms of hemostasis, management of abnormal bleeding problems, and the techniques for testing for significant abnormalities.

c) Histopathology (general and oral): The material presented in this phase of the program is of importance because it is through the understanding of diseases and their progression that rational treatment is planned. While the greatest emphasis should be placed on the regions in which the oral surgeon has the most interest and responsibility, at the same time the trainee's experience in the pathology department also should cover the other regions of the body.

Both gross and microscopic pathology should be reviewed. The histologic diagnosis should be correlated with the history, the radiographic findings, the clinical signs and symptoms, and with the sequelae that might accompany the condition. Considerable knowledge also can be gained from the study of tissues and organs at autopsy. Integration of the findings with the medical history gives the trainee a comprehensive understanding of the pathogenesis of the various systemic diseases. The following areas also should be stressed:

- (1) learning to communicate in the language of the pathologist,
- (2) intelligent recording of the pertinent facts in the clinical record and the accurate transmittal of these facts to the pathologist,
- (3) understanding, evaluating and interpreting the histopathological report and relating this information to specific treatment of the patient. An oral pathologist should participate in this aspect of the program.

d) *Microbiology and Immunology:* While some of this information will be obtained during the rotation on a medical or the infectious disease service, additional knowledge of the subject can be gained by time spent in the microbiology laboratory. Here the trainee can observe the various diagnostic testing procedures and correlate them to the clinical conditions seen in patients, and to problems associated with such things as sterilization, isolation of organisms, resistance to antibiotics and chemotherapeutic agents.

The success of such a hospital oriented type of program will depend upon two factors. First, consideration must be given to the fact that mere assignment on a medical or surgical service does not in itself guarantee a proper education. The time spent on other services must be adequately organized and supervised by competent, interested personnel who understand the needs of the oral surgeon.

Ideally, a full-time chief of oral surgery is invaluable in implementing such a system. Second, the supplemental lectures, seminars and other activities must be planned carefully to cover all areas of patient care with which an oral surgeon needs to be familiar. While such a program may be unstructured or informal in its method of presentation, to be effective it must be structured and formal in its organization. Failure to understand this distinction can be detrimental to the ultimate goal of this approach."

Understandably, there are different attitudes concerning the detailed structure of a training programme. Diverse views frequently prompt debate and stimulate research and efforts to improve on the status quo. Whilst diversity therefore presents advantages, basic elements in oral surgery training are essential and should be mandatory. In this regard, it is interesting to peruse the scheme of training for the specialty of oral surgery, as described by Small (1971):

"Of all Dental School freshmen, 94 per cent hold a baccalaureate degree. Dental School requires four years of study, with the first two years essentially the same as those of Medical School.

Oral surgery training requires another three years of formal training, all hospital oriented, all in the treatment of injuries, diseases, and defects in and about the jaws and face. Six months to one year, as a minimum of this training, is devoted to training in General Anaesthesia. As a measure of competence, it is worthy to point out that there are more general anaesthesia episodes in Dental and Oral Surgery offices and clinics throughout the United States each year than in all the hospitals combined, and this with less mortality and morbidity, which speaks rather well for the ability of oral surgery in patient evaluation and patient management.

The prospective oral surgeon rotates through varying periods of General and Thoracic Surgery, Plastic Surgery, Otolaryngology, Physical Diagnosis and Internal Medicine, and the Pathology Laboratory Service. He concentrates on the surgical anatomy of the head and neck in his dissection courses. He becomes capable of managing a ward, acting as a ward medical officer in many of our large Naval Hospitals. This very great training effort is directed solely to making this oral surgeon capable and knowledgeable in the management of patients suffering from injuries, defects, or diseases of the teeth, jaws, and contiguous structures. I believe that this represents what is called for in the May 1970 Bulletin of the American College of Surgeons, and I quote: '... the College represents all the various surgical specialties and it recognizes a considerable overlapping in their interests. It urges only that surgeons, regardless of their particular specialist label, have adequate training and competence for whatever they may undertake in their practice'."

With regard to the treatment of nasal fractures, Small considered the results of a survey of the management of maxillo-facial injuries in naval hospitals throughout the world and concluded, "Oral Surgeons treated 91.7 per cent of these cases and, significantly, 297 of these cases were treated by oral surgeons at 12 hospitals in which the oral surgeon treated all facial fractures."

Dunbar (1973) considered that oral surgery had become increasingly important to the status of dentistry, and this was reflected in the emergence of several advanced educational programmes that have brought national and international pre-eminence to the profession.

One of the most progressive and innovative programmes is directed by Dr. Robert V. Walker, Professor of Surgery and Chairman of the Division of Oral Surgery at the Southwestern Medical School of the University of Texas in Dallas. The Division is based in the Department of Surgery and is accepted as an integral part of the surgical complex.

Two essential items of this educational programme evidently are as follows:

1. Full time teaching staff with no additional responsibilities.
2. Efforts to delegate as many responsibilities as possible to trainees in order to develop confidence and a broader scope of interest and potential.

It is considered that a balance is necessary between instruction, discussion and assessments of performance. Staff are advised not to oversupervise, and apparently exemplify a readiness to guide, advise and encourage.

The programme requires that trainees be rostered to three areas, that is:

1. General anaesthesia, including resuscitation, cardiopulmonary physiology and pharmacology.
2. Internal medicine, which is orientated to general medicine. Trainees are given full responsibility for the care of patients.
3. Pathology, including histology of lesions of the oral cavity, and the diagnosis of pathology using clinical, radiographic and histopathological evidence.

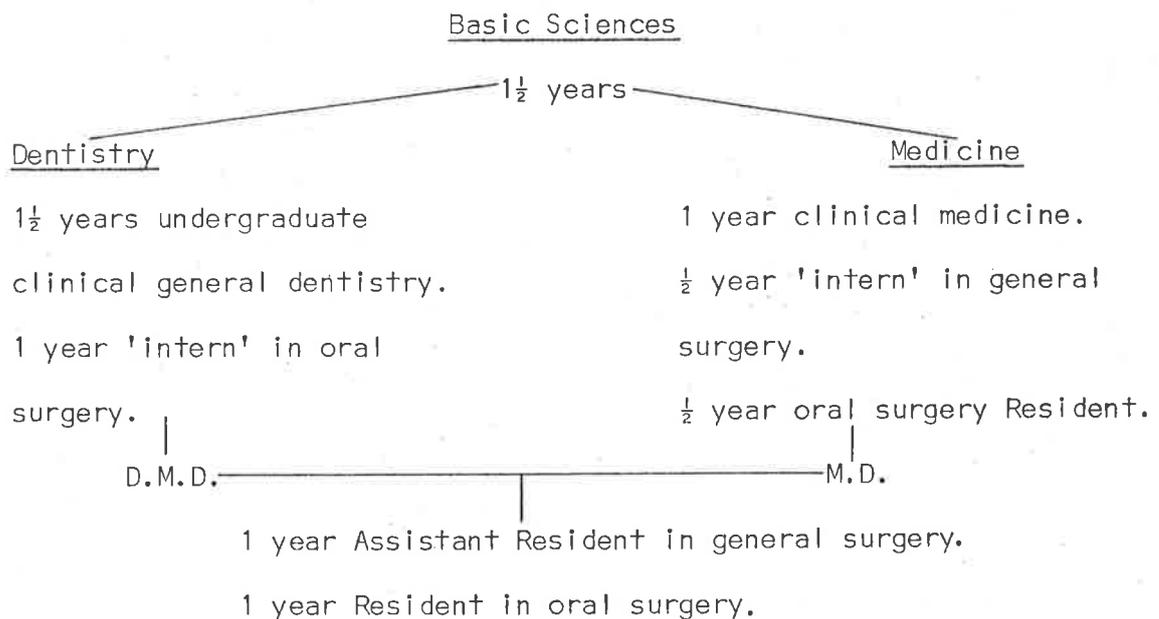
In addition, trainees may elect to be rostered to units associated with conditions of the ear, nose and throat, plastic surgery, infectious diseases and cardiology and in their final year of training, are responsible for the performance of junior trainees in the programme.

Guralnick (1973) presented reasons for the introduction of the "Harvard Combined Oral Surgery - M.D. Programme". His outline of the plan is included for completeness and comparison. Guralnick stated "The total programme outline for each of the years is as follows:

- | | |
|------------------------|--|
| I, II, III.
(years) | The first three years of the current dental curriculum, in which the first 1½ years are spent at the medical school taking the preclinical basic science programme with the medical students and the second 1½ years are spent in the School of Dental Medicine and the dental clinics of its affiliated hospitals and neighbourhood health centres. |
| IV.
(year) | Oral Surgery 'Internship' with D.M.D. awarded at the end of the year. |
| V.
(year) | The Principal Clinical Year at the Medical School and its teaching hospitals. |

- VI. (year) Time split between being an assistant resident in oral surgery for six months and an 'intern' in general surgery for six months; at the end of the year, the M.D. degree would be awarded.
- VII. (year) Assistant resident in general surgery.
- VIII. (year) Resident in oral surgery."

It seems that this programme can be summarised diagrammatically, as follows:



The following notable features are apparent:

1. The student qualifies for a dental degree after four years of training.
2. As an undergraduate, he receives 1½ years of training in general dentistry.

3. As an undergraduate, he receives one year of training in oral surgery.
4. After graduation, he spends no time in general dental practice.
5. The student qualifies for a medical degree after three years of medical training.
6. As an undergraduate in medicine, he receives one year of training in clinical medicine.
7. As an undergraduate in medicine, he receives six months of training in general surgery.
8. After graduation, he spends no time in general medical practice.
9. As a postgraduate, he receives $1\frac{1}{2}$ years of training in oral surgery.
10. It appears that at no time is the student attached to clinics related to plastic surgery, orthopaedic surgery, otorhinolaryngology or anaesthesia.
11. No mention is made of advanced training in the basic or biomedical sciences.

It seems doubtful that this course would be a satisfactory substitute for that with a dental base only, as mentioned for the United Kingdom in preparation for the position of Consultant Dental Surgeon, or for the United States in preparation for the role of Specialist Oral Surgeon.

Todd et al. (1968) considered that the essential aim of the undergraduate medical course was to educate the student to degree standard

in the medical sciences and in the application of these sciences to human diseases. They concluded that this aim could not be achieved in three years, that it was extremely doubtful whether it could be achieved in four years, and stated " ... an undergraduate could not possibly be given in less than five years the kind of education that we consider appropriate for a university degree in medicine in modern circumstances."

2.3 Australia

Whilst training in Australia varies between the Universities of Queensland, Western Australia, Melbourne and Sydney, each programme is associated with the University's programme for the Master's degree of Dental Surgery or Dental Science. A further training programme has been developed at the University of Adelaide.

Each programme will be considered individually.

2.3.1. University of Queensland (personal communication - Sagar)

Apparently, there is a difference between the programme for a candidate with both dental and medical qualifications and that for a candidate with a dental degree only. An individual programme of study is constructed for each candidate.

The Master's Degree alone is not a sufficient credential for specialty registration, and some years of experience also are required. The formal requirements for registration are described in the section relating to Dental Boards. (Dental Act 1971, No. 61, Page 7).

Rules for the Degree of Master of Dental Science at the University of Queensland, include the following:

"Specialty status

Candidates wishing to use the degree as a specialty qualification should consult with the Dental Board and the Dean of the Faculty at the time of the initial discussion of their candidature. In such cases, the candidate will be required to take the degree by means of a formal course of study and research."

Furthermore,

"A candidate shall undertake a course of study and research approved in his case by the Faculty Board for a period of four consecutive academic semesters as a full-time student or for an equivalent period of time as a part-time student."

An indication of the required content of the course is contained in these statements made by Sagar:

"This candidate proposes to use the degree for specialty qualification; therefore the course is designed to satisfy Part II of the rules relating to the Degree of Master of Dental Science. The following groups of experience are required.

Group A

Oral Biology

The candidate will be required to attend tutorials, seminars or lectures and pursue a course of study based on the following topics:

1. Respiration.
2. Regional pathology of the respiratory tree and cardiovascular system.
3. Pharmacology of (a) local and general anaesthetics.
 - (b) sedation.
 - (c) antibiotics.
 - (d) haemostatic agents.

Treatment Planning and Post - Operative - Casualty Clinic 162 hours

Proposed Public Hospital Sessions

Royal Brisbane Hospital

(a) Operating session assistance and observation. 81 hours

(b) Facial Pain Clinic (This session will alternate by arrangement with observation at Princess Alexandra Hospital Operating sessions). 81 hours

(c) Casualty Department - By arrangement with casualty department Supervisor. Friday and Saturday evenings, as arranged.

(d) Night calls - By arrangement with oral surgeons.

Princess Alexandra Hospital Operating theatre session - Observation, alternating as arranged with Facial Pain Clinic at Royal Brisbane Hospital.

Research Project:

The candidate during the year will undertake and submit a report on a research project ..."

2.3.2 University of Western Australia (Personal communication - Sutherland)

Regulations for the degree of Master of Dental Science state in part as follows:

"(1) A candidate may proceed to the degree either by way of an examination in a Clinical specialty or by way of a thesis.

(2) The examination in the clinical specialty must be taken in one of the following subjects:

(a) Operative Dentistry,

(b) Oral Surgery and Oral Medicine,

(c) Orthodontics,

(d) Prosthodontics,

or such equivalent subject as may be approved by the Faculty."

Sutherland reported, "The preliminary subjects which are usually required by Faculty for studying and passing examinations in, with respect to the specialty of Oral Surgery, are Anatomy and Pathology, together with Oral Pathology which is mandatory. No set courses are offered but the candidates are given direction on reading assignments, research projects, lectures to attend etc. A half-day seminar on Oral Pathology which includes histopathology is given once a week.

Candidates obtain their clinical experience at the Perth Dental Hospital and the Royal Perth Hospital. They are employed as Registrars at the Perth Dental Hospital and are under the supervision of a supervisor appointed by Faculty. Whilst candidates are obtaining clinical experience, they study for the preliminary examinations which they usually successfully complete after two years. Experience has shown that a further two years of supervised clinical experience is necessary before they are ready to sit for the final examination. Overall, they therefore spend about four years gaining clinical experience in Oral Surgery, which becomes more advanced as they progress. This includes considerable experience at the maxillo-facial unit at the Royal Perth Hospital.

No formal courses akin to undergraduate courses are offered for Masters degree candidates.

Provided the candidate obtains clinical experience over a period of not less than four years, this qualification meets the requirements

of the Dental Board of Western Australia for registration as a specialist in Oral Surgery."

2.3.3 University of Melbourne (personal communication - Radden)

The University of Melbourne offers a degree of Master of Dental Science (M.D.Sc.) and this degree can be obtained in oral surgery. From the Dental Faculty Handbook, it is evident that a student can proceed to an M.D.Sc. degree by satisfying these requirements:

1. Two years full-time study in the Department of Dental Medicine and Surgery, or if part-time, the equivalent of two years.
2. Employment by the Royal Dental Hospital of Melbourne in the House Surgeon-Registrar training programme. This is a three-year programme whereby trainees are employed by the Hospital. Trainees in this programme spend three years attached to the Department of Dental Medicine and Surgery, and this Department virtually provides the total oral surgery service. Therefore, trainees have access to extensive clinical material. During the three years that they spend in the Department, they must devote some time to anatomy, microbiology, pathology, etcetera, that is, they have some commitments in the basic science areas. Trainees frequently are expected to act as demonstrators for undergraduate dental students in these areas. Trainees are assigned to various in-patient and out-patient theatres, the out-patient oral surgery and oral medicine clinics, and the exodontia area. At this time, they obtain a reasonable amount of experience under expert guidance. During the three years, they also are rostered to such clinics as those located at the Peter MacCallum Cancer Institute, the St. Vincent's Hospital, where there

is a strong haematological interest and a well-developed oral medicine department, the Eye and Ear Hospital, where they spend a significant proportion of their time associated with Ear-Nose-Throat specialists, and the Royal Melbourne Hospital.

During their three years at the University, six months is "on exchange" with the Registrar at the Royal Melbourne Hospital. This permits participation in the management of trauma patients as well as patients requiring more major forms of oral surgery. Periodically, the "House Surgeon-Registrar" staff also attend dermatology clinics at St. Vincent's Hospital. Whilst attached to the Royal Dental Hospital, they receive training in anaesthesia and sedation, and care for a large number of patients who are admitted to the ward.

At the end of the three-year training period, if candidates participate in the House Surgeon-Registrar training scheme, or after two years if the programme is full-time, candidates are examined by written, clinical and viva examinations in oral surgery, oral medicine and oral pathology. Successful candidates then graduate with a M.D.Sc. degree in oral surgery.

Radden claimed that teaching staff consider that M.D.Sc. graduates are not ready to specialise. Therefore, graduates are encouraged to travel overseas to obtain further experience in oral surgery and allied fields. Radden stated, "It is pretty clear that only those people who have had extensive training and experience both here and overseas are likely to be accepted into the field of 'recognised' oral surgeons."

Teaching staff in Adelaide evidently are not as enthusiastic about the desirability of overseas experience as are those in Melbourne, as the training programme currently being conducted is considered adequate. Indeed applications for trainee posts are being received from overseas postgraduate students.

2.3.4 University of Sydney (personal communication - Jolly)

The Master's Degree course is of two years duration, but it is considered that this is insufficient for complete training in oral surgery. It is regarded as necessary that there be supplementary practical experience in oral medicine and oral surgery, and that a significant part of this experience should be gained in a general hospital.

The British system of apprenticeship through a set of graded positions is favoured by Jolly. He considered that the Dental School's Department of Oral Medicine and Oral Surgery should be part of a large general teaching hospital to upgrade the quality of training in oral surgery.

The course includes preclinical and clinical subjects such as local anaesthesia, general anaesthesia, radiology, pharmacology, therapeutics and medicine. All subjects are related to oral medicine and oral surgery. In addition, a research project and thesis is required.

2.3.5 University of Adelaide

Jolly (1970) stated:

"There is a great and urgent need for improvement in facilities for the training of oral surgeons in this country. Having recognised

the existence and nature of the problem, the first step is to determine the most effective means of making good the deficiency. The second step is to put the plan so evolved into operation. I believe we have reached the threshold of step one where we stand in a haze of uncertainty. We have good Dental Schools in Australia and the oral surgery staffs of these schools have made earnest efforts to meet the problem. However I believe that the ideal answer cannot come entirely from within any one dental school nor from all of them together. The crux of the problem is the dearth of adequate dental departments in our general hospitals, and therefore the absence of hospital training facilities for oral surgery. The dental school with the best staff imaginable and with the best intentions in the world cannot provide an adequate training for the oral surgeon in a 9 a.m. to 5 p.m. dental clinic."

In fact, requirements that Jolly mentioned, viz: (i) a good dental school; (ii) a high quality of staff, and (iii) an adequate dental department in a general hospital and therefore hospital training facilities for oral surgery, all are apparent in Adelaide. The Dental School's Department of Oral Pathology and Oral Surgery has established a training programme for oral and maxillo-facial surgery within the framework of the University and the Royal Adelaide Hospital. This training programme is recognised officially by the Royal Australian College of Dental Surgeons and the Australian and New Zealand Society of Oral Surgeons, and the unit provides a service to the Royal Adelaide,

Queen Elizabeth, Adelaide Children's and Modbury Hospitals, and the Flinders Medical Centre.

It seems that academics and other members of the dental profession should support this first specific training programme in Australia if it is to thrive.

Referring to Britain, Jolly indicated that the hospital dental department is recognised as an essential component of a general hospital, and has earned and maintained this place because of its contribution. This contribution has included assistance provided to other medical specialties. Jolly indicated that the function of the dental department is the same as other departments, that is, patient care and training at the graduate and, to some extent, undergraduate level. Patients largely are referred from dental and medical practitioners and are treated on both an in-patient and out-patient basis. The in-patients include those requiring a prolonged general anaesthetic and major oral and maxillo-facial surgery. Other in-patients present severe medical disabilities requiring special precautions in surgery, or extensive trauma in the maxillo-facial region. Traumatic injuries usually are associated with motor car accidents and those at home or in industry.

Jolly observed that in this environment, the trainee oral surgeon obtains the widest possible range of experiences. He learns to participate in the total care of patients and gains experience as part of the hospital's medical and surgical teams. Jolly claimed that whilst dental and oral surgery departments in hospitals would be

of immense value for training, these departments also would enable a more comprehensive service to be provided to the community. It follows that where a dental or oral surgery unit already exists in a hospital, this unit should be expanded to the most desirable level. This would enable the community to receive a better service. It seems that other specialists would tend to use such a unit if it were available.

Necessarily, there must be high quality training programmes to graduate competent personnel to fill hospital and teaching posts.

Bear (1973) drew attention to the need to draw competent oral surgeons into the academic field which seems an important base for the promotion of oral surgery. Teaching staff aim to further patient care by improving training programmes and the scope of practice, which improvements could elevate the status of the specialty. Bear considered that training programmes are used as indicators of the status of the oral surgery specialty.

The establishment of the oral surgery training programme in Adelaide seems a significant development in Australian dentistry. Its first graduate fulfilled all the requirements, gained a Master of Dental Surgery degree and the Fellowship of the Royal Australian College of Dental Surgeons, was the only candidate eligible to complete examinations for the Advanced Diploma in Oral Surgery of the Royal Australian College of Dental Surgeons and was the first individual to gain this qualification.

The programme requires close co-operation between the Department of Oral Pathology and Oral Surgery of the University of Adelaide, and

clinics of the Royal Adelaide Hospital. Furthermore, the programme seems consistent with world trends in oral surgery training (Seward et al. 1973, and Journal of Oral Surgery, Vol. 31, April, 1973).

It is the only programme in Australasia which at present conforms with requirements for the Advanced Diploma of Oral Surgery of the Royal Australian College of Dental Surgeons (Regulations R.A.C.D.S. 1974).

The essential elements of this programme are:

1. One year full-time in general practice.
2. Academic programme:
 - a) Bachelor of Science in Dentistry.
 - b) Master of Dental Surgery.
 - c) Fellowship and Advanced Diploma in Oral Surgery of the Royal Australian College of Dental Surgeons.
3. Clinical programme: Four years full-time in oral surgery and related fields. The oral surgery component's clinical requirements must be completed in the following areas:
 - a) patient assessment and medical history.
 - b) exodontics.
 - c) surgical removal of unerupted and impacted teeth.
 - d) apical surgery.
 - e) cysts of the oral cavity and jaws.
 - f) surgical management of benign tumours.
 - g) pre-prosthetic surgery, with particular reference to the use of grafts within the oral cavity.

- h) fractures of the facial bones.
- i) orthodontic and corrective jaw surgery.
- j) temporomandibular joint abnormality.
- k) oral pathology and oral medicine.

As an integral part of the training programme, trainees are seconded to specialist clinics at the Royal Adelaide Hospital, each of which outlines particular aims and requirements. The departments included are:

1. Anaesthesia.
2. General Surgery.
3. Plastic Surgery.
4. Otorhinolaryngology.
5. Orthopaedic Surgery.
6. Radiotherapy.

The programme now is discussed under relevant headings.

1. Anaesthesia

The major areas of study to be covered are directed largely towards the care of patients requiring major oral and facio-maxillary surgery, with particular reference to patients suffering multiple injuries.

The student should become acquainted with the following:

- (i) Pre-anaesthetic assessment and preparation regarding
 - a) vomiting risk and inhalational syndrome.
 - b) effects of major injuries on physiological functions.
 - c) assessment of blood loss.
 - d) massive blood transfusion - problems and management.

- (ii) Anaesthesia with regard to
 - a) airway problems.
 - b) anaesthetic techniques for surgery of the head and neck.
 - c) complications of anaesthetic drugs.
- (iii) Post-anaesthetic problems and care, that is,
 - a) methods and complications of airway management, and review of available equipment.
 - b) principles of fluid, electrolyte and nutritional care.
- (iv) Practical procedures and other topics, for example,
 - a) percutaneous venepuncture.
 - b) laryngoscopy and endotracheal intubation.
 - c) artificial ventilation.
 - d) recognition and management of cardiac arrest.
 - e) drug distribution and elimination, and drug interactions.

Trainees are expected to satisfy requirements for attendance in the Intensive Care Ward, at major oral surgical lists and at plastic surgical lists.

One continuous period of 4 to 6 weeks must be spent within the Department.

2. General Surgery

The principles and practice of general surgery are covered, and attendance at operating lists, ward rounds and out-patients clinics over a period of one academic term is required.

The time spent in the clinic consists of approximately nine hours per week.

3. Plastic Surgery

The trainees are invited to attend all ward rounds, and engage in relevant discussion of any aspect of plastic surgery carried

out by the Royal Adelaide Hospital's Plastic Surgery Unit. The time allotment approximates two hours per week. The trainees are invited to attend the out-patient sessions of the Plastic Surgery Unit also, and this requires a further two hours per week. Attendance at operating sessions of the Plastic Surgery Unit extends for two half days per week. During this time, the trainee is free to assist in operations.

The trainee receives instruction in suturing techniques that have special application to facial injuries and wounds of the oral mucosa. He is instructed on the taking and applying of skin grafts for all parts of the body, but particularly in relation to facial and intra oral wounds.

The trainee also participates in the operative treatment of facial fractures, and a special emphasis is given to the treatment of fractures of the face, which normally fall within the province of the plastic surgeon; for example, fractures of the nose, malar bone and fractures affecting the orbit. He receives instruction in the post operative care of patients after surgery of the face, head and neck, and receives special advice on the management of conditions affecting the airway. He also receives instruction on emergency tracheotomy.

The Cleft Palate Clinic at the Adelaide Children's Hospital is extensive and is attended by plastic surgeons, orthodontists, ear, nose and throat surgeons, speech therapists, etcetera. The oral surgery trainee is invited to attend these sessions, which are arranged once a

month. He also is invited to attend operating sessions at the Adelaide Children's Hospital, especially those related to repair of clefts of the palate and lip.

4. Otorhinolaryngology

The trainee spends a period of one academic term as an "observer-assistant" within the Department of Otorhinolaryngology at the Royal Adelaide Hospital. He attends the out-patient clinics, operating sessions and ward rounds to obtain a general appreciation of the specialty of otorhinolaryngology. The main areas of emphasis are those related to the nose and jaws, and cases with associated facial and ear pain. Instruction in methods of obtaining a medical history and examining the ears, nasal cavities, mouth, pharynx, post nasal space, larynx and hypopharynx are provided. Assistance and observation are directed at sinus and nasal surgery, pharyngeal and laryngeal surgery, middle ear and mastoid surgery, and surgical approaches to the external auditory meatus with its close anatomical relation to the temporomandibular joint.

5. Orthopaedic Surgery

Study is directed at the general characteristics of bone, including the healing of injuries of bone and soft tissues, and the management of associated multiple injuries. Topics considered are listed as follows:

- (i) Bone healing.
- (ii) Host incorporation of bone grafts.
- (iii) Host response to implants.

- (iv) Physiological principles related to the management of fractures and associated wounds of soft tissues.
- (v) Methods of management of fractures and their application to
 - a) compound fractures.
 - b) fractures that affect joints.
 - c) complicated fractures.
- (vi) Management of injuries associated with fractures.
- (vii) Approaches to multiple injuries, including
 - a) the priorities of management with particular reference to maxillo-facial trauma.
 - b) injuries of the cervical spine.
 - c) nursing and nutritional aspects.
- (viii) Management of soft tissue wounds, including the aspects of
 - a) primary closure.
 - b) delayed primary closure.
 - c) split skin grafting.
 - d) secondary suture and other methods.
- (ix) The general approach to surgical techniques in the management of fractures, including
 - a) manipulation and closed reduction.
 - b) open reduction.
 - c) internal fixation.
- (x) The general approach to surgical techniques in implant surgery.
- (xi) Techniques of taking bone for grafting.

6. Radiotherapy

Trainees will be orientated to these subjects:

- (i) The effects of ionising radiation on normal tissues, that is,
 - a) epithelium.
 - b) soft tissues.
 - c) bone and teeth.
 - d) parenchymatous tissues such as salivary glands.
- (ii) Techniques of radiotherapy used in head and neck cancer and their indications.
- (iii) The integration of radiation, surgery and chemotherapy in the management of diseases of the head and neck.
- (iv) The role of oral surgery in the prevention and management of radiation damage.

This broad outline is reviewed with each relevant specialty before a formal programme is finalised, and is subject to periodic review.

2.4 New Zealand (personal communication - Macalister)

The regulations for the Master of Dental Surgery degree of the University of Otago were being altered at the time of the communication. The course extends either for one year on an intensive basis, or for two years. The time is divided into three equal portions related to clinical, academic and research aspects respectively.

The University of Otago's Master of Dental Surgery degree never has been posed as a "specialist qualification", and additional training always has been envisaged. This activity normally has followed overseas. The latter experience has included positions as House Officers and Registrars at well-known maxillo-facial units and hospitals.

In the majority of instances, the time required for qualification and training, before acceptance as a specialist, is at least four years after obtaining a basic dental qualification. One or two years of this time is spent in general dentistry and the remainder as a House Officer and in satisfying requirement for additional qualifications.

It seems that no practising oral surgeon in New Zealand is both medically and dentally qualified.

2.5 People's Republic of China

Kerr (1973) reported that the future oral surgeon is selected during his initial (undergraduate) training. After undergraduate training, he would be posted to an oral surgery or hospital unit where he would proceed through progressive practical experiences and associated reading. He does not pursue academic qualifications.

According to Kerr, the Chinese claim that this system permits full use of the surgeons ability at the height of his dexterity and enthusiasm. Nevertheless, Kerr considered that these surgeons possibly lacked an adequate general knowledge.

Examination of one hospital indicated the type of training that a potential oral surgeon might obtain. A medium-sized hospital was seen to contain 506 beds of which 60 were assigned to the oral surgical unit which attended to 200 to 300 out-patients daily and served patients from Shanghai and the surrounding districts.

Apparently there is little facial trauma, because of the limited numbers of motor vehicles and consequent road accidents, and also it appears that there is little physical violence in China.

For the treatment of fractures, eyelet wiring commonly is used because most people seem to retain their natural dentition, while external fixation is achieved with plaster head caps or pins, and displaced mandibular fractures are plated or wired.

The scope of oral surgery includes the following:

1. Treatment of fractures.
2. Care of malignancies of the face.
3. Block dissections of glands in the neck.
4. Repair of large residual defects by plastic surgery.
5. Surgery for cleft palates.

Such specialty practice is based on an undergraduate course of three years (there also is a one year undergraduate course), which matches the length of the undergraduate medical course.

2.6 International Association of Oral Surgeons

In April 1974, a workshop on the training of oral surgeons was held in Madrid. The chairman, Sir Terence Ward, stated that the intent was to produce a document that would outline a curriculum that could act as a model for countries with training programmes under review.

It was emphasised that a graduate could enter the specialty of oral and maxillo-facial surgery with either a primary dental or medical degree, but that the ultimate result of training should be specialists of comparable skill, irrespective of the nature of their basic degrees.

In most parts of the world, oral surgery is performed by specialists with a basic dental degree and additional medical and surgical training and experience.

It was considered that training programmes should not be too long in view of the high cost and the need for competent specialists to graduate at as young an age as possible.

It was accepted that the trainees proceeding from a basic dental degree would require additional medical and surgical training, whereas those proceeding from a basic medical degree would require dental training. Supplementary training for medical graduates would be longer because of the absence of dental training in the medical course. Dental graduates already had been exposed to many medical subjects.

Paramount importance was placed on the need for final graduates from either source to have equal status. There was no apparent justification for extra privileges to be accorded to graduates from the basic medical course, nor to those with both a dental and medical degree.

It was considered essential that the graduating specialist have an acceptable level of competency, and that appointments be based on competency rather than basic degrees.

The workshop stressed the importance of certifying bodies in each country to maintain standards of training in oral surgery, and considered training requirements under these headings:

1. General objectives.
2. Particular training objectives.

Elaboration now follows and is categorised under these headings.

1. General objectives.

It was concluded that a well trained oral surgeon should have

- a) a broad education and wide experience as both a clinician and diagnostician.

- b) a good basic training in all aspects of dentistry.
- c) a sound knowledge and broad experience in the field of oral surgery.
- d) an appropriate medical and surgical training during his postgraduate education.

2. Particular training objectives.

Similarly, it was concluded that a well trained oral surgeon should have extensive knowledge of the basic biological and dental sciences and adequate competence in the following:

- a) the relevant aspects of medicine and surgery and of general pathology, microbiology, biochemistry, genetics, pharmacology, anaesthesia, sedation techniques and local analgesia.
- b) preventive and restorative dentistry.
- c) oral medicine, oral pathology and therapeutics.
- d) dento-alveolar surgery.
- e) management of maxillo-facial injuries.
- f) treatment of diseases, anomalies and functional disturbances of the teeth, jaws and salivary glands.
- g) applied statistics, research and teaching, administration, management and jurisprudence.

It was felt that a minimum period of four years would be appropriate to cover relevant training objectives, and the importance of in-patient experience in general hospitals, accompanied by instruction, was stressed.

It has been mentioned that the only training programme available in Australia, which is fully acceptable to the Royal Australian College of Dental Surgeons for acceptance to candidature for examinations towards the

Advanced Diploma in Oral Surgery, is that currently being conducted in Adelaide. This programme seems to compare favourably with those overseas, and satisfies the training objectives expressed at the Madrid Workshop (1974).

The inclusion of the treatment of (i) malignancy of the face, (ii) block dissections of glands in the neck, (iii) plastic surgery for the large residual defects, and (iv) surgery for cleft palates, for oral surgeons in the People's Republic of China is based on practical rather than academic experience. Perhaps the balance of academic and practical experience in other countries should be reconsidered.

C. Specialty registration for oral surgery.

1. South Australia

Reade (1961) indicated that the term "specialist" implied the possession of superior knowledge and skill, and emphasised the anomaly in South Australia where any dentist can claim this status. He advocated the institution of regulations to govern specialist practice and also that there be an examination of the credentials of applicants to ensure that specialist status was appropriate.

To date, no provision for registering specialists has been introduced by the Dental Board. With the inception of the oral surgery training programme, it seems essential that specialty registration be established. If this development were delayed, it seems that the future quality of oral surgery in the State could suffer.

2. Queensland

Specialist registration is well-established in Queensland and is required for a practitioner to present himself as a specialist.

The Act lists these criteria for specialist registration:

"A Dentist shall be entitled to be registered as a dental specialist, if he applies to the Board in the prescribed form, pays the prescribed fee for registration and satisfies the Board that -

- a) he has gained special skill in a particular dental specialty by adequate experience in that specialty in the practice of dentistry during a period of not less than five years; and
- b) in relation to a dental specialty in respect of which a degree, diploma or certificate is granted or recognised, he is the holder of, or is entitled to have conferred upon him, a degree, diploma or certificate (in each case recognised by the Board and obtained after due examination) in the dental specialty to which his application relates, of an institution recognised in the State or Territory of the Commonwealth, or other country wherein it is situated, and by the Board as authorised to grant such degree, diploma or certificate."

While the Board must be satisfied that certain criteria are satisfied, each application is investigated in detail on an individual basis.

The Board considers that the required graduate qualification must result from a university course of length equivalent to two academic years.

3. New South Wales

Specialist registration exists in New South Wales, and the following requirements are necessary for approval to use the term "specialist".

Whilst the requirements may be varied by the Board, the following now apply:

1. Registration to practise dentistry in New South Wales.
2. A written commitment to the Board that practice will be confined to that specialty. If the individual ceases to so limit his practice, the Board must be notified and the specialty status relinquished.
3. A history of at least two years full-time, or its equivalent, in general dental practice, either in private practice, a hospital, an institution, the armed services or in a public health service.
4. Satisfactory demonstration to the Board that, in addition to two years in general practice, the individual has gained special skill in a particular specialty by adequate training and experience.

The possession of a relevant higher degree is essential.

No dentist may be a specialist in more than one field concurrently.

4. Victoria

No review is possible as an attempt to obtain information from the Board was unsuccessful.

5. Tasmania

Similarly, no information was received from the Dental Board of this State regarding specialty registration.

6. Western Australia

Specialty registration has been established and requires the following:

1. A dentist must have the permission of the Board in writing before assuming a specialist title.

2. For this permission to be granted, the applicant must satisfy the Board that he has a recognised, higher academic qualification that is applicable to the specialty, and that he has undertaken at least two years in general practice followed by a period of not less than four years (including any time spent in preparation for the examination for that higher qualification) substantially devoted to the practice of the specialty.
3. Practice must be confined to the specialty.

Each application is treated individually. There are no higher qualifications nominated as acceptable, although a masters degree or its equivalent generally would be considered favourably. No specific programme of training is required by the Board.

7. Australian Capital Territory

As no records of oral surgeons are maintained by the Dental Board, it is apparent that specialty registration does not exist.

8. Northern Territory

There is no specialist registration for dentists in the Northern Territory, although higher qualifications are recorded in the Dental Register.

9. Comments

Regrettably, explanation of, or enlightenment regarding, their definition of "adequate training" and "special skill" was not provided by the Dental Boards, and from this review, it appears that uniform Australia-wide requirement for registration of specialty practice is urgent if the public is to be protected and provided with oral surgery services of a uniformly high quality.

The oral surgery training programme inaugurated in Adelaide hopefully will continue to develop and might act as a catalyst for further developments in oral surgery. It would seem irresponsible if the establishment of Australia-wide registration for the specialty practice of oral surgery is not treated as an urgent requirement.

There is no evidence of uniformity among the Australian States regarding the requirements for registration of specialists. In some States, there is no such requirement. Moreover, it seems that where specialist registration does apply, requirements are inconsistent with modern concepts of training and performance.

D. Oral surgery services.

Oral surgery services in Australia appear to be similar in type and techniques to those in most countries. These services are provided to varying degrees by:

1. General dental practitioners.
2. "Approved" general dental practitioners.
3. Specialist oral surgeons - registered or unregistered.
4. Medical practitioners to a limited extent.

This care is provided through:

1. Private practices.
2. Hospital clinics.
3. University teaching clinics.
4. Armed services.

Services offered by general practitioners are delivered in private practices, government and hospital dental clinics and in the armed services. A wide variety of minor oral surgery services is

considered to fall within the realm of the general practitioner. These practitioners seem to be distributed widely across the country.

"Approved" dentists include both general practitioners and specialists, who appear to favour the capital cities. To receive more major oral surgery, patients therefore must seek care in a State capital or perhaps another large urban centre.

From a perusal of hospital appointments listed in the Australian Medical Directory, it seems that there are few large hospitals with a full or part-time oral surgeon. It therefore is evident that specialist oral surgery services are not being provided adequately through these facilities.

Some hospitals apparently have appointments for dental surgeons and so would provide general dental care and limited oral surgery services.

A tendency is evident in some institutions to manage oral surgical problems, particularly those associated with maxillo-facial trauma, by employing plastic or other medical surgeons together with general dental practitioners, and this arrangement does not seem to comply with the best interests of patients, as there is little doubt that high quality care requires surgeons who are fully trained for the task.

Those institutions, which use the designation "Oral Surgeon", apparently have established the position on a part-time basis, and the service is provided by oral surgeons in private practice on an honorary or visiting capacity.

This arrangement also applies to the Armed Services, where specialist oral surgery is obtained through the co-operation of civilian private practitioners, who may be members of the force of reserve officers

(personal communication - the Director of Dental Services in each of the three branches of the Australian Armed Forces). In contrast, the British Army evidently has possessed a specialist branch for over thirty years (Stanhope 1972).

E. Report of enquiry into South Australian health services.

The committee of Enquiry into Health Services in South Australia under the Chairmanship of The Hon. Mr. Justice C.H. Bright submitted its report in January 1973.

The report mentioned deterioration of the urban environment in large cities and cited the problems encountered in Sydney and Melbourne regarding water and air pollution, urban diseases and crime. The desirability of a greater decentralisation of urban development in South Australia was emphasised. It seems then that such development would necessitate an extension of specialist oral surgery services to areas of decentralisation, where the population size was appropriate. In the meantime, a service should be provided through the present structure of the Oral and Maxillo-facial Surgery Unit.

The report expressed the view that orthodontic services are likely to be limited and available only in Adelaide for some years. Although the report does not refer to oral surgery specifically, it possibly would be categorised with orthodontic care and considered likely to be available only centrally for some years.

The report indicated the need for efficient transport services and well-developed communication facilities for the remote areas, and noted the essential ambulance service being provided by The Council of St. John

and the aerial transportation undertaken by the Royal Flying Doctor Service. Particular mention might be made of the Em-Care vehicles designed and used by the St. John Ambulance Service of South Australia.

The report states:

"The structure of the necessary transport services will be closely linked to the concept of graduated facilities, with patients being treated in peripheral units for relatively minor conditions but referred to regional base hospitals, or health centres for specialised treatment. In some cases, when necessary, patients will be transferred to central general teaching hospitals, special teaching hospitals or other specialised units dependent on the patient's condition. Such movement of patients within the framework of the total health service makes it imperative that an efficient transport service is an integral part of the scheme."

The report recommended " ... that consideration should be given to both aeroplane and helicopter movement of patients in the future for some of the more remote areas in the State, in the interest of the patient being moved to special facilities. We received evidence of significant benefit to certain types of patients injured in road accidents and industrial casualties by their being transported by air rather than being subjected to long distances of road ambulance transportation. ... It is understood that consideration is being given to the provision of a helicopter pad at the Flinders Medical Centre."

The Committee stated that there should be the closest possible association between all students who seek to make a career in any of the health services, and emphasised the need to avoid fragmentation in order to attain unified concepts and to engender multidisciplinary team approaches. This seems to be an important comment, because the team approach requires that each type of health provider is highly trained and appreciates the respective skills and roles of other members of the team.

The following statement was directed at medical services, but applies to specialist dental services also, viz: "In areas where centres are not developed (i.e., community health centres) there will need to be provided a mechanism whereby these services are easily identified and are readily accessible to both the patients and the general practitioners. The provision of such services in country areas ... can probably only be overcome by some type of mobile service on a circuit basis. It would be a mistake to lay down rigid specifications at this time. There must be experimentation and evaluation in order to achieve by a gradual process the appropriate provision of facilities for the varying needs of people in differing localities. ... Some of the more remote country areas could be better served by specialist facilities. These will probably need to be supplied by mobile services from a base hospital either on a route basis or an ad hoc basis as a need arises."

"The initiative of the Royal Flying Doctor Service and the South Australian Branch of the Australian Dental Association in organising a partial service for remote areas is commended and we are not able to recommend any alternative."

In 1974, a Health Services Seminar was staged at the Flinders University in South Australia. The report claimed that there was sufficient evidence to suggest that staff work better if they work together, and health services are best co-ordinated when there is use of multidisciplinary teams rather than the separate organisation of singular disciplines.

It was considered that some of the flaws in specialist services would be reduced by the following:

1. Early streaming for specialisation to reduce the length of training and maximise the contribution of training resources.
2. Incentives for specialists to work in areas where they are needed most.
3. Manpower planning to define accurately the kind, number and distribution of specialists needed.
4. Negotiation between Government, Universities and Royal Colleges and other interested organisations.

It was considered that the health team concept is the most effective way for the delivery of health care services, and the success of the health team depends on:

1. Free and total communication between members.
2. Mutual trust and confidence.
3. An understanding of each other's roles.
4. Co-ordination of effort.
5. Good leadership.

In many situations it was felt that probably a medical practitioner should lead the team. Nevertheless, it was suggested that each clinical

situation should be under the overall direction of the most appropriate team member and in overlapping situations, free consultation should occur and overall direction transferred to the appropriate discipline.

Some recommendations made in relation to the provision of services to regional and rural areas, transport of patients and trauma services were as follows:

1. Metropolitan teaching hospitals should be general, medical and surgical hospitals of a defined region, the personnel of which should be made available to visit regions on a regular basis.
2. Specialist teams should be flown to selected centres on a regular basis and also for emergency situations as necessary.
3. Establishment of suitable regional base hospitals with specialist services in the areas.
4. Provision of aerial ambulance services.
5. Emergency services of hospitals should be separate entities from normal admissions, of twenty four hour status, and should employ multidisciplinary teams all of whose members should be able to initiate emergency treatment.

F. Oral surgery services in South Australia.

Located in the central portion of the southern half of the continent, South Australia is one of the six Australian States and ranks third in area and fourth in population. The area of the State is 984,375 square kilometres, which is equivalent to more than four times the area of the United Kingdom.

The population at the 1971 Census was 1,173,707, and the population was congregated along the coastal strip and adjacent to the Murray River. Large areas of the State consist of desert or semi-desert with a widely-distributed sparse population.

Oral Surgery services are provided to varying degrees, by:

1. General dental practitioners.
2. "Approved" dentists who include general practitioners and those who restrict their practice to oral surgery and use the title "oral surgeon".

The number of "approved" dentists is 16; nine restrict their practice to oral surgery and of these nine, six are in private practice in Adelaide and three are members of the staff of The University of Adelaide Dental School. Of the private practitioners, one provides a periodic service to Port Lincoln in South Australia and Broken Hill in New South Wales.

The remainder are located as follows:

- | | |
|--------------------|-------|
| a) Renmark | - one |
| b) Adelaide | - two |
| c) Murray Bridge) | |
| Tailem Bridge) | |
| | - one |
| Meningie) | |
| Mannum) | |
| d) Loxton | - one |
| e) Millicent | - one |
| f) Port Lincoln | - one |

Therefore, the remainder of the State depends on the general dental practitioner for oral surgery. Even the "approved" dentists frequently provide limited oral surgery services only. Therefore, populations in vast areas of the State do not have direct access to specialist oral surgeons and are forced to try and manage locally or travel large distances.

G. Oral surgery services in Queensland.

Queensland is the second largest State in Australia with an area of 1,727,200 square kilometres. The state occupies 22 per cent of the Australian continent and is seven times the area of the United Kingdom.

The population at the 1971 census was 1,827,065 and the distribution pattern is somewhat different from South Australia. Most areas of the State are inhabited, and there is a greater number of large urban centres apart from the capital city itself.

As in South Australia, the oral surgery services are provided by:

1. General dental practitioners.
2. A group of "approved" dentists consisting of general practitioners and specialist oral surgeons; the latter are registered as such with the State Dental Board.

"Approved" dentists number 17 of whom 11 are registered as specialists in oral surgery. Of the total "approved", seven are in private practice in Brisbane, three are members of the staff of the University of Queensland Dental School, one is an administrator in the Department of Dental Health, and the remainder are located as follows:

- | | |
|-----------------------|-------|
| a) Rockhampton | - one |
| b) Roma | - one |
| c) Townsville | - one |
| d) Surfers Paradise) | |
| Lismore (N.S.W.) | - one |
| e) Mackay | - two |

Of the 11 registered as specialists in oral surgery, ten are located in Brisbane and one in Townsville. The latter and six of those in the capital are in private practice.

It appears that two of those registered as oral surgeons, and practising privately, provided a visiting service to two centres located within a distance of approximately 100 kilometres from the State capital. Apart from the locations mentioned, oral surgery services for the State are provided by general practitioners and one registered specialist located in the northern part of the State.

H. The role of the oral surgeon.

It seems that the oral surgeon has a role, which can in part be played by people in other disciplines, but which can be completely and adequately performed only by an expert specifically trained for the purpose. This particular person is the specialist oral surgeon, who practises that "... part of dental practice which deals with the diagnosis and the surgical and adjunctive treatment of diseases, injuries, and defects of the human jaws and associated structures."

It seems that the oral surgeon is to the general dental practitioner what the specialist physician and specialist surgeon are to the general medical practitioner. He is an expert to whom the dental and medical profession can refer for diagnosis and treatment of conditions in this field and he is a link between medicine and dentistry. As such, the oral surgeon requires a special type of training.

The position of the oral surgeon, as a dental specialist, has been the subject of debate, confusion and even ill feeling between sections of medicine and dentistry. This apparently has resulted largely from

a lack of knowledge and appreciation of the oral surgeon's background and capability. Confusion seems to have resulted from wide differences in scope of practice, which apparently are related to the variations in preparatory training.

It seems necessary that the scope of oral surgery be broadly defined and that future oral surgeons be trained to perform all aspects of the specialty. This development would be facilitated by a specific training programme aimed at establishing satisfactory standards of competency, as in other surgical specialties. Specialty registration could promote quality, if the requirements for registration were enforced rigorously.

The author considers that a basic dental training with postgraduate dental qualifications should be mandatory, as much of the knowledge and skill required to practise oral surgery is unique to dentistry.

A medical qualification does not seem necessary and a specific course would avoid inefficient use of resources. There seems little doubt in the present climate of progressive education that specific training programmes for specialist oral surgeons could be developed throughout Australia. For the concept of specific training to be a practical success, all relevant groups should be acquainted with the philosophy of the training programmes and present a receptive atmosphere. It should be appreciated that the specialist oral surgeon is highly trained and able to cope with the complete management of patients to the same degree as other surgical specialists. Like these other surgical specialists, oral surgeons are able to obtain the necessary consultations with appropriate medical specialists.

To a large extent, the reasons why oral surgery has been slow to develop and gain acceptance in Australia appear to be the following:

1. The lack of a training programme specifically designed to graduate specialist oral surgeons.
2. The ease with which those with limited skills and qualifications have been able to assume the title of "oral surgeon".
3. The lack of national standards for training and specialty registration.
4. The acceptance by the profession that some individuals had specialist skills on the basis of claims made by the individuals themselves.

This situation seems to have confused the medical profession and hospital administrations and cast doubts on the credibility of oral surgery as a health specialty.

In the future, the dental profession and the Australian and New Zealand Society of Oral Surgeons could specify minimum requirements for specialty registration, which could be enforced vigorously. The resulting performance of "oral surgeons" consequently could be consistent with specialty recognition.

It seems particularly important that this action should be taken now, when there are great changes in (i) government and public opinion, (ii) the organisation of health services and the techniques of providing health services, and (iii) public demand for high quality health care.

The advent of highly trained specialists in a field such as oral surgery should be a welcome addition to the health services, for as Bohannen et al. (1972) commented, "If we are really interested in providing more and better care for more people, every State needs individuals with specialty training."

For acceptance to be complete, it is evident that practitioners, who purport to be oral surgeons, must be competent in all aspects of the specialty, as defined by the American Dental Association and the Australian Dental Association. Consequently, it should be mandatory for such persons to have completed acceptable pre-requisites for specialty registration.

It is clear that the specialist oral surgeon needs to provide more than is encompassed in dento-alveolar surgery. It is becoming increasingly evident that specialist oral surgery can offer a major contribution in the health service to the community, and therefore it is incumbent upon the dental profession to ensure that this contribution is possible by the preparation of competent specialists. It seems clear that a sophisticated specialty cannot be developed through the fragmented varieties of oral surgery training that traditionally have prevailed.

The major criticism, which has been levelled at oral surgeons, is their lack of a medical and surgical background, and it is in these areas that particular attention could be devoted in future training programmes. Apparently oral surgery trainees, after suitable preparation, have been considered by physicians to be as competent in physical examinations and assessments as medical interns. This is not surprising as medicine and dentistry both share a common training background in the basic sciences. In the past, the lack of clinical application in general medicine seems to have prevented the dentist from exploiting fully his basic education. This situation evidently has perpetuated the gap in status between the medical and dental professions. It is not claimed

that a short course would convert dentists into medical practitioners, but only that it would provide an adequate basis for the oral surgeon to manage fully most of his patients. It is expected that numerous patients would continue to require multidisciplinary care, as is common in other branches of medicine.

It would appear that the present training programme in Adelaide could be improved by a short concentrated course in applied medicine. If this were completed at the commencement of the programme, the benefits derived from periods assigned to the Plastic, Ear-Nose-Throat, Orthopaedic and General Surgery Clinics, as well as the Anaesthetic Department, could be increased and the trainees might seem more competent to other specialists and achieve greater recognition. The establishment of good rapport and acceptance seem important to the establishment of effective multidisciplinary teams.

A concentrated course in applied medicine might also strengthen the contention that specialist oral surgeons without medical degrees are fully competent.

The author considers that it should be made evident to educators, governments, hospital administrators and the public that oral surgery is a dental specialty and must be based on dentistry. As it is evident that much of the knowledge and skill that is essential in oral surgery is unique to dentistry, a dental background should be mandatory.

It should be appreciated that quality health care requires an increasingly complex multidisciplinary team that includes health providers with and without medical degrees.

Various professional specialties will evolve from bases other than medicine, because of their specific requirements for knowledge and skill. Medical educators have stated that there must be a radical change in the present system of training, and so the time seems appropriate to advocate specialist training programmes such as that inaugurated in Adelaide for oral surgery (Wells 1966, Todd 1968, Health Services Seminar 1974).

If governments genuinely desire complete health services, and appreciate the shortages of specialist manpower and the irrelevance of much of their training, it seems that these governments would support specific training programmes for specialists and modifications of medical Acts to permit specialist oral surgeons without medical degrees to practise fully.

It is evident that there are surgical procedures performed in and around the mouth by health providers other than oral surgeons, for example, general practitioners and other surgical specialists. Nevertheless, it is beyond the scope of this thesis to investigate that field. It is evident that the correct person to perform a surgical procedure is one who has been trained specifically for that purpose. The American College of Surgeons reported in 1970 that it was important " ... that surgeons, regardless of their particular specialist label, have adequate training and competence for whatever they may undertake in their practice."

It seems unfortunate that a practising oral surgeon felt compelled to write: "However, a significant part of Oral and Maxillo-facial Surgery is spent in hospital practice and in Brisbane this is organised in a manner which excludes Dental Residents or Registrars from being appointed

to such units. Such a system fails to provide the day-to-day patient care which is needed - which only a dentally trained person can carry out, fails to train younger dentists to the specialty - which is a duty of all senior members of any profession, and concurrently fails to provide those senior clinicians with the mental stimulus that characterises postgraduate teaching roles." Campbell (1975).

This situation, as described, is contrary to the normal practice in cities of this size elsewhere in the English-speaking world, and is inconsistent with general attitudes regarding appropriate dental participation in oral surgery.

It has been reported that there was general agreement at the Madrid Workshop that oral surgery training programmes should encompass:

1. A basic dental qualification.
2. Postgraduate study in the basic sciences of anatomy, physiology, biochemistry, microbiology and pathology.
3. Postgraduate study in oral medicine, oral surgery, oral pathology, pharmacology and therapeutics.
4. Training by attachment to other clinics such as general surgery, anaesthetics, ear - nose - throat, orthopaedics, plastic surgery and general medicine.

1. The scope of oral surgery.

Holland (1970) stated that the mismanagement of jaw injuries in World War I led to the introduction of dentists to field medical units for the preliminary treatment of jaw injuries, and to special medical units for the treatment of maxillo-facial injuries.

This is considered an important phase in the development of oral surgery, because the unique expertise of dentists in oral surgery became recognised formally.

In 1975, Ward recalled this historical decision and described the part played by Kelsey Fry. The latter stressed the importance of the team approach in this statement, which is relevant today, "... neither the dental aspect is neglected by Major Gillies, nor the surgical aspect by myself, and reconnaissance into the other man's territory has led to the closest co-operation between us working as a team and we believe with satisfactory results."

The treatment of maxillo-facial injuries therefore was recognised as being within the scope of oral surgery, which has been defined to embrace the diagnosis and surgical and adjunctive treatment of diseases, injuries and defects of the human jaws and associated structures.

The American College of Surgeons over the years has supported the view that definitive boundaries of a surgical specialty cannot be formulated (Hillenbrand 1971). Nevertheless, the scope of oral surgery is indicated by the surgical frame of reference for a training programme outlined by Walker and reported by Dunbar (1973), viz:

1. Normal dento-alveolar surgery, which includes extractions, surgery of soft tissues within the oral cavity, the removal of impacted teeth, preparation of ridges for prosthetics and the usual intra-oral procedures attendant to oral surgery.
2. The treatment of injuries of bone in the maxillo-facial region from the frontal bone to the mandible.
3. The treatment of odontogenic lesions that occur about the maxilla or mandible.
4. The management of benign tumours that occur in and about the oral cavity.
5. The diagnosis and more particularly, the reconstructive care associated with oral cancer.

6. Orthognathic surgery.
7. The care of temporomandibular joint problems, including intricate surgery in and about the temporomandibular joint.
8. The treatment of common infections of odontogenic origin, and the incision and drainage of fascial planes in and about the floor of the mouth.
9. The management of a wide range of lesions that originate in the salivary glands.
10. Preprosthetic surgery, including extensions of the vestibules, lowering the floor of the mouth and skin grafting.
11. Bone grafting.

The scope of oral surgery has been outlined by Campbell (1971) as relating to the teeth, jaws, oral cavity and supporting tissues, extending above into the paranasal sinuses, which is the domain of the ear, nose and throat surgeon, and below into the neck where the head and neck surgeon practises. He stressed that the scope of oral surgery for particular surgeons must be restricted by the confines of their competency. The level of performance of oral surgeons should be predictable and consistent with recognised training programmes, which include training in the fields of ear, nose and throat surgery, head and neck surgery and plastic surgery. Campbell stressed that the latter fields impinge on oral surgery, and surgeons trained only in these specialties often endeavour to provide oral surgery that is beyond their ability.

These general descriptions of the scope of oral surgery are similar to those indicated by Rayne, the Honorary Secretary of the British Association of Oral Surgeons (1974). Moreover, they are consistent with the Australian and Canadian views, as expressed by services included in schedules for medical insurance.

J. The changing scope of oral surgery.

One of the major influences on the varying pattern of oral surgery has been the changing extent and nature of industrial and traffic accidents.

Though the simple fracture of the mandible still is common, high velocity accidents have led to complex, grossly-displaced injuries that include soft tissues and more remote structures. These injuries have required the development of more sophisticated techniques and a multidisciplinary approach.

As a consequence, the oral surgeon has needed to obtain a broader surgical skill and a greater appreciation of clinical medicine, this broadening of knowledge and skill having been facilitated by the extensive content of basic sciences in the dental undergraduate course. Further study for the primary examination of the Fellowship of the Royal Australian College of Dental Surgeons and experience in medical and surgical clinics also have enabled oral surgeons to acquire the necessary knowledge and skill.

K. Referral to specialists.

It has been accepted that the undergraduate dental and medical courses are designed to provide a sound base for general practice and the associated need for referral to specialists.

In order to provide a complete consultative service to general dental practitioners, dental specialists, and the medical profession, oral surgery has developed extensively in the areas of oral pathology, oral medicine and surgery. Referral from other health providers seems to have stimulated the development of oral surgery to the level of a specialty.

It seems that as the needs of the professions change further, so the specialty will adapt to provide a better service to the health professions and community.

L. Oral surgery in the undergraduate curriculum.

The extent of teaching in oral surgery at the undergraduate level probably varies with the attitudes of teaching staff in individual universities, the main area of variation being in the realm of scope with regard to general practice.

It is considered that the following outline of the oral surgery content of an undergraduate curriculum would receive general acceptance (Hale 1966).

Hale stated: "On completion of this course, the basic standards should have encompassed the knowledge of and surgical ability to

1. diagnose and manage the patient within the limits of his professional ability and, when indicated, to know how to refer complex problems in oral surgery;
2. administer local anaesthetics effectively and safely;
3. select and administer pre and post operative medications effectively and safely;
4. employ the basic surgical skills judiciously, and understand when, where, and how each instrument should be used to best advantage;
5. prevent, recognise, and manage early shock, or other office emergency problems;
6. evaluate accurately the ease or difficulty of an extraction, and to gain a high degree of proficiency in uncomplicated extractions;
7. remove fractured or retained roots from the alveolus;

8. perform alveoloplasties within his capabilities;
9. treat periapical pathologies and such other conditions of the alveolar process surgically;
10. incise and maintain drainage for intra oral abscesses; and recognise, manage, and/or seek consultation for other acute or chronic infection;
11. biopsy suspected lesions or neoplasms, and submit the surgical specimens properly to a qualified pathologist for microscopic study;
12. recognise the need for adequate post surgical care, and provide it when indicated;
13. perform indicated apical and gingival surgery;
14. treat haemorrhage from bone and soft tissues, and be familiar with appropriate operating room technique, hospital protocol, and surgical procedures.

The undergraduate should also acquire a theoretic knowledge of oral surgery problems which may be beyond his ability; e.g. facial trauma, neoplasms, severe infections, congenital and acquired deformities of the jaws, and other surgical problems that are within the scope of the specialty practice of oral surgery. It is basic that the dentist be able to diagnose and know where and how to refer for treatment those cases that are not within his range of ability. The student, therefore, should thoroughly understand the art of maintaining patient rapport while seeking indicated consultation with a specialist."

He concluded by commenting "By knowing the surgical procedures that should come within the operating range of the general practitioner, it is anticipated that he will be able to provide a more satisfactory oral surgery service."

The research undertaken by the author now will be described, beginning with an outline of materials and methods.

Materials and methods

A. Samples.

1. All dentists.

1.1 South Australia

Questionnaires were posted to all registered dentists with a covering letter requesting participation and indicating the importance and purpose of the study (Appendices 1.i and 1.ii). After four weeks, those who had not returned questionnaires were contacted either by telephone, if residing in Adelaide, or by mail and encouraged to participate (Appendix 1.iii).

In fact, of the 495 registered dentists, 373 (75.4 per cent) participated. The proportions of registered dentists responding by region were as follows:

- (i) 307 out of 395 (77.7 per cent) for the State capital.
- (ii) 40 out of 58 (69.0 per cent) for country urban centres of populations greater than 4,429.
- (iii) 26 out of 42 (61.9 per cent) for country towns (rural areas) of population less than 4,429.

The acceptance rate in these regions was statistically heterogeneous ($\chi^2 = 6.56; df = 2; p < 0.05$) (Chilton 1967). The best response was associated with the State capital.

In fact, the actual response rate was greater than indicated by these percentages, because 26 dentists were known to be retired or absent from the State. If this group is excluded, the effective rate becomes 79.5 per cent. This rate might also under-estimate the effective acceptance rate because of additional dentists, who unknown to the author, were retired or absent from the State.

It is possible that non-participation was associated with characteristics of the dentists and their style of practice leading to biased results. Nevertheless, it can be concluded that results pertain to the majority of dentists in South Australia.

1.2 Queensland

The questionnaires were posted to a sample of 495 Queensland dentists with the identical covering letters and follow-up procedures as those employed in South Australia (Appendices 1. i, 1. ii and 1. iii).

The sample was selected from the register by applying a systematic routine following a random start. Dentists first were classified according to whether they practised in

- (i) the State capital.
- (ii) a country urban centre of population greater than 4,429.
- (iii) a country town (rural area) of population less than 4,429.

The frequency distribution of dentists by location was determined and a sample with a comparable distribution obtained by selecting the appropriately-sized sub-sample from each locality.

South Australia and Queensland differ in the number of large country urban centres. A number were evident in Queensland with populations

- (i) greater than 50,000, that is, three.
- (ii) between 40,000 and 50,000, that is, two.

In South Australia, there were only two centres with populations greater than 30,000. (1971 Census of Population and Housing, Bureau of Census and Statistics. Australia).

Of the 495 dentists circularised, 327 (66.1 per cent) participated. The proportions of registered dentists responding by region were as follows:

- (i) 181 out of 300 (60.3 per cent) for the State capital.
- (ii) 121 out of 155 (78.1 per cent) for country urban centres of populations greater than 4,429.
- (iii) 25 out of 40 (62.5 per cent) for country towns (rural areas) of population less than 4,429.

The acceptance rate in these regions was statistically heterogeneous ($\chi^2=14.58; df=2; p<0.001$). The best response was associated with country urban centres.

The actual participation rate was greater than indicated by the above percentage because of 77 dentists, who were known to have retired or were absent from the State. After excluding those known to be in these categories, 78.2 per cent are seen to have responded. This rate also might be an understatement of the effective acceptance rate because of additional dentists who, unknown to the author, no longer practised in the State.

2. Approved dentists.

Questionnaires were posted to all "approved" dentists in Australia. The covering letters and follow-up procedures were the same as that for all dentists in South Australia and Queensland, except that no telephonic communication was associated with dentists in States other than South Australia or Queensland (Appendices 1.i, 1.ii and 1.iii).

The participation rate of "approved" dentists by location was as follows:

(i) South Australia - 15 in 15.

(ii) Queensland - 14 in 16 (87.5 per cent).

One dentist evidently was an administrator and felt that the questionnaire was irrelevant to his role. The questionnaire for another dentist was returned, because the address was unknown.

(iii) New South Wales - 50 in 74 (67.6 per cent).

Two questionnaires were returned, because the address was unknown, one dentist had retired and another was overseas.

(iv) Victoria - 19 in 26 (73.1 per cent).

One dentist evidently had left the State.

(v) Western Australia - five in seven (71.4 per cent).

One questionnaire was returned because the address was unknown.

(vi) Tasmania - one in one.

(vii) Australian Capital Territory - zero in one.

As mentioned for all dentists, it is possible that non-participation led to biased results, but it nevertheless can be concluded that results relate to the majority of "approved" dentists in Australia.

3. New Zealand oral surgeons.

Questionnaires were forwarded to all New Zealand members of the Australian and New Zealand Society of Oral Surgeons (Appendix I.i).

The standard covering letter was sent, but no follow-up contact was attempted (Appendix I.ii).

Of the 24 oral surgeons approached, 14 (58.3 per cent) responded, and one of these indicated that he had retired.

B. Questionnaires.

The questionnaires were designed in consultation with the Head of the Department of Oral Pathology and Oral Surgery of the University of Adelaide and a "data processing" consultant.

A pilot survey of 20 dentists, who were drawn at random from the State capital of South Australia, was undertaken to detect misleading questions and ambiguities.

The final questionnaire consisted mostly of questions with specified mutually-exclusive optional answers, as indicated (Appendix I.i).

Dentists were informed that results would be treated in the strictest confidence and that the front page with their name would be detached upon receipt of the returned questionnaire.

C. Data processing.

Data were processed at the University of Adelaide's computing centre by

- (i) key-punching data on to cards from the questionnaires.
- (ii) processing data using the FORTRAN extended 4.5 language, which complies with specifications of the American National Standards Institute.

A CDC6400 SCOPE 3.4 computer was employed.

Subsequent minor processing was performed with a Canola 167 P electronic calculator.

Prior to processing, the author checked all questionnaires to ensure complete recording and contacted subjects for further information when required and practicable.

D. Statistical analysis.

The characteristics of dentists in South Australia and Queensland were compared as detailed in the results. Occasionally, differences were compared using the Chi Square test of statistical significance (Chilton) to increase discrimination. Yates continuity correction was incorporated for all 2 x 2 tables.

Differences in treatment characteristics between various groups of dentists were analysed by the examination of trends. Tests of statistical significance were not applied because of limited time and resources.

New Zealand data was not analysed because of time constraints, but these are available for study at a later date.

E. Treatment options.

The codes for optional treatment management are particularly important, and are as follows:

- "1" ... Signifies that patients would be referred routinely.
- "2" ... Signifies that patients would be referred in most instances.
- "3" ... Signifies that the treatment would be provided in most instances, but only because an oral surgeon is not readily available.
- "4" ... Signifies that the treatment would be provided in most instances, irrespective of whether or not an oral surgeon is readily available.
- "5" ... Signifies that the treatment would be provided routinely, but only because an oral surgeon is not readily available.
- "6" ... Signifies that the treatment would be provided routinely, irrespective of whether or not an oral surgeon is available (Appendix I.i).

Results and comments

A. Descriptive characteristics of dentists.

1. Age distribution by location.

1.1. South Australia

Of the respondents, 350 were males, 15 were females and eight did not specify their sex. As a consequence of the small number of females, the results are not classified by sex. A total of 283 (75.9 per cent) claimed to be general practitioners and their results are presented separately as well as accumulated within the total sample.

The age distributions of South Australian general practitioners and total dentists are presented in Tables 1 and 2 respectively.

Table 1. Age distribution of South Australian general practitioners by location of practice

(percentages in brackets)

Location of practice	Age (yrs.)				Total
	≤30	31-40	41-50	≥51	
State capital	74(32.5)	45(19.7)	67(29.4)	42(18.4)	228
Country urban	12(38.7)	8(25.8)	6(19.4)	5(16.1)	31
Rural	9(37.5)	2(8.3)	6(25.0)	7(29.2)	24
Total	95(33.6)	55(19.4)	79(27.9)	54(19.1)	283

Table 2. Age distribution of South Australian dentists by location of practice

(percentages in brackets)

Location of practice	Age (yrs.)				Total
	≤30	31-40	41-50	≥51	
State capital	96(31.3)	67(21.8)	94(30.6)	50(16.3)	307
Country urban	20(50.0)	8(20.0)	7(17.5)	5(12.5)	40
Rural	10(38.5)	3(11.5)	6(23.1)	7(26.9)	26
Total	126(33.8)	78(20.9)	107(28.7)	62(16.6)	373

It is evident that all dentists, and general practitioners specifically, were younger in the country areas than in the State capital. The proportions 40 years of age or younger in the State capital and country areas respectively were as follows:

(i) 53.1 per cent and 62.1 per cent for all dentists.

(ii) 52.2 per cent and 56.4 per cent for general practitioners.

Nevertheless, differences in overall age-sex distributions between the three specified locations were not statistically significant.

General practitioners were located in this manner:

(i) 228 (80.6 per cent) in the State capital.

(ii) 31 (11.0 per cent) in country urban centres.

(iii) 24 (8.5 per cent) in rural areas.

Of the remaining 90 dentists, 79 (87.8 per cent) were located in the State capital. This proportion is higher than the corresponding one for general practitioners and is consistent with the impression that specialist services and institutionalised sectors of the profession are concentrated in the capital.

1.2 Queensland

Overall, 314 dentists indicated that they were males, eight were females and five did not indicate their sex. Because of the small number of females, the results are not presented by sex. A total of 285 (87.2 per cent) respondents claimed to be general practitioners and results for these dentists are presented separately and accumulated within the total sample.

The age distribution of general practitioners and total dentists is presented in Tables 3 and 4 respectively.

Table 3. Age distribution of Queensland general practitioners by location of practice

(percentages in brackets)

Location of practice	Age (yrs.)				Total
	≤30	31-40	41-50	≥51	
State capital	31(21.7)	32(22.4)	46(32.2)	34(23.8)	143
Country urban	24(20.3)	39(33.1)	32(27.1)	23(19.5)	118
Rural	10(41.7)	3(12.5)	8(33.3)	3(12.5)	24
Total	65(22.8)	74(26.0)	86(30.2)	60(21.1)	285

Table 4. Age distribution of Queensland dentists by location of practice

(percentages in brackets)

Location of practice	Age (yrs.)				Total
	≤30	31-40	41-50	≥51	
State capital	36(20.0)	43(23.8)	58(32.0)	44(24.3)	181
Country urban	26(21.5)	39(32.2)	33(27.3)	23(19.0)	121
Rural	10(40.0)	3(12.0)	9(36.0)	3(12.0)	25
Total	72(22.0)	85(26.0)	100(30.6)	70(21.4)	327

Whilst a greater proportion of country dentists evidently were 40 years of age or younger, overall there was no statistically significant difference in age distributions of dentists by location.

General practitioners were located as follows:

- (i) 143 (50.2 per cent) in the State capital.
- (ii) 118 (41.4 per cent) in country urban centres.
- (iii) 24 (8.4 per cent) in the rural areas.

Of the 42 remaining dentists, 38 (90.5 per cent) were located in the State capital. This proportion is significantly higher than for general practitioners ($X^2=22.45; df=1; p<0.001$), and is consistent with the impression that specialist services and institutionalised sectors of the profession are concentrated in the capital.

1.3 South Australia and Queensland

Whilst the percentage of dentists, who were female, was small in both States, the South Australian figure was higher, that is, 4.1 (15 in 365) as opposed to 2.5 (8 in 322) for Queensland.

The proportion of dentists claiming to be general practitioners was higher in Queensland, that is, 87.2 per cent compared to 75.9 per cent in South Australia, and the difference is statistically significant ($X^2=13.77:df=1:p<0.001$).

It is evident from Tables 1, 2, 3 and 4, that the age distributions of dentists in both States were similar, although a higher proportion in South Australia evidently were 30 years of age or younger. The difference in the proportions of South Australian and Queensland dentists, who were in this lower age group, was statistically significant for both the general practitioners ($X^2=7.60:df=1:p<0.01$) and all dentists ($X^2=11.31:df=1:p<0.001$). This difference is understandable as South Australia has a relatively new dental school with an enlarged training capacity.

In both States there seemed to be a slight tendency for dentists in the country areas to be younger than those in the capital.

The distribution of general practitioners by location varied appreciably between the two States. In Queensland a smaller proportion were located in the capital, that is, 50.2 per cent as opposed to 80.6 per cent in South Australia. This difference is statistically significant ($X^2=56.56:df=1:p<0.001$) and was anticipated because it is evident that Queensland has a larger number of country urban centres.

Dentists, who were not general practitioners, were concentrated in the State capital, as expected.

2. Final undergraduate year by location.

2.1 South Australia

Overall, 367 dentists indicated their final undergraduate year. Results for general practitioners and the total sample are presented separately in Tables 5 and 6.

Table 5. Final undergraduate year of South Australian general practitioners by location of practice

(percentages in brackets)

Location of practice	Final undergraduate year				Total
	≤1930	1931-50	1951-70	≥1971	
State capital	7(3.1)	40(17.9)	131(58.7)	45(20.2)	223
Country urban	0(0.0)	5(16.1)	16(51.6)	10(32.3)	31
Rural	3(12.5)	6(25.0)	11(45.8)	4(16.7)	24
Total	10(3.6)	51(18.3)	158(56.8)	59(21.2)	278

Table 6. Final undergraduate year of South Australian dentists by location of practice

(percentages in brackets)

Location of practice	Final undergraduate year				Total
	≤1930	1931-50	1951-70	≥1971	
State capital	7(2.3)	52(17.3)	184(61.1)	58(19.3)	301
Country urban	0(0.0)	5(12.5)	17(42.5)	18(45.0)	40
Rural	3(11.5)	6(23.1)	12(46.2)	5(19.2)	26
Total	10(2.7)	63(17.2)	213(58.0)	81(22.1)	367

Overall, the distribution of final undergraduate years for general practitioners did not vary by location to a statistically significant extent, but the distribution did differ significantly for the total sample ($\chi^2=23.20$:df=6:p<0.001). Whilst 19.3 per cent of dentists in the State capital (58 in 301) graduated after 1970, this percentage was 34.8 (23 in 66) for the remainder.

2.2 Queensland

Overall, 324 dentists indicated their final undergraduate year. Results for general practitioners and the total sample are presented separately in Tables 7 and 8.

Table 7. Final undergraduate year of Queensland general practitioners by location of practice

(percentages in brackets)

Location of practice	Final undergraduate year				Total
	≤1930	1931-50	1951-70	≥1971	
State capital	3(2.1)	36(25.7)	81(57.9)	20(14.3)	140
Country urban	1(0.8)	22(18.6)	76(64.4)	19(16.1)	118
Rural	0(0.0)	4(16.7)	11(45.8)	9(37.5)	24
Total	4(1.4)	62(22.0)	168(59.6)	48(17.0)	282

Table 8. Final undergraduate year of Queensland dentists by location of practice

(percentages in brackets)

Location of practice	Final undergraduate year				Total
	≤1930	1931-50	1951-70	≥1971	
State capital	3(1.7)	47(26.4)	105(59.0)	23(12.9)	178
Country urban	1(0.8)	22(18.2)	77(63.6)	21(17.4)	121
Rural	0(0.0)	4(16.0)	12(48.0)	9(36.0)	25
Total	4(1.2)	73(22.5)	194(59.9)	53(16.4)	324

Overall, the final undergraduate years for general practitioners or total dentists did not vary by location to a statistically significant extent.

2.3 South Australia and Queensland

It is apparent from Tables 5, 6, 7 and 8 that the distributions of South Australian and Queensland dentists by final undergraduate years were similar. Overall, the distributions did not differ to a statistically significant extent.

There was an apparent tendency for recent graduates to be located in the country areas to a greater extent than the remainder, and this observation is consistent with the finding that younger dentists tended to practise in the country to a greater extent than the remainder (Tables 1, 2, 3 and 4).

3. Location of basic dental education.

3.1 South Australia

A total of 371 dentists indicated where they had obtained their basic dental qualification. Of these, 309 (83.3 per cent) had graduated from the Adelaide Dental School. The remainder reported dental schools in these localities:

(i) New South Wales	-	15
(ii) The United Kingdom	-	15
(iii) Queensland	-	10
(iv) other States or overseas	-	22

The proportion, who originally graduated from the Adelaide Dental School, was (i) 83.6 per cent (255 in 305) for dentists in the capital, (ii) 80.0 per cent (32 in 40) for those in country urban centres and (iii) 84.6 per cent (22 in 26) for practitioners in rural areas. Overall, the variation was small.

The proportion was higher for the more recent graduates, for example: 92.6 per cent (75 in 81) for those who stated that they graduated after 1970 and 80.7 per cent (234 in 290) for the remainder, and the difference was statistically significant ($X^2=5.62:df=1:p<0.05$)

Of the 281 general practitioners who provided information, 244 (86.8 per cent) had graduated in Adelaide. This proportion was 96.6 per cent (57 in 59) for those who graduated after 1970, and 88.5

per cent (200 in 226) and 80.0 per cent (44 in 55) for dentists in the State capital and country areas respectively.

3.2 Queensland

Overall, 325 dentists responded and 298 (91.7 per cent) apparently obtained their basic dental degree in Queensland. The remainder specified dental schools in these localities:

- (i) New South Wales - 16
- (ii) elsewhere - 11

The proportion, who originally graduated from the Queensland Dental School, evidently was (i) 93.9 per cent (168 in 179) for dentists in the capital, (ii) 86.8 per cent (105 in 121) for those in country urban centres, and (iii) 100 per cent (25 in 25) for the remainder. Overall, the difference was small.

The proportion was high for the more recent graduates, for example: 98.1 per cent (52 in 53) for those who stated that they graduated after 1970, and 90.4 per cent (246 in 272) for the remainder.

Of the 284 general practitioners who provided information, 261 (91.9 per cent) evidently graduated in Queensland. This proportion was 97.9 per cent (47 in 48) for those who graduated after 1970, and 95.1 per cent (135 in 142) and 88.7 per cent (126 in 142) for dentists in the State capital and country areas respectively.

3.3 South Australia and Queensland

The vast majority of dentists in each State had obtained their basic degree locally, although the relevant proportion was significantly higher for Queensland ($X^2=10.23; df=1; p<0.01$).

In both States, more of the recent graduates evidently had graduated locally. It seemed that general practitioners, who graduated locally, tended to be located in capitals to a greater extent than did other dentists.

4. Employment authority by location.

4.1 South Australia

Of the 367 dentists providing information on their employment, the following nominated these specified forms:

- (i) 299 (81.5 per cent) - private practice.
- (ii) 35 (9.5 per cent) - School Dental Service.
- (iii) 15 (4.1 per cent) - Dental School.
- (iv) 13 (3.5 per cent) - Dental Hospital.
- (v) 5 (1.4 per cent) - other.

Of those nominating private practice, 250 (83.6 per cent) were located in the State capital, whereas the numbers were 19 (54.3 per cent), 15 (100.0 per cent) and 13 (100.0 per cent) for the School Dental Service, Dental School and Dental Hospital respectively.

Of the 81 dentists graduating since 1970, the following nominated these specified forms of employment:

- (i) 51 (63.0 per cent) - private practice.
- (ii) 19 (23.5 per cent) - School Dental Service.
- (iii) 4 (4.9 per cent) - Dental School.
- (iv) 5 (6.2 per cent) - Dental Hospital.
- (v) 2 (2.5 per cent) - other.

It is evident that recent graduates were employed outside private practice to a greater extent than other dentists.

Of the 279 general practitioners providing information 261 (93.5 per cent) were employed privately. Fifty-nine general practitioners graduated after 1970 and 49 (83.1 per cent) reported that they were employed privately. Accordingly, it is evident that recently graduated general practitioners were employed outside private practice to a greater extent than other general practitioners. Also more dentists, who were not general practitioners, were employed outside the private sector ($X^2=109.11;df=1;p<0.001$).

4.2 Queensland

A total of 318 dentists provided information as follows:

- (i) 245 (77.0 per cent) - private practice.
- (ii) 43 (13.5 per cent) - a Dental Hospital.
- (iii) 9 (2.8 per cent) - Dental School.
- (iv) 7 (2.2 per cent) - Armed Forces.
- (v) 5 (1.6 per cent) - School Dental Service.
- (vi) 9 (2.8 per cent) - other.

Of those nominating private practice, 137 (55.9 per cent) were located in the State capital, whereas the numbers were 21 (48.8 per cent) for a dental hospital, 9 (100.0 per cent) for the Dental School, 3 (42.9 per cent) for the Armed Forces and 3 (60.0 per cent) for the School Dental Service.

Of the 52 dentists who graduated since 1970, 24 (46.2 per cent) had entered private practice and 13 (25.0 per cent) were employed at a dental hospital. It is apparent that recent graduates were employed outside the private sector to a greater extent than the remainder.

Of the 277 general practitioners providing information, 228 (82.3 per cent) were employed privately. Forty-seven general practitioners graduated after 1970 and 24 (51.1 per cent) reported that they were employed privately. Accordingly, it is evident that recently graduated general practitioners were employed outside private practice to a greater extent than other general practitioners. Also more dentists, who were not in general practice, were more likely to be employed outside the private sector ($X^2=31.42:df=1:p<0.001$).

4.3 South Australia and Queensland

The vast majority of dentists in both States were employed privately, but this was more apparent for South Australia. The difference in the proportion of South Australian and Queensland general practitioners in private practice was statistically significant ($X^2=15.52:df=1:p<0.001$).

In both States, employment outside private practice was most apparent for recent graduates and for those not in general practice.

5. Postgraduate qualifications.

5.1 South Australia

A total of 16 dentists indicated that they had been "approved" by the Commonwealth Government for their patients to receive reimbursement for certain fees relating to oral surgery.

Of these dentists, 11 (68.8 per cent) were located in the State capital, as opposed to 3 (18.8 per cent) in certain country centres and 2 (12.5 per cent) in the rural areas. Therefore the proportion of dentists, who were "approved", was as follows:

- (i) 3.6 per cent (11 in 307) for the State capital.
- (ii) 7.5 per cent (3 in 40) for the country urban centres.
- (iii) 7.7 per cent (2 in 26) for the rural areas.

The 16 dentists were classified according to postgraduate training in oral surgery and whether their practices were restricted entirely to oral surgery, as indicated in Table 9.

Table 9. South Australian "approved" dentists by exposure to postgraduate training and according to whether their practice was restricted entirely to oral surgery

(percentages in brackets)

Restricted/postgraduate oral surgery training	Location			Total
	Capital	Country urban	Rural	
No/No	2(33.3)	2(33.3)	2(33.3)	6
No/Yes	0(0.0)	0(0.0)	0(0.0)	0
Yes/No	1(50.0)	1(50.0)	0(0.0)	2
Yes/Yes	8(100.0)	0(0.0)	0(0.0)	8
Total	11(68.8)	3(18.8)	2(12.5)	16

It is apparent that all the dentists with practices entirely restricted to oral surgery and with histories of postgraduate training in that field (50.0 per cent) were located in the capital. No "approved" dentists in the rural areas had a restricted practice or a history of training. It therefore can be assumed that whilst the proportion of dentists in the State capital, who were "approved", was lower than for other locations, these "approved" dentists usually were more qualified and devoted more of their time to oral surgery.

Of the 16 "approved" dentists, nine had postgraduate qualifications. Two were Fellows of the Royal College or Royal Australian College of Dental Surgeons, but had no postgraduate degrees,

whereas seven had further degrees. No "approved" dentist outside the State capital possessed a postgraduate qualification.

Of the 283 respondents claiming to be general practitioners, none had received postgraduate training in oral surgery. Twenty (7.1 per cent) had postgraduate qualifications. Four were Fellows of the Royal College or Royal Australian College of Dental Surgeons, but had no postgraduate degrees, whereas 16 had further degrees. Nineteen of these dentists (95.0 per cent) resided in the State capital.

5.2 Queensland

In Queensland, 10 dentists indicated that they were classified as "approved" dentists by the Commonwealth Government.

Thus the proportion of dentists, who were "approved", was as follows:

- (i) 2.8 per cent (5 in 181) for the State capital.
- (ii) 4.1 per cent (5 in 121) for the country urban areas.
- (iii) 0.0 per cent (0 in 25) for the rural areas.

The 10 dentists were classified according to postgraduate training in oral surgery and whether their practices were restricted entirely to oral surgery, as indicated in Table 10.

Table 10. Queensland "approved" dentists by exposure to postgraduate oral surgery training and according to whether their practice was restricted entirely to oral surgery

(percentages in brackets)

Restricted/postgraduate oral surgery training	Location			Total
	Capital	Country urban	Rural	
No/No	1(33.3)	2(66.7)	0(0.0)	3
No/Yes	0(0.0)	2(100.0)	0(0.0)	2
Yes/No	0(0.0)	0(0.0)	0(0.0)	0
Yes/Yes	4(80.0)	1(20.0)	0(0.0)	5
Total	5(50.0)	5(50.0)	0(0.0)	10

Of the dentists who restricted their practice to oral surgery, four (80.0 per cent) were located in the capital city, and one (20.0 per cent) was located in a country urban centre, and all five had histories of postgraduate training in oral surgery.

Thus there was an equal distribution of "approved" dentists between the State capital and country urban centres. Whilst the proportion of dentists in the capital, who were "approved" was lower than in the country urban centres, these "approved" dentists generally were more qualified and devoted more time to oral surgery. Of the 10 dentists, five had postgraduate qualifications including degrees.

The number of "approved" dentists with postgraduate qualifications was as follows:

- (i) 4 (80.0 per cent) in the capital city.
- (ii) 1 (20.0 per cent) in a country urban centre.

Of the 285 respondents who claimed to be general practitioners, two had some postgraduate training in oral surgery, and 24 (8.4 per cent) had postgraduate qualifications. Three were Fellows of the Royal College or Royal Australian College of Dental Surgeons, but had no other degrees whereas 21 had further university degrees. Twenty-one of these dentists (87.5 per cent) resided in the State capital.

5.3 South Australia and Queensland

Results suggest that the proportion of dentists who were "approved" was marginally higher in South Australia than Queensland.

In South Australia, the proportion was higher in the country areas whereas no "approved" dentists were reported for the rural areas of Queensland.

The tendency for "approved" dentists to have received postgraduate training in oral surgery and to have practices entirely devoted to oral surgery was higher in the cities.

"Approved" dentists and general practitioners in the cities seemed more likely to possess postgraduate qualifications.

The extent of histories of postgraduate training and postgraduate qualifications in the two States seemed comparable for both "approved" dentists and all general practitioners.

6. Proximity to an oral surgeon by location.

6.1 South Australia

A total of 370 dentists provided the following:

- (i) 46 (12.4 per cent) - oral surgeon in the same building.
- (ii) 240 (64.9 per cent) - oral surgeon in the same town.
- (iii) 30 (8.1 per cent) - oral surgeon not within the town
but within 80 kilometres.
- (iv) 54 (14.6 per cent) - oral surgeon not within 80 kilometres.

In the State capital, 46 (15.1 per cent) indicated that an oral surgeon practised in the same building, whereas this circumstance did not apply outside this city. Conversely, only one dentist in the State capital (0.3 per cent) reported that no oral surgeon practised within 80 kilometres, but this number was 53 (80.3 per cent) for the remainder.

A total of 280 general practitioners provided this information:

- (i) 15 (5.4 per cent) - oral surgeon in the same building.
- (ii) 192 (68.6 per cent) - oral surgeon in the same town.
- (iii) 30 (10.7 per cent) - oral surgeon not within the town
but within 80 kilometres.
- (iv) 43 (15.4 per cent) - oral surgeon not within 80 kilometres.

Whereas 207 (73.9 per cent) general practitioners claimed that there was an oral surgeon in the same building or town, the corresponding number was 79 (87.8 per cent) for the remainder and the difference is statistically significant ($X^2=6.68:df=1:p<0.01$).

6.2 Queensland

A total of 326 dentists provided information as follows:

- (i) 33 (10.1 per cent) - oral surgeon in the same building.
- (ii) 179 (54.9 per cent) - oral surgeon in the same town.
- (iii) 19 (5.8 per cent) - oral surgeon not within the town
but within 80 kilometres.
- (iv) 95 (29.1 per cent) - oral surgeon not within 80 kilometres.

In the State capital, 32 (17.8 per cent) indicated that an oral surgeon practised in the same building, whereas only one (0.7 per cent) made this statement for other areas of the State. Conversely, only two dentists in the State capital (1.1 per cent) reported that no oral surgeon practised within 80 kilometres, but this number was 93 (63.7 per cent) for the remainder.

A total of 285 general practitioners provided this information:

- (i) 11 (3.9 per cent) - oral surgeon in the same building.
- (ii) 164 (57.5 per cent) - oral surgeon in the same town.
- (iii) 19 (6.7 per cent) - oral surgeon not within the town but within 80 kilometres.
- (iv) 91 (31.9 per cent) - oral surgeon not within 80 kilometres.

Whereas 175 (61.4 per cent) general practitioners claimed that there was an oral surgeon in the same building or town, the corresponding number was 37 (90.2 per cent) for the remainder and the difference is statistically significant ($X^2=11.87;df=1;p<0.001$).

6.3 South Australia and Queensland

In both States, the ready availability of an oral surgeon seemed limited. The proportion of dentists located over 80 kilometres from an oral surgeon was higher in Queensland ($X^2=20.94;df=1;p<0.001$).

For dentists practising outside the State capitals, this proportion evidently was higher in South Australia, that is, 80.3 per cent as opposed to 63.7 per cent in Queensland ($X^2=5.10;df=1;p<0.05$). The latter situation might result from the smaller apparent number of towns in the South Australian country areas with adequate populations to support an oral surgeon.

In both States the ready availability of an oral surgeon was highest in the capitals. The ready availability was greatest for dentists, who were not general practitioners, and this finding is consistent with the apparent concentration of specialists in the city areas.

7. Availability of adequate hospital and anaesthetist services for specified oral surgical procedures.*

7.1 South Australia

A total of 360 dentists provided relevant information. Of these, 187 (51.9 per cent) indicated that adequate services were available in this regard. Another 69 (19.2 per cent) stated that services were not adequate and the remaining 104 (28.9 per cent) did not know. The hospital facilities were specified as inadequate by 49 dentists (13.6 per cent), and the lack of availability of a suitable anaesthetist was specified by 26 respondents (7.2 per cent).

Outside the State capital, 29 dentists (45.3 per cent) indicated that adequate hospital and anaesthetist services were available in this regard. Another 23 (35.9 per cent) stated that services were not adequate and the remaining 12 (18.8 per cent) did not know. Hospital facilities were specified as inadequate by 20 dentists (31.3 per cent) and the lack of availability of a suitable anaesthetist was specified by 10 respondents (15.6 per cent).

The information supplied by general practitioners was similar to that presented for all dentists.

7.2 Queensland

A total of 317 dentists provided relevant information. Of these 197 (62.1 per cent) indicated that adequate services were available in this regard. Another 76 (24.0 per cent) considered that services were not adequate and the remaining 44 (13.9 per cent) did not know. The hospital facilities were specified as inadequate by 50 dentists (15.8 per cent) and the lack of availability of a suitable anaesthetist was specified by 33 respondents (10.4 per cent).

* --- specified procedures outlined in the questionnaire (Appendix 1.i)

Outside the State capital, 74 (51.4 per cent) indicated that adequate hospital and anaesthetist services were available in this regard. Another 44 (30.6 per cent) stated that services were not adequate and the remaining 26 (18.1 per cent) did not know. Hospital facilities were specified as inadequate by 40 (27.8 per cent) and the lack of availability of a suitable anaesthetist was specified by 20 dentists (13.9 per cent).

The information supplied by general practitioners was similar to that presented for all dentists.

7.3 South Australia and Queensland

In both States, a similar lack of adequate hospital and anaesthetist services was reported and was particularly noticeable outside the capital cities. The availability of suitable hospital facilities seemed lower than the availability of adequate anaesthetist services.

8. Summarising remarks.

Over 95 per cent of dentists in each State were males and approximately three quarters were in general practice in South Australia, whereas the corresponding proportion was almost 90 per cent of Queensland.

The age distributions of dentists in the two States were similar, but there was a preponderance of dentists aged 30 years or younger in South Australia. Evidently, there was a slightly greater tendency for young dentists and recent graduates to practise outside the State capitals.

A much higher proportion of South Australians than Queenslanders resided in the State capital. Predictably, approximately 80 per cent of South Australian general practitioners practised in the capital

and the corresponding proportion for Queensland was 50 per cent. The percentage located in rural areas was about seven per cent for the two States. As expected, more dentists, who were not general practitioners, were concentrated in State capitals.

Whilst most dentists were graduates of the State in which they practised, this was more so for Queensland where 92 per cent were local graduates, as opposed to 83 per cent for South Australia. Local graduates seemed to be more common amongst recent graduates, and for general practitioners in a State capital as opposed to country areas.

The percentages of dentists in private practice were approximately 82 and 77 in South Australia and Queensland respectively, and the proportion was smaller amongst recent graduates and dentists who were not in general practice.

The proportion of dentists, who were "approved", seemed slightly higher in South Australia. Whereas the proportion was higher in country regions than the State capital in South Australia, no "approved" dentists were reported for rural areas in Queensland.

"Approved" dentists in the State capitals seemed more likely:

- (i) to have practices restricted entirely to oral surgery,
- (ii) to have received relevant postgraduate training and
- (iii) to possess formal postgraduate qualifications.

Also more general practitioners in the State capitals evidently had postgraduate qualifications. Few general practitioners had received postgraduate training in oral surgery.

The ready availability of oral surgeons was limited in both States, and particularly in the country areas of South Australia.

A lack of adequate hospital and anaesthetist services was reported for both States and was most apparent outside the capitals. The shortage of suitable hospital facilities seemed more acute than the shortage of anaesthetist services.

B. Decisions of general practitioners regarding the provision of various treatments.

Throughout this section, it should be assumed that when it is stated that care would be provided routinely or in most instances, then this would be so irrespective of the availability of an oral surgeon. In the event that care would be so provided only because an oral surgeon is not readily available, then this is stated specifically. Interpretations of the columns numbered from one to six in each table are explained in "materials and methods".

1. "Extraction of one tooth".

It was anticipated that this treatment would be provided by virtually all general practitioners. In fact, 238 (84.7 per cent) South Australians and 240 (85.7 per cent) Queenslanders indicated that they would provide the care routinely. An additional 35 (12.5 per cent) South Australians and 36 (12.9 per cent) Queensland dentists reported that they would provide this care in most instances. Further details are presented by location in Table 11.

Table 11. Decisions regarding "The extraction of one tooth"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	2 (0.9)	5 (2.2)	1 (0.4)	31 (13.7)	0 (0.0)	188 (82.8)	227
	Qld.	0 (0.0)	2 (1.4)	0 (0.0)	17 (12.1)	0 (0.0)	121 (86.4)	140
Country	S.A.	0 (0.0)	0 (0.0)	0 (0.0)	2 (6.7)	0 (0.0)	28 (93.3)	30
	Qld.	0 (0.0)	0 (0.0)	2 (1.7)	16 (13.8)	0 (0.0)	98 (84.5)	116
Urban	S.A.	0 (0.0)	0 (0.0)	0 (0.0)	2 (8.3)	0 (0.0)	22 (91.7)	24
	Qld.	0 (0.0)	0 (0.0)	0 (0.0)	3 (12.5)	0 (0.0)	21 (87.5)	24
Total	S.A.	2 (0.7)	5 (1.8)	1 (0.4)	35 (12.5)	0 (0.0)	238 (84.7)	281
	Qld.	0 (0.0)	2 (0.7)	2 (0.7)	36 (12.9)	0 (0.0)	240 (85.7)	280

No dentists outside the State capitals indicated that they would refer routinely or in most instances. Only two dentists outside these capitals reported that they would provide treatment in most instances only because an oral surgeon was not readily available. Only nine South Australian and Queensland dentists practising in the State capitals apparently would refer routinely or in most instances.

Two (1.7 per cent) dentists in country urban centres of Queensland, and one (0.4 per cent) in the South Australian capital, claimed that they usually would provide this treatment only because an oral surgeon was not readily available. It seems possible that "availability" occasionally was interpreted in terms of cost rather than proximity.

It is evident that referral was rare, particularly in locations outside the State capitals. In South Australian country areas, routine care seemed more common than in the capital.

It seems that this care normally is regarded as the responsibility of the general practitioner.

2. "Extraction of several teeth".

As for the previous treatment, it was expected that this care would be regarded as a responsibility of general practitioners.

Of the respondents, 236 (83.7 per cent) South Australians and 239 (84.2 per cent) Queenslanders stated that they would provide this treatment routinely, whereas 33 (11.7 per cent) South Australian and 40 (14.1 per cent) Queensland dentists indicated that they would perform this treatment in most instances. Further details are presented by location in Table 12.

Table 12. Decisions regarding "The extraction of several teeth" by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	6 (2.6)	6 (2.6)	1 (0.4)	28 (12.3)	0 (0.0)	186 (81.9)	227
	Qld.	1 (0.7)	3 (2.1)	0 (0.0)	18 (12.7)	0 (0.0)	120 (84.5)	142
Country	S.A.	0 (0.0)	0 (0.0)	0 (0.0)	3 (9.7)	0 (0.0)	28 (90.3)	31
	Qld.	0 (0.0)	0 (0.0)	1 (0.8)	19 (16.1)	0 (0.0)	98 (83.1)	118
Rural	S.A.	0 (0.0)	0 (0.0)	0 (0.0)	2 (8.3)	0 (0.0)	22 (91.7)	24
	Qld.	0 (0.0)	0 (0.0)	0 (0.0)	3 (12.5)	0 (0.0)	21 (87.5)	24
Total	S.A.	6 (2.1)	6 (2.1)	1 (0.4)	33 (11.7)	0 (0.0)	236 (83.7)	282
	Qld.	1 (0.4)	3 (1.1)	1 (0.4)	40 (14.1)	0 (0.0)	239 (84.2)	284

The small number of respondents, who claimed that they would refer this form of treatment either routinely or in most instances, were located in the State capitals. Only one dentist practising outside a State capital (0.5 per cent) reported that care would be provided in most instances because an oral surgeon was not readily available. In South Australian country areas, routine care seemed more common than in the city.

It is evident that this treatment is considered to be the responsibility of a general practitioner to an extent similar to that reported for the extraction of one tooth.

3. "Excision of hyperplastic tissue".

Undergraduate training seems to emphasise and develop confidence in the treatment of hard as opposed to soft tissues. Therefore it was anticipated that results might indicate that dentists were less likely to treat pathology of the soft tissues.

Of the respondents, only 95 (33.8 per cent) South Australians and 107 (37.8 per cent) Queenslanders indicated that they would provide this treatment routinely. Further details by location are presented in Table 13.

Table 13. Decisions regarding "The excision of hyperplastic tissue" by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	47 (20.8)	50 (22.1)	2 (0.9)	55 (24.3)	0 (0.0)	72 (31.9)	226
	Qld.	34 (24.1)	31 (22.0)	0 (0.0)	27 (19.1)	1 (0.7)	48 (34.0)	141
Country	S.A.	2 (6.5)	1 (3.2)	5 (16.1)	8 (25.8)	1 (3.2)	14 (45.2)	31
	Qld.	8 (6.8)	16 (13.6)	11 (9.3)	29 (24.6)	3 (2.5)	51 (43.2)	118
Urban	S.A.	3 (12.5)	2 (8.3)	0 (0.0)	8 (33.3)	2 (8.3)	9 (37.5)	24
	Qld.	2 (8.3)	5 (20.8)	2 (8.3)	5 (20.8)	2 (8.3)	8 (33.3)	24
Total	S.A.	52 (18.5)	53 (18.9)	7 (2.5)	71 (25.3)	3 (1.1)	95 (33.8)	281
	Qld.	44 (15.5)	52 (18.4)	13 (4.6)	61 (21.6)	6 (2.1)	107 (37.8)	283

In both States, the likelihood of referral seemed higher in the State capitals. This possibly resulted from the greater availability of oral surgeons in these cities. The provision of care mostly or routinely, because an oral surgeon was not readily available, was more common outside the State capitals and more so than indicated previously for extractions of single or several teeth.

It is evident that this care is not considered to be the responsibility of general practitioners to as great an extent as extractions of single or several teeth.

4. "Apicectomy and retrofilling of both roots of a lower second molar".

It was regarded that few dentists would consider this care to be the responsibility of general practitioners. In fact, a total of 220 (80.3 per cent) South Australian and 212 (77.1 per cent) Queensland dentists indicated that they would routinely refer patients who required this treatment. Further details by location are presented in Table 14.

Table 14. Decisions regarding "Apicectomy and retrofilling of both roots of a lower second molar" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	179 (81.4)	28 (12.7)	3 (1.4)	2 (0.9)	0 (0.0)	8 (3.6)	220
	Qld.	111 (81.0)	17 (12.4)	0 (0.0)	5 (3.6)	0 (0.0)	4 (2.9)	137
Country Urban	S.A.	24 (80.0)	3 (10.0)	0 (0.0)	1 (3.3)	0 (0.0)	2 (6.7)	30
	Qld.	85 (74.6)	16 (14.0)	3 (2.6)	3 (2.6)	0 (0.0)	7 (6.1)	114
Rural	S.A.	17 (70.8)	4 (16.7)	1 (4.2)	1 (4.2)	0 (0.0)	1 (4.2)	24
	Qld.	16 (66.7)	6 (25.0)	1 (4.2)	0 (0.0)	0 (0.0)	1 (4.2)	24
Total	S.A.	220 (80.3)	35 (12.8)	4 (1.5)	4 (1.5)	0 (0.0)	11 (4.0)	274
	Qld.	212 (77.1)	39 (14.2)	4 (1.5)	8 (2.9)	0 (0.0)	12 (4.4)	275

As expected, routine care seemed slightly more common outside the State capitals. Despite small numbers, treatment because an oral surgeon was not readily available seemed more apparent outside the State capital in Queensland. No dentist in any location evidently was prepared to provide this care routinely because of the lack of ready availability of an oral surgeon.

5. "Surgical extraction of a tooth".

It seems that one aim of undergraduate training is to prepare students for the provision of this care. Therefore it was expected that most dentists would provide this service routinely.

Nevertheless, results indicated that many dentists preferred to utilise oral surgical services. Of the respondents, only 89 (31.8 per cent) South Australian and 122 (43.4 per cent) Queensland dentists indicated that they would provide this care routinely. Further details by location are provided in Table 15.

Table 15. Decisions regarding "The surgical extraction of a tooth" by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total response	
		1	2	3	4	5		
Capital	S.A.	29 (12.9)	42 (18.7)	1 (0.4)	86 (38.2)	2 (0.9)	65 (28.9)	225
	Qld.	18 (12.7)	25 (17.6)	0 (0.0)	49 (34.5)	1 (0.7)	49 (34.5)	142
Country	S.A.	3 (9.7)	2 (6.5)	2 (6.5)	10 (32.3)	0 (0.0)	14 (45.2)	31
	Qld.	4 (3.4)	12 (10.3)	7 (6.0)	29 (25.0)	3 (2.6)	61 (52.6)	116
Rural	S.A.	4 (16.7)	3 (12.5)	0 (0.0)	6 (25.0)	1 (4.2)	10 (41.7)	24
	Qld.	0 (0.0)	0 (0.0)	2 (8.7)	6 (26.1)	3 (13.0)	12 (52.2)	23
Total	S.A.	36 (12.9)	47 (16.8)	3 (1.1)	102 (36.4)	3 (1.1)	89 (31.8)	280
	Qld.	22 (7.8)	37 (13.2)	9 (3.2)	84 (29.9)	7 (2.5)	122 (43.4)	281

It is evident that in both States, dentists practising outside the capital were more likely to provide this care routinely, and as anticipated, the decision to provide care because an oral surgeon was not readily available seemed more frequent in country areas. The latter tendency appeared to be slightly more pronounced in Queensland.

More Queenslanders seemed to provide this treatment routinely and fewer evidently referred routinely. More Queensland dentists apparently provided this care because an oral surgeon was not readily available, although this difference did not apply to the State capitals.

The proportions, who routinely provided the care, seem similar to those reported for the excision of hyperplastic tissue.

6. "Removal of a residual root which is visible clinically".

It was anticipated that this treatment would be provided by general practitioners as a routine procedure. Of the respondents,

224 (79.4 per cent) South Australian and 224 (78.6 per cent) Queensland dentists claimed that they would provide this treatment routinely, which is slightly fewer than for the extraction of several teeth. Further details by location are presented in Table 16.

Table 16. Decisions regarding "The removal of a residual root which is visible clinically"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	7 (3.1)	3 (1.3)	1 (0.4)	39 (17.2)	1 (0.4)	176 (77.5)	227
	Qld.	2 (1.4)	5 (3.5)	0 (0.0)	29 (20.3)	0 (0.0)	107 (74.8)	143
Country Urban	S.A.	1 (3.2)	0 (0.0)	0 (0.0)	2 (6.5)	0 (0.0)	28 (90.3)	31
	Qld.	0 (0.0)	1 (0.8)	1 (0.8)	17 (14.4)	0 (0.0)	99 (83.9)	118
Rural	S.A.	0 (0.0)	0 (0.0)	0 (0.0)	4 (16.7)	0 (0.0)	20 (83.3)	24
	Qld.	0 (0.0)	0 (0.0)	1 (4.2)	4 (16.7)	1 (4.2)	18 (75.0)	24
Total	S.A.	8 (2.8)	3 (1.1)	1 (0.4)	45 (16.0)	1 (0.4)	224 (79.4)	282
	Qld.	2 (0.7)	6 (2.1)	2 (0.7)	50 (17.5)	1 (0.4)	224 (78.6)	285

It is evident that in both States, dentists practising outside the capital were more likely to provide this care routinely. Routine care also seemed more common in South Australia.

Overall it is evident that this care would be provided routinely by most general practitioners.

7. "Frenectomy".

Since this care was directed at soft tissues, it was considered that there would be a high referral rate.

Of the respondents, 142 (50.4 per cent) South Australians and 149 (53.4 per cent) Queenslanders indicated that they would provide this treatment routinely, which was greater than expected in view of findings related to the excision of hyperplastic tissue. Further details by location are presented in Table 17.

Table 17. Decisions regarding "Frenectomy"
by State and location

Location of practice	State	(percentages in brackets)						Total respon dents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	47 (20.7)	35 (15.4)	1 (0.4)	32 (14.1)	0 (0.0)	112 (49.3)	227
	Qld.	40 (28.8)	16 (11.5)	0 (0.0)	20 (14.4)	0 (0.0)	63 (45.3)	139
Country urban	S.A.	4 (12.9)	3 (9.7)	2 (6.5)	4 (12.9)	1 (3.2)	17 (54.8)	31
	Qld.	9 (7.8)	8 (6.9)	2 (1.7)	21 (18.1)	3 (2.6)	73 (62.9)	116
Rural	S.A.	2 (8.3)	4 (16.7)	1 (4.2)	4 (16.7)	0 (0.0)	13 (54.2)	24
	Qld.	5 (20.8)	0 (0.0)	3 (12.5)	2 (8.3)	1 (4.2)	13 (54.2)	24
Total	S.A.	53 (18.8)	42 (14.9)	4 (1.4)	40 (14.2)	1 (0.4)	142 (50.4)	282
	Qld.	54 (19.4)	24 (8.6)	5 (1.8)	43 (15.4)	4 (1.4)	149 (53.4)	279

The routine provision of this care in country centres and rural areas evidently was more common outside the State capitals. Referral either routinely or in most instances evidently was greater in the capital cities than elsewhere, whereas the provision of care, because of the lack of ready availability of an oral surgeon, seemed greater in country urban centres and rural areas.

8. "Intra oral incision and drainage of an abscess".

Of the respondents, 196 (69.8 per cent) South Australian and 202 (71.4 per cent) Queensland dentists stated that they would provide this care routinely, whilst 60 (21.4 per cent) and 59 (20.8 per cent) respectively claimed that they would provide this treatment in most instances. Further details by location are presented in Table 18.

Table 18. Decisions regarding "Intra oral incision and drainage of an abscess"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	7 (3.1)	12 (5.3)	2 (0.9)	51 (22.6)	1 (0.4)	153 (67.7)	226
	Qld.	6 (4.3)	6 (4.3)	1 (0.7)	29 (20.6)	0 (0.0)	99 (70.2)	141
Country urban	S.A.	0 (0.0)	0 (0.0)	2 (6.5)	3 (9.7)	0 (0.0)	26 (83.9)	31
	Qld.	2 (1.7)	1 (0.8)	2 (1.7)	27 (22.9)	1 (0.8)	85 (72.0)	118
Rural	S.A.	0 (0.0)	0 (0.0)	1 (4.2)	6 (25.0)	0 (0.0)	17 (70.8)	24
	Qld.	0 (0.0)	1 (4.2)	2 (8.3)	3 (12.5)	0 (0.0)	18 (75.0)	24
Total	S.A.	7 (2.5)	12 (4.3)	5 (1.8)	60 (21.4)	1 (0.4)	196 (69.8)	281
	Qld.	8 (2.8)	8 (2.8)	5 (1.8)	59 (20.8)	1 (0.4)	202 (71.4)	283

As expected, the tendency to refer apparently was greater in the capital cities. The provision of care, because an oral surgeon was not readily available, seemed greater outside the State capitals, although the numbers are exceedingly small.

9. "Management of a small ranula".

It was thought that this treatment would be associated with a high referral rate. In fact, 212 (76.5 per cent) South Australian and 161 (59.6 per cent) Queensland dentists claimed that they would refer patients requiring this management routinely or in most instances. Further details by location are presented in Table 19.

Table 19. Decisions regarding "Management of a small ranula"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	113 (50.7)	62 (27.8)	1 (0.4)	31 (13.9)	1 (0.4)	15 (6.7)	223
	Qld.	68 (49.6)	35 (25.5)	0 (0.0)	17 (12.4)	0 (0.0)	17 (12.4)	137
Country urban	S.A.	12 (40.0)	7 (23.3)	1 (3.3)	4 (13.3)	0 (0.0)	6 (20.0)	30
	Qld.	26 (23.9)	20 (18.3)	6 (5.5)	27 (24.8)	8 (7.3)	22 (20.2)	109
Rural	S.A.	14 (58.3)	4 (16.7)	0 (0.0)	3 (12.5)	1 (4.2)	2 (8.3)	24
	Qld.	11 (45.8)	1 (4.2)	3 (12.5)	2 (8.3)	3 (12.5)	4 (16.7)	24
Total	S.A.	139 (50.2)	73 (26.4)	2 (0.7)	38 (13.7)	2 (0.7)	23 (8.3)	277
	Qld.	105 (38.9)	56 (20.7)	9 (3.3)	46 (17.0)	11 (4.1)	43 (15.9)	270

In both States, it was apparent that routine treatment was more likely to be provided in country urban centres and rural areas. More Queensland dentists in these regions apparently provided this care because of the lack of ready availability of an oral surgeon. The routine provision of this care evidently seemed more common in Queensland.

10. "Gingivoplasty."

A total of 48 (17.2 per cent) South Australian and 51 (18.3 per cent) Queensland dentists indicated that they would provide this care routinely, and these proportions seemed highest in country urban centres. Further details by location are presented in Table 20.

Table 20. Decisions regarding "Gingivoplasty"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	85 (37.6)	60 (26.5)	1 (0.4)	43 (19.0)	0 (0.0)	37 (16.4)	226
	Qld.	75 (53.2)	34 (24.1)	0 (0.0)	14 (9.9)	0 (0.0)	18 (12.8)	141
Country urban	S.A.	14 (46.7)	5 (16.7)	1 (3.3)	2 (6.7)	0 (0.0)	8 (26.7)	30
	Qld.	31 (27.4)	22 (19.5)	9 (8.0)	20 (17.7)	3 (2.7)	28 (24.8)	113
Rural	S.A.	10 (43.5)	7 (30.4)	0 (0.0)	3 (13.0)	0 (0.0)	3 (13.0)	23
	Qld.	7 (29.2)	7 (29.2)	1 (4.2)	3 (12.5)	1 (4.2)	5 (20.8)	24
Total	S.A.	109 (39.1)	72 (25.8)	2 (0.7)	48 (17.2)	0 (0.0)	48 (17.2)	279
	Qld.	113 (40.6)	63 (22.7)	10 (3.6)	37 (13.3)	4 (1.4)	51 (18.3)	278

The tendency to provide care, because of the lack of ready availability of an oral surgeon, seemed most pronounced in the country areas of Queensland.

11. "Removal of a clinically visible impacted tooth."

It was considered that this treatment would be regarded as a prime responsibility of the general practitioners on the basis of perceived undergraduate training.

Of the respondents, 112 (39.9 per cent) South Australian and 130 (45.9 per cent) Queensland dentists indicated that they would provide this care routinely. Further details by location are presented in Table 21.

Table 21. Decisions regarding "Removal of a clinically visible impacted tooth" by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total respondents	
		1	2	3	4	5		
Capital	S.A.	29 (12.8)	34 (15.0)	2 (0.9)	76 (33.5)	2 (0.9)	84 (37.0)	227
	Qld.	19 (13.4)	27 (19.0)	1 (0.7)	42 (29.6)	0 (0.0)	53 (37.3)	142
Country urban	S.A.	4 (13.3)	3 (10.0)	0 (0.0)	5 (16.7)	1 (3.3)	17 (56.7)	30
	Qld.	6 (5.1)	11 (9.4)	7 (6.0)	26 (22.2)	2 (1.7)	65 (55.6)	117
Rural	S.A.	3 (12.5)	3 (12.5)	1 (4.2)	6 (25.0)	0 (0.0)	11 (45.8)	24
	Qld.	0 (0.0)	1 (4.2)	3 (12.5)	5 (20.8)	3 (12.5)	12 (50.0)	24
Total	S.A.	36 (12.8)	40 (14.2)	3 (1.1)	87 (31.0)	3 (1.1)	112 (39.9)	281
	Qld.	25 (8.8)	39 (13.8)	11 (3.9)	73 (25.8)	5 (1.8)	130 (45.9)	283

It is evident that in both States, dentists practising outside the capital were more likely to provide this care routinely. In Queensland, the decision to provide care, because an oral surgeon was not readily available, seemed slightly more common in country areas.

Findings were similar for both States, although more Queensland dentists evidently provided this care because an oral surgeon was not readily available. This difference was particularly noticeable in rural areas, although the numbers are small and possibly misleading.

12. "Suturing a traumatic wound of the mucous membrane."

Although a treatment of soft tissues, it was thought that this care would be provided either routinely or in most instances. In fact, treatment in most instances or routinely was indicated by only 209 (74.9 per cent) South Australian and 234 (82.7 per cent) Queensland dentists. Further details by location are presented in Table 22.

Table 22. Decisions regarding "Suturing a traumatic wound of the mucous membrane" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	24 (10.7)	31 (13.8)	1 (0.4)	64 (28.6)	0 (0.0)	104 (46.4)	224
	Qld.	7 (4.9)	13 (9.1)	0 (0.0)	41 (28.7)	1 (0.7)	81 (56.6)	143
Country urban	S.A.	1 (3.2)	0 (0.0)	3 (9.7)	7 (22.6)	1 (3.2)	19 (61.3)	31
	Qld.	3 (2.6)	7 (6.0)	5 (4.3)	23 (19.8)	3 (2.6)	75 (64.7)	116
Rural	S.A.	4 (16.7)	3 (12.5)	1 (4.2)	2 (8.3)	1 (4.2)	13 (54.2)	24
	Qld.	1 (4.2)	3 (12.5)	3 (12.5)	5 (20.8)	3 (12.5)	9 (37.5)	24
Total	S.A.	29 (10.4)	34 (12.2)	5 (1.8)	73 (26.2)	2 (0.7)	136 (48.7)	279
	Qld.	11 (3.9)	23 (8.1)	8 (2.8)	69 (24.4)	7 (2.5)	165 (58.3)	283

The provision of this form of treatment either routinely or in most instances, because of the lack of ready availability of an oral surgeon, seemed more likely outside the Capital cities and most evident in Queensland rural areas, although the numbers included were small. The number reporting routine referral was consistently higher in South Australia.

13. "Excision of a fibrous attachment."

A total of 75 (27.2 per cent) South Australians and 93 (33.8 per cent) Queenslanders reported that they would provide this care routinely. Routine care was more common in the country areas of South Australia than in the State capital. Treatment because an oral surgeon was not readily available seemed more frequent outside the capital cities. Further details by location are presented in Table 23.

Table 23. Decisions regarding "Excision of a fibrous attachment"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respon- dents
		1	2	3	4	5	6	
Capital	S.A.	55 (24.8)	68 (30.6)	0 (0.0)	47 (21.2)	0 (0.0)	52 (23.4)	222
	Qld.	41 (29.3)	25 (17.9)	0 (0.0)	29 (20.7)	1 (0.7)	44 (31.4)	140
Country urban	S.A.	4 (13.3)	2 (6.7)	2 (6.7)	7 (23.3)	0 (0.0)	15 (50.0)	30
	Qld.	15 (13.5)	17 (15.3)	9 (8.1)	23 (20.7)	5 (4.5)	42 (37.8)	111
Rural	S.A.	4 (16.7)	6 (25.0)	0 (0.0)	5 (20.8)	1 (4.2)	8 (33.3)	24
	Qld.	4 (16.7)	5 (20.8)	4 (16.7)	3 (12.5)	1 (4.2)	7 (29.2)	24
Total	S.A.	63 (22.8)	76 (27.5)	2 (0.7)	59 (21.4)	1 (0.4)	75 (27.2)	276
	Qld.	60 (21.8)	47 (17.1)	13 (4.7)	55 (20.0)	7 (2.5)	93 (33.8)	275

14. "Apicectomy and retro filling of a central incisor."

It was considered that this treatment frequently would be undertaken by general practitioners, as it seemed that undergraduate training would be adequate in this regard. Nevertheless, fewer than half the respondents in each State indicated a willingness to provide such treatment routinely. The tendency to provide this care routinely was more pronounced outside the State capitals. Further details by location are presented in Table 24.

Table 24. Decisions regarding "Apicectomy and retro filling of a central incisor"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respon- dents
		1	2	3	4	5	6	
Capital	S.A.	52 (23.1)	33 (14.7)	1 (0.4)	42 (18.7)	0 (0.0)	97 (43.1)	225
	Qld.	46 (32.2)	23 (16.1)	0 (0.0)	23 (16.1)	0 (0.0)	51 (35.7)	143
Country urban	S.A.	6 (19.4)	4 (12.9)	3 (9.7)	4 (12.9)	0 (0.0)	14 (45.2)	31
	Qld.	17 (14.5)	9 (7.7)	5 (4.3)	19 (16.2)	1 (0.9)	66 (56.4)	117
Rural	S.A.	3 (12.5)	4 (16.7)	0 (0.0)	5 (20.8)	0 (0.0)	12 (50.0)	24
	Qld.	2 (8.3)	5 (20.8)	3 (12.5)	3 (12.5)	1 (4.2)	10 (41.7)	24
Total	S.A.	61 (21.8)	41 (14.6)	4 (1.4)	51 (18.2)	0 (0.0)	123 (43.9)	280
	Qld.	65 (22.9)	37 (13.0)	8 (2.8)	45 (15.8)	2 (0.7)	127 (44.7)	284

It appears that the likelihood of providing care, because an oral surgeon was not readily available, was greater outside the capital cities, although the numbers were small and possibly misleading.

15. "Alveoloplasty."

It was anticipated that this procedure would be performed routinely by general practitioners, because of its association with immediate protheses and minor pre-prosthetic surgery. Nevertheless, the results indicated that only 54 (19.4 per cent) South Australian and 66 (23.8 per cent) Queensland dentists would provide this service routinely. Further details by location are presented in Table 25.

Table 25. Decisions regarding "Alveoloplasty"
by State and location

Location of practice	State	(percentages in brackets)					Total respon- dents	
		Course of action						
		1	2	3	4	5		
Capital	S.A.	100 (44.4)	48 (21.3)	1 (0.4)	34 (15.1)	0 (0.0)	42 (18.7)	225
	Qld.	73 (52.1)	25 (17.9)	0 (0.0)	14 (10.0)	0 (0.0)	28 (20.0)	140
Country urban	S.A.	12 (38.7)	7 (22.6)	0 (0.0)	5 (16.1)	0 (0.0)	7 (22.6)	31
	Qld.	30 (26.5)	20 (17.7)	10 (8.8)	16 (14.2)	3 (2.7)	34 (30.1)	113
Rural	S.A.	10 (43.5)	4 (17.4)	2 (8.7)	2 (8.7)	0 (0.0)	5 (21.7)	23
	Qld.	7 (29.2)	6 (25.0)	4 (16.7)	1 (4.2)	2 (8.3)	4 (16.7)	24
Total	S.A.	122 (43.7)	59 (21.1)	3 (1.1)	41 (14.7)	0 (0.0)	54 (19.4)	279
	Qld.	110 (39.7)	51 (18.4)	14 (5.1)	31 (11.2)	5 (1.8)	66 (23.8)	277

The probability of providing this care because an oral surgeon was not readily available seemed greatest in the country areas of Queensland.

16. "Removal of a residual root that is completely intraosseus."

As undergraduate training is designed to prepare the dental graduate for complications associated with exodontia, it was expected that the routine provision of this care would be common. Even so, only

71 (25.4 per cent) South Australian and 94 (33.2 per cent) Queensland dentists indicated that they would provide this care routinely.

Further details by location are presented in Table 26.

Table 26. Decisions regarding "Removal of a residual root that is completely intraosseus" by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	56 (24.9)	45 (20.0)	1 (0.4)	71 (31.6)	0 (0.0)	52 (23.1)	225
	Qld.	47 (33.1)	26 (18.3)	0 (0.0)	34 (23.9)	1 (0.7)	34 (23.9)	142
Country urban	S.A.	5 (16.1)	3 (9.7)	3 (9.7)	9 (29.0)	0 (0.0)	11 (35.5)	31
	Qld.	12 (10.3)	16 (13.7)	10 (8.5)	24 (20.5)	4 (3.4)	51 (43.6)	117
Rural	S.A.	4 (17.4)	6 (26.1)	1 (4.3)	4 (17.4)	0 (0.0)	8 (34.8)	23
	Qld.	1 (4.2)	3 (12.5)	6 (25.0)	5 (20.8)	0 (0.0)	9 (37.5)	24
Total	S.A.	65 (23.3)	54 (19.4)	5 (1.8)	84 (30.1)	0 (0.0)	71 (25.4)	279
	Qld.	60 (21.2)	45 (15.9)	16 (5.7)	63 (22.3)	5 (1.8)	94 (33.2)	283

It is evident that in both States, dentists practising outside the capital were more likely to provide this care routinely and as anticipated, the decision to provide care, because an oral surgeon was not readily available, seemed more frequent in the country areas.

Findings were similar in both States, although more Queenslanders evidently elected to provide this care routinely.

17. "Enucleation of a small cyst."

The expectation regarding this treatment was that there would be a high degree of referral, and results are consistent with this preconception. Of the respondents, 179 (63.7 per cent) South Australian and 153 (53.9 per cent) Queensland dentists claimed that they would refer in most instances or routinely. The rate of routine referral seemed lower in Queensland. Further details by location are presented in Table 27.

Table 27. Decisions regarding "Enucleation of a small cyst"
by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	96 (42.3)	50 (22.0)	2 (0.9)	38 (16.7)	1 (0.4)	40 (17.6)	227
	Qld.	58 (40.6)	35 (24.5)	0 (0.0)	26 (18.2)	0 (0.0)	24 (16.8)	143
Country urban	S.A.	10 (32.3)	8 (25.8)	3 (9.7)	4 (12.9)	0 (0.0)	6 (19.4)	31
	Qld.	20 (17.1)	28 (23.9)	9 (7.7)	15 (12.8)	4 (3.4)	41 (35.0)	117
Rural	S.A.	8 (34.8)	7 (30.4)	2 (8.7)	1 (4.3)	0 (0.0)	5 (21.7)	23
	Qld.	7 (29.2)	5 (20.8)	2 (8.3)	2 (8.3)	3 (12.5)	5 (20.8)	24
Total	S.A.	114 (40.6)	65 (23.1)	7 (2.5)	43 (15.3)	1 (0.4)	51 (18.1)	281
	Qld.	85 (29.9)	68 (23.9)	11 (3.9)	43 (15.1)	7 (2.5)	70 (24.6)	284

Routine care was more common in rural areas and country urban centres, and the provision of care because of the lack of ready availability of an oral surgeon seemed more frequent in these regions also.

18. "Incisional biopsy."

The importance of early detection of malignancy seems to have received a growing emphasis, and so it was anticipated that the performance of incisional biopsy might be a routine treatment. This attitude was not supported by the results.

A total of 34 (12.1 per cent) South Australian and 55 (19.4 per cent) Queensland dentists stated that they would provide this service routinely. Further details by location are presented in Table 28.

Table 28. Decisions regarding "Incisional biopsy"
by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	117 (51.5)	63 (27.8)	0 (0.0)	22 (9.7)	0 (0.0)	25 (11.0)	227
	Qld.	81 (56.6)	25 (17.5)	0 (0.0)	17 (11.9)	1 (0.7)	19 (13.3)	143
Country urban	S.A.	9 (29.0)	6 (19.4)	6 (19.4)	3 (9.7)	1 (3.2)	6 (19.4)	31
	Qld.	38 (32.8)	21 (18.1)	10 (8.6)	9 (7.8)	6 (5.2)	32 (27.6)	116
Rural	S.A.	10 (43.5)	9 (39.1)	0 (0.0)	1 (4.3)	0 (0.0)	3 (13.0)	23
	Qld.	6 (25.0)	4 (16.7)	4 (16.7)	2 (8.3)	4 (16.7)	4 (16.7)	24
Total	S.A.	136 (48.4)	78 (27.8)	6 (2.1)	26 (9.3)	1 (0.4)	34 (12.1)	281
	Qld.	125 (44.2)	50 (17.7)	14 (4.9)	28 (9.9)	11 (3.9)	55 (19.4)	283

Queenslanders tended to provide routine care more frequently than their South Australian counterparts.

The provision of routine care was more common in regions outside the State capitals, and more dentists in these regions evidently provided care routinely because an oral surgeon was not readily available.

19. "Management of a fractured alveolus with loose teeth."

The results from answers to this question were not as anticipated. It was expected that this care would be provided almost routinely.

Of the respondents, 177 (63.2 per cent) South Australian and 156 (55.1 per cent) Queensland dentists claimed that they would routinely refer or refer in most instances. Further details by location are presented in Table 29.

Table 29. Decisions regarding "Management of a fractured alveolus with loose teeth"
by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total respondents	
		1	2	3	4	5		
Capital	S.A.	97 (42.9)	54 (23.9)	1 (0.4)	44 (19.5)	2 (0.9)	28 (12.4)	226
	Qld.	62 (43.7)	37 (26.1)	1 (0.7)	17 (12.0)	0 (0.0)	25 (17.6)	142
Country urban	S.A.	8 (25.8)	5 (16.1)	6 (19.4)	3 (9.7)	0 (0.0)	9 (29.0)	31
	Qld.	21 (17.9)	24 (20.5)	8 (6.8)	22 (18.8)	7 (6.0)	35 (29.9)	117
Rural	S.A.	10 (43.5)	3 (13.0)	3 (13.0)	3 (13.0)	0 (0.0)	4 (17.4)	23
	Qld.	6 (25.0)	6 (25.0)	5 (20.8)	4 (16.7)	2 (8.3)	1 (4.2)	24
Total	S.A.	115 (41.1)	62 (22.1)	10 (3.6)	50 (17.9)	2 (0.7)	41 (14.6)	280
	Qld.	89 (31.4)	67 (23.7)	14 (4.9)	43 (15.2)	9 (3.2)	61 (21.6)	283

Routine care seemed more common in South Australian country areas than in the State capital. The provision of care because an oral surgeon was not readily available seemed greatest in the country areas.

20. "Removal of a bony exostosis."

The expectation that this treatment would be associated with a high degree of referral was confirmed. A total of 210 (75.0 per cent) South Australian and 178 (63.3 per cent) Queensland dentists indicated that they would refer routinely or in most instances. Further details by location are presented in Table 30.

Table 30. Decisions regarding "Removal of a bony exostosis" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	115 (50.9)	59 (26.1)	2 (0.9)	33 (14.6)	0 (0.0)	17 (7.5)	226
	Qld.	73 (51.0)	36 (25.2)	1 (0.7)	14 (9.8)	0 (0.0)	19 (13.3)	143
Country urban	S.A.	14 (45.2)	7 (22.6)	1 (3.2)	1 (3.2)	0 (0.0)	8 (25.8)	31
	Qld.	36 (31.6)	18 (15.8)	7 (6.1)	20 (17.5)	4 (3.5)	29 (25.4)	114
Rural	S.A.	12 (52.2)	3 (13.0)	1 (4.3)	4 (17.4)	0 (0.0)	3 (13.0)	23
	Qld.	5 (20.8)	10 (41.7)	3 (12.5)	3 (12.5)	1 (4.2)	2 (8.3)	24
Total	S.A.	141 (50.4)	69 (24.6)	4 (1.4)	38 (13.6)	0 (0.0)	28 (10.0)	280
	Qld.	114 (40.6)	64 (22.8)	11 (3.9)	37 (13.2)	5 (1.8)	50 (17.8)	281

A greater tendency for country dentists to provide care routinely was apparent in South Australia.

More country dentists seemed to provide care because an oral surgeon was not readily available, and this was particularly noticeable in Queensland. Numbers were too small for confident conclusions.

21. "Closed reduction of a dislocation of the T.M.J."

Of the respondents 40 (14.5 per cent) South Australian and 54 (19.3 per cent) Queensland dentists claimed that they would provide this care routinely. Further details by location are presented in Table 31.

Table 31. Decisions regarding "Closed reduction of a dislocation of the T.M.J."

by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	119 (53.4)	31 (13.9)	2 (0.9)	41 (18.4)	0 (0.0)	30 (13.5)	223
	Qld.	75 (52.8)	25 (17.6)	0 (0.0)	19 (13.4)	0 (0.0)	23 (16.2)	142
Country urban	S.A.	13 (43.3)	5 (16.7)	2 (6.7)	2 (6.7)	0 (0.0)	8 (26.7)	30
	Qld.	46 (40.4)	13 (11.4)	4 (3.5)	19 (16.7)	4 (3.5)	28 (24.6)	114
Rural	S.A.	10 (43.5)	3 (13.0)	2 (8.7)	4 (17.4)	2 (8.7)	2 (8.7)	23
	Qld.	13 (54.2)	4 (16.7)	2 (8.3)	1 (4.2)	1 (4.2)	3 (12.5)	24
Total	S.A.	142 (51.4)	39 (14.1)	6 (2.2)	47 (17.0)	2 (0.7)	40 (14.5)	276
	Qld.	134 (57.9)	42 (15.0)	6 (2.1)	39 (13.9)	5 (1.8)	54 (19.3)	280

The practice of providing this care, because an oral surgeon was not readily available, evidently was more likely outside the State capitals.

22. "Removal of an impacted tooth that is not clinically visible."

It was expected that there would be a high degree of referral for this type of service, and in fact the figures for respondents who indicated that they would routinely or mostly refer was 179 (63.9 per cent) for South Australian and 147 (51.8 per cent) for Queensland dentists. Further details by location are presented in Table 32.

Table 32. Decisions regarding "Removal of an impacted tooth that is not clinically visible"

by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	81 (35.8)	69 (30.5)	0 (0.0)	53 (23.5)	1 (0.4)	22 (9.7)	226
	Qld.	54 (37.8)	35 (24.5)	0 (0.0)	35 (24.5)	0 (0.0)	19 (13.3)	143
Country urban	S.A.	10 (33.3)	6 (20.0)	1 (3.3)	8 (26.7)	0 (0.0)	5 (16.7)	30
	Qld.	20 (17.1)	31 (26.5)	5 (4.3)	23 (19.7)	5 (4.3)	33 (28.2)	117
Rural	S.A.	7 (29.2)	6 (25.0)	0 (0.0)	3 (12.5)	3 (12.5)	5 (20.8)	24
	Qld.	3 (12.5)	4 (16.7)	3 (12.5)	6 (25.0)	2 (8.3)	6 (25.0)	24
Total	S.A.	98 (35.0)	81 (28.9)	1 (0.4)	64 (22.9)	4 (1.4)	32 (11.4)	280
	Qld.	77 (27.1)	70 (24.6)	8 (2.8)	64 (22.5)	7 (2.5)	58 (20.4)	284

The routine provision of this care was more common in the country areas, and also treatment because an oral surgeon was not readily available was more noticeable in these areas. Routine provision of this care was more apparent in Queensland.

23. "Surgical exposure of tooth for orthodontics."

A review of the results indicates that almost a quarter of the general practitioners in each State would provide the care routinely. Further details by location are presented in Table 33.

Table 33. Decisions regarding "Surgical exposure of tooth for orthodontics" by State and location

Location of practice	State	Course of action (percentages in brackets)						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	54 (23.8)	62 (27.3)	1 (0.4)	61 (26.9)	1 (0.4)	48 (21.1)	227
	Qld.	64 (44.8)	21 (14.7)	0 (0.0)	30 (21.0)	0 (0.0)	28 (19.6)	143
Country urban	S.A.	7 (22.6)	5 (16.1)	4 (12.9)	5 (16.1)	0 (0.0)	10 (32.3)	31
	Qld.	27 (23.1)	23 (19.7)	6 (5.1)	21 (17.9)	5 (4.3)	35 (29.9)	117
Rural	S.A.	5 (20.8)	4 (16.7)	2 (8.3)	5 (20.8)	0 (0.0)	8 (33.3)	24
	Qld.	10 (41.7)	3 (12.5)	4 (16.7)	4 (16.7)	0 (0.0)	3 (12.5)	24
Total	S.A.	66 (23.4)	71 (25.2)	7 (2.5)	71 (25.2)	1 (0.4)	66 (23.4)	282
	Qld.	101 (35.6)	47 (16.5)	10 (3.5)	55 (19.4)	5 (1.8)	66 (23.2)	284

Queensland dentists evidently were more likely to refer patients routinely, and the provision of care routinely was more apparent in the country areas in South Australia.

As anticipated, the decision to provide care because an oral surgeon was not readily available was more evident outside the State capitals.

24. "Extra oral incision and drainage of an abscess."

As anticipated, most dentists in South Australia (69.4 per cent) and in Queensland (60.6 per cent) stated that they would adopt the course of routine referral. Referral either routinely or in most

instances was less likely in Queensland, whereas routine care was more common in that State. Further details by location are presented in Table 34.

Table 34. Decision regarding "Extra oral incision and drainage of an abscess"
by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total respondents	
		1	2	3	4	5		
Capital	S.A.	160 (71.7)	42 (18.8)	1 (0.4)	8 (3.6)	0 (0.0)	12 (5.4)	223
	Qld.	101 (71.6)	14 (9.9)	0 (0.0)	11 (7.8)	0 (0.0)	15 (10.6)	141
Country urban	S.A.	17 (54.8)	5 (16.1)	4 (12.9)	3 (9.7)	0 (0.0)	2 (6.5)	31
	Qld.	60 (51.3)	19 (16.2)	7 (6.0)	9 (7.7)	4 (3.4)	18 (15.4)	117
Rural	S.A.	16 (66.7)	3 (12.5)	2 (8.3)	1 (4.2)	0 (0.0)	2 (8.3)	24
	Qld.	10 (41.7)	6 (25.0)	5 (20.8)	0 (0.0)	0 (0.0)	3 (12.5)	24
Total	S.A.	193 (69.4)	50 (18.0)	7 (2.5)	12 (4.3)	0 (0.0)	16 (5.8)	278
	Qld.	171 (60.6)	39 (13.8)	12 (4.3)	20 (7.1)	4 (1.4)	36 (12.8)	282

The decision to provide routine care was most evident outside the State capitals. The provision of care because an oral surgeon was not readily available seemed more common in these regions also.

25. "Closed reduction and fixation of a fracture of the mandible."

Routine referral was the most likely course of action, as indicated by 238 (84.7 per cent) South Australian and 193 (68.7 per cent) Queensland dentists.

There seemed to be a greater likelihood that treatment would be provided, because an oral surgeon was not readily available, in both the country urban centres and rural areas of Queensland than in South Australia. Generally, Queenslanders seemed less likely to refer routinely and more likely to treat routinely. Further details by State and location are presented in Table 35.

Table 35. Decisions regarding "Closed reduction and fixation of a fracture of the mandible"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	199 (88.1)	23 (10.2)	1 (0.4)	1 (0.4)	0 (0.0)	2 (0.9)	226
	Qld.	120 (85.1)	10 (7.1)	0 (0.0)	3 (2.1)	0 (0.0)	8 (5.7)	141
Country urban	S.A.	18 (58.1)	5 (16.1)	2 (6.5)	1 (3.2)	1 (3.2)	4 (12.9)	31
	Qld.	61 (52.6)	20 (17.2)	9 (7.8)	3 (2.6)	7 (6.0)	16 (13.8)	116
Rural	S.A.	21 (87.5)	2 (8.3)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	12 (50.0)	7 (29.2)	3 (12.5)	0 (0.0)	1 (4.2)	1 (4.2)	24
Total	S.A.	238 (84.7)	30 (10.7)	4 (1.4)	2 (0.7)	1 (0.4)	6 (2.1)	281
	Qld.	193 (68.7)	37 (13.2)	12 (4.3)	6 (2.1)	8 (2.8)	25 (8.9)	281

As anticipated, the provision of care because an oral surgeon was not readily available was more likely outside the capital in each State.

26. "Open reduction and fixation of a fracture of the mandible".

As anticipated, routine referral was common in both States.

Of the respondents, 264 (94.0 per cent) South Australians and 245 (86.6 per cent) Queenslanders indicated this course of action.

Provision of care, because of the lack of ready availability of an oral surgeon, seemed more likely in the country areas, although the numbers were small and possibly misleading. Further details by location are presented in Table 36.

Table 36. Decisions regarding "Open reduction and fixation of a fracture of the mandible"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	214 (94.7)	11 (4.9)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.4)	226
	Qld.	130 (91.5)	7 (4.9)	0 (0.0)	2 (1.4)	0 (0.0)	3 (2.1)	142
Country urban	S.A.	28 (90.3)	1 (3.2)	1 (3.2)	0 (0.0)	0 (0.0)	1 (3.2)	31
	Qld.	97 (82.9)	12 (10.3)	0 (0.0)	0 (0.0)	2 (1.7)	6 (5.1)	117
Rural	S.A.	22 (91.7)	2 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	18 (75.0)	2 (8.3)	3 (12.5)	0 (0.0)	1 (4.2)	0 (0.0)	24
Total	S.A.	264 (94.0)	14 (5.0)	1 (0.4)	0 (0.0)	0 (0.0)	2 (0.7)	281
	Qld.	245 (86.6)	21 (7.4)	3 (1.1)	2 (0.7)	3 (1.1)	9 (3.2)	283

Routine referral seemed slightly less likely in Queensland.

27. "Reduction and fixation of a fracture of the middle third of the facial skeleton."

Routine referral was the normal action, as indicated by the great majority of dentists in both States. Of the respondents, 280 (99.6 per cent) South Australians and 266 (94.0 per cent) Queenslanders claimed that they would either routinely refer or do so in most instances.

Queenslanders seemed more likely to provide care because an oral surgeon was not readily available, although the numbers are small and possibly misleading. The decision to provide care because an oral surgeon was not readily available apparently was more common outside the State capital in Queensland. Further details by location are presented in Table 37.

Table 37. Decisions regarding "Reduction and fixation of a fracture of the middle third of the facial skeleton" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	220 (97.3)	6 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	226
	Qld.	129 (90.8)	8 (5.6)	0 (0.0)	2 (1.4)	0 (0.0)	3 (2.1)	142
Country urban	S.A.	28 (90.3)	2 (6.5)	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)	31
	Qld.	98 (83.8)	8 (6.8)	2 (1.7)	1 (0.9)	2 (1.7)	6 (5.1)	117
Rural	S.A.	23 (95.8)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	0 (0.0)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	271 (96.4)	9 (3.2)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	281
	Qld.	250 (88.3)	16 (5.7)	3 (1.1)	3 (1.1)	2 (0.7)	9 (3.2)	283

28. "Excision of a benign tumour such as a small papilloma located in the buccal mucosa."

As this care requires surgery of the soft tissues, it was expected that there would be considerable referral. Of the respondents, 199 (70.5 per cent) South Australian and 158 (55.8 per cent) Queensland dentists stated that they would refer routinely or in most instances, and this tendency was consistently more marked in South Australia. Further details by location are presented in Table 38.

Table 38. Decisions regarding "Excision of a benign tumour such as a small papilloma located in the buccal mucosa" by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total respondents	
		1	2	3	4	5		
Capital	S.A.	126 (55.5)	41 (18.1)	0 (0.0)	31 (13.7)	1 (0.4)	28 (12.3)	227
	Qld.	72 (50.3)	26 (18.2)	0 (0.0)	19 (13.3)	0 (0.0)	26 (18.2)	143
Country urban	S.A.	12 (38.7)	4 (12.9)	3 (9.7)	7 (22.6)	0 (0.0)	5 (16.1)	31
	Qld.	32 (27.6)	17 (14.7)	6 (5.2)	16 (13.8)	3 (2.6)	42 (36.2)	116
Rural	S.A.	9 (37.5)	7 (29.2)	0 (0.0)	4 (16.7)	0 (0.0)	4 (16.7)	24
	Qld.	5 (20.8)	6 (25.0)	3 (12.5)	4 (16.7)	2 (8.3)	4 (16.7)	24
Total	S.A.	147 (52.1)	52 (18.4)	3 (1.1)	42 (14.9)	1 (0.4)	37 (13.1)	282
	Qld.	109 (38.5)	49 (17.3)	9 (3.2)	39 (13.8)	5 (1.8)	72 (25.4)	283

The decision to treat, because of the lack of ready availability of an oral surgeon, was more likely in areas outside the State capitals.

29. "Removal of a root or other foreign body from the maxillary sinus."

It was apparent that patients requiring this form of treatment would be referred routinely or in most instances.

Of the respondents, 274 (98.2 per cent) South Australian and 248 (88.3 per cent) Queensland dentists claimed that they would take this course of action.

Routine referral was less likely in Queensland, and the provision of this care because of the lack of ready availability of an oral surgeon seemed most likely in Queensland country urban centres.

Further details by location are presented in Table 39.

Table 39. Decisions regarding "Removal of a root or other foreign body from the maxillary sinus" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	209 (92.5)	15 (6.6)	0 (0.0)	1 (0.4)	0 (0.0)	1 (0.4)	226
	Qld.	111 (78.7)	22 (15.6)	0 (0.0)	3 (2.1)	0 (0.0)	5 (3.5)	141
Country urban	S.A.	23 (79.3)	4 (13.8)	0 (0.0)	1 (3.4)	0 (0.0)	1 (3.4)	29
	Qld.	76 (65.5)	15 (12.9)	6 (5.2)	3 (2.6)	4 (3.4)	12 (10.3)	116
Rural	S.A.	20 (83.3)	3 (12.5)	0 (0.0)	1 (4.2)	0 (0.0)	0 (0.0)	24
	Qld.	18 (75.0)	6 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	252 (90.3)	22 (7.9)	0 (0.0)	3 (1.1)	0 (0.0)	2 (0.7)	279
	Qld.	205 (73.0)	43 (15.3)	6 (2.1)	6 (2.1)	4 (1.4)	17 (6.0)	281

In both States, routine referral seemed less common outside the State capital.

30. "Repair of an oro-antral fistula."

There was a general concensus that this care required an oral surgeon. Of the respondents, 238 (84.7 per cent) South Australians and 192 (68.6 per cent) Queenslanders stated that they would refer either routinely or in most instances, and this tendency was consistently less apparent in Queensland. Conversely, the decision to treat routinely was markedly more likely in Queensland.

The provision of care, because an oral surgeon was not readily available, seemed more common in Queensland and outside the capitals, and routine referral seemed less likely in the latter regions. Further details by location are presented in Table 40.

Table 40. Decisions regarding "Repair of an oro-antral fistula" by State and location

Location of practice	State	(percentages in brackets)						Total respondents
		Course of action						
		1	2	3	4	5	6	
Capital	S.A.	165 (73.0)	37 (16.4)	1 (0.4)	14 (6.2)	0 (0.0)	9 (4.0)	226
	Qld.	85 (60.7)	32 (22.9)	0 (0.0)	12 (8.6)	0 (0.0)	11 (7.9)	140
Country urban	S.A.	14 (45.2)	3 (9.7)	2 (6.5)	8 (25.8)	1 (3.2)	3 (9.7)	31
	Qld.	45 (38.8)	17 (14.7)	13 (11.2)	14 (12.1)	8 (6.9)	19 (16.4)	116
Rural	S.A.	17 (70.8)	2 (8.3)	1 (4.2)	2 (8.3)	0 (0.0)	2 (8.3)	24
	Qld.	8 (33.3)	5 (20.8)	3 (12.5)	5 (20.8)	0 (0.0)	3 (12.5)	24
Total	S.A.	196 (69.8)	42 (14.9)	4 (1.4)	24 (8.5)	1 (0.4)	14 (5.0)	281
	Qld.	138 (49.3)	54 (19.3)	16 (5.7)	31 (11.1)	8 (2.9)	33 (11.8)	280

31. "Sialolithotomy."

Provision of this care was considered to be the responsibility of an oral surgeon. Of the respondents, 273 (98.2 per cent) South Australian and 250 (88.7 per cent) Queensland dentists claimed that they would refer either routinely or in most instances, and referral seemed consistently less likely in Queensland. Further details by location are presented in Table 41.

Table 41. Decisions regarding "Sialolithotomy"
by State and location

Location of practice	State	Course of action (percentages in brackets)						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	213 (95.1)	8 (3.6)	0 (0.0)	3 (1.3)	0 (0.0)	0 (0.0)	224
	Qld.	117 (82.4)	13 (9.2)	0 (0.0)	6 (4.2)	1 (0.7)	5 (3.5)	142
Country urban	S.A.	26 (86.7)	2 (6.7)	1 (3.3)	1 (3.3)	0 (0.0)	0 (0.0)	30
	Qld.	87 (75.0)	13 (11.2)	5 (4.3)	2 (1.7)	2 (1.7)	7 (6.0)	116
Rural	S.A.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	15 (62.5)	5 (20.8)	1 (4.2)	1 (4.2)	1 (4.2)	1 (4.2)	24
Total	S.A.	263 (94.6)	10 (3.6)	1 (0.4)	4 (1.4)	0 (0.0)	0 (0.0)	278
	Qld.	219 (77.7)	31 (11.0)	6 (2.1)	9 (3.2)	4 (1.4)	13 (4.6)	282

Evidently, there was a greater likelihood that Queensland practitioners would provide treatment because an oral surgeon was not readily available, although the numbers were extremely small. As anticipated, it seemed that care was provided because an oral surgeon was not readily available, to a greater extent outside the State capitals. In Queensland, routine care seemed more common in the country areas, although the numbers were small.

32. "Repositioning of the mental nerve."

Almost total referral was indicated. A total of 278 (99.6 per cent) South Australians and 275 (97.9 per cent) Queenslanders stated that they would refer routinely or in most instances, and this proportion was lower in Queensland.

Further details by location are presented in Table 42, and indicate that there was no dentist in any location, who was prepared to provide the care in most instances or routinely because an oral surgeon was not readily available.

Table 42. Decisions regarding "Repositioning of the mental nerve" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	219 (96.9)	6 (2.7)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	226
	Qld.	132 (94.3)	4 (2.9)	0 (0.0)	1 (0.7)	0 (0.0)	3 (2.1)	140
Country urban	S.A.	28 (96.6)	1 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	29
	Qld.	111 (94.9)	4 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.7)	117
Rural	S.A.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	271 (97.1)	7 (2.5)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	279
	Qld.	266 (94.7)	9 (3.2)	0 (0.0)	1 (0.4)	0 (0.0)	5 (1.8)	281

33. "Antrostomy."

Of the respondents, 278 (99.3 per cent) South Australian and 274 (97.2 per cent) Queensland dentists stated that they would refer routinely or in most instances. This proportion was lower in Queensland.

Virtually no dentists elected to provide this care routinely or in most instances, even when an oral surgeon was not readily available. Further details by location are presented in Table 43.

Table 43. Decisions regarding "Antrostomy"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	219 (96.9)	6 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.4)	226
	Qld.	135 (95.1)	4 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (2.1)	142
Country urban	S.A.	27 (90.0)	2 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.3)	30
	Qld.	108 (93.1)	3 (2.6)	1 (0.9)	0 (0.0)	0 (0.0)	4 (3.4)	116
Rural	S.A.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	270 (96.4)	8 (2.9)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.7)	280
	Qld.	266 (94.3)	8 (2.8)	1 (0.4)	0 (0.0)	0 (0.0)	7 (2.5)	282

34. "Sulcoplasty with skin graft."

Referral either routinely or in most instances was the dominant course of action, as indicated by 275 (100.0 per cent) South Australians and 270 (97.8 per cent) Queenslanders. Evidently, there was little or no tendency to provide treatment because an oral surgeon was not readily available.

In Queensland, routine referral seemed slightly more common outside the State capital. Further details by location are presented in

Table 44.

Table 44. Decisions regarding "Sulcoplasty with skin graft"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	218 (97.3)	6 (2.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	224
	Qld.	130 (94.2)	4 (2.9)	0 (0.0)	3 (2.2)	0 (0.0)	1 (0.7)	138
Country urban	S.A.	27 (96.4)	1 (3.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	28
	Qld.	110 (95.7)	3 (2.6)	0 (0.0)	1 (0.9)	0 (0.0)	1 (0.9)	115
Rural	S.A.	23 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	23
	Qld.	23 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	23
Total	S.A.	268 (97.5)	7 (2.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	275
	Qld.	263 (94.3)	7 (2.5)	0 (0.0)	4 (1.4)	0 (0.0)	2 (0.7)	276

35. "Enucleation of a large cyst."

Because of the lack of ready availability of an oral surgeon, provision of this care was apparent to a small extent outside the State capital in Queensland. Of the respondents, 274 (97.9 per cent) South Australian and 258 (91.5 per cent) Queensland dentists indicated that they would provide care either routinely or in most instances.

Queenslanders seemed consistently less likely to refer routinely. In Queensland, routine referral seemed marginally less likely outside the capital city. Further details by location are presented in Table 45.

Table 45. Decisions regarding "Enucleation of a large cyst" by State and location

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	203 (90.2)	17 (7.6)	0 (0.0)	4 (1.8)	1 (0.4)	0 (0.0)	225
	Qld.	123 (86.6)	9 (6.3)	0 (0.0)	3 (2.1)	1 (0.7)	6 (4.2)	142
Country urban	S.A.	26 (83.9)	4 (12.9)	0 (0.0)	0 (0.0)	1 (3.2)	0 (0.0)	31
	Qld.	84 (72.4)	20 (17.2)	3 (2.6)	2 (1.7)	1 (0.9)	6 (5.2)	116
Rural	S.A.	22 (91.7)	2 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	20 (83.3)	2 (8.3)	2 (8.3)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	251 (89.6)	23 (8.2)	0 (0.0)	4 (1.4)	2 (0.7)	0 (0.0)	280
	Qld.	227 (80.5)	31 (11.0)	5 (1.8)	5 (1.8)	2 (0.7)	12 (4.3)	282

36. "Marsupialisation."

A total of 10 (3.6 per cent) South Australians and 21 (7.4 per cent) Queenslanders claimed that they would provide this care either routinely or in most instances. Further details are displayed in Table 46.

Table 46. Decisions regarding "Marsupialisation"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	192 (86.5)	21 (9.5)	0 (0.0)	6 (2.7)	0 (0.0)	3 (1.4)	222
	Qld.	119 (83.2)	10 (7.0)	0 (0.0)	5 (3.5)	1 (0.7)	8 (5.6)	143
Country urban	S.A.	23 (79.3)	4 (13.8)	0 (0.0)	1 (3.4)	1 (3.4)	0 (0.0)	29
	Qld.	87 (74.4)	15 (12.8)	6 (5.1)	0 (0.0)	1 (0.9)	8 (6.8)	117
Rural	S.A.	21 (87.5)	3 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	17 (70.8)	3 (12.5)	4 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	236 (85.8)	28 (10.2)	0 (0.0)	7 (2.5)	1 (0.4)	3 (1.1)	275
	Qld.	223 (78.5)	28 (9.9)	10 (3.5)	5 (1.8)	2 (0.7)	16 (5.6)	284

In all locations, Queenslanders seemed less likely to refer. The practice of providing care, because an oral surgeon was not readily available, seemed most common in the country areas of Queensland, although the numbers were small and possibly misleading. The routine referral of patients in Queensland evidently was more common in the State capital.

37. "Jaw deformity surgery."

There was virtually complete referral for this type of care.

Details are presented in Table 47.

Table 47. Decisions regarding "Jaw deformity surgery"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	221 (98.2)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	225
	Qld.	138 (97.2)	4 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	142
Country urban	S.A.	28 (93.3)	2 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	111 (94.9)	4 (3.4)	0 (0.0)	1 (0.9)	0 (0.0)	1 (0.9)	117
Rural	S.A.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	0 (0.0)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	273 (97.8)	6 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	279
	Qld.	272 (96.1)	8 (2.8)	1 (0.4)	1 (0.4)	0 (0.0)	1 (0.4)	283

In Queensland, routine referral seemed slightly less likely in country locations.

38. "Condylectomy."

As for the previous treatment, dentists in both States indicated that they would refer routinely or mostly. Only two dentists indicated that they would provide care routinely or in most instances. Details are presented in Table 48.

Table 48. Decisions regarding "Condylectomy"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	221 (98.2)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	225
	Qld.	138 (97.2)	4 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	142
Country urban	S.A.	29 (96.7)	1 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	111 (94.9)	4 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.7)	117
Rural	S.A.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	274 (98.2)	5 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	279
	Qld.	273 (96.5)	8 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.7)	283

39. "Extirpation of submandibular gland."

Results for this treatment were similar to those for the previous treatment and are detailed in Table 49.

Table 49. Decisions regarding "Extirpation of submandibular gland"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	221 (98.2)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	225
	Qld.	138 (97.2)	4 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	142
Country urban	S.A.	28 (93.3)	2 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	111 (94.9)	4 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.7)	117
Rural	S.A.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	273 (97.8)	6 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	279
	Qld.	273 (96.5)	8 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.7)	283

40. "Extra oral excision of tumour, cyst or scar."

The course of action reported for this care was almost complete referral. Details are presented in Table 50.

Table 50. Decisions regarding "Extra oral excision of tumour, cyst or scar"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	221 (98.2)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	225
	Qld.	134 (94.4)	4 (2.8)	0 (0.0)	3 (2.1)	0 (0.0)	1 (0.7)	142
Country urban	S.A.	27 (90.0)	3 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	107 (91.5)	6 (5.1)	0 (0.0)	0 (0.0)	0 (0.0)	4 (3.4)	117
Rural	S.A.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	272 (97.5)	7 (2.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	279
	Qld.	264 (93.3)	11 (3.9)	0 (0.0)	3 (1.1)	0 (0.0)	5 (1.8)	283

41. "Partial glossectomy."

In South Australia, all dentists indicated that they would refer routinely or in most instances, and in Queensland, only three respondents (1.1 per cent) stated that they would do otherwise. Details are presented in Table 51.

Table 51. Decisions regarding "Partial glossectomy"
by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	221 (98.2)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	225
	Qld.	136 (97.1)	4 (2.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	140
Country urban	S.A.	28 (93.3)	2 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	110 (94.0)	4 (3.4)	0 (0.0)	0 (0.0)	0 (0.0)	3 (2.6)	117
Rural	S.A.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	24 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	273 (97.8)	6 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	279
	Qld.	270 (96.1)	8 (2.8)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.1)	281

42. "Bone graft."

Virtually all dentists reported referral as a routine or in most instances. Details are presented in Table 52.

Table 52. Decisions regarding "Bone graft" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	220 (97.8)	4 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	224
	Qld.	137 (96.5)	5 (3.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	142
Country urban	S.A.	29 (96.7)	1 (3.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	30
	Qld.	112 (95.7)	3 (2.6)	0 (0.0)	1 (0.9)	0 (0.0)	1 (0.9)	117
Rural	S.A.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	273 (97.8)	5 (1.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	278
	Qld.	273 (96.5)	8 (2.8)	0 (0.0)	1 (0.4)	0 (0.0)	1 (0.4)	283

43. "Repositioning of muscle attachment."

Referral was the most likely course of action in all locations of both States, with no practitioners willing to provide this care because an oral surgeon was not readily available. Details are presented in Table 53.

Table 53. Decisions regarding "Repositioning of muscle attachment" by State and location

(percentages in brackets)

Location of practice	State	Course of action						Total respondents
		1	2	3	4	5	6	
Capital	S.A.	213 (95.1)	9 (4.0)	0 (0.0)	1 (0.4)	0 (0.0)	1 (0.4)	224
	Qld.	130 (91.5)	8 (5.6)	0 (0.0)	3 (2.1)	0 (0.0)	1 (0.7)	142
Country urban	S.A.	28 (90.3)	3 (9.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	31
	Qld.	109 (93.2)	4 (3.4)	0 (0.0)	1 (0.9)	0 (0.0)	3 (2.6)	117
Rural	S.A.	24(100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
	Qld.	23 (95.8)	1 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	24
Total	S.A.	265 (95.0)	12 (4.3)	0 (0.0)	1 (0.4)	0 (0.0)	1 (0.4)	279
	Qld.	262 (92.6)	13 (4.6)	0 (0.0)	4 (1.4)	0 (0.0)	4 (1.4)	283

In Queensland, routine referral seemed marginally more likely outside the State capital.

44. "Suturing a traumatic wound of the skin."

Of the respondents, 25 (9.0 per cent) South Australians and 44 (15.7 per cent) Queenslanders stated that they would provide this care routinely or in most instances. The practice of providing this care because an oral surgeon was not readily available was most apparent in country regions. Further details are evident in Table 54.

Table 54. Decisions regarding "Suturing a traumatic wound of the skin" by State and location

(percentages in brackets)

Location of practice	State	Course of action					Total respondents	
		1	2	3	4	5		
Capital	S.A.	155 (68.9)	52 (23.1)	0 (0.0)	11 (4.9)	0 (0.0)	7 (3.1)	225
	Qld.	97 (68.3)	22 (15.5)	0 (0.0)	11 (7.7)	0 (0.0)	12 (8.5)	142
Country urban	S.A.	19 (63.3)	3 (10.0)	2 (6.7)	2 (6.7)	1 (3.3)	3 (10.0)	30
	Qld.	62 (54.4)	26 (22.8)	3 (2.6)	8 (7.0)	2 (1.8)	13 (11.4)	114
Rural	S.A.	16 (66.7)	5 (20.8)	1 (4.2)	1 (4.2)	0 (0.0)	1 (4.2)	24
	Qld.	15 (62.5)	7 (29.2)	1 (4.2)	0 (0.0)	1 (4.2)	0 (0.0)	24
Total	S.A.	190 (68.1)	60 (21.5)	3 (1.1)	14 (5.0)	1 (0.4)	11 (3.9)	279
	Qld.	174 (62.1)	55 (19.6)	4 (1.4)	19 (6.8)	3 (1.1)	25 (8.9)	280

Routine referral apparently was slightly less common in Queensland.

45. Summarising comments.

45.1 Referral tendency by States

It seems from Table 55 that Queensland dentists were less likely to refer patients for treatment in all locations.

Table 55. Relative tendency of South Australian and Queensland general practitioners to refer routinely or in most instances

by location

Relative tendency of Queensland general practitioners to refer	Location			
	Capital	Country urban	Rural	Overall
Less likely	26	35	24	43
More likely	14	7	7	1
Same	4	2	13	0

45.2 Referral tendency by location within States

As presented in Table 56, results indicate that in each State, there was the least likelihood of referral in country urban centres and the greatest likelihood in the capital.

Discrepancies in totals resulted from the following:

- (1) In Queensland, there were two treatments where there was no referral in both country urban centres and rural areas;
- (2) In South Australia, there were three treatments where there was no referral in both country urban centres and rural areas, and six instances where there was total referral in all locations.

Table 56. Locations where the tendency to refer routinely or mostly was the lowest

State	Location			Total
	Capital	Country urban	Rural	
S.A.	3	25	7	35
Qld.	3	29	10	42

45.3 Provision of treatment, because an oral surgeon was not readily available, by State

As presented in Table 57, results indicate that in all locations there were dentists who reported that they provided certain care routinely or in most instances, only because an oral surgeon was not readily available.

Table 57. Relative tendency of South Australian and Queensland general practitioners to provide treatment routinely or mostly, only because of the lack of ready availability of an oral surgeon

Relative tendency of Queensland general practitioners to provide care for this reason	Location			
	Capital	Country urban	Rural	Overall
Less likely	23	12	1	0
More likely	7	23	30	33
Same	14	9	13	11

Perhaps availability sometimes was interpreted in terms of economics or inconvenience and this accounted for the apparent lack of ready availability of an oral surgeon in the State capitals.

In both the country urban centres and rural areas, Queensland dentists seemed more likely to provide treatment routinely or in most instances only because an oral surgeon was not available. The reverse was apparent in the State capitals.

45.4 Provision of treatment, because an oral surgeon was not readily available, by location

Table 58 presents information within each State related to the provision of care only because an oral surgeon was not readily available.

Table 58. Locations where the tendency to provide care routinely or in most instances, because an oral surgeon was not readily available, was the greatest, by State

State	Capital	Country urban	Rural	≥2 locations the same	Overall
S.A.	3	22	7	12	44
Qld.	0	6	30	8	44

It is evident that in South Australia, this care was most likely in country urban centres, whereas in Queensland, it was most likely in rural areas. In both States, this care seemed least likely in the capital city.

45.5 Classification of treatment, as pertaining predominantly to the general practitioners, oral surgeon, or neither. Individual treatment categories have been classified as predominantly in the realm of the general practitioner when two-thirds or more of these dentists reported that they would mostly or routinely provide the treatment, irrespective of the availability of an oral surgeon. Alternatively, treatment categories have been classified as predominantly in the realm of the oral surgeon when fewer than one-third of general practitioners reported in this manner.

From Tables 11 to 54, it can be seen that those predominantly in the realm of the general practitioner in South Australia and Queensland were as follows:

- (i) "Extraction of one tooth".
- (ii) "Extraction of several teeth".
- (iii) "Surgical extraction of a tooth".
- (iv) "Removal of a residual root which is visible clinically".
- (v) "Intra oral incision and drainage of an abscess".
- (vi) "Removal of a clinically visible impacted tooth".
- (vii) "Suturing a traumatic wound of the mucous membrane".

One treatment was classified as predominantly in the realm of the general practitioner in South Australia, but not in Queensland, namely

"Extra oral incision and drainage of an abscess". Another treatment was classified as predominantly in the realm of the general practitioner in Queensland, but not in South Australia, that is, "Frenectomy".

Similarly from Tables 11 to 54, it can be seen that treatments predominantly in the realm of the oral surgeon in both States were as follows:

- (i) "Apicectomy and retro filling of both roots of a lower second molar".
- (ii) "Management of a small ranula".
- (iii) "Incisional biopsy".
- (iv) "Removal of a bony exostosis".
- (v) "Closed reduction and fixation of a fracture of the mandible".
- (vi) "Open reduction and fixation of a fracture of the mandible".
- (vii) "Closed reduction of a dislocation of the T.M.J.".
- (viii) "Reduction and fixation of a fracture of the middle third of the facial skeleton".
- (ix) "Removal of a root or other foreign body from the maxillary sinus".
- (x) "Repair of an oro-antral fistula".
- (xi) "Sialolithotomy".
- (xii) "Repositioning of the mental nerve".
- (xiii) "Antrostomy".
- (xiv) "Sulcoplasty with skin graft".
- (xv) "Enucleation of a large cyst".
- (xvi) "Marsupialisation".

- (xvii) "Jaw deformity surgery".
- (xviii) "Condylectomy".
- (xix) "Extirpation of submandibular gland".
- (xx) "Extra oral excision of tumour, cyst or scar".
- (xxi) "Partial glossectomy".
- (xxii) "Bone graft".
- (xxiii) "Repositioning of muscle attachment".
- (xxiv) "Suturing a traumatic wound of the skin".

Those shown to be predominantly in the realm of the oral surgeon in South Australia, but not in Queensland were the following:

- (i) "Management of a fractured alveolus with loose teeth".
- (ii) "Excision of a benign tumour such as a small papilloma located in the buccal mucosa".

Those shown to be predominantly in the realm of the oral surgeon in Queensland but not in South Australia were as follows:

- (i) "Gingivoplasty".
- (ii) "Extra oral incision and drainage of an abscess".

The following treatments fell into the category between these two extremes in both South Australia and Queensland:

- (i) "Excision of hyperplastic tissue".
- (ii) "Excision of a fibrous attachment".
- (iii) "Apicectomy and retro filling of a central incisor".
- (iv) "Alveoloplasty".
- (v) "Removal of a residual root that is completely intraosseous".
- (vi) "Enucleation of a small cyst".

- (vii) "Removal of an impacted tooth that is not clinically visible".
 (viii) "Surgical exposure of tooth for orthodontics".

The two treatments which were so classified in South Australia but not in Queensland were "Frenectomy" and "Gingivoplasty", while those in this same category in Queensland, but not in South Australia, were:

- (i) "Management of a fractured alveolus with loose teeth".
 (ii) "Excision of a benign tumour such as a small papilloma located in the buccal mucosa".

C. Decision of "approved" dentists regarding the provision of various treatments.

In this section, data presented for Australia in Appendices II and III are summarised. Comparisons of South Australian and Queensland figures with the respective data for general practitioners are undertaken.

1. Relative likelihood of "approved" dentists to provide routine care, by State.

It is evident from Table 59, that "approved" dentists were more likely to provide care routinely in Queensland than elsewhere in Australia.

Table 59. Number of treatments where the percentage of "approved" dentists providing routine care was the highest or equal highest by State

No. of treatments	State		
	South Aust.	Queensland	Elsewhere
44	14	40	0

2. Relative likelihood of "approved" dentists and general practitioners to provide routine care in South Australia and Queensland.

Data presented in Table 60 indicate that "approved" dentists were more likely to provide each of the 44 treatments on a routine basis.

Table 60. Number of treatments where the percentage of "approved" dentists providing routine care was the highest, by type of dentist

Type of dentist	State	
	South Aust.	Queensland
General practitioner	0	0
"Approved"	44	44

3. Relative likelihood of "approved" dentists to provide routine care, by grade of dentist.

As anticipated, data in Table 61 indicate that dentists in grade four, i.e. those with postgraduate training in oral surgery and who restricted their practices to this discipline, seemed more likely to provide care routinely. Conversely, this tendency seemed least likely for dentists without histories of this training or restricted oral surgery practices (grade one).

Interestingly, those who did not restrict their practices to oral surgery but had received postgraduate training in oral surgery (grade two), seemed more likely to provide care routinely than those with restricted oral surgery practices but no histories of relevant postgraduate training (grade three).

Table 61. Number of treatments where the percentage of "approved" dentists providing routine care was the highest, by grade of dentist

No. of treatments	Grade			
	1	2	3	4
44	0	16	13	42

4. Relative likelihood of "approved" dentists to provide specified categories of care, by grade of dentist.

4.1 Care classified as within the realm of the general practitioner.

It was anticipated that all "approved" dentists would provide this care routinely, and data presented in Table 62 indicate that this situation prevailed almost without exception for those with restricted oral surgery practices and/or histories of postgraduate training in oral surgery.

Table 62. Percentage of "approved" dentists routinely providing care classified as within the realm of the general practitioner, by grade of dentist

Treatment number	Grade of dentist			
	1	2	3	4
1	95.4	100.0	100.0	100.0
2	95.5	100.0	100.0	100.0
5	77.3	100.0	100.0	100.0
6	93.2	100.0	100.0	100.0
8	90.9	100.0	100.0	100.0
11	86.4	100.0	88.9	100.0
12	84.1	94.1	100.0	100.0

Every dentist in grade four, with a history of postgraduate training in oral surgery and a restricted oral surgery practice, provided these treatments routinely.

4.2 Care classified as between the realm of the general practitioner and oral surgeon.

It is evident from Table 63 that "approved" dentists in grades two to four were more likely to provide these treatments than those without postgraduate training in oral surgery, irrespective of whether their practices were restricted to oral surgery or not.

Table 63. Number of treatments, classified as between the realm of the general practitioner and oral surgeon, where the percentage of "approved" dentists providing routine care was the highest, by grade of dentist

Treatment numbers	Grade of dentist			
	1	2	3	4
3, 13, 14, 15, 16, 17, 22, 23	0	6	3	8

Moreover, dentists in grade four seemed most likely to provide this care routinely. Dentists with restricted oral surgery practices, but no histories of relevant postgraduate training (grade three), seemed less likely to provide the care routinely than those with this training but without restricted practices (grade two).

4.3 Care classified as within the realm of the oral surgeon.

Data in Table 64 indicate that "approved" dentists, who had histories of postgraduate oral surgery training and practices restricted to this

specialty, were more likely to provide these treatments routinely than other "approved" dentists.

Table 64. Number of treatments, classified as within the realm of the oral surgeon, where the percentage of "approved" dentists providing routine care was the highest, by grade of dentist

Treatment numbers	Grade of dentist			
	1	2	3	4
4, 9, 18, 20, 21, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	0	1	1	23

As the treatments 7, 10, 24, 28 did not classify in the specified categories, they were not included in those analysed for "approved" dentists.

4.4 The relative tendency of different grades of "approved" dentists to provide care routinely.

From Table 65, it is evident that as the dentists' grade increased, the proportion who would provide care routinely increased also.

Table 65. Number of treatments, where the stated percentage of "approved" dentists would provide routine care, by grade of dentist

Grade of dentist	Percentage who would treat routinely		
	<60	60-85	>85
1	27	12	5
2	14	6	24
3	11	6	27
4	4	3	37

This tendency was most pronounced when care classified as within the scope of the oral surgeon was analysed separately (Table 66).

Table 66. Number of "oral surgery" treatments, where the stated percentage of dentists would provide routine care, by grade of dentist

Grade of dentist	Percentage who would treat routinely		
	<60	60-85	>85
1	22	2	0
2	14	5	5
3	11	5	8
4	4	3	17

5. Summarising comments.

It was evident that "approved" dentists in Queensland were more likely to provide care routinely than those elsewhere in Australia. South Australian "approved" dentists seemed more likely to provide this care than their counterparts elsewhere, apart from those in Queensland.

"Approved" dentists in Queensland and South Australia were more likely to provide the 44 treatments routinely than general practitioners in the respective States.

Dentists with both restricted oral surgery practices and histories of relevant postgraduate training seemed most likely to provide care routinely, whereas this tendency was least apparent for dentists without this training and without restricted oral surgery practices.

The relatively greater tendency of dentists, who had restricted oral surgery practices and histories of relevant postgraduate training, to provide care routinely, when compared to other dentists, increased as the complexity of care progressed from the realm of the general practitioner to that of the oral surgeon.

D. Decisions of general practitioners regarding the provision of certain treatments, by specified characteristics of the dentist or practice.

The treatments employed in this section are as follows:

- (i) "Frenectomy";
- (ii) "Removal of a clinically visible impacted tooth";
- (iii) "Apicectomy and retro filling of a central incisor",
and
- (iv) "Removal of a residual root that is completely intraosseous".

Decisions are detailed by State in Appendices IV and V.

1. Decisions by sex.

In South Australia, it was apparent that male dentists were more likely to treat routinely and less likely to refer routinely than were females, but a consistent trend was not evident for Queensland. The numbers were too small for confident assessments of differences.

2. Decisions by year of graduation.

In South Australia, dentists who graduated between 1961 and 1970 seemed more inclined to provide care routinely than the remainder. This difference was not consistent for Queensland.

3. Decisions by origin of basic dental qualification.

In South Australia, it seemed that dentists trained locally were less likely to provide these services routinely. No consistent trend was evident in Queensland.

4. Decisions by type of practice.

In Queensland, dentists outside the private sector seemed more likely to treat routinely, but no consistent trend was apparent in South Australia.

5. Decisions by possession of additional qualifications.

In South Australia, dentists with additional qualifications apparently were more likely to treat routinely, whereas there seemed to be a tendency for the reverse to apply in Queensland.

6. Decisions by proximity of oral surgeon.

In both States, routine care seemed most likely in general practices that were most remote from the practices of oral surgeons.

7. Decisions by availability of complete hospital and anaesthetic support services.

In South Australia, routine care seemed most likely where complete supportive services were available. A consistent trend did not apply to Queensland data.

Discussion, Conclusions and Recommendations

The development of oral surgery as a specialty has been intimately associated with dentistry, and its importance as a foundation for the specialty has been recognised by the International Association of Oral Surgeons and by members of the medical profession who have obtained a dental qualification for this purpose. The importance of appropriate postgraduate training specifically in oral surgery also has been mentioned and deserves emphasis. There seems to be no justification for disputing the claim that oral surgery is a specialty of dentistry rather than of medicine and has an important contribution to make in the provision of a comprehensive health service.

The treatment of facial trauma is an integral part of health care and the consensus of dental and medical opinion reviewed in the literature supports the contention that the oral surgeon is the most competent person to diagnose and treat fractures of the facial skeleton.

It is appropriate to recognise that to have suitable numbers of satisfactorily trained personnel, teaching programmes of appropriate quality must be available. These programmes would require co-operation between a university dental school, a large general teaching hospital and selected specialist medical groups, and also would require clinics in the teaching hospital.

In addition to these facilities, there needs to be the recognition that specialisation requires a high degree of special knowledge and

skill, and that equal status of all specialist groups is appropriate, particularly in the oro-facial region where the philosophy of the multidisciplinary team is so relevant. There should be no licence for "empire building", the "jack of all trades" attitude nor a sense of individual or specialty superiority. These features would not only abrogate the spirit of equality, but could deprive the patient of the quality care to which he is entitled.

In order to ensure high standards of care and to protect the public, a system of accreditation of training programmes and specialty registration on a national basis is an urgent requirement.

With concepts and philosophies of health care training under review, a shortage of general medical practitioners and university quotas, it seems opportune to recognise that oral surgery requires a dental base and a broad medical and hospital orientation without the apparent waste of resources associated with a full undergraduate medical course. Such a form of specialist training could be a prototype for the avenue of development in other specialist fields. It is evident from the results of the survey that the provision of a comprehensive oral surgery service is not possible without adequate training.

By a comparison of the scope of practice of oral surgeons in the People's Republic of China, where apparently emphasis is placed on practical training, with that of graduates of more highly academically orientated Western programmes, it may be possible to establish a balance between the two systems which could be important for future development.

It would seem that the country areas are least effectively served by oral surgeons, which suggests that perhaps services should be established in selected country centres. These services could be staffed through a system of visiting specialists supported by efficient transport systems.

The results of the survey indicate that there are categories of care which could be considered for extended training to general practitioners intending to practice in remote areas. This training would be required soon after graduation, as many country practitioners evidently are recent graduates.

It would seem that a full scope of oral surgery is being practised by only a few practitioners, who are located mostly in State capitals. Even a number of practitioners, who are labelled as oral surgeons, apparently do not practice the full range of care included in the questionnaire.

The results of the survey indicate that general practitioners practise only a limited amount of oral surgery, and refer most complicated forms to an oral surgeon. Country general practitioners evidently refer less than those in the capital, and this indicates a possible requirement for extended training for these dentists.

It also is evident that the scope of oral surgery practised by oral surgeons relates directly to their training.

There apparently are no practising oral surgeons in New Zealand who possess a medical qualification. Those in Australia, who possess such

a qualification, do not necessarily provide a wider range of care. Whilst not tabulated in this thesis, there have been instances noticed where oral surgeons with dental qualifications only, perform a wider sphere of practice than those with a medical background. The important determining factor seems to be the extent of specific oral surgery training.

Naturally, it would be expected that the full scope of oral surgery would be provided only by oral surgeons who are graduates of a well-organised and, preferably, accredited training programme. Such a system of training was not available in Australia prior to the establishment of the programme in Adelaide.

The association between training and scope of practice, that is apparent from the survey, highlights the interdependence of these characteristics and supports the development of training schemes in this field.

The undergraduate dental course seems to concentrate on the development of skills in the treatment of hard, rather than soft, tissues, and survey results support the view that general practitioners are less likely to provide oral surgery that is not directly "tooth-related".

Review of the group of treatments, classified as within the realm of the general practitioner in both States, reveals that only one treatment is not "tooth-related". It also is evident from this review that general practitioners are more likely to provide care when the target is clinically visible, which possibly also reflects the emphasis of undergraduate training.

It is interesting to note that the two treatments, which are classified as within the general practitioners' category in one State only, are of the "soft tissue" variety.

The category of treatments falling between those of the general practitioner and oral surgeon represents:

- (i) a departure from care that is "tooth-related",
- (ii) operative procedures aimed at soft as opposed to hard tissues and
- (iii) treatments embracing areas which are not clinically visible.

Usually, the treatments which fall into this central category in one State only are not "tooth-related", and include soft tissue surgery.

Those treatments classifiable as within the realm of the oral surgeon are related to soft tissues, areas not clinically visible and surgery of the jaws and contiguous structures, as opposed to clinically visible hard dental tissues. A similar observation applies to those treatments, which are classified as within the realm of the oral surgeon in one State only.

It seems that there is no need for those general practitioners intending to practise in a capital city or an approximating country area to provide treatments not classified as within the realm of the general practitioner. Nevertheless, it appears desirable that the training of those general practitioners, who intend to practise in remote country areas, be supplemented to provide expertise in certain

forms of care that normally are not within the realm of the general practitioner. This seems particularly appropriate as survey results indicate a practice of providing certain types of care, which are outside the realm of the general practitioner, only because an oral surgeon is not readily available.

Results indicate that referral by general practitioners is less likely outside the State capitals and that this situation is partly one of choice but not entirely. It has been reported in some instances that care is provided only because an oral surgeon is not readily available. This finding is consistent with the results for both States, which indicate that the ready availability of an oral surgeon is highest in the capitals.

It is apparent that dentists trained in South Australia are less likely to provide care on a routine basis. This may not have resulted from differences in undergraduate training, but may be associated with the greater tendency for local graduates to practise in the capital.

With the current high ratio of student numbers to university staff and facilities, it seems neither feasible nor appropriate to increase substantially the oral surgery content of undergraduate training. It seems to the author that additional training would need to be of prohibitive length to serve a significant value.

In this perspective, perhaps extended training should be offered to general practitioners with particular emphasis on those practising or intending to practise in country areas. This training could be

provided to recent graduates through an elective component within a preregistration intern year. Established practitioners could participate in a course of at least six months duration.

This would be particularly relevant for "approved" dentists, as survey results indicate that those with postgraduate oral surgery training but who do not restrict their practice to oral surgery, provide routine care to a greater degree than those with restricted oral surgery practices, but no postgraduate training in this discipline.

It seems to the author that a method whereby interested general practitioners in selected country areas could be trained to provide certain forms of oral surgery would be more appropriate than the provision of extended training for all graduates. Selective training for country graduates seems particularly relevant as survey results indicate that "approved" dentists in these areas have received less training than their counterparts in the capital.

It seems that the provision of complete oral surgery services to areas other than State capitals could be achieved in several ways, for example:

1. Encouragement could be offered to fully trained oral surgeons to establish practice in large country urban centres (Sampson and Higgins 1968). For example, provision could be made for a consultant appointment at a local hospital.
2. A system of State-subsidised visiting oral surgeons could be introduced.

3. A sophisticated transport system could be developed to convey patients rapidly to oral surgeons in the capital, with provision for associated accommodation.

For oral surgery services to be provided in country areas, it is obvious that there must be adequate hospital facilities and trained anaesthetic and recovery personnel. Both adequate hospital facilities and trained anaesthetists evidently are lacking in a number of areas, the shortage of the former apparently being the more acute.

It therefore is apparent that it would be appropriate to introduce necessary hospital facilities, trained anaesthetists and oral surgeons into selected country urban centres. Hooley's (1966) report suggests that these towns would need to serve regions with approximately 70,000 people in the centre and surrounding districts.

The present survey indicates that Queensland dentists are less likely to refer in all locations and more likely to provide care only because of the lack of ready availability of an oral surgeon in the country urban and rural areas.

Queensland appears to have fewer "approved" dentists, and in fact there are none in the rural areas. Those dentists, who are "approved", apparently are more likely to provide care than those in other Australian States. Perhaps these "approved" dentists are under greater pressure to provide care.

It is evident that in both Queensland and South Australia, the ready availability of an oral surgeon is limited, and whilst it had been thought that Queensland's geography would be conducive to more

dentists being located over 80 kilometres from an oral surgeon, the proportion is higher in South Australia for dentists practising outside the capitals.

With the advent of a recognised and acceptable means of oral surgery training in South Australia it would appear that a more definitive study to discover community needs for oral surgery, together with the personnel requirements to cater for those needs, is not only appropriate but essential in the immediate future.

It is to be hoped that the Adelaide oral surgery training programme will be encouraged and developed so that service to the community will be expanded both at the specialist and general practitioner level.

For this to occur it would be apposite for Government and hospital authorities to be aware of the information presented.

Appendix I

Appendix I.i.

Your name is included on the front cover for clerical purposes only.

When your reply is received, the front cover will be detached from your answers and there will be no further connection between them.

NAME:-

ADDRESS:-

.....

ORAL SURGERY QUESTIONNAIRE

Please place a cross (x) in the relevant boxes

Q 1. Age (yrs)

30 or younger	<input type="checkbox"/>	C1	1
31 - 40	<input type="checkbox"/>		2
41 - 50	<input type="checkbox"/>		3
51 plus	<input type="checkbox"/>		4

Q 2. Sex

Male	<input type="checkbox"/>	C2	1
Female	<input type="checkbox"/>		2

Q 3. Final undergraduate

Year in dentistry (decade and year) 19 C3-4

Q 4. Location of University where basic dental qualification obtained

N.S.W.	<input type="checkbox"/>	C5	1
Queensland	<input type="checkbox"/>		2
S. Aust.	<input type="checkbox"/>		3
Victoria	<input type="checkbox"/>		4
W. Aust.	<input type="checkbox"/>		5
North America	<input type="checkbox"/>		6
United Kingdom	<input type="checkbox"/>		7
New Zealand	<input type="checkbox"/>		8
Elsewhere	<input type="checkbox"/>		9

Specify

.....

.....

Q 5. Indicate where you now spend most time practising dentistry

- | | | |
|----------------------------|--------------------------|---|
| | C6 | |
| In private practice | <input type="checkbox"/> | 1 |
| In a dental hospital | <input type="checkbox"/> | 2 |
| In a dental school | <input type="checkbox"/> | 3 |
| In a school dental service | <input type="checkbox"/> | 4 |
| In the Armed Forces | <input type="checkbox"/> | 5 |
| Elsewhere | <input type="checkbox"/> | 6 |

Specify

.....

.....

Q 6. Indicate the post code where you now spend most time practising dentistry

C7	C10
<input type="checkbox"/>	<input type="checkbox"/>

Q 7. You are -

A general practitioner

C11	
<input type="checkbox"/>	1

A dentist with a practice restricted entirely to:-

- | | | |
|----------------|--------------------------|---|
| Endodontics | <input type="checkbox"/> | 2 |
| Oral Surgery | <input type="checkbox"/> | 3 |
| Orthodontics | <input type="checkbox"/> | 4 |
| Pedodontics | <input type="checkbox"/> | 5 |
| Periodontics | <input type="checkbox"/> | 6 |
| Prosthodontics | <input type="checkbox"/> | 7 |
| Other | <input type="checkbox"/> | 8 |

Specify

.....

Q 8. What qualifications do you possess in addition to the basic dental qualification?

- No additional qualification
- D.D.Sc., or D.D.S. (New Zealand) C12
- Dip. Orth. C13
- F.D.S.R.C.S. C14
- F.R.A.C.D.S. C15
- B.Sc. Dent. C16
- M.B., B.S. C17
- M.D.S. or M.D.Sc. C18
- Ph.D. C19
- Other C20

Specify

Indicate whether specific postgraduate training in oral surgery was included in the training for this additional qualification:-

C21

No 1

Yes 2

Please specify specific postgraduate training in oral surgery by indicating:-

- (a) approx. duration of this training in weeks
- (b) approx. average number of hours per week related to this training

C22 - C24

C25 - C26

(c) briefly describe this training

During this oral surgery training please specify by name, to which of the departments of General Surgery, Plastic Surgery, Orthopaedics, Otorhinolaryngology, Anaesthetics, Radiotherapy you were seconded, together with the length of time spent in the department.

C27

If none, please write - none

Q 9. Are you a member of the A.N.Z.S.O.S.? C28
 No 1
 Yes 2

Q 10. When viewed from your usual place of practice, the nearest dental colleague who restricts his practice largely or completely to oral surgery is situated:- C29
 Within the same building 1
 Within the same town or city 2
 Outside the same town or city but within 50 miles (80 km) 3
 Over 50 miles away 4

Q 11. Is there a hospital in your area with facilities that could support such oral surgery as sulcoplasty with a split skin graft or removal of a tooth from the maxillary sinus? C30
 No 1
 Yes 2
 I don't know 3

Q 12. If required, could you gain the assistance of an anaesthetist in your area:-
 a) Who can provide naso-tracheal intubation? C31
 No 1
 Yes 2
 I don't know 3

b) Who would understand the management requirements of patients with intermaxillary fixation? C32
 No 1
 Yes 2
 I don't know 3

Q 13. Please place a cross in the appropriate box to indicate the course of action that you would take if confronted with the stated treatment requirements:-

- N.B.
1. Signifies routine referral.
 2. Signifies referral in most instances.
 3. Signifies that you would provide the treatment in most instances, but only because an oral surgeon is not readily available.
 4. Signifies that you would provide the treatment in most instances, irrespective of the availability of an oral surgeon.
 5. Signifies that you would provide the treatment routinely, but only because an oral surgeon is not readily available.
 6. Signifies that you would provide the treatment routinely, irrespective of the availability of an oral surgeon.

Treatment 1

Extraction of one tooth

1	2	3	4	5	6
Routinely refer	Mostly refer	Mostly treat because oral surgeon unavailable	Mostly treat	Routinely treat because oral surgeon unavailable	Routinely treat
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C33

Treatment 2

Extraction of several teeth

1	2	3	4	5	6
<input type="checkbox"/>					

C34

Treatment 3

Excision of hyperplastic tissue

1	2	3	4	5	6
<input type="checkbox"/>					

C35

Treatment 4

Apicectomy and retro filling of both roots of a lower second molar

1	2	3	4	5	6
<input type="checkbox"/>					

C36

Treatment 5

Surgical extraction of a tooth

1	2	3	4	5	6
<input type="checkbox"/>					

C37

Treatment 6

Removal of a residual root which is visible clinically

1	2	3	4	5	6
<input type="checkbox"/>					

C38

Treatment 7

Frenectomy

1	2	3	4	5	6

C39

Treatment 8

Intra oral incision and drainage of an abscess

1	2	3	4	5	6

C40

Treatment 9

Management of a small ranula

1	2	3	4	5	6

C41

Treatment 10

Gingivoplasty

1	2	3	4	5	6

C42

Treatment 11

Removal of a clinically visible impacted tooth

1	2	3	4	5	6

C43

Treatment 12

Suturing a traumatic wound of the mucous membrane

1	2	3	4	5	6

C44

Treatment 13

Excision of a fibrous attachment

1	2	3	4	5	6

C45

Treatment 14

Apicectomy and retro filling of a central incisor

1	2	3	4	5	6

C46

Treatment 15

Alveoloplasty

1	2	3	4	5	6

C47

Treatment 16

Removal of a residual root that is completely intraosseous

1	2	3	4	5	6

C48

Treatment 17

Enucleation of a small cyst

1	2	3	4	5	6

C49

Treatment 18

Incisional biopsy

1	2	3	4	5	6

C50

Treatment 19

Management of a fractured alveolus with loose teeth

1	2	3	4	5	6
Routinely refer	Mostly refer	Mostly treat because oral surgeon unavailable	Mostly treat	Routinely treat because oral surgeon unavailable	Routinely treat

C51

Treatment 20

Removal of a bony exostosis

1	2	3	4	5	6

C52

Treatment 21

Closed reduction of a dislocation of the T.M.J.

1	2	3	4	5	6

C53

It is understood that most general practitioners would not undertake some of the following procedures. However, it would be appreciated if they would answer these queries.

Treatment 22

Removal of an impacted tooth that is not clinically visible

1	2	3	4	5	6
Routinely refer	Mostly refer	Mostly treat because oral surgeon unavailable	Mostly treat	Routinely treat because oral surgeon unavailable	Routinely treat

C54

Treatment 23

Surgical exposure of tooth for orthodontics

1	2	3	4	5	6

C55

Treatment 24

Extra oral incision and drainage of an abscess

1	2	3	4	5	6

C56

Treatment 25

Closed reduction and fixation of a fracture of the mandible

1	2	3	4	5	6

C57

Treatment 26

Open reduction and fixation of a fracture of the mandible

1	2	3	4	5	6
<i>Routinely refer</i>	<i>Mostly refer</i>	<i>Mostly treat because oral surgeon unavailable</i>	<i>Mostly treat</i>	<i>Routinely treat because oral surgeon unavailable</i>	<i>Routinely treat</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C58

Treatment 27

Reduction and fixation of a fracture of the middle 1/3rd of the facial skeleton

1	2	3	4	5	6
<input type="checkbox"/>					

C59

Treatment 28

Excision of a benign tumour such as a small papilloma located in the buccal mucosa

1	2	3	4	5	6
<input type="checkbox"/>					

C60

Treatment 29

Removal of a root or other foreign body from the maxillary sinus

1	2	3	4	5	6
<input type="checkbox"/>					

C61

Treatment 30

Repair of an oro-antral fistula

1	2	3	4	5	6
<input type="checkbox"/>					

C62

Treatment 31

Sialolithotomy

1	2	3	4	5	6
<input type="checkbox"/>					

C63

Treatment 32

Repositioning of the mental nerve

1	2	3	4	5	6
<input type="checkbox"/>					

C64

Treatment 33

Antrostomy

1	2	3	4	5	6
<input type="checkbox"/>					

C65

Treatment 34

Sulcoplasty with skin graft

1	2	3	4	5	6
<input type="checkbox"/>					

C66

Treatment 35

Enucleation of a large cyst

1	2	3	4	5	6
<input type="checkbox"/>					

C67

Treatment 36

Marsupialisation

1	2	3	4	5	6
<input type="checkbox"/>					

C68

Treatment 37

Jaw deformity surgery

1	2	3	4	5	6
<input type="checkbox"/>					

C69

Treatment 38

Condylectomy

Treatment 39

Extirpation of submandibular gland

Treatment 40

Extra oral excision of tumour, cyst or scar

Treatment 41

Partial glossectomy

Treatment 42

Bone graft

Treatment 43

Repositioning of muscle attachment

Treatment 44

Suturing a traumatic wound of the skin

1	2	3	4	5	6	
Routinely refer	Mostly refer	Mostly treat because oral surgeon unavailable	Mostly treat	Routinely treat because oral surgeon unavailable	Routinely treat	

C70

1 2 3 4 5 6

--	--	--	--	--	--

C71

1 2 3 4 5 6

--	--	--	--	--	--

C72

1 2 3 4 5 6

--	--	--	--	--	--

C73

1 2 3 4 5 6

--	--	--	--	--	--

C74

1 2 3 4 5 6

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Appendix I.ii.

Dear Colleague,

This department has established a formal oral surgery training programme designed to equip those undergoing the programme for specialist practice in oral surgery.

In order to provide the most effective method of training and relate this to the needs of the profession and the community, a survey is being undertaken as part fulfilment for the degree of M.D.S. by Dr. L.H. Mayne.

Dr. Mayne, before entering the oral surgery training programme, had some 20 years experience in general dental practice and part-time oral surgery practice in Queensland.

The information gained from this survey could be of value in producing information which could help in upgrading oral surgery services both in the urban area and in country areas.

I make a special plea for you to help him in making the survey a success.

J.A. Cran,
Chairman of Department.

Appendix I.iii.

THE UNIVERSITY OF ADELAIDE
ADELAIDE, SOUTH AUSTRALIA, 5001

DEPARTMENT OF ORAL PATHOLOGY AND ORAL SURGERY

Dear

About a month ago I sent a questionnaire with regard to oral surgery services and training, and note that to date it would appear that I have not received your completed form.

Having spent many years in practice myself, I do fully appreciate that your days are extremely busy and well occupied, and these things easily get set aside, but might I make a personal and special appeal that you complete and return the questionnaire today.

The information requested is vital to the study which is being carried out through the Department of Oral Pathology and Oral Surgery of the University of Adelaide, which has inaugurated an oral surgery training programme. As this programme is in a continuing process of development, it could greatly benefit in the future from the information gained from the present study.

Your co-operation and assistance would be greatly appreciated, as the training of competent specialists, and the provision of such services is an important part of the essential role of dentistry in its professional commitment to the total health care of the community.

If perchance you have mislaid your questionnaire, please find another copy enclosed.

Thanking you in anticipation.

Yours sincerely,

L.H. Mayne,
Senior Teaching Fellow

Appendix II

Decisions of "approved" dentists by location, regarding the provision of various treatments (percentages in brackets)

Decisions of "approved" dentists by location, regarding:

Table 1.

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	0 (0.0)	0 (0.0)	1 (1.4)	1 (1.4)	0 (0.0)	69 (97.2)	71
Total	0 (0.0)	0 (0.0)	1 (1.0)	1 (1.0)	0 (0.0)	99 (98.0)	101

Table 2.

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	0 (0.0)	0 (0.0)	1 (1.4)	1 (1.4)	0 (0.0)	70 (97.2)	72
Total	0 (0.0)	0 (0.0)	1 (1.0)	1 (1.0)	0 (0.0)	101 (98.1)	103

Table 3.

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.3)	15 (93.8)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	2 (2.8)	3 (4.2)	1 (1.4)	6 (8.5)	1 (1.4)	58 (81.7)	71
Total	2 (2.0)	3 (2.9)	1 (1.0)	6 (5.9)	2 (2.0)	88 (86.3)	102

Table 4.

"Apicectomy and retro filling of both roots of a lower second molar"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	2 (12.5)	3 (18.8)	0 (0.0)	1 (6.3)	0 (0.0)	10 (62.5)	16
Qld.	0 (0.0)	3 (20.0)	0 (0.0)	0 (0.0)	0 (0.0)	12 (80.0)	15
Elsewhere	25 (38.5)	3 (4.6)	3 (4.6)	3 (4.6)	1 (1.5)	30 (46.2)	65
Total	27 (28.1)	9 (9.4)	3 (3.1)	4 (4.2)	1 (1.0)	52 (54.2)	96

Table 5.

"Surgical extraction of a tooth"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	2 (2.8)	0 (0.0)	1 (1.4)	7 (9.7)	0 (0.0)	62 (86.1)	72
Total	2 (1.9)	0 (0.0)	1 (1.0)	7 (6.8)	0 (0.0)	93 (90.3)	103

Table 6.

"Removal of a residual root which is visible clinically"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	0 (0.0)	0 (0.0)	1 (1.4)	2 (2.8)	0 (0.0)	69 (95.8)	72
Total	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.9)	0 (0.0)	100 (97.1)	103

Table 7.

"Frenectomy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	3 (4.2)	2 (2.8)	1 (1.4)	1 (1.4)	1 (1.4)	64 (88.9)	72
Total	3 (2.9)	2 (1.9)	1 (1.0)	1 (1.0)	1 (1.0)	95 (92.2)	103

Table 8.

"Intra oral incision and drainage of an abscess"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	1 (1.4)	0 (0.0)	0 (0.0)	3 (4.2)	0 (0.0)	68 (94.4)	72
Total	1 (1.0)	0 (0.0)	0 (0.0)	3 (2.9)	0 (0.0)	99 (96.1)	103

Table 9.

"Management of a small ranula"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	1 (6.3)	1 (6.3)	1 (6.3)	2 (12.5)	1 (6.3)	10 (62.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	15
Elsewhere	10 (14.5)	1 (1.4)	3 (4.3)	6 (8.7)	0 (0.0)	49 (71.0)	69
Total	11 (11.0)	2 (2.0)	4 (4.0)	8 (8.0)	2 (2.0)	73 (73.0)	100

Table 10.

"Gingivoplasty"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	2 (12.5)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	12 (75.0)	16
Qld.	0 (0.0)	1 (6.7)	0 (0.0)	1 (6.7)	1 (6.7)	12 (80.0)	15
Elsewhere	12 (16.9)	5 (7.0)	0 (0.0)	7 (9.9)	1 (1.4)	46 (64.8)	71
Total	14 (13.7)	8 (7.8)	0 (0.0)	8 (7.8)	2 (2.0)	70 (68.6)	102

Table 11.

"Removal of a clinically visible impacted tooth"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.3)	15 (93.8)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	2 (2.8)	0 (0.0)	2 (2.8)	2 (2.8)	0 (0.0)	66 (91.7)	72
Total	2 (1.9)	0 (0.0)	2 (1.9)	2 (1.9)	1 (1.0)	96 (93.2)	103

Table 12.

"Suturing a traumatic wound of the mucous membrane"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	0 (0.0)	0 (0.0)	1 (1.4)	6 (8.3)	1 (1.4)	64 (88.9)	72
Total	0 (0.0)	0 (0.0)	1 (1.0)	6 (5.8)	1 (1.0)	95 (92.2)	103

Table 13.

"Excision of a fibrous attachment"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	4 (5.6)	0 (0.0)	1 (1.4)	8 (11.3)	1 (1.4)	57 (80.3)	71
Total	4 (3.9)	0 (0.0)	1 (1.0)	8 (7.8)	1 (1.0)	88 (86.3)	102

Table 14.

"Apicectomy and retro filling of a central incisor"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	1 (6.3)	0 (0.0)	0 (0.0)	15 (93.8)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	3 (4.2)	1 (1.4)	0 (0.0)	2 (2.8)	0 (0.0)	65 (91.5)	71
Total	3 (2.9)	1 (1.0)	1 (1.0)	2 (2.0)	0 (0.0)	95 (93.1)	102

Table 15.

"Alveoloplasty"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	1 (6.3)	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	14 (87.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	5 (7.0)	3 (4.2)	3 (4.2)	8 (11.3)	1 (1.4)	51 (71.8)	71
Total	6 (5.9)	4 (3.9)	3 (2.9)	8 (7.8)	1 (1.0)	80 (78.4)	102

Table 16.

"Removal of a residual root that is completely intraosseous"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	1 (1.4)	2 (2.8)	1 (1.4)	6 (8.4)	0 (0.0)	61 (85.9)	71
Total	1 (1.0)	2 (2.0)	1 (1.0)	6 (5.9)	0 (0.0)	92 (90.2)	102

Table 17.

"Enucleation of a small cyst"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	1 (6.3)	1 (6.3)	0 (0.0)	14 (87.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	4 (5.6)	2 (2.8)	1 (1.4)	2 (2.8)	1 (1.4)	62 (86.1)	72
Total	4 (3.9)	2 (1.9)	2 (1.9)	3 (2.9)	1 (1.0)	91 (88.3)	103

Table 18.

"Incisional biopsy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	1 (6.3)	1 (6.3)	1 (6.3)	0 (0.0)	13 (81.3)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	9 (12.7)	3 (4.2)	0 (0.0)	3 (4.2)	2 (2.8)	54 (76.1)	71
Total	9 (8.8)	4 (3.9)	1 (1.0)	4 (3.9)	2 (2.0)	82 (80.4)	102

Table 19.

"Management of a fractured alveolus with loose teeth"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	2 (12.5)	0 (0.0)	14 (87.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	2 (2.8)	0 (0.0)	1 (1.4)	4 (5.6)	3 (4.2)	61 (85.9)	71
Total	2 (2.0)	0 (0.0)	1 (1.0)	6 (5.9)	3 (2.9)	90 (88.2)	102

Table 20.

"Removal of a bony exostosis"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	2 (12.5)	1 (6.3)	0 (0.0)	13 (81.3)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	6 (8.5)	1 (1.4)	2 (2.8)	6 (8.5)	0 (0.0)	56 (78.9)	71
Total	6 (5.9)	1 (1.0)	4 (3.9)	7 (6.9)	0 (0.0)	84 (82.4)	102

Table 21.

"Closed reduction of a dislocation of the T.M.J."

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	1 (6.3)	0 (0.0)	1 (6.3)	1 (6.3)	0 (0.0)	13 (81.3)	16
Qld.	0 (0.0)	1 (6.7)	1 (6.7)	0 (0.0)	0 (0.0)	13 (86.7)	15
Elsewhere	4 (5.6)	1 (1.4)	1 (1.4)	6 (8.3)	1 (1.4)	59 (81.9)	72
Total	5 (4.9)	2 (1.9)	3 (2.9)	7 (6.8)	1 (1.0)	85 (82.5)	103

Table 22.

"Removal of an impacted tooth that is not clinically visible"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)	0 (0.0)	14 (93.3)	15
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	5 (6.9)	1 (1.4)	2 (2.8)	8 (11.1)	0 (0.0)	56 (77.8)	72
Total	5 (4.9)	1 (1.0)	2 (2.0)	9 (8.8)	0 (0.0)	85 (83.3)	102

Table 23.

"Surgical exposure of tooth for orthodontics"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	1 (6.3)	1 (6.3)	0 (0.0)	14 (87.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	5 (6.9)	4 (5.6)	1 (1.4)	4 (5.6)	1 (1.4)	57 (79.2)	72
Total	5 (4.9)	4 (3.9)	2 (1.9)	5 (4.9)	1 (1.0)	86 (83.5)	103

Table 24.

"Extra oral incision and drainage of an abscess"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	2 (12.5)	1 (6.3)	2 (12.5)	0 (0.0)	0 (0.0)	11 (68.8)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	8 (11.6)	8 (11.6)	3 (4.3)	4 (5.8)	0 (0.0)	46 (66.7)	69
Total	10 (10.0)	9 (9.0)	5 (5.0)	4 (4.0)	0 (0.0)	72 (72.0)	100

Table 25.

"Closed reduction and fixation of a fracture of the mandible"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	2 (12.5)	2 (12.5)	2 (12.5)	0 (0.0)	0 (0.0)	10 (62.5)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	2 (2.8)	1 (1.4)	1 (1.4)	8 (11.1)	4 (5.6)	56 (77.8)	72
Total	4 (3.9)	3 (2.9)	3 (2.9)	8 (7.8)	4 (3.9)	81 (78.6)	103

Table 26.

"Open reduction and fixation of a fracture of the mandible"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	5 (31.3)	2 (12.5)	1 (6.3)	0 (0.0)	0 (0.0)	8 (50.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.7)	1 (6.7)	13 (86.7)	15
Elsewhere	13 (18.1)	11 (15.3)	2 (2.8)	6 (8.3)	3 (4.2)	37 (51.4)	72
Total	18 (17.5)	13 (12.6)	3 (2.9)	7 (6.8)	4 (3.9)	58 (56.3)	103

Table 27.

"Reduction and fixation of a fracture of the middle 1/3rd of the facial skeleton"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	6 (37.5)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	8 (50.0)	16
Qld.	0 (0.0)	1 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	14 (93.3)	15
Elsewhere	11 (15.5)	9 (12.7)	5 (7.0)	4 (5.6)	1 (1.4)	41 (57.7)	71
Total	17 (16.7)	12 (11.8)	5 (4.9)	4 (3.9)	1 (1.0)	63 (61.8)	102

Table 28.

"Excision of a benign tumour such as a small papilloma located in the buccal mucosa"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	0 (0.0)	0 (0.0)	1 (6.3)	3 (18.8)	0 (0.0)	12 (75.0)	16
Qld.	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	15
Elsewhere	8 (11.3)	2 (2.8)	3 (4.2)	6 (8.5)	0 (0.0)	52 (73.2)	71
Total	8 (7.8)	2 (2.0)	4 (3.9)	9 (8.8)	0 (0.0)	79 (77.5)	102

Table 29.

"Removal of a root or other foreign body from the maxillary sinus"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	2 (13.3)	3 (20.0)	0 (0.0)	0 (0.0)	0 (0.0)	10 (66.7)	15
Qld.	0 (0.0)	1 (6.7)	0 (0.0)	1 (6.7)	1 (6.7)	12 (80.0)	15
Elsewhere	12 (16.7)	10 (13.9)	4 (5.6)	5 (6.9)	0 (0.0)	41 (56.9)	72
Total	14 (13.7)	14 (13.7)	4 (3.9)	6 (5.9)	1 (1.0)	63 (61.8)	102

Table 30.

"Repair of an oro-antral fistula"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	4 (25.0)	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	11 (68.8)	16
Qld.	0 (0.0)	1 (6.7)	1 (6.7)	1 (6.7)	0 (0.0)	12 (80.0)	15
Elsewhere	9 (13.0)	9 (13.0)	2 (2.9)	7 (10.1)	1 (1.4)	41 (59.4)	69
Total	13 (13.0)	11 (11.0)	3 (3.0)	8 (8.0)	1 (1.0)	64 (64.0)	100

Table 31.

"Sialolithotomy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	7 (43.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	0 (0.0)	0 (0.0)	1 (6.7)	1 (6.7)	0 (0.0)	13 (86.7)	15
Elsewhere	27 (38.0)	8 (11.3)	2 (2.8)	6 (8.5)	0 (0.0)	28 (39.4)	71
Total	34 (33.3)	8 (7.8)	3 (2.9)	6 (6.9)	0 (0.0)	50 (49.0)	102

Table 32.

"Repositioning of the mental nerve"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	7 (43.8)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	3 (21.4)	2 (14.3)	0 (0.0)	1 (7.1)	0 (0.0)	8 (57.1)	14
Elsewhere	32 (47.1)	5 (7.4)	2 (2.9)	2 (2.9)	0 (0.0)	27 (39.7)	68
Total	42 (42.9)	7 (7.1)	2 (2.0)	3 (3.1)	0 (0.0)	44 (44.9)	98

Table 33.

"Antrostomy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	6 (37.5)	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	3 (20.0)	2 (13.3)	1 (6.7)	0 (0.0)	0 (0.0)	9 (60.0)	15
Elsewhere	29 (42.0)	7 (10.1)	1 (1.4)	6 (8.7)	0 (0.0)	26 (37.7)	69
Total	38 (38.0)	10 (10.0)	2 (2.0)	6 (6.0)	0 (0.0)	44 (44.0)	100

Table 34.

"Sulcoplasty with skin graft"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	6 (42.9)	0 (0.0)	0 (0.0)	1 (7.1)	0 (0.0)	7 (50.0)	14
Qld.	4 (26.7)	2 (13.3)	0 (0.0)	3 (20.0)	0 (0.0)	6 (40.0)	15
Elsewhere	38 (55.1)	11 (15.9)	1 (1.4)	3 (4.3)	0 (0.0)	16 (23.2)	69
Total	48 (49.0)	13 (13.3)	1 (1.0)	7 (7.1)	0 (0.0)	29 (29.6)	98

Table 35.

"Enucleation of a large cyst"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	5 (31.3)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	0 (0.0)	1 (6.7)	1 (6.7)	0 (0.0)	0 (0.0)	13 (86.7)	15
Elsewhere	14 (19.4)	14 (19.4)	3 (4.2)	5 (6.9)	0 (0.0)	36 (50.0)	72
Total	19 (18.4)	17 (16.5)	4 (3.9)	5 (4.9)	0 (0.0)	58 (56.3)	103

Table 36.

"Marsupialisation"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	5 (31.3)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	1 (6.7)	1 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	13 (86.7)	15
Elsewhere	18 (26.1)	7 (10.1)	2 (2.9)	5 (7.2)	0 (0.0)	37 (53.6)	69
Total	24 (24.0)	10 (10.0)	2 (2.0)	5 (5.0)	0 (0.0)	59 (59.0)	100

Table 37.

"Jaw deformity surgery"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	7 (43.8)	3 (18.8)	0 (0.0)	0 (0.0)	0 (0.0)	6 (37.5)	16
Qld.	3 (20.0)	6 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (40.0)	15
Elsewhere	45 (62.5)	11 (15.3)	0 (0.0)	0 (0.0)	0 (0.0)	16 (22.2)	72
Total	55 (53.4)	20 (19.4)	0 (0.0)	0 (0.0)	0 (0.0)	28 (27.2)	103

Table 38.

"Condylectomy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	8 (53.3)	2 (13.3)	0 (0.0)	0 (0.0)	0 (0.0)	5 (33.3)	15
Qld.	3 (20.0)	7 (46.7)	0 (0.0)	0 (0.0)	0 (0.0)	5 (33.3)	15
Elsewhere	56 (78.9)	7 (9.9)	0 (0.0)	0 (0.0)	0 (0.0)	8 (11.3)	71
Total	67 (66.3)	16 (15.8)	0 (0.0)	0 (0.0)	0 (0.0)	18 (17.8)	101

Table 39.

"Extirpation of submandibular gland"

State	Course of action						Total respondent
	1	2	3	4	5	6	
S.A.	9 (60.0)	2 (13.3)	0 (0.0)	0 (0.0)	0 (0.0)	4 (26.7)	15
Qld.	4 (26.7)	6 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (33.3)	15
Elsewhere	55 (77.5)	11 (15.5)	0 (0.0)	1 (1.4)	0 (0.0)	4 (5.6)	71
Total	68 (67.3)	19 (18.8)	0 (0.0)	1 (1.0)	0 (0.0)	13 (12.9)	101

Table 40.

"Extra oral excision of tumour, cyst or scar"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	6 (37.5)	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	9 (56.3)	16
Qld.	1 (6.7)	6 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (53.3)	15
Elsewhere	42 (58.3)	11 (15.3)	0 (0.0)	3 (4.2)	0 (0.0)	16 (22.2)	72
Total	49 (47.6)	18 (17.5)	0 (0.0)	3 (2.9)	0 (0.0)	33 (32.0)	103

Table 41.

"Partial glossectomy"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	7 (43.8)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	7 (43.8)	16
Qld.	5 (33.3)	4 (26.7)	0 (0.0)	0 (0.0)	0 (0.0)	6 (40.0)	15
Elsewhere	51 (71.8)	10 (14.1)	0 (0.0)	3 (4.2)	0 (0.0)	7 (9.9)	71
Total	63 (61.8)	16 (15.7)	0 (0.0)	3 (2.9)	0 (0.0)	20 (19.6)	102

Table 42.

"Bone graft"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	9 (56.3)	2 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	5 (31.3)	16
Qld.	4 (28.6)	5 (35.7)	0 (0.0)	1 (7.1)	0 (0.0)	4 (28.6)	14
Elsewhere	48 (68.6)	10 (14.3)	0 (0.0)	1 (1.4)	0 (0.0)	11 (15.7)	70
Total	61 (61.0)	17 (17.0)	0 (0.0)	2 (2.0)	0 (0.0)	20 (20.0)	100

Table 43.

"Repositioning of muscle attachment"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	7 (43.8)	1 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)	8 (50.0)	16
Qld.	2 (13.3)	1 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	12 (80.0)	15
Elsewhere	31 (45.6)	7 (10.3)	1 (1.5)	5 (7.4)	0 (0.0)	24 (35.3)	68
Total	40 (40.4)	9 (9.1)	1 (1.0)	5 (5.1)	0 (0.0)	44 (44.4)	99

Table 44.

"Suturing a traumatic wound of the skin"

State	Course of action						Total respondents
	1	2	3	4	5	6	
S.A.	4 (25.0)	2 (12.5)	0 (0.0)	1 (6.3)	0 (0.0)	9 (56.3)	16
Qld.	0 (0.0)	1 (6.7)	0 (0.0)	0 (0.0)	0 (0.0)	14 (93.3)	15
Elsewhere	17 (23.9)	7 (9.9)	3 (4.2)	8 (11.3)	0 (0.0)	36 (50.7)	71
Total	21 (20.6)	10 (9.8)	3 (2.9)	9 (8.8)	0 (0.0)	59 (57.8)	102

Appendix III

Decisions of "approved" dentists by grade regarding the provision of various treatments (percentages in brackets).

Decisions of "approved" dentists by grade, regarding:

Table 1.

"Extraction of one tooth"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	0 (0.0)	0 (0.0)	1 (2.3)	1 (2.3)	0 (0.0)	41 (95.3)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	32 (100.0)	32
Total	0 (0.0)	0 (0.0)	1 (1.0)	1 (1.0)	0 (0.0)	99 (98.0)	101

Table 2.

"Extraction of several teeth"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	0 (0.0)	0 (0.0)	1 (2.3)	1 (2.3)	0 (0.0)	42 (95.5)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	0 (0.0)	0 (0.0)	1 (1.0)	1 (1.0)	0 (0.0)	101 (98.1)	103

Table 3.

"Excision of hyperplastic tissue"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	2 (4.7)	3 (7.0)	1 (2.3)	6 (14.0)	1 (2.3)	30 (69.8)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (11.1)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	2 (2.0)	3 (2.9)	1 (1.0)	6 (5.9)	2 (2.0)	88 (86.3)	102

Table 4.

"Apicectomy and retro filling of both roots of a lower second molar"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	23 (53.5)	4 (9.3)	3 (7.0)	3 (7.0)	1 (2.3)	9 (20.9)	43
2	3 (21.4)	3 (21.4)	0 (0.0)	1 (7.1)	0 (0.0)	7 (50.0)	14
3	1 (12.5)	1 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	6 (75.0)	8
4	0 (0.0)	1 (3.2)	0 (0.0)	0 (0.0)	0 (0.0)	30 (96.8)	31
Total	27 (28.1)	9 (9.4)	3 (3.1)	4 (4.2)	1 (1.0)	52 (54.2)	96

Table 5.

"Surgical extraction of a tooth"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	2 (4.5)	0 (0.0)	1 (2.3)	7 (15.9)	0 (0.0)	34 (77.3)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	2 (1.9)	0 (0.0)	1 (1.0)	7 (6.8)	0 (0.0)	93 (90.3)	103

Table 6.

"Removal of a residual root which is visible clinically"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	0 (0.0)	0 (0.0)	1 (2.3)	2 (4.5)	0 (0.0)	41 (93.2)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.9)	0 (0.0)	100 (97.1)	103

Table 7.

"Frenectomy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	3 (6.8)	2 (4.5)	1 (2.3)	1 (2.3)	1 (2.3)	36 (81.8)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	3 (2.9)	2 (1.9)	1 (1.0)	1 (1.0)	1 (1.0)	95 (92.2)	103

Table 8.

"Intra oral incision and drainage of an abscess"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	1 (2.3)	0 (0.0)	0 (0.0)	3 (6.8)	0 (0.0)	40 (90.9)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	1 (1.0)	0 (0.0)	0 (0.0)	3 (2.9)	0 (0.0)	99 (96.1)	103

Table 9.

"Management of a small ranula"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	10 (23.8)	2 (4.8)	3 (7.1)	8 (19.0)	1 (2.4)	18 (42.9)	42
2	1 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	15 (88.2)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	32 (100.0)	32
Total	11 (11.0)	2 (2.0)	4 (4.0)	8 (8.0)	2 (2.0)	73 (73.0)	100

Table 10.

"Gingivoplasty"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	9 (20.9)	5 (11.6)	0 (0.0)	7 (16.3)	1 (2.3)	21 (48.8)	43
2	2 (11.8)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	14 (82.4)	17
3	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	2 (6.1)	3 (9.1)	0 (0.0)	1 (3.0)	0 (0.0)	27 (81.8)	33
Total	14 (13.7)	8 (7.8)	0 (0.0)	8 (7.8)	2 (2.2)	70 (68.6)	102

Table 11.

"Removal of a clinically visible impacted tooth"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	2 (4.5)	0 (0.0)	2 (4.5)	2 (4.5)	0 (0.0)	38 (86.4)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (11.1)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	2 (1.9)	0 (0.0)	2 (1.9)	2 (1.9)	1 (1.0)	96 (93.2)	103

Table 12.

"Suturing a traumatic wound of the mucous membrane"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	0 (0.0)	0 (0.0)	1 (2.3)	5 (11.4)	1 (2.3)	37 (84.1)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	0 (0.0)	16 (94.1)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	0 (0.0)	0 (0.0)	1 (1.0)	6 (5.8)	1 (1.0)	95 (92.2)	103

Table 13.

"Excision of a fibrous attachment"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	4 (9.3)	0 (0.0)	1 (2.3)	8 (18.6)	1 (2.3)	29 (67.4)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	4 (3.9)	0 (0.0)	1 (1.0)	8 (7.8)	1 (1.0)	88 (86.3)	102

Table 14.

"Apicectomy and retro filling of a central incisor"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	3 (7.0)	1 (2.3)	0 (0.0)	2 (4.7)	0 (0.0)	37 (86.0)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	3 (2.9)	1 (1.0)	1 (1.0)	2 (2.0)	0 (0.0)	95 (93.1)	102

Table 15.

"Alveoloplasty"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	5 (11.6)	4 (9.3)	3 (7.0)	5 (11.6)	1 (2.3)	25 (58.1)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	0 (0.0)	16 (94.1)	17
3	1 (11.1)	0 (0.0)	0 (0.0)	2 (22.2)	0 (0.0)	6 (66.7)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	6 (5.9)	4 (3.9)	3 (2.9)	8 (7.8)	1 (1.0)	80 (78.4)	102

Table 16.

"Removal of a residual root that is completely intraosseous"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	1 (2.3)	2 (4.5)	1 (2.3)	5 (11.4)	0 (0.0)	35 (79.5)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	1 (6.3)	0 (0.0)	15 (93.8)	16
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	1 (1.0)	2 (2.0)	1 (1.0)	6 (5.9)	0 (0.0)	92 (90.2)	102

Table 17.

"Enucleation of a small cyst"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	4 (9.1)	2 (4.5)	1 (2.3)	3 (6.8)	1 (2.3)	33 (75.0)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	4 (3.9)	2 (1.9)	2 (1.9)	3 (2.9)	1 (1.0)	91 (88.3)	103

Table 18.

"Incisional biopsy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	8 (18.6)	4 (9.3)	0 (0.0)	4 (9.3)	2 (4.7)	25 (58.1)	43
2	1 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (94.1)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	9 (8.8)	4 (3.9)	1 (1.0)	4 (3.9)	2 (2.0)	82 (80.4)	102

Table 19.

"Management of a fractured alveolus with loose teeth"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	2 (4.5)	0 (0.0)	1 (2.3)	6 (13.6)	3 (6.8)	32 (72.7)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (100.0)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	2 (2.0)	0 (0.0)	1 (1.0)	6 (5.9)	3 (2.9)	90 (88.2)	102

Table 20.

"Removal of a bony exostosis"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	6 (14.0)	1 (2.3)	3 (7.0)	6 (14.0)	0 (0.0)	27 (62.8)	43
2	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	0 (0.0)	16 (94.1)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	6 (5.9)	1 (1.0)	4 (3.9)	7 (6.9)	0 (0.0)	84 (82.4)	102

Table 21.

"Closed reduction of a dislocation of the T.M.J."

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	4 (9.1)	1 (2.3)	3 (6.8)	7 (15.9)	1 (2.3)	28 (63.6)	44
2	0 (0.0)	1 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	16 (94.1)	17
3	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	5 (4.9)	2 (1.9)	3 (2.9)	7 (6.8)	1 (1.0)	85 (82.5)	103

Table 22.

"Removal of an impacted tooth that is not clinically visible"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	5 (11.4)	1 (2.3)	2 (4.5)	9 (20.4)	0 (0.0)	27 (61.4)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (100.0)	8
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	5 (4.9)	1 (1.0)	2 (2.0)	9 (8.8)	0 (0.0)	85 (83.3)	102

Table 23.

"Surgical exposure of tooth for orthodontics"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	5 (11.4)	4 (9.1)	1 (2.3)	5 (11.4)	1 (2.3)	28 (63.6)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	5 (4.9)	4 (3.9)	2 (1.9)	5 (4.9)	1 (1.0)	86 (83.5)	103

Table 24.

"Extra oral incision and drainage of an abscess"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	10 (23.8)	9 (21.4)	4 (9.5)	4 (9.5)	0 (0.0)	15 (35.7)	42
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (100.0)	16
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	10 (10.0)	9 (9.0)	5 (5.0)	4 (4.0)	0 (0.0)	72 (72.0)	100

Table 25.

"Closed reduction and fixation of a fracture of the mandible"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	4 (9.1)	3 (6.8)	2 (4.5)	8 (18.2)	4 (9.1)	23 (52.3)	44
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	17 (100.0)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	4 (3.9)	3 (2.9)	3 (2.9)	8 (7.8)	4 (3.9)	81 (78.6)	103

Table 26.

"Open reduction and fixation of a fracture of the mandible"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	15 (34.1)	7 (15.9)	2 (4.5)	5 (11.4)	3 (6.8)	12 (27.3)	44
2	2 (11.8)	1 (5.9)	0 (0.0)	1 (5.9)	1 (5.9)	12 (70.6)	17
3	1 (11.1)	4 (44.4)	1 (11.1)	0 (0.0)	0 (0.0)	3 (33.3)	9
4	0 (0.0)	1 (3.0)	0 (0.0)	1 (3.0)	0 (0.0)	31 (93.9)	33
Total	18 (17.5)	13 (12.6)	3 (2.9)	7 (6.8)	4 (3.9)	58 (56.3)	103

Table 27.

"Reduction and fixation of a fracture of the middle 1/3rd of the facial skeleton"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	16 (37.2)	6 (14.0)	5 (11.6)	4 (9.3)	1 (2.3)	11 (25.6)	43
2	0 (0.0)	3 (17.6)	0 (0.0)	0 (0.0)	0 (0.0)	14 (82.4)	17
3	1 (11.1)	3 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	5 (55.6)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	17 (16.7)	12 (11.8)	5 (4.9)	4 (3.9)	1 (1.0)	63 (61.8)	102

Table 28.

"Excision of a benign tumour such as a small papilloma located in the buccal mucosa"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	7 (16.3)	2 (4.7)	3 (7.0)	9 (20.9)	0 (0.0)	22 (51.2)	43
2	1 (5.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (94.1)	17
3	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	8 (7.8)	2 (2.0)	4 (3.9)	9 (8.8)	0 (0.0)	79 (77.5)	102

Table 29.

"Removal of a root or other foreign body from the maxillary sinus"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	12 (27.3)	13 (29.5)	4 (9.1)	5 (11.4)	0 (0.0)	10 (22.7)	44
2	2 (11.8)	1 (5.9)	0 (0.0)	0 (0.0)	1 (5.9)	13 (76.5)	17
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (100.0)	8
4	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.0)	0 (0.0)	32 (97.0)	33
Total	14 (13.7)	14 (13.7)	4 (3.9)	6 (5.9)	1 (1.0)	63 (61.8)	102

Table 30.

"Repair of an oro-antral fistula"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	11 (25.6)	10 (23.3)	2 (4.7)	7 (16.3)	1 (2.3)	12 (27.9)	43
2	1 (6.7)	1 (6.7)	1 (6.7)	0 (0.0)	0 (0.0)	12 (80.0)	15
3	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.0)	0 (0.0)	32 (97.0)	33
Total	13 (13.0)	11 (11.0)	3 (3.0)	8 (8.0)	1 (1.0)	64 (64.0)	100

Table 31.

"Sialolithotomy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	29 (67.4)	7 (16.3)	2 (4.7)	0 (0.0)	0 (0.0)	5 (11.6)	43
2	4 (23.5)	1 (5.9)	1 (5.9)	4 (23.5)	0 (0.0)	7 (41.2)	17
3	1 (11.1)	0 (0.0)	0 (0.0)	2 (22.2)	0 (0.0)	6 (66.7)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	1 (3.0)	0 (0.0)	32 (97.0)	33
Total	34 (33.3)	8 (7.8)	3 (2.9)	7 (6.9)	0 (0.0)	50 (49.0)	102

Table 32.

"Repositioning of the mental nerve"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	34 (79.1)	4 (9.3)	1 (2.3)	0 (0.0)	0 (0.0)	4 (9.3)	43
2	6 (40.0)	2 (13.3)	1 (6.7)	1 (6.7)	0 (0.0)	5 (33.3)	15
3	1 (11.1)	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	7 (77.8)	9
4	1 (3.2)	1 (3.2)	0 (0.0)	1 (3.2)	0 (0.0)	28 (90.3)	31
Total	42 (42.9)	7 (7.1)	2 (2.0)	3 (3.1)	0 (0.0)	44 (44.9)	98

Table 33.

"Antrostomy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	29 (67.4)	3 (7.0)	2 (4.7)	1 (2.3)	0 (0.0)	8 (18.6)	43
2	6 (40.0)	2 (13.3)	0 (0.0)	4 (26.7)	0 (0.0)	3 (20.0)	15
3	1 (11.1)	3 (33.3)	0 (0.0)	1 (11.1)	0 (0.0)	4 (44.4)	9
4	2 (6.1)	2 (6.1)	0 (0.0)	0 (0.0)	0 (0.0)	29 (87.9)	33
Total	38 (38.0)	10 (10.0)	2 (2.0)	6 (6.0)	0 (0.0)	44 (44.0)	100

Table 34.

"Sulcoplasty with skin graft"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	34 (81.0)	4 (9.5)	1 (2.4)	1 (2.4)	0 (0.0)	2 (4.8)	42
2	8 (53.3)	3 (20.0)	0 (0.0)	2 (13.3)	0 (0.0)	2 (13.3)	15
3	2 (25.0)	2 (25.0)	0 (0.0)	1 (12.5)	0 (0.0)	3 (37.5)	8
4	4 (12.1)	4 (12.1)	0 (0.0)	3 (9.1)	0 (0.0)	22 (66.7)	33
Total	48 (49.0)	13 (13.3)	1 (1.0)	7 (7.1)	0 (0.0)	29 (29.6)	98

Table 35.

"Enucleation of a large cyst"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	16 (36.4)	10 (22.7)	4 (9.1)	5 (11.4)	0 (0.0)	9 (20.5)	44
2	2 (11.8)	5 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)	10 (58.8)	17
3	1 (11.1)	2 (22.2)	0 (0.0)	0 (0.0)	0 (0.0)	6 (66.7)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	19 (18.4)	17 (16.5)	4 (3.9)	5 (4.9)	0 (0.0)	58 (56.3)	103

Table 36.

"Marsupialisation"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	19 (45.2)	6 (14.3)	2 (4.8)	4 (9.5)	0 (0.0)	11 (26.2)	42
2	4 (25.0)	4 (25.0)	0 (0.0)	1 (6.3)	0 (0.0)	7 (43.8)	16
3	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8 (88.9)	9
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	33 (100.0)	33
Total	24 (24.0)	10 (10.0)	2 (2.0)	5 (5.0)	0 (0.0)	59 (59.0)	100

Table 37.

"Jaw deformity surgery"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	35 (81.4)	6 (14.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (4.7)	43
2	11 (64.7)	4 (23.5)	0 (0.0)	0 (0.0)	0 (0.0)	2 (11.8)	17
3	4 (44.4)	3 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	2 (22.2)	9
4	5 (14.7)	7 (20.6)	0 (0.0)	0 (0.0)	0 (0.0)	22 (64.7)	34
Total	55 (53.4)	20 (19.4)	0 (0.0)	0 (0.0)	0 (0.0)	28 (27.2)	103

Table 38.

"Condylectomy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	39 (90.7)	3 (7.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (2.3)	43
2	11 (64.7)	5 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	17
3	7 (87.5)	1 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8
4	10 (30.3)	7 (21.2)	0 (0.0)	0 (0.0)	0 (0.0)	16 (48.5)	33
Total	67 (66.3)	16 (15.8)	0 (0.0)	0 (0.0)	0 (0.0)	18 (17.8)	101

Table 39.

"Extirpation of submandibular gland"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	37 (86.0)	4 (9.3)	0 (0.0)	1 (2.3)	0 (0.0)	1 (2.3)	43
2	11 (64.7)	5 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	17
3	7 (87.5)	1 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8
4	13 (39.4)	9 (27.3)	0 (0.0)	0 (0.0)	0 (0.0)	11 (33.3)	33
Total	68 (67.3)	19 (18.8)	0 (0.0)	1 (1.0)	0 (0.0)	13 (12.9)	101

Table 40.

"Extra oral excision of tumour, cyst or scar"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	34 (79.1)	4 (9.3)	0 (0.0)	1 (2.3)	0 (0.0)	4 (9.3)	43
2	7 (41.2)	6 (35.3)	0 (0.0)	1 (5.9)	0 (0.0)	3 (17.6)	17
3	4 (44.4)	2 (22.2)	0 (0.0)	0 (0.0)	0 (0.0)	3 (33.3)	9
4	4 (11.8)	6 (17.7)	0 (0.0)	1 (2.9)	0 (0.0)	23 (67.7)	34
Total	49 (47.6)	18 (17.5)	0 (0.0)	3 (2.9)	0 (0.0)	33 (32.0)	103

Table 41.

"Partial glossectomy"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	37 (86.0)	4 (9.3)	0 (0.0)	1 (2.3)	0 (0.0)	1 (2.3)	43
2	13 (76.5)	3 (17.6)	0 (0.0)	0 (0.0)	0 (0.0)	1 (5.9)	17
3	4 (50.0)	2 (25.0)	0 (0.0)	1 (12.5)	0 (0.0)	1 (12.5)	8
4	9 (26.5)	7 (20.6)	0 (0.0)	1 (2.9)	0 (0.0)	17 (50.0)	34
Total	63 (61.8)	16 (15.7)	0 (0.0)	3 (2.9)	0 (0.0)	20 (19.6)	102

Table 42.

"Bone graft"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	35 (81.4)	6 (14.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (4.7)	43
2	10 (58.8)	5 (29.4)	0 (0.0)	0 (0.0)	0 (0.0)	2 (11.8)	17
3	7 (87.5)	1 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8
4	9 (28.1)	5 (15.6)	0 (0.0)	2 (6.3)	0 (0.0)	16 (50.0)	32
Total	61 (61.0)	17 (17.0)	0 (0.0)	2 (2.0)	0 (0.0)	20 (20.0)	100

Table 43.

"Repositioning of muscle attachment"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	31 (73.8)	3 (7.1)	1 (2.4)	3 (7.1)	0 (0.0)	4 (9.5)	42
2	6 (37.5)	4 (25.0)	0 (0.0)	1 (6.3)	0 (0.0)	5 (31.3)	16
3	2 (22.2)	1 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	6 (66.7)	9
4	1 (3.1)	1 (3.1)	0 (0.0)	1 (3.1)	0 (0.0)	29 (90.6)	32
Total	40 (40.4)	9 (9.1)	1 (1.0)	5 (5.1)	0 (0.0)	44 (44.4)	99

Table 44.

"Suturing a traumatic wound of the skin"

Grade	Course of action						Total respondents
	1	2	3	4	5	6	
1	17 (39.5)	6 (14.0)	3 (7.0)	3 (7.0)	0 (0.0)	14 (32.6)	43
2	1 (5.9)	0 (0.0)	0 (0.0)	3 (17.7)	0 (0.0)	13 (76.5)	17
3	3 (33.3)	1 (11.1)	0 (0.0)	2 (22.2)	0 (0.0)	3 (33.3)	9
4	0 (0.0)	3 (9.1)	0 (0.0)	1 (3.0)	0 (0.0)	29 (87.9)	33
Total	21 (20.6)	10 (9.8)	3 (2.9)	9 (8.8)	0 (0.0)	59 (57.8)	102

Appendix IV

Decisions of South Australian general practitioners regarding the provision of a "Frenectomy" (percentages in brackets)

By sex

Sex	1	2	3	4	5	6	Total
M	45 (17.0)	41 (15.5)	4 (1.5)	38 (14.3)	1 (0.4)	136 (51.3)	265
F	7 (70.0)	1 (10.0)	0 (0.0)	1 (10.0)	0 (0.0)	1 (10.0)	10
Total	52 (18.9)	42 (15.3)	4 (1.5)	39 (14.2)	1 (0.4)	137 (49.8)	275

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	9 (39.1)	6 (26.1)	0 (0.0)	3 (13.0)	0 (0.0)	5 (21.7)	23
41-50	6 (15.8)	4 (10.5)	1 (2.6)	6 (15.8)	0 (0.0)	21 (55.3)	38
51-60	18 (24.7)	9 (12.3)	0 (0.0)	7 (9.6)	0 (0.0)	39 (53.4)	73
61-70	13 (15.5)	11 (13.1)	1 (1.2)	9 (10.7)	0 (0.0)	50 (59.5)	84
71 +	6 (10.2)	11 (18.6)	2 (3.4)	14 (23.7)	1 (1.7)	25 (42.4)	59
Total	52 (18.8)	41 (14.8)	4 (1.4)	39 (14.1)	1 (0.4)	140 (50.5)	277

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
S.A.	46 (18.9)	39 (16.0)	4 (1.6)	35 (14.4)	1 (0.4)	118 (48.6)	243
Other	6 (16.2)	2 (5.4)	0 (0.0)	5 (13.5)	0 (0.0)	24 (64.9)	37
Total	52 (18.6)	41 (14.6)	4 (1.4)	40 (14.3)	1 (0.4)	142 (50.7)	280

By type of practice

Type	1	2	3	4	5	6	Total
Private	48 (18.5)	40 (15.4)	2 (0.8)	36 (13.8)	1 (0.4)	133 (51.2)	260
Other	4 (22.2)	2 (11.1)	2 (11.1)	4 (22.2)	0 (0.0)	6 (33.3)	18
Total	52 (18.7)	42 (15.1)	4 (1.4)	40 (14.4)	1 (0.4)	139 (50.0)	278

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	4 (20.0)	2 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)	14 (70.0)	20
No	49 (18.7)	40 (15.3)	4 (1.5)	40 (15.3)	1 (0.4)	128 (48.9)	262
Total	53 (18.8)	42 (14.9)	4 (1.4)	40 (14.2)	1 (0.4)	142 (50.4)	282

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	7 (46.7)	3 (20.0)	0 (0.0)	1 (6.7)	0 (0.0)	4 (26.7)	15
Same town	38 (19.9)	28 (14.7)	0 (0.0)	27 (14.1)	0 (0.0)	98 (51.3)	191
< 80 KM	3 (10.0)	4 (13.3)	0 (0.0)	7 (23.3)	0 (0.0)	16 (53.3)	30
> 80 KM	5 (11.6)	5 (11.6)	4 (9.3)	5 (11.6)	1 (2.3)	23 (53.5)	43
Total	53 (19.0)	40 (14.3)	4 (1.4)	40 (14.3)	1 (0.4)	141 (50.5)	279

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	22 (17.2)	17 (13.3)	1 (0.8)	16 (12.5)	1 (0.8)	71 (55.5)	128
Not full	31 (20.1)	25 (16.2)	3 (1.9)	24 (15.6)	0 (0.0)	71 (46.1)	154
Total	53 (18.8)	42 (14.9)	4 (1.4)	40 (14.2)	1 (0.4)	142 (50.4)	282

Decisions of South Australian general practitioners regarding the
"Removal of a clinically visible impacted tooth"

By sex.

Sex	1	2	3	4	5	6	Total
M	32 (12.1)	34 (12.9)	3 (1.1)	86 (32.6)	3 (1.1)	106 (40.2)	264
F	3 (30.0)	6 (60.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (10.0)	10
Total	35 (12.8)	40 (14.6)	3 (1.1)	86 (31.4)	3 (1.1)	107 (39.1)	274

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	8 (34.8)	4 (17.4)	2 (8.7)	3 (13.0)	0 (0.0)	6 (26.1)	23
41-50	6 (16.2)	8 (21.6)	0 (0.0)	9 (24.3)	0 (0.0)	14 (37.8)	37
51-60	10 (13.9)	7 (9.7)	0 (0.0)	22 (30.6)	1 (1.4)	32 (44.4)	72
61-70	7 (8.2)	9 (10.6)	0 (0.0)	30 (35.3)	1 (1.2)	38 (44.7)	85
71 +	5 (8.5)	11 (18.6)	1 (1.7)	20 (33.9)	1 (1.7)	21 (35.6)	59
Total	36 (13.0)	39 (14.1)	3 (1.1)	84 (30.4)	3 (1.1)	111 (40.2)	276

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
S.A.	31 (12.8)	34 (14.0)	3 (1.2)	76 (31.4)	2 (0.8)	96 (39.7)	242
Other	4 (10.8)	5 (13.5)	0 (0.0)	11 (29.7)	1 (2.7)	16 (43.2)	37
Total	35 (12.5)	39 (14.0)	3 (1.1)	87 (31.2)	3 (1.1)	112 (40.1)	279

By type of practice

Type	1	2	3	4	5	6	Total
Private	34 (13.1)	38 (14.7)	3 (1.2)	81 (31.3)	2 (0.8)	101 (39.0)	259
Other	2 (11.1)	2 (11.1)	0 (0.0)	5 (27.8)	1 (5.6)	8 (44.4)	18
Total	36 (13.0)	40 (14.4)	3 (1.1)	86 (31.0)	3 (1.1)	109 (39.4)	277

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	3 (15.0)	1 (5.0)	1 (5.0)	3 (15.0)	0 (0.0)	12 (60.0)	20
No	33 (12.6)	39 (14.9)	2 (0.8)	84 (32.2)	3 (1.1)	100 (38.3)	261
Total	36 (12.8)	40 (14.2)	3 (1.1)	87 (31.0)	3 (1.1)	112 (39.9)	281

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	6 (40.0)	2 (13.3)	0 (0.0)	3 (20.0)	0 (0.0)	4 (26.7)	15
Same town	21 (11.0)	28 (14.7)	2 (1.0)	68 (35.6)	1 (0.5)	71 (37.2)	191
≤ 80 KM	3 (10.0)	4 (13.3)	0 (0.0)	9 (30.0)	0 (0.0)	14 (46.7)	30
> 80 KM	6 (14.3)	4 (9.5)	1 (2.4)	7 (16.7)	2 (4.8)	22 (52.4)	42
Total	36 (12.9)	38 (13.7)	3 (1.1)	87 (31.3)	3 (1.1)	111 (39.9)	278

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	20 (15.7)	14 (11.0)	1 (0.8)	27 (21.3)	1 (0.8)	64 (50.4)	127
Not full	16 (10.4)	26 (16.9)	2 (1.3)	60 (39.0)	2 (1.3)	48 (31.2)	154
Total	36 (12.8)	40 (14.2)	3 (1.1)	87 (31.0)	3 (1.1)	112 (39.9)	281

Decisions of South Australian general practitioners regarding the provision of "Apicectomies and retro fillings of central incisors"

By Sex

Sex	1	2	3	4	5	6	Total
M	57 (21.7)	40 (15.2)	2 (0.8)	48 (18.3)	0 (0.0)	116 (44.1)	263
F	4 (40.0)	1 (10.0)	1 (10.0)	2 (20.0)	0 (0.0)	2 (20.0)	10
Total	61 (22.3)	41 (15.0)	3 (1.1)	50 (18.3)	0 (0.0)	118 (43.2)	273

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	11 (47.8)	5 (21.7)	0 (0.0)	2 (8.7)	0 (0.0)	5 (21.7)	23
41-50	8 (21.6)	5 (13.5)	0 (0.0)	7 (18.9)	0 (0.0)	17 (45.9)	37
51-60	17 (23.3)	13 (17.8)	1 (1.4)	7 (9.6)	0 (0.0)	35 (47.9)	73
61-70	11 (13.1)	11 (13.1)	0 (0.0)	19 (22.6)	0 (0.0)	43 (51.2)	84
71 +	12 (20.3)	7 (11.9)	3 (5.1)	15 (25.4)	0 (0.0)	22 (37.3)	59
Total	59 (21.4)	41 (14.9)	4 (1.4)	50 (18.1)	0 (0.0)	122 (44.2)	276

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
S.A.	53 (21.9)	38 (15.7)	4 (1.7)	46 (19.0)	0 (0.0)	101 (41.7)	242
Other	7 (19.4)	2 (5.6)	0 (0.0)	5 (13.9)	0 (0.0)	22 (61.1)	36
Total	60 (21.6)	40 (14.4)	4 (1.4)	51 (18.3)	0 (0.0)	123 (44.2)	278

By type of practice

Type	1	2	3	4	5	6	Total
Private	57 (22.1)	38 (14.7)	3 (1.2)	47 (18.2)	0 (0.0)	113 (43.8)	258
Other	4 (22.2)	3 (16.7)	1 (5.6)	4 (22.2)	0 (0.0)	6 (33.3)	18
Total	61 (22.1)	41 (14.9)	1 (1.4)	51 (18.5)	0 (0.0)	119 (43.1)	276

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	4 (20.0)	1 (5.0)	0 (0.0)	1 (5.0)	0 (0.0)	14 (70.0)	20
No	57 (21.9)	40 (15.4)	4 (1.5)	50 (19.2)	0 (0.0)	109 (41.9)	260
Total	61 (21.8)	41 (14.6)	4 (1.4)	51 (18.2)	0 (0.0)	123 (43.9)	280

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	4 (26.7)	1 (6.7)	0 (0.0)	4 (26.7)	0 (0.0)	6 (40.0)	15
Same town	41 (21.7)	29 (15.3)	0 (0.0)	36 (19.0)	0 (0.0)	83 (43.9)	189
≤ 80 KM	8 (26.7)	2 (6.7)	0 (0.0)	7 (23.3)	0 (0.0)	13 (43.3)	30
> 80 KM	8 (18.6)	7 (16.3)	4 (9.3)	4 (9.3)	0 (0.0)	20 (46.5)	43
Total	61 (22.0)	39 (14.1)	4 (1.4)	51 (18.4)	0 (0.0)	122 (44.0)	277

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	24 (19.0)	16 (12.7)	3 (2.4)	17 (13.5)	0 (0.0)	66 (52.4)	126
Not full	37 (24.0)	25 (16.2)	1 (0.6)	34 (22.1)	0 (0.0)	57 (37.0)	154
Total	61 (21.8)	41 (14.6)	4 (1.4)	51 (18.2)	0 (0.0)	123 (43.9)	280

Decisions of South Australian general practitioners regarding the
"Removal of a residual root that is completely intraosseous"

By sex

Sex	1	2	3	4	5	6	Total
M	59 (22.5)	51 (19.5)	4 (1.5)	82 (31.3)	0 (0.0)	66 (25.2)	262
F	6 (60.0)	3 (30.0)	1 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)	10
Total	65 (23.9)	54 (19.9)	5 (1.8)	82 (30.1)	0 (0.0)	66 (24.3)	272

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	12 (52.2)	7 (30.4)	0 (0.0)	2 (8.7)	0 (0.0)	2 (8.7)	23
41-50	10 (27.0)	8 (21.6)	0 (0.0)	14 (37.8)	0 (0.0)	5 (13.5)	37
51-60	23 (31.9)	13 (18.1)	0 (0.0)	15 (20.8)	0 (0.0)	21 (29.2)	72
61-70	11 (13.3)	13 (15.7)	1 (1.2)	29 (34.9)	0 (0.0)	29 (34.9)	83
71 +	8 (13.6)	11 (18.6)	4 (6.8)	23 (39.0)	0 (0.0)	13 (22.0)	59
Total	64 (23.4)	52 (19.0)	5 (1.8)	83 (30.3)	0 (0.0)	70 (25.5)	274

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
S.A.	56 (23.2)	47 (19.5)	4 (1.7)	74 (30.7)	0 (0.0)	60 (24.9)	241
Other	8 (22.2)	6 (16.7)	1 (2.8)	10 (27.8)	0 (0.0)	11 (30.6)	36
Total	64 (23.1)	53 (19.1)	5 (1.8)	84 (30.3)	0 (0.0)	71 (25.6)	277

By type of practice

Type	1	2	3	4	5	6	Total
Private	59 (23.0)	51 (19.8)	4 (1.6)	79 (30.7)	0 (0.0)	64 (24.9)	257
Other	6 (33.3)	2 (11.1)	1 (5.6)	4 (22.2)	0 (0.0)	5 (27.8)	18
Total	65 (23.6)	53 (19.3)	5 (1.8)	83 (30.2)	0 (0.0)	69 (25.1)	275

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	3 (15.8)	2 (10.5)	0 (0.0)	6 (31.6)	0 (0.0)	8 (42.1)	19
No	62 (23.8)	52 (20.0)	5 (1.9)	78 (30.0)	0 (0.0)	63 (24.2)	260
Total	65 (23.3)	54 (19.4)	5 (1.8)	84 (30.1)	0 (0.0)	71 (25.4)	279

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	6 (40.0)	1 (6.7)	0 (0.0)	3 (20.0)	0 (0.0)	5 (33.3)	15
Same town	48 (25.5)	41 (21.8)	0 (0.0)	61 (32.4)	0 (0.0)	38 (20.2)	188
≤ 80 KM	3 (10.0)	5 (16.7)	0 (0.0)	11 (36.7)	0 (0.0)	11 (36.7)	30
> 80 KM	8 (18.6)	5 (11.6)	5 (11.6)	9 (20.9)	0 (0.0)	16 (37.2)	43
Total	65 (23.6)	52 (18.8)	5 (1.8)	84 (30.4)	0 (0.0)	70 (25.4)	276

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	25 (20.0)	21 (16.8)	3 (2.4)	33 (26.4)	0 (0.0)	43 (34.4)	125
Not full	40 (26.0)	33 (21.4)	2 (1.3)	51 (33.1)	0 (0.0)	28 (18.2)	154
Total	65 (23.3)	54 (19.4)	5 (1.8)	84 (30.1)	0 (0.0)	71 (25.4)	279

Appendix V

Decisions of Queensland general practitioners regarding the provision of a "Frenectomy"

By sex

Sex	1	2	3	4	5	6	Total
M	51 (18.8)	23 (8.9)	5 (1.8)	42 (15.5)	4 (1.5)	145 (53.5)	271
F	2 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (50.0)	4
Total	53 (19.3)	24 (8.7)	5 (1.8)	42 (15.3)	4 (1.5)	147 (53.5)	275

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	8 (36.4)	3 (13.6)	0 (0.0)	2 (9.1)	1 (4.5)	8 (36.4)	22
41-50	14 (35.0)	5 (12.5)	2 (5.0)	4 (10.0)	0 (0.0)	15 (37.5)	40
51-60	15 (16.3)	8 (8.7)	1 (1.1)	17 (18.5)	1 (1.1)	50 (54.3)	92
61-70	9 (12.0)	4 (5.3)	0 (0.0)	11 (14.7)	1 (1.3)	50 (66.7)	75
71 +	7 (14.9)	4 (8.5)	2 (4.3)	9 (19.1)	1 (2.1)	24 (51.1)	47
Total	53 (19.2)	24 (8.7)	5 (1.8)	43 (15.6)	4 (1.4)	147 (53.3)	276

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
Qld.	50 (19.5)	21 (8.2)	4 (1.6)	39 (15.2)	4 (1.6)	138 (53.9)	256
Other	4 (18.2)	3 (13.6)	1 (4.5)	3 (13.6)	0 (0.0)	11 (50.0)	22
Total	54 (19.4)	24 (8.6)	5 (1.8)	42 (15.1)	4 (1.4)	149 (53.6)	278

By type of practice

Type	1	2	3	4	5	6	Total
Private	47 (21.0)	20 (8.9)	3 (1.3)	34 (15.2)	2 (0.9)	118 (52.7)	224
Other	6 (12.5)	4 (8.3)	2 (4.2)	8 (16.7)	2 (4.2)	26 (54.2)	48
Total	53 (19.5)	24 (8.8)	5 (1.8)	42 (15.4)	4 (1.5)	144 (52.9)	272

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	6 (26.1)	1 (4.3)	0 (0.0)	6 (26.1)	0 (0.0)	10 (43.5)	23
No	48 (18.8)	23 (9.0)	5 (2.0)	37 (14.5)	4 (1.6)	139 (54.3)	256
Total	54 (19.4)	24 (8.6)	5 (1.8)	43 (15.4)	4 (1.4)	149 (53.4)	279

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	4 (36.4)	0 (0.0)	0 (0.0)	1 (9.1)	0 (0.0)	6 (54.5)	11
Same town	42 (26.3)	18 (11.3)	0 (0.0)	29 (18.1)	0 (0.0)	71 (44.4)	160
≤ 80 KM	2 (11.1)	2 (11.1)	0 (0.0)	6 (33.3)	0 (0.0)	8 (44.4)	18
> 80 KM	6 (6.7)	4 (4.4)	5 (5.6)	7 (7.8)	4 (4.4)	64 (71.1)	90
Total	54 (19.4)	24 (8.6)	5 (1.8)	43 (15.4)	4 (1.4)	149 (53.4)	279

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	34 (20.7)	14 (8.5)	0 (0.0)	30 (18.3)	1 (0.6)	85 (51.8)	164
Not full	20 (17.4)	10 (8.7)	5 (4.3)	13 (11.3)	3 (2.6)	64 (55.7)	115
Total	54 (19.4)	24 (8.6)	5 (1.8)	43 (15.4)	4 (1.4)	149 (53.4)	279

Decisions of Queensland general practitioners regarding the
"Removal of a clinically visible impacted tooth"

By sex

Sex	1	2	3	4	5	6	Total
M	25 (9.1)	38 (13.8)	11 (4.0)	70 (25.5)	5 (1.8)	126 (45.8)	275
F	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)	0 (0.0)	3 (75.0)	4
Total	25 (9.0)	38 (13.6)	11 (3.9)	71 (25.4)	5 (1.8)	129 (46.2)	279

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	3 (13.0)	6 (26.1)	0 (0.0)	5 (21.7)	0 (0.0)	9 (39.1)	23
41-50	6 (14.0)	10 (23.3)	3 (7.0)	10 (23.3)	1 (2.3)	13 (30.2)	43
51-60	11 (12.1)	11 (12.1)	2 (2.2)	31 (34.1)	0 (0.0)	36 (39.6)	91
61-70	4 (5.3)	8 (10.7)	4 (5.3)	17 (22.7)	2 (2.7)	40 (53.3)	75
71 +	1 (2.1)	4 (8.3)	2 (4.2)	8 (16.7)	2 (4.2)	31 (64.6)	48
Total	25 (8.9)	39 (13.9)	11 (3.9)	71 (25.4)	5 (1.8)	129 (46.1)	280

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
Qld.	23 (8.9)	37 (14.3)	10 (3.9)	65 (25.1)	5 (1.9)	119 (45.9)	259
Other	2 (8.7)	2 (8.7)	1 (4.3)	7 (30.4)	0 (0.0)	11 (47.8)	23
Total	25 (8.9)	39 (13.8)	11 (3.9)	72 (25.5)	5 (1.8)	130 (46.1)	282

By type of practice

Type	1	2	3	4	5	6	Total
Private	24 (10.6)	33 (14.5)	6 (2.6)	62 (27.3)	3 (1.3)	99 (43.6)	227
Other	1 (2.0)	6 (12.2)	5 (10.2)	8 (16.3)	2 (4.1)	27 (55.1)	49
Total	25 (9.1)	39 (14.1)	11 (4.0)	70 (25.4)	5 (1.8)	126 (45.7)	276

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	1 (4.2)	3 (12.5)	0 (0.0)	9 (37.5)	0 (0.0)	11 (45.8)	24
No	24 (9.3)	36 (13.9)	11 (4.2)	64 (24.7)	5 (1.9)	119 (45.9)	259
Total	25 (8.8)	39 (13.8)	11 (3.9)	73 (25.8)	5 (1.8)	130 (45.9)	283

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	1 (9.1)	2 (18.2)	0 (0.0)	1 (9.1)	0 (0.0)	7 (63.6)	11
Same town	23 (14.1)	30 (18.4)	0 (0.0)	51 (31.3)	0 (0.0)	59 (36.2)	163
≤ 80 KM	1 (5.3)	2 (10.5)	0 (0.0)	9 (47.4)	0 (0.0)	7 (36.8)	19
> 80 KM	0 (0.0)	5 (5.6)	11 (12.2)	12 (13.3)	5 (5.6)	57 (63.3)	90
Total	25 (8.8)	39 (13.8)	11 (3.9)	73 (25.8)	5 (1.8)	130 (45.9)	283

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	14 (8.4)	26 (15.7)	3 (1.8)	48 (28.9)	2 (1.2)	73 (44.0)	166
Not full	11 (9.4)	13 (11.1)	8 (6.8)	25 (21.4)	3 (2.6)	57 (48.7)	117
Total	25 (8.8)	39 (13.8)	11 (3.9)	73 (25.8)	5 (1.8)	130 (45.9)	283

Decisions of Queensland general practitioners regarding the provision
of "Apicectomies and retro fillings of central incisors"

By sex

Sex	1	2	3	4	5	6	Total
M	65 (23.6)	36 (13.0)	7 (2.5)	43 (15.6)	2 (0.7)	123 (44.6)	276
F	0 (0.0)	0 (0.0)	1 (25.0)	2 (50.0)	0 (0.0)	1 (25.0)	4
Total	65 (23.2)	36 (12.9)	8 (2.9)	45 (16.1)	2 (0.7)	124 (44.3)	280

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	11 (47.8)	5 (21.7)	0 (0.0)	3 (13.0)	0 (0.0)	4 (17.4)	23
41-50	18 (42.9)	8 (19.0)	1 (2.4)	3 (7.1)	0 (0.0)	12 (28.6)	42
51-60	20 (21.5)	11 (11.8)	4 (4.3)	17 (18.3)	0 (0.0)	41 (44.1)	93
61-70	13 (17.3)	7 (9.3)	2 (2.7)	7 (9.3)	1 (1.3)	45 (60.0)	75
71 +	3 (6.3)	5 (10.4)	1 (2.1)	15 (31.3)	1 (2.1)	23 (47.9)	48
Total	65 (23.1)	36 (12.8)	8 (2.8)	45 (16.0)	2 (0.7)	125 (44.5)	281

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
Qld.	58 (22.2)	35 (13.4)	8 (3.1)	42 (16.1)	2 (0.8)	116 (44.4)	261
Other	7 (31.8)	2 (9.1)	0 (0.0)	2 (9.1)	0 (0.0)	11 (50.0)	22
Total	65 (23.0)	37 (13.1)	8 (2.8)	44 (15.5)	2 (0.7)	127 (44.9)	283

By type of practice

Type	1	2	3	4	5	6	Total
Private	59 (26.0)	31 (13.7)	6 (2.6)	35 (15.4)	1 (0.4)	95 (41.9)	227
Other	5 (10.2)	5 (10.2)	2 (4.1)	8 (16.3)	1 (2.0)	28 (57.1)	49
Total	64 (23.2)	36 (13.0)	8 (2.9)	43 (15.6)	2 (0.7)	123 (44.6)	276

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	7 (29.2)	2 (8.3)	0 (0.0)	7 (29.2)	0 (0.0)	8 (33.3)	24
No	58 (22.3)	35 (13.5)	8 (3.1)	38 (14.6)	2 (0.8)	119 (45.8)	260
Total	65 (22.9)	37 (13.0)	8 (2.8)	45 (15.8)	2 (0.7)	127 (44.7)	284

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	2 (18.2)	2 (18.2)	0 (0.0)	2 (18.2)	0 (0.0)	5 (45.5)	11
Same town	55 (33.5)	21 (12.8)	1 (0.6)	25 (15.2)	0 (0.0)	62 (37.8)	164
≤ 80 KM	2 (10.5)	5 (26.3)	1 (5.3)	4 (21.1)	0 (0.0)	7 (36.8)	19
> 80 KM	6 (6.7)	9 (10.0)	6 (6.7)	14 (15.6)	2 (2.2)	53 (58.9)	90
Total	65 (22.9)	37 (13.0)	8 (2.8)	45 (15.8)	2 (0.7)	127 (44.7)	284

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	35 (21.0)	22 (13.2)	3 (1.8)	30 (18.0)	2 (1.2)	75 (44.9)	167
Not full	30 (25.6)	15 (12.8)	5 (4.3)	15 (12.8)	0 (0.0)	52 (44.4)	117
Total	65 (22.9)	37 (13.0)	8 (2.8)	45 (15.8)	2 (0.7)	127 (44.7)	284

Decisions of Queensland general practitioners regarding the
"Removal of a residual root that is completely intraosseous"

By sex

Sex	1	2	3	4	5	6	Total
M	60 (21.8)	42 (15.3)	16 (5.8)	61 (22.2)	5 (1.8)	91 (33.1)	275
F	0 (0.0)	1 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (75.0)	4
Total	60 (21.5)	43 (15.4)	16 (5.7)	61 (21.9)	5 (1.8)	94 (33.7)	279

By year of graduation

Grad. year	1	2	3	4	5	6	Total
21-40	11 (47.8)	5 (21.7)	1 (4.3)	2 (8.7)	0 (0.0)	4 (17.4)	23
41-50	11 (25.6)	10 (23.3)	5 (11.6)	4 (9.3)	0 (0.0)	13 (30.2)	43
51-60	21 (22.8)	15 (16.3)	3 (3.3)	28 (30.4)	2 (2.2)	23 (25.0)	92
61-70	14 (18.9)	9 (12.2)	3 (4.1)	16 (21.6)	2 (2.7)	30 (40.5)	74
71 +	3 (6.3)	6 (12.5)	4 (8.3)	11 (22.9)	1 (2.1)	23 (47.9)	48
Total	60 (21.4)	45 (16.1)	16 (5.7)	61 (21.8)	5 (1.8)	93 (33.2)	280

By origin of basic dental qualification

Origin	1	2	3	4	5	6	Total
Qld.	53 (20.5)	43 (16.6)	15 (5.8)	58 (22.4)	5 (1.9)	85 (32.8)	259
Other	7 (30.4)	2 (8.7)	1 (4.3)	4 (17.4)	0 (0.0)	9 (39.1)	23
Total	60 (21.3)	45 (16.0)	16 (5.7)	62 (22.0)	5 (1.8)	94 (33.3)	282

By type of practice

Type	1	2	3	4	5	6	Total
Private	52 (23.0)	37 (16.4)	12 (5.3)	53 (23.5)	3 (1.3)	69 (30.5)	226
Other	6 (12.2)	7 (14.3)	4 (8.2)	9 (18.4)	1 (2.0)	22 (44.9)	49
Total	58 (21.1)	44 (16.0)	16 (5.8)	62 (22.5)	4 (1.5)	91 (33.1)	275

By possession of additional qualification(s)

Addit. qual.	1	2	3	4	5	6	Total
Yes	6 (25.0)	5 (20.8)	0 (0.0)	7 (29.2)	0 (0.0)	6 (25.0)	24
No	54 (20.8)	40 (15.4)	16 (6.2)	56 (21.6)	5 (1.9)	88 (34.0)	259
Total	60 (21.2)	45 (15.9)	16 (5.7)	63 (22.3)	5 (1.8)	94 (33.2)	283

By proximity of an oral surgeon

Proximity	1	2	3	4	5	6	Total
Same building	3 (27.3)	1 (9.1)	0 (0.0)	2 (18.2)	0 (0.0)	5 (45.5)	11
Same town	53 (32.5)	29 (17.8)	1 (0.6)	41 (25.2)	1 (0.6)	38 (23.3)	163
< 80 KM	1 (5.6)	6 (33.3)	1 (5.6)	5 (27.8)	1 (5.6)	4 (22.2)	18
> 80 KM	3 (3.3)	9 (9.9)	14 (15.4)	15 (16.5)	3 (3.3)	47 (51.6)	91
Total	60 (21.2)	45 (15.9)	16 (5.7)	63 (22.3)	5 (1.8)	94 (33.2)	283

By availability of full hospital and anaesthetic support

Avail.	1	2	3	4	5	6	Total
Full	40 (24.1)	25 (15.1)	2 (1.2)	40 (24.1)	3 (1.8)	56 (33.7)	166
Not full	20 (17.1)	20 (17.1)	14 (12.0)	23 (19.7)	2 (1.7)	38 (32.5)	117
Total	60 (21.2)	45 (15.9)	16 (5.7)	63 (22.3)	5 (1.8)	94 (33.2)	283

References and Bibliography.

- Abrahams, L.C. There is no valid reason for changing the title:
Maxillo-facial Oral Surgeon.
J. Dent. Assoc. Sth. Africa. 24:11;361, Nov. 1969.
- Allred, H. et al. Proposals for planned change in dental education
and practice.
Br. Dent. J. 133:173-9, Sept. 1972.
- Amies, A. The oral surgeon in the making.
Aust. Dent. J. 11:219-23, Aug. 1966.
- Australian Department of Social Security. Medical Benefits for
Services by Dentists.
Aust. Govt. Publishing Service, Canberra. 1975.
- Australian Medical Directory. 1974.
- Bear, S.E. The Oral Surgeon Today.
J. Oral Surg. 31:249-55, Apr. 1973.
- Blum, R.J. A matter of degree.
J. Oral Surg. 31:168, Mar. 1973.
- Bohannon, H. et al. The flexible dental curriculum.
J.A.D.A. 84:112-24, Jan. 1972.
- Bremner, M.D.K. The Story of Dentistry. Dental Items of Interest
Publishing Co. Inc. 2nd Edition 1946.
- Bright, C.H. Health Services in South Australia. Report of the
Committee of Enquiry into Health Services in South Australia.
Jan. 1973.
- Browne, J.C. McClure. Training for Obstetrics and Gynaecology.
Brit. Med. J. 2:750, Sept. 1963.
- Cameron, J.R. Hospital Dentistry yesterday - today - tomorrow.
J. Oral Surg. 26:312-5, May 1968.
- Campbell, A.F.G. Oral Surgery as a Specialty, TANGKA.
Uni. of Qld. Dent. Ass. Magazine. 58-60, 1971.
- Campbell, A.F.G. Letter, Aust. Dent. Ass. Qld.
Branch Newsletter No. 167, Nov. 1975.

- Chase, R.A. The "core knowledge" principle and erosion of specialty barriers in surgical training.
Ann. Surg. 171:987-90, 1970.
- Chase, R.A. The Surgical Council and basic surgical examination.
J.A.M.A. 218:1412, Nov. 1971.
- Chief Medical Officer of the Dept. of Health. The State of the Public Health.
Health Trends. 4:4;65, Nov. 1972.
- Chilton, N.W. Chi Square. Design and Analysis in Dental and Oral Research.
J.B. Lippincott Co. 208-30, 1967.
- Choukas, N.C. Scope of Oral Surgery Practice.
J. Oral Surg. 31:422, Jun. 1973.
- Christensen, F.G. Oral Surgery as a dental specialty. TANGKA.
Uni. of Qld. Ass. Magazine 33-37, 1971.
- Coady, J.M. The future of dental specialties.
Amer. J. Orthod. 64:625-30, Dec. 1973.
- Cooper, J.A.D. Curriculum Reforms in Medical Education.
J. Dent. Educ. 37:13-6, Jan. 1973.
- De Fries, H.O. Management of Maxillo-facial injuries: Medical Viewpoint.
Militt. Med. 136:558-61, Jun. 1971.
- Dental Science Regulations. Degree of Master of Dental Science.
Uni. of W.A.
- Dunbar, R.E. The Walker Program for advanced education in Oral Surgery.
J.A.D.A. 86:1025-32, May 1973.
- Edelberg, J.W., Tryon, A., & Jerge, C.R. Oral Surgery Education - The Surgeons' Views.
J. Oral Surg. 31:509-15, Jul. 1973.
- Eisenbud, L. An analysis of the potential impact of oral surgery - M.D. programs.
J. Oral Surg. 31:277-82, Apr. 1973.
- Eisenbud, L. The form and substance of a hospital dental program.
J.A.D.A. 86:1039-44, May 1973.

Em-Care Brochure, St. John Ambulance Assoc. S.A.

Fickling, B.W. By dentistry out of surgery - the birth of a specialty.
Aust. Dent. J. 17:178-87, Jun. 1972.

Fitzpatrick, B.N. Now and then - Oral Surgery.
Probe (Adelaide). 16:8-10, 1965.

Fitzsimons, J.R. Early and Modern Dentistry in Australia.
Br. Dent. J. 134:205-6, Mar. 1973.

Glass, D. Dental cooperation as practised in Plastic and Jaw
Injuries Centre.
J. Cleft Palate. 7:562-7, Apr. 1970.

Goldberg, M.H. Letter to the Editor.
J. Oral Surg. 30:157, Feb. 1972.

Gosling, J.R. Unconventional Obstetrics and Gynecology,
Reflections on the Growth and Development of a Specialty.
Amer. J. Surg. 110-44, Jul. 1965.

Guralnick, Walter C. The Combined Oral Surgery - M.D. program:
the Harvard plan.
J. Oral Surg. 31:271-6, Apr. 1973.

Hale, M.L. Scope of Clinical Oral Surgery. Principles of Under-Grad.
Education in Oral Surgery.
J. Dent. Educ. 30:409-10, Dec. 1966.

Hale, M.L. Oral Surgery - an integral part of total health care.
Plugger 1:13-6, Oct. 1968.

Hale, M.L. Comment re article of Edelberg, Tryon, Jerge.
J. Oral Surg. 31:509-15, Jul. 1973.
Year Book of Dentistry 1974.

Hall, H. David. Current tracks in advanced educational program in
Oral Surgery
J. Oral Surg. 31:260-5, Apr. 1973.

Hanlon, C.R. Advantages and disadvantages of a program for basic
surgical education.
Ann. Surg. 168:4;579-81, Oct. 1968.

Hayward, J.R. The origin, intent and status of "Essentials of an
adequate advanced training program in oral surgery.
Proceedings of the Fourth Conference on Graduate Education
in Oral Surgery, Nov. 27, 1961, Chicago.

- Hayward, J.R. Divide and Conquer.
J. Oral Surg. 25:105, Mar. 1967.
- Hayward, J.R. Privileges in perspective.
J. Oral Surg. 26:311, May 1968.
- Hayward, J.R. At the core.
J. Oral Surg. 26:503, Aug. 1968.
- Hayward, J.R. Closer ties for the specialty.
J. Oral Surg. 28:564, Aug. 1970.
- Hayward, J.R. Identity and interpretation.
J. Oral Surg. 29:8, Jan. 1971.
- Hayward, J.R. Our right to equal access.
J. Oral Surg. 29:246, Apr. 1971.
- Hayward, J.R. The Cutting edge of specialization.
J. Oral Surg. 29:548, Aug. 1971.
- Hayward, J.R. Adaptations of a Specialty.
J. Oral Surg. 29:696, Oct. 1971.
- Hayward, J.R. Strains on a bridging specialty.
J. Oral Surg. 29:837, Dec. 1971.
- Henning, F.R. Specialisation in Dentistry.
Probe (Adelaide) 1969.
- Hillenbrand, H. Oral surgery's relation to medicine and dentistry.
J. Oral Surg. 25:60, Jan. 1967.
- Hillenbrand, H. The Continuing Challenge: Oral Surgery as a
Specialty of dentistry.
J. Oral Surg. 29:9-12, Jan. 1971.
- Hillenbrand, H. The past present and future status of oral surgery
in the United States.
J. Oral Surg. 31:291-4, Apr. 1973.
- Holden, W.D. The Education of Surgeons.
Ann. Surg. 168:4;586-91, Oct. 1968.
- Holland, H.G. The role of the dental surgeon in the overall medical
situation arising during times of war or civil disasters
in the light of military dentistry.
Dent. J. Malaysia Singapore. 10:11-5, Oct. 1970.

- Hospital and Health Services, Immediate Problems and Practical Solutions.
Report on Health Services Seminar held at Flinders University Jun. 1974.
- Hooley, J.R. Oral Surgery in the Small Community.
Dent. Survey. 42:E. Gordon Biggs, 74-5, 1966.
- Irby, W.B. History of the development of oral surgery in the United States.
In Archer, W.H. (ed.). Oral surgery directory of the world. Pittsburgh, Oral Surgery Directory of the World, 1971, pp. 407-413.
- Joint Committee on Higher Surgical Training, Second Report, 1971.
- Jolly, M. Graduate Training in Oral Surgery.
A.D.J. 15:435-6, Oct. 1970.
- Jolly, M. Personal Communication, 1975.
- Kerr, N.W. The Life and Work of the Dental Surgeon and Oral Surgeon in the Peoples Republic of China.
Br. J. Oral Surg. 11:1;36-42, Jul. 1973.
- Laskin, D.M. Quality Control in Oral Surgery Programs.
J. Oral Surg. 27:930, Dec. 1969.
- Laskin, D.M. Oral Surgery - a question of degree?
J. Oral Surg. 30:86, Feb. 1972.
- Laskin, D.M. The future need for oral surgeons.
J. Oral Surg. 30:477, Jul. 1972.
- Laskin, D.M. Research in the residency program.
J. Oral Surg. 30:715, Oct. 1972.
- Laskin, D.M. Educational trends in oral surgery.
J. Oral Surg. 31:248, Apr. 1973.
- Levant, B.A. The changing pattern in treatment in oral surgery.
Ann. Aust. Coll. Dent. Surg. 3:73-9, Dec. 1971.
- Longmire, W.P. A basic surgical training in preparation for all surgical fields; A basic surgical residency.
Ann. Surg. 168:4;578-9, Oct. 1968.
- Macalister, A.D. Personal Communication, 1975.
- Madrid Workshop, 1974.

- Nairn, R.I. Dental Specialties.
The Dent. Practitioner and Dent. Record. 20:Sept. 1969.
- North, J.P. Oral Surgeons in Hospitals.
Bulletin Amer. Coll. of Surgeons: Sep. - Oct. 1965.
- Ontario Health Insurance Card I.B.M. 41947.
- Paynter, K.J. Accreditation of Specialty Programs marks new
era in Canadian Dentistry.
J. Dent. Educ. 37:31-2, Feb. 1973.
- Pleasants, J.F. Legislation - The solution to a dilemma.
J. Oral Surg. 32:166, Mar. 1974.
- Pizer, M.E. Medical Evaluation by the Oral Surgeon.
J. Oral Surg. 31:822, Nov. 1973.
- Poore, T.E. The Physical Examination.
J. Oral Surg. 31:6, Jan. 1973.
- Population and Dwellings in Local Government Areas and Urban Centres.
Commonwealth Bureau of Census and Statistics,
Canberra, Australia.
Bulletin 6: Part 9. Ref. No. 2.88.9.Jun. 1971.
- Porterfield, J.D. Dentistry - its status in the hospital.
J. Oral Surg. 31:256-9, Apr. 1973.
- Queensland Dental Act 1971, No. 61, p.7.
- Queensland Government Gazette. Register of Dentists.
Vol. CCXLVIII No. 70. 1975. S.G. Reid, Govt. Printer.
- Radden, B.G. Personal Communication, 1975.
- Rayne, J. Hon. Sec. Br. Assoc. of Oral Surgeons.
Personal Communication, 1974.
- Reade, P.C. Dental Services in South Australia.
M.D.S. Thesis. Uni. of Adel. Dec. 1961.
- Regulations for the Enrolment, Registration and Examination of Fellows
at an Advanced Level in Special Fields in The Royal Australian
College of Dental Surgeons. 1974.

- Revzin, Marvin E. The three-year oral surgery program.
J. Oral Surg. 31:266-70, Apr. 1973.
- Rowe, N.L. The training of an oral surgeon in England.
J. Oral Surg. 31:283-9, Apr. 1973.
- Rules and Guidelines for M.D.Sc. candidates taking formal courses
of study.
Uni. of Qld. Faculty of Dent. Jan. 1975.
- Sagar, J.A. Personal Communication, 1975.
- Sampson, M.A., Higgins, L.T. Oral surgery in the small community.
Chron. Omaha Dist. Dent. Soc. 32:110-1, Dec. 1968.
- Schwartz, H.G. What the specialist needs in a basic surgical education.
Ann. Surg. 168:582-4, 1968.
- Scott, H.W., Jr. Basic surgical education.
Surgery 50:1-11, Jul. 1961.
- Seward, G.R., Howe, G.L., Rowe, N.L., Heslop, I.H. British Association
of Oral Surgeons Report of a Sub-Committee for Training
in Oral Surgery.
Br. J. Oral Surg. 10:360-71, Mar. 1973.
- Shira, R.B. The Specialty of Oral Surgery: present and future.
J. Oral Surg. 27:386-94, Jun. 1969.
- Sissman, I. Comprehensive dental care in a small hospital.
J.A.D.A. 86:1044-6, May 1973.
- Slack, G.L. et al. Joint Committee for Higher Training in Dentistry,
second report.
Br. Dent. J. 134:103, Feb. 1973.
- Small, E.W. Inside-out and bottom-up: the management of maxillo-
facial trauma patients.
Militt. Med. 136:553-7, Jun. 1971.
- South Australian Government Gazette. Dental Register. 1975.
A.B. James, Govt. Printer.
- Stanhope, E.D. Specialisation in the Royal Army Dental Corps.
Br. Dent. J. 132:324-6, Apr. 1972.
- Sutherland, K.J. Personal Communication, 1975.

- Thoma, K.H. Operative Oral Surgery. The History of Oral Surgery
(The oldest specialty in dentistry).
J. Oral Surg., Oral Med., Oral Path. 10:1-10, Jan.-Dec. 1957.
- Todd, et al. Report of Royal Commission on Medical Education.
H.M.S.O. London 1968.
- Walker, D.G. The Future of Post-Graduate Education.
Br. Dent. J. 126:411-7, May 1969.
- Walker, Robert V. An improved Board examination that makes a
difference.
J. Oral Surg. 27:689, Sept. 1969.
- Ward, T. Report on the Madrid Workshop on the Training of the
Oral Surgeon throughout the World. Apr. 1974.
- Ward, T. The Maxillo-facial Unit.
Ann. Roy. Coll. Surg. Eng. 57:2;65-73, Aug. 1975.
- Wells, C. Surgical education and training.
Ann. Roy. Coll. Surg. Eng. 39:5;267-98, Nov. 1966.
- Wilson, D.B. The Hospital and Comprehensive Health Care.
J.A.D.A. 86:1035-8, May 1973.
- Wolfort, F.G. and Hoopes, J.E. Who treats facial fractures?
J. Trauma. 14:303-4, Apr. 1974.

Personal Communications

Training Institutions

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University of Western Australia - Professor Sutherland

University of Otago - Professor Macalister

University of Sydney - Professor Jolly

University of Queensland - Dr. Sagar

Swedish Institute for Post-graduate Education - Dr. Hollender

Queen Mary's Hospital - Mr. Rowe

Associations and Societies

British Association of Oral Surgeons

American Society of Oral Surgeons

Australian and New Zealand Society of Oral Surgeons

Canadian Society of Oral Surgeons

Canadian Dental Association

New Zealand Dental Association

Dental Boards

Queensland

New South Wales

Victoria

Tasmania

Western Australia

Northern Territory

Australian Capital Territory

Hospitals

Royal Brisbane

Princess Alexandra - Brisbane

Royal North Shore - Sydney

Royal Newcastle

Royal Dental - Melbourne

Royal Hobart

Launceston General

Mater Misericordiae - Brisbane

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Western Australia

Director General of Health - Canberra

Director of Health Services - Tasmania

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