DENTAL SERVICES REPORT

Department of Health - Irish Dental Association
- Health Boards

JOINT WORKING PARTY
REPORT

Department of Health - Irish Dental Association
- Health Boards

JOINT WORKING PARTY
1.1 At a meeting on 12 June, 1978 between the Minister for Health and representatives of the Irish Dental Association, it was agreed that a small working party, consisting of representatives of the Association and officials of the Department of Health and of the Health Boards, should examine a number of wide ranging proposals affecting dental services which had been put forward by the Irish Dental Association. The recommendations put forward by the Working Party would be fully considered by the Minister when formulating his proposals for a comprehensive development programme for dental services.

1.2 Terms of Reference

The Working Party had its first meeting on 26 June 1978. At that meeting the following terms of reference were agreed:

'To examine existing dental services and to make recommendations for consideration by the Minister in the formulation and establishment of an overall dental policy'.

1.3 Membership

<table>
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<tr>
<th>Name</th>
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<tr>
<td>Mr D. St. A. Atkins</td>
<td>Irish Dental Association</td>
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<tr>
<td>Dr C. Collins</td>
<td>Irish Dental Association</td>
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<tr>
<td>Mr C. Conway</td>
<td>Dept. of Health</td>
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<tr>
<td>Dr E. Harrington</td>
<td>Irish Dental Association</td>
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<td>Dr J. Lemasney</td>
<td>Irish Dental Association</td>
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<td>Mr L. Mc Cauley (until February 1979)</td>
<td>Irish Dental Association</td>
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<tr>
<td>Mr C.J. Mulvihill</td>
<td>Dept. of Health</td>
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<tr>
<td>Mr P. Murtagh</td>
<td>Health Board Chief Executive Officers</td>
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<td>Dr D.M. O'Mullane</td>
<td>Dept. of Health</td>
</tr>
<tr>
<td>Mr J. O'Rourke</td>
<td>Dept. of Health</td>
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<tr>
<td>Dr B. Pigott</td>
<td>Irish Dental Association</td>
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Meetings

1.4 The Working Party met on thirteen occasions.

1.5 The meetings were chaired alternately by Mr J. O'Rourke, Asst. Secretary, Dept. of Health and Dr C. Collins, President, Irish Dental Association. Dr B Harrington and Mr C.J. Mulvihill acted as alternate Chairman.
Acknowledgements

1.6 The Working Party wishes to record its appreciation of the role played by Dr A. Cowan, former president of the Irish Dental Association, in the establishment of the Working Party.

1.7 It is also desired to acknowledge the considerable contributions to the work of the Working Party made by Dr A. Woolfe, Irish Dental Association, Mr H. Morrison and Department of Social Welfare/Mr D. McCarthy, Department of Health.

1.8 The representatives of the Irish Dental Association on the Working Party wish to have noted the very helpful advice and assistance received by them from many members of the Association and in particular to thank Dr S. Finn, President Elect Irish Dental Association, Professors B. Barrett, N.P. Butler and R.B. Dockrell, Drs F.J. Allen, H. Barry, M. Walsh, E.A. Walsh, A. McGann, D. Nolan, F. Prendergille D. Shanley, L. Heslin, F. A. Mc Loughlin, the members of the Health Board Dental Surgeons Group and M/s M. Byrne, Dental Health Foundation.

1.9 The Working Party is deeply grateful to Mr C. Conway, Department of Health, for the considerable time and effort he devoted as Secretary to the Working Party and in the preparation of this report.

1.10 Working/Discussion Papers:

Copies of the following papers which were considered by the Working Party are appended to this Report:

Appendix 1 - The role of Preventive Dentistry
Appendix 2 - Need and Demand for Dental Care: Dental Manpower; Dental Auxiliary Personnel;
Appendix 3 - Post Graduate Qualifications held by public dental officers
Appendix 4 - Dental Therapist; A Demonstration Study (Preliminary Outline)
SUMMARY OF RECOMMENDATIONS.

Prevention:

(1) The Working Party wishes to emphasise the importance of giving priority to the development of preventive aspects of dental care, and to stress that the establishment of an improved dental treatment service, in the absence of a preventive philosophy, is unlikely to bring about an improvement in the dental health of the community. (2.2 & 4.2)

(2) All personnel engaged in the provision of dental services must be motivated by a preventive approach (4.4.)

(3) Consideration should be given to the employment in the health board service of auxiliary dental personnel who possess specialised training in preventive measures. In particular, the Working Party has in mind the employment of dental hygienists, who have undergone a recognised course of training. (4.5.)

(4) The arrangements for implementing water fluoridation need to be improved. (4.8.)

(5) Preventive programmes involving the topical application of fluoride and other preventive measures have a role in all areas, whether or not they are served by fluoridated water. (4.9 - 4.20)

(6) Measures need to be taken to improve dental health education. (4.23)

(7) The Dental Health Foundation should be recognised as a central body, having a primary co-ordinating role in dental health education, in association with the Health Education Bureau. (4.23)

(8) That a base line survey be carried out to investigate the level of dental health treatment need and attitudes towards Dental Health (2.3 & 4.23.2)
(9) That the role of dental hygienist be primarily in the field of dental health education. (4.23.8)

**Organisation and Administration:**

(10) The proposals of the Irish Dental Association in regard to the organisation and administration of the dental services, within the organisational structure of the health boards, should be fully examined in the context of the review now taking place of the organisation of community health services (5.3)

**Manpower:**

(11) Sponsorship of dental undergraduates, on condition that they take up employment in the health board dental service, should be considered. (6.2.1.)

(12) The creation of a special entry grade of health board dental surgeons should be considered. (6.2.2.)

(13) The payment of removal expenses of dentists recruited from abroad, and the provision of accommodation in certain areas, should be considered. (6.2.3.)

(14) Urgent consideration should be given, by the appropriate agencies, to the possibility of improving the promotional outlets for health board dental surgeons. (6.3)

(15) The creation of part time/post of health board dental surgeon should be considered for areas with low dentist/population ratios. (6.2.5.)

(16) Health boards should be authorised to refer dental patients for treatment by general dental practitioners for certain dental services. (6.11)

(17) Arrangements for training dental surgery assistants and the establishment of an Irish qualification for them should be considered by the dental schools, the Irish Dental Association, the Health Boards, and the Department of Health. (6.17)
(18) Steps should be taken to ensure that the recruitment arrangements for appointment as dental surgery assistant should be segregated from the other appointment arrangements to which they are now linked. (6.18)

(19) The illegal practice of dental technicians providing dental appliances directly to the public, should be brought speedily to an end by such legislation as may be necessary. (6.19)

(20) The training arrangements for dental technicians should be examined (6.20 and 6.21)

(21) Health Boards should consider employing dental technicians capable of carrying out specialised and routine work. (6.21)

(22) The introduction of denturists is not recommended, having regard to the other recommendations made in the report. (6.23)

(23) Provision should be made for the training and employment of dental hygienists who work to the prescription of a dentist. (6.25.1)

(24) The introduction of expanded duty dental auxiliaries (E.D.D.A.'s) is not recommended. (6.26)

(25) The dental profession in this country is overwhelmingly opposed to dental procedures in the mouth being carried out by auxiliaries, unless this is on the prescription and under the direction of a dentist. They are, therefore, opposed to the introduction of New Zealand Dental Nurses or similar type auxiliaries into this country. The Working Party accepts this view at the present time. However, the Working Party recommends that a demonstration study should be undertaken with a view to determining the feasibility of employing New Cross dental therapists in the Health Board Dental Service, to carry out prescribed procedures and treatments for eligible persons, under the age of 16 years, in areas with unfavourable dentists/population ratios. (6.28 and Appendix 4)
Dental Education:
(26) The nature of the profession indicates that dentists should undergo periodic continuing education courses. (6.4)

(27) Health boards should actively encourage their own dentists to participate in approved courses, and should facilitate them by allowing reasonable leave, with pay. Consideration should also be given to the needs of Private Practitioners, an increasing number of whom may be providing services for public patients. (6.4 & 6.5)

(28) Retraining opportunities should be provided for dentists who have not practised for an appreciable time and who wish to resume their profession. (6.2.4.)

(29) The dental teaching authorities should arrange suitable participatory courses in co-operation with health boards and dentists representatives. (6.6)

(30) The subject of community dental health, in undergraduate dental education, should be developed. (6.9)

(31) Post-graduate courses in community dental health should be established for dentists who intend to pursue a career in the health board dental service. (6.10)

Dental Information:
(32) Health boards should seek the active co-operation of University Departments in developing studies of dental needs and demands in the community and in assessing the effectiveness and efficiency of preventive and treatment programmes. (6.10)

(33) The recommendations, when implemented, should be evaluated by means of periodic reviews. (2.4)

Eligibility:
(34) Early consideration should be given to the possibility of extending eligibility in their own right to adolescents as a group. They should be given priority over other groups when any extension of eligibility for public dental service is being considered. (3.11)
Hospital Dental Services: Secondary Care
Oral Surgery / Oral Medicine:

(35) Initially, four consultant posts in Oral Surgery be established at major centres, with specific reference to the needs in the Western Areas. (7.3)

(36) Two of the posts should be located in Dublin and Cork, respectively, and should be linked with arrangements to provide a training pathway for future consultant training. In due course, further posts may be necessary. (7.2 & 7.3)

(37) These posts should have appropriate clinical support staff which will provide training opportunities for persons aspiring to consultant status. It is envisaged that clinical support staff for the remaining consultant posts should be provided by Health Board Service Personnel who have particular aptitude and training in oral surgery. (7.3)

(38) One consultant post in oral medicine should be created initially, with a specific remit of establishing the level of oral pathology and setting up a national referral diagnostic and treatment service. (7.4)

Orthodontics:

(39) Five full time consultants should be appointed on an appropriate population distribution basis. The Dublin and Cork posts should be linked with training pathway arrangements in this specialty. (7.5)

(40) The training pathway posts should have appropriate clinical support staff. Clinical support for the others could be provided by health board dental personnel or by Private Practitioners. (7.5)

Paediatric Dentistry

(41) Two consultant posts should be established and advertised. (7.8)
Restorative Dentistry/Periodontology:

(42) Until the extent of the need in this area becomes clearer, the services required should be arranged with the dental schools. The possibility of joint hospital/university appointments should be considered. (7.9 & 7.10)

Consultative Specialists - General:

(43) The conditions of employment for consultant dental appointments must take account of the responsibilities and duties attaching to the post, but should not be less advantageous that those applying to medical consultant appointments. (8.3)

(44) Consultation with the Irish Committee for Higher Training in Dentistry is considered desirable when the professional qualifications for appointment to consultant posts are being laid down. Medical qualifications should not be prescribed as essential qualifications. (8.4)

(45) Dental Consultants should have the support of full ancillary services. (8.3)

(46) Facilities for dental treatment should be included in the plans of new hospitals. (8.5)

(47) Health board dental surgeons providing a specialist service must have adequate and appropriate facilities. (8.6)

Hospital Dental Services: Primary Care:

(48) Adequate facilities must be provided, particularly to deal with emergencies which may arise during or following treatment under general anaesthesia. (7.14 & 7.15)

Dental Treatment Hazards:

(49) The Department of Health should issue guidelines to Health Boards and others concerning hazards to which dental personnel and patients may be exposed during the practice of dentistry. (8.2)
Social Welfare Dental Benefits Scheme:

(50) Decisions should be expedited on the proposals put by the Irish Dental Association to the Department of Social Welfare for an increase in the range of procedures available under the scheme, as well as a re-structuring of the fee basis, and an increase in the level of fees. (9.6)

(51) The administration of the present Social Welfare Scheme should be transferred to the Department of Health. (9.7)
Introduction

2.1 Dentistry is an independent autonomous profession working in co-operation with the other health professions.

2.2 The Working Party wishes to emphasise the importance of giving priority to the development of preventive aspects of dental care and to stress that the establishment of an improved dental treatment service in the absence of a preventive philosophy is unlikely to bring about an improvement in the dental health of the community.

2.3 In arriving at its recommendations, the Working Party was hindered by the absence of adequate information concerning the dental health and treatment needs of the community and lacked an information base on which to evaluate the possible effects of its recommendations. The Working Party recommends that studies be undertaken to remedy the situation and that urgent consideration should be given to this matter.

2.4 The recommendations when implemented should be evaluated by means of periodic reviews. The Working Party trusts that this report will result in the formulation of an overall planned development programme for the dental services.
Legal Background and Objectives

3.1 Dentistry is one of the health fields in which preventive approaches can be extremely effective. Health boards provide preventive dental services for the community as a whole through the fluoridation of water supplies and health education measures. In addition, they provide preventive services on a personal basis as well as any necessary dental treatment and appliances, free of charge, for the following categories of persons:

1. Persons with full eligibility for health services, usually medical card holders and their dependants;

2. Children under the age of 6 years in respect of dental pathology noticed at child health service examinations;

3. Pupils attending national schools in respect of pathology noticed at school health examinations.

4. Persons not within the foregoing categories who are regarded as being unable on grounds of undue hardship to provide these services at their own expenses.

3.2 It is intended to extend these personal services to other sections of the community but services to-date have been restricted to the above groups.

Organisation

3.3 Health board services are organised into three programmes. These are Community Care, General Hospital Care and Special Hospital Care. Each of these programmes is headed by a Programme Manager, except in the smaller health board areas where the hospital care programmes are under the one Programme Manager. Each health board has a Chief Executive Officer who has overall responsibility for the services provided under the three programme areas.

3.4 The majority of dental services are provided under the Community Care programme. (see Section 5)

/ Section 67 of the Health Act 1970.
The delivery of services under that programme is based on Community Care areas each of which functions under a Director of Community Care. There are two or more such areas in each health board area. In common with other services in the Community Care programme, dental services are co-ordinated by the Director of Community Care. A Senior Dental Surgeon is responsible for the day to day running of the community dental services in six health board areas. In each of the remaining two areas, i.e. the Eastern and Southern Health Boards, there is a Chief Dental Surgeon who is responsible for the co-ordination of dental services in his area.

Under the Chief or Senior Dental Surgeon the services are provided by full time dental practitioners and ancillary staff employed by the board, supplemented to some cases by private dental practitioners employed on a sessional or fee-per item or service basis, either in health board clinics or in their own surgeries. Access to hospital is usually available, when necessary, for general anaesthetics, medical risk patients, etc. but this accessibility varies considerably, according to area and demand for hospital beds.

Services

Priorities Priority in the provision of treatment services is given to certain categories of patients. These are children, the aged, the handicapped, and expectant and nursing mothers. Services for the relief of pain are provided immediately for all eligible persons regardless of category. While persons in the 12-16 year age group have not heretofore been given any special priority, a growing number of authorities accept that this group does have a priority need for dental care.

Services for Children

If those who are too young to require dental treatment are excluded, the number of children dependent on health board dental services is estimated to be 600,000 comprising 500,000 National School children and 100,000 pre-school children. Overall, a service is provided for approximately 50% of this case-load every year. However, availability of treatment is not uniform throughout the country; there are marked differences in the level of service delivered and a comprehensive service is not provided in all cases. Areas which find it relatively easy to recruit dentists, such as Dublin, are better able to meet the needs and provide a more comprehensive range of services. A much less satisfactory situation applies
in the areas which traditionally experience difficulty in recruiting and retaining sufficient numbers of staff.

3.8 Orthodontic treatment is provided to a limited extent by health board dental surgeons. Children requiring specialist orthodontic treatment are treated by orthodontists in private practice, either under an arrangement made directly with the health boards or as members of the staffs of the dental hospitals in Dublin and Cork. In general, difficulties are being experienced in meeting the increasing demand for orthodontic treatment and persons seeking such treatment frequently experience considerable delays.

3.9 **Services for Adolescents**

Adolescents are not specifically catered for as a separate group by health legislation - a person who is 16 years of age or older is defined as an adult, while a child is a person who is less than 16 years of age. The great majority of children are eligible for dental services up to the age of 12 years or so by virtue of attending national schools. Thereafter the number eligible decreases significantly and in effect adolescents in the 12-16 years age group receive dental treatment services in the following circumstances:

1. as dependants of persons with full eligibility, mainly Medical Card holders
2. for treatments prescribed or commenced while pupils of national schools.

In some health board areas, eligible adolescents are grouped with children for dental service purposes and accordingly receive a measure of priority over adults who require routine conservation care. However, the services provided for adolescents are overall of a minimal nature.

3.10 It is difficult to state accurately the number of adolescents eligible for services. It is estimated that approximately 37% of the total population in the 0-15 age group are dependants of Medical Card holders. This gives a figure of 90,000 adolescents eligible for services with a further 150,000 ineligible.

3.11 The Working Party considers that early consideration should be given to the possibility of extending eligibility in their own right to adolescents as a group and that they should be given priority over other groups when any extension of eligibility for public dental services is being considered.
However, eligibility should be extended to adolescents only when it is possible to provide them with an adequate level of service. It is estimated that less than 10% of the adolescents who now qualify for services do in fact receive treatment. It would clearly be unwise to increase the number of eligible persons until an adequate level of service has at least been provided for the number now eligible.

**Adults**

The remaining group qualifying for services under the Health Acts consists of persons who have full eligibility for health services (viz. mainly medical card holders) and their dependants. The number of medical card holders at 31 March 1979 was 683,538 and they had 540,403 dependants. A number of the dependants would qualify in their own right for services as pre-school children or pupils of national schools, while some of the adults would also be entitled to services as persons insured under the Social Welfare Acts. If those with dual entitlement are excluded, the number of adults and adolescent dependants wholly dependent on the health board dental service is of the order of 550,000.

While there is considerable dissatisfaction with the health board service as a whole, the main complaints and criticisms are directed at the level of service provided for eligible adults. Returns received from health boards confirm this situation. They show that the proportion of eligible persons treated in any one year is of the order of 10% which compares unfavourably with a demand rate of 25% under the Social Welfare Dental Benefits Scheme. Moreover, the treatments provided are for the most part *extractions for the relief of pain and the provision of dentures.*

**Assessment of Services Provided**

While the services provided for children are better than those available for adults and their adolescent dependents, the overall situation is far from satisfactory and there are considerable disparities as between health board areas. It is clear that the health board dental service is not at present capable of providing an acceptable level of service for all eligible persons.

The provision of facilities for the dental care of various groups of handicapped persons both in hospitals and the community, for the infirm and for those in psychiatric and geriatric hospitals is generally underdeveloped.

The public service is also short of facilities to provide the more specialised...
treatments. This is noticeably so in the case of orthodontics, where the true demand is difficult to quantify. There is also a shortage of facilities in the case of oral surgery/oral medicine and other specialties where the demand may not be so apparent. Facilities for such dental procedures are available to a limited extent by arrangement with the dental hospitals in Dublin and Cork. In general, these are not capable of meeting the demand for specialised services.

3.18 Causes of the deficiencies

The inability of the health board dental service to fulfill its role is due to the absence of a sustained preventive approach in the services provided and to a shortage of dentists. The latter reflects the fact that in the country as a whole the dentist/population ratio falls considerably short of the guidelines adopted by the World Health Organisation for servicing a comprehensive dental service for an entire community.

3.19 There are about 850 dentists in active practice in this country at present. Of these, 200 are full time health board dental surgeons. WHO guidelines would put our requirements at 1,550 dentists to provide a comprehensive service for the entire community. A public dental service staffed on that basis and also based on current eligibility criteria would need 600 full-time dentists to provide a comprehensive service for all eligible patients.

3.20 The discrepancies between the manpower available and the numbers required clearly indicate the magnitude of the problem which has to be overcome in order to improve the level of service. An improvement in the situation will depend largely on factors such as our ability to reverse the current practice for newly qualified dentists to emigrate on graduation, on the possibility of attracting dentists from abroad and on the extent to which the health board dental service can emerge as a more attractive career possibility for the newly qualified dentist. The dental schools now qualify some 60 dentists annually and a significant contribution would be made to the manpower situation if greater numbers remained in this country and were attracted into the health board service. Even so, the improving manpower situation which would result is likely to be offset by the continually growing demand for dental services, and by the sophistication and time consuming nature of the increasing range of treatment procedures now being used. Since an unlimited number of dentists will never be available to
counteract such developments it follows that our services for the future must place a strong emphasis on preventive measures and on the greater use of acceptable auxiliary personnel.

Measures to improve the health board dental services

3.21 The objectives of the health board service must be to prevent disease, to promote better community health and to provide a general treatment service for eligible groups, with specialised services for those for whom a general service is inadequate. In considering how the present service might be improved it is necessary to look at the main components of the problem. Basically, these are the extent of the case load, the organisation and administration of the service, the availability of personnel to man the service and the range of services required. Approaches to resolve these problems are considered in this Report under the following headings:—

- Preventive Services
- Organisation and Administration
- Manpower
- Hospital Dental Services
PREVENTIVE SERVICES

Prevention

4.1 Prevention of dental disease must be promoted, not only in the interest of the well being of the community, but also as a practical economic measure to contain the treatment load within limits which the community can reasonably afford. The World Health Organisation has this to say on the topic:—

'Given the high incidence of dental caries today, no country, no matter how wealthy, can train a sufficient number of dentists and finance the service required to give adequate treatment to the whole population. The only solution is to reduce the incidence through preventive measures'.

4.2 Priority must be given to the development of preventive services and the adoption of a philosophy of prevention.

4.3 While the provision of treatment and restorative services for eligible persons must remain a function of the health board dental services, it can only succeed within the framework of prevention. Many treatments provided for children without this framework are nullified by the progress of disease between treatments, or by the delay in the provision of treatment. This is a waste of scarce resources.

4.4 The Working Party considers that all personnel engaged in the provision of dental services must be motivated in future by a preventive approach. This requirement must be kept firmly in mind when considering staffing and other measures to improve the dental services. Consequently the Working Party recommends that:—

4.4.1. The job specification for health board dental surgeons should place additional emphasis on the existing requirement of knowledge and experience in the field of preventive dentistry.

4.4.2. For those dental surgeons already employed by health boards, facilities for additional training in the philosophy and application of preventive dentistry must be made available.

4.5 Consideration should be given to the employment in the health board service of
auxiliary dental personnel who possess specialised training in preventive measures and who would supplement the preventive services provided by dentists. In particular, the Working Party has in mind the employment of Dental Hygienists who have undergone a recognised course of training which equips them to provide a preventive service both on a community and individual patient basis. This matter is referred to in greater detail in Section 5 of this Report.

**Fluoridation**

Fluoridating drinking water to a level of 1 part per million is well established as the most efficient preventive measure available on a community basis against dental caries. A reduction of over 50% in the incidence of disease has been recorded among children using a fluoridated piped drinking water supply. Allied to its effectiveness is the relative ease of application where there are suitable piped water provisions. The World Health Organisation and numerous other health agencies have adopted several recommendations over the years in favour of the implementation of water fluoridation and other fluoridation measures. In 1969 the World Health Organisation decided:

'To recommend Member States to examine the possibility of introducing and where practicable to introduce fluoridation of those community water supplies where the fluoride intake from water and other sources for the given population is below optimal levels, as a proven public health measure; and where fluoridation of community water supplies is not practicable to study other methods of using fluorides for the protection of dental health'.

In 1974, the World Health Organisation Executive Board recommended that Member States 'take early steps to ensure the provision of water fluoridation to communities where practicable, and where not practicable to introduce other methods of using fluorides for the prevention of dental caries'. Subsequently, the World Health Organisation in plenary session in 1975 endorsed the view that the fluoridation of water supplies remains the most effective known means of preventing dental caries.

Again in 1978, the World Health Assembly urged 'member states to consider, within national plans for the prevention and control of oral disease, the fluoridation of public water supplies, where and when appropriate'. The assembly further expressed the belief that 'where the fluoridation of public drinking water supplies is not feasible for technical or other reasons, alternative methods of achieving an optimum daily intake of application of fluoride should be considered'.

Problems can arise, and have arisen in Ireland, in ensuring that supplies of hydrofluosilicic acid are constantly available and also in maintaining fluoride levels at the optimum level in water supplies actually fluoridated. In some instances, effective fluoridation has not been achieved in the smaller water supplies.

The Working Party is anxious that effective fluoridation of piped water supplies should be utilised to the fullest extent practicable and accordingly makes the following recommendations with a view to achieving that situation:
4.8.1. A national monitoring agency should be set up with membership drawn from appropriate agencies and interests. Members might include Directors of Community Care, Chief and Senior Dental Officers, Local Sanitary Engineers, Officials of the Department of the Environment and of the Department of Health.

4.8.2. Health boards should purchase fluorine ion probes which would enable appropriate locally based officers, such as health board dental surgeons, to carry out routine regular monitoring of the fluoride content of water. These tests would be valuable adjunct to the routine tests which are now carried out.

4.8.3. Recorder/Controllers should, where feasible, be installed at fluoride injection points in major water supplies.

4.8.4. To minimise interruptions in fluoridation which may arise due to failure in plant and equipment, consideration should be given to the provision of standby equipment at regional centres or at a national centre. All equipment should be serviced at regular intervals.

4.8.5. To minimise the effects of interruptions in fluoridation which may arise due to temporary unavailability of hydrofluosilicic acid, it is strongly recommended that a six months reserve supply should be maintained at regional and national centres.

4.8.6. Where the fluoridation of water supplies has not yet commenced, a decision as to the likelihood of that taking place (and the projected date) should be made as soon as possible in order that the introduction of alternative preventive measures can be considered, such as referred to in the later paragraphs of this section.

4.8.7. A special effort should be made to ensure that an optimum concentration of fluoride is maintained in all fluoridated water supplies. This could be a function of the proposed new national monitoring agency. If it is not found reasonably possible to maintain a satisfactory level of fluoride in a particular supply, alternative methods of caries prevention for the community served by the water supply should be considered.

Other Preventive Measures

4.9

While optimal fluoridation of water supplies is the most effective and efficient methods of preventing dental caries, the 50 per cent reduction achieved by fluoridation still leaves a considerable level of this disease in the population serviced by water fluoridation. Also, approximately 40 per cent of the population living in rural areas and smaller towns cannot benefit from fluoridation of piped water supplies. There is therefore an obvious need for alternative preventive measures.
There is insufficient scientific evidence of the effectiveness of fluoridated milk, fluoridated school water supplies or fluoridated salt as worthwhile preventive measures on a community basis. In the absence of such evidence to date the Working Party cannot recommend the adoption of any of these measures.

In Fluoridated Areas:

Since persons living in fluoridated areas are already receiving optimal intakes of fluoride any further preventive measures should not include systemic use of fluoride preparations.

**Fluoride Toothpastes** Numerous studies have shown that regular use of fluoride toothpastes gives a small but important reduction in dental caries (20-25 per cent reduction). Whether this gives users in fluoridated areas a further preventive effect over and above that of water fluoridation has not been fully established. However, some encouraging results have recently been reported and the use of fluoride toothpastes in a fluoridated area should be encouraged.

**Other topical fluoride programmes** Public Health programmes using other topical fluoride procedures in fluoridated areas, such as the professional application of fluoride gels and solutions and mouth rinses have not been shown to provide further benefit over and above that of water fluoridation. However in patients with particularly serious caries problems or in those for whom dentistry or dental disease is a particular problem their use should be encouraged.

**Fissure Sealants** The beneficial effect of water fluoridation occurs mostly in the smooth surfaces of the teeth with little effect on the occlusal (biting) pits and fissures of back teeth. Sealing pits and fissures therefore appears a reasonable practice in fluoridated areas. However, fissure sealants are a relatively new development in preventive dentistry and their effectiveness and efficiency in preventing caries under field conditions of everyday practice have not been fully established. It is recommended, therefore, that fissure sealing programmes be encouraged but that these programmes be carefully evaluated.

In Non-Fluoridated Areas:

**Fluoride Toothpaste** Even though the reduction in caries achieved by the regular use of fluoride toothpaste is small (20-25%), it is a most efficient method of preventing caries and its use should be encouraged. Over 90 per cent of the
available toothpastes contain fluoride.

**Fluoride Tablets** In areas where water fluoridation cannot be implemented, programmes using fluoride tablets are recommended as an alternative measure. The most difficult problems likely to be encountered are those of motivating the parents of school children to dispense the tablets regularly and of distributing tablets to pre-school children. These would appear to be important functions of the dental hygienist. The recommended dosage are as follows:

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<th>Age</th>
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**Professional topical application of gels and solutions** Numerous studies have shown that application of fluoride gels and solutions at 6-monthly or yearly intervals gives reductions in caries of the order of 20-25 per cent. In patients using fluoride toothpastes regularly, however, the reduction is considerably less and indeed some recent evidence suggests that topical fluoride applications confer no added benefit. Nevertheless in the present state of knowledge it would seem advisable to continue the application of fluoride gels and solutions in the case of persons for whom dentistry or dental disease is a particular problem, irrespective of whether they are regularly using fluoride toothpaste.

**Fluoride Mouthrinses:** Persons using fluoride toothpastes regularly can expect little or no additional benefit from using fluoride mouthrinses. Therefore programmes which include visits to schools by health personnel should in the first instance concentrate on a dental health education programme which includes the acquisition of toothbrushes and the use of fluoride toothpaste rather than on the giving of priority to fluoride mouthrinses. Hence the introduction of any new public health programmes using fluoride mouthrinses is not recommended, except in special circumstances.

**Fissure Sealants:** As explained in paragraph 4.14, the use of fissure sealants is a relatively new concept and any programme making use of them should be the subject of careful on-going evaluation. Nevertheless, their use should be encouraged in non-fluoridated areas as well as in fluoridated areas.

**Other Measures:** The use of other measures, such as sugar substitute (e.g. Xylitol), sugarless chewing gums, and anti-plaque agents are being actively researched at
present. Objective evidence to support their widespread use in populations is not available at present.

4.21 The Working Party recommends the formulation of a national policy on sucrose usage.

DENTAL HEALTH EDUCATION

4.22 Dental health education is concerned primarily with the prevention or the reduction in the incidence of two diseases, dental caries (dental decay) and periodontal disease. It is now established that dental caries is primarily due to a too frequent intake of foods and drinks containing refined sugars and that periodontal disease is primarily due to unsatisfactory oral hygiene practices. Both diseases, therefore, are directly related to a person's way of life; hence their prevention or a considerable reduction in their incidence can be achieved by effective dental health education. As in other areas of health education, merely informing the public of the factors causing dental disease does not bring about the desired behaviour change. At present much research effort is being spent on methods of bringing about behaviour change and it is important that personnel involved in dental health education be kept up to date on developments in this field.

4.23 The Working Party recommends:

4.23.1 That the Dental Health Foundation be recognised as a central body having a primary co-ordinating role in dental health education in association with the Health Education Bureau.

4.23.2 That a base-line survey be carried out to investigate attitudes towards dental health and that results of this survey form the basis for further action and activity in the field of dental health education.

4.23.3 That to ensure that the dental health education messages are credible and effective, it is essential that

- the Dental profession should agree on the messages
- all personnel involved in dental health education should be informed of the messages and kept up to date with continuing developments.
At present the essential messages are:

- the need for a reduction in the frequency of intake of refined sugars in foods and drinks and
- the need for the adoption of effective oral hygiene practices.

4.23.4 That an advisory panel should be established to review and monitor relevant research literature on the scientific basis of dental health education and to disseminate this to health educators. An existing organisation, such as the Dental Health Foundation, could co-ordinate this function. Such a panel would aid agreement on the dental message and aid its credibility with both the profession and the individual in the community.

4.23.5 That training and refresher courses should be established for all personnel involved in dental health education.

4.23.6 That Primary and Secondary School syllabuses and text books should incorporate dental health education material.

4.23.7 That the effectiveness of dental health education should be carefully monitored.

4.23.8 That the role of dental hygienist be primarily in the field of dental health education.
The representatives of the Irish Dental Association consider that the co-ordination and development of the public dental service require the establishment of a separate dental programme within the health boards organisational structure. They envisage the programme being headed by a chief administrative dental officer with overall responsibility for community and institutional dental services in a health board area and that the officer would have support staff consisting of principal dental surgeons, senior clinical dental surgeons, clinical dental surgeons grade II and clinical dental surgeons grade I. They feel that many of the recommendations in this report support their view.

This report of the Joint Working Party emphasises that dentistry is a part of all three programmes, General Hospital Care, Special Hospital Care and Community Care. Many of its proposals involve all three health board programmes.

The Working Party as a whole recommends that the Association's proposals should be fully examined in the context of the review now being undertaken of the organisation of community health services.
Manpower

Health Board Dental Surgeons

Recruitment

§.1 Apart from the recruitment problems created by the overall shortage of dentists, the health board service must compete against the counter attractions of private practice and with the inducements which service abroad holds for newly qualified graduates. The health board dental service should offer professional satisfaction, as well as secure and pensionable employment and good working conditions. The number of whole-time dentists in the service increased substantially in the period 1970 - 1979 (from 116 in 1970 to 200 in 1979). This improvement must be measured against the increase in the number of eligible persons for health board services from 1.12 millions in 1970 to 1.43 millions in 1979. The total number of dentists registered in the country increased from 697 in January 1970 to 955 in January 1979.

§.2 The Working Party puts forward the following recommendations for improving the attractiveness of the service.

6.2.1 Consideration should be given to the possibility of dental undergraduates being sponsored by the Department of Health or health boards during the two concluding years of training, on condition that they undertake employment in the health board service for an appropriate period following graduation;

6.2.2 Consideration should be given to the creation of a special entry grade of health board dental surgeon. Newly qualified Dentists recruited through this grade should practice dentistry under the guidance of a senior clinical dental surgeon in an appropriate programme for a probationary period.

6.2.3 Consideration should be given to the possibility of paying removal expenses to persons recruited from abroad as health board dental surgeons provided they serve for a minimum period of, say, two years in the area for which they were recruited. The provision of accommodation for health board dental surgeons in locations to which it is difficult to attract dentists or the subsidizing of accommodation...
for such dentists should also be given consideration.

6.2.4 Measures should be adopted to provide retraining opportunities for dentists who have not practised dentistry for an appreciable time and who would need some refresher training in modern dental techniques before resuming their careers.

6.2.5 In areas with low dentist/population ratios health boards should consider the possibility of creating a number of part-time permanent appointments of health board dental surgeons, which would permit holders to engage in private practice.

Career Structure

6.3 There is a great deal of evidence to suggest that one of the main dissatisfactions of health board dental surgeons with the present service is the lack of sufficient opportunities for promotion from the basic entry grade. The total number of whole-time dentists employed in the service is 200, of whom 30 are in senior posts. This relatively small number of senior posts leaves little room for promotion from the entry grade. The situation will become more difficult if the recruitment of additional dentists is not matched by an increase in promotion opportunities. Accordingly, the Working Party recommends that urgent consideration should be given by the appropriate agencies to the possibility of improving the promotional outlets for health board dental surgeons. The Working Party would not however wish to see this achieved simply by an increase in the number of administrative posts and it is recommended that such promotional outlets should as far as possible be provided in clinical areas. (see section 7).

Continuing Education

6.4 The nature of the profession indicates that dentists should undergo periodic continuing education courses in order to maintain their skills and to keep abreast of developments in knowledge and techniques. When such courses become generally available, the appropriate bodies should give consideration to making attendance at them obligatory for practising dentists.

6.5 Health boards should actively encourage their own dentists to participate in approved courses and should facilitate them by allowing reasonable leave with pay. Consideration should also be given to the needs of private practitioners, an increasing number of whom will possibly be providing services for public patients.
The dental teaching authorities should consider how they might co-operate with the Health Boards and the representatives of the practising profession in arranging suitable participatory courses at convenient centres.

Community Dental Health Education for Dentists

The subject of Community Dental Health is now recognised as an important area for study both at undergraduate and post-graduate level. For example, in the U.K. Joint Committee for Higher Training in Dentistry has agreed on a training pathway for specialists in community dental health, the length of the training corresponding with that of training in other specialties in dentistry.

Experience in other countries has shown that where undergraduates are introduced to the concepts of community dental health at an early stage of the undergraduate curriculum, they are more likely to seek a career in the public dental services on qualifying.

The Working Party welcomes the recent introduction of community dental health as a subject in the undergraduate curriculum of the Dublin Dental School by the appointment of a part-time lecturer in the subject and recommends that it be established on a more formal basis in due course.

As well as providing teaching of the subject at undergraduate level, postgraduate courses should be developed for those who intend to pursue a career in the health board dental service. At present no such courses are available in Ireland. The Working Party also recommends that Health Boards should seek the active co-operation of University Dental Faculties in order to develop studies of dental needs and demands in the community and to assess the effectiveness and efficiency of preventive and treatment programmes.

Private Practitioners

In a situation where health boards are unable to provide an adequate primary care service for all eligible persons, it is recommended that any spare capacity in the private practice area should be availed of in order to improve the level of services for public sector patients.

It appears that there are a number of dentists in private practice throughout the country with some spare capacity who would be willing to provide services for health board patients if acceptable terms were offered to them. Some
dentists in private practice throughout the country do provide services for health board patients, generally on a sessional basis or on rates of payment related to sessional rates. The representatives of the Irish Dental Association feel that an increased number of private practitioners would be prepared to undertake work for health boards if payment rates were the same as the rates negotiated in the preliminary review of the Social Welfare scheme.

The Department of Health representatives point out that at this point in time they can only offer the Social Welfare payment rates applicable at present. They could guarantee that any increases authorised under the claim now being processed as between the Department of Social Welfare and the Irish Dental Association would be applied with the same effective dates as were negotiated in the case of the Social Welfare scheme.

6.13 In this respect, it is generally accepted that the treatment of children and adolescents and the provision of services for persons in long-stay institutions, is best carried out by whole-time health board dental surgeons. It would, therefore, appear that the services of private practitioners should normally be employed by health boards in providing services for eligible adults. While it could be expected that ultimately a service on the lines of the Social Welfare Scheme could be provided by private practitioners for eligible adult health board patients, it is recommended that for the present any new services should be confined to a range of basic procedures such as extractions, fillings, dentures and basic preventive services. This will ensure that until resources, including manpower, improve, the greatest possible number would receive a basic service rather than a few should receive a comprehensive dental service.

DENTAL AUXILIARY PERSONNEL

6.14 The term dental auxiliary embraces a considerable number of personnel who provide services within the dental area. They may be divided into two main groups:

6.14.1 Non-Operating Dental Auxiliaries:
This group assist the dentist in his work but do not independently carry-out any procedures in the mouth. Included in this group are dental surgery assistants and dental technicians.

6.14.2 Operating Dental Auxiliaries:
This group carry out procedures in the mouth. They may be divided into two main groups.

- Those who carry out procedures in the mouth which are regarded as reversible. Included in this group are denturists, dental hygienists and Expanded Duty Dental Auxiliaries (E.D.D.A.).
Those who carry out procedures in the mouth which are regarded as irreversible. Included in this group are dental therapists.

**Non-Operating Dental Auxiliaries**

**Chairside Assistants/Dental Surgery Assistants**

These auxiliaries work within a clinical area in which dental care is provided but do not independently provide any part of this care except to assist the operator (dentist or other) to do so. The employment of such assistants adds considerably to the efficiency of the operator and their employment on the basis of 1 operator to 1 assistant is considered essential as a minimal requirement.

Training courses for dental surgery assistants have been conducted in Dublin and Cork Dental Schools for a number of years. These full-time courses extend over a period of two years. Short courses have also been organised by the Irish Dental Association and the Eastern Health Board. At the end of these courses candidates either sit the U.K. Dental Surgery Assistants Examination or in the case of students in Dublin, an examination arranged by Dublin Dental Hospital.

The Working Party recommends that representatives of the dental schools, the Irish Dental Association, the health boards and the Department of Health consider the present arrangements for training dental surgery assistants and the establishment of an Irish qualification in the discipline. When these have been established, only suitably qualified persons should be eligible for appointment as dental surgery assistants.

The Working Party notes that in some health board areas the recruitment of dental assistants is linked with the recruitment of certain clerical grades. In consequence, successful applicants are unaware until appointed, whether or not they are being assigned as dental surgery assistants. The Working Party recommends that steps be taken to ensure that appointments as dental assistants are segregated from the other appointments to which they are now linked.

**Dental Technicians**

This category usually works in a dental laboratory and carries out technical procedures to the prescription of a Dentist such as the manufacture and repair of dentures and the manufacture of orthodontic appliances, inlays, crowns,
bridges, chrome cobalt dentures etc. They are precluded by law from providing dental appliances direct to the public. However a number of them are known to do so. The Working Party recommends that this illegal practice should be brought speedily to an end by such legislation as may be necessary.

6.20 A recent report by the National Prices Commission (Report on Irish Dental Laboratories. Occasional Paper No. 27) highlighted the generally inadequate arrangements for the training of dental technicians and the inability of the Irish commercial firms to satisfy the requirement of the dental profession particularly as regards the more specialised prosthetic appliances with the result that much of this work is referred abroad. The report referred to the possibility of remedying that situation by developing the industry and the consequential beneficial effects this would have for the employment of dental technicians.

6.21 It is to be expected that the involvement of private dentists in providing services for Medical Card holders as recommended earlier in this report and the creation of consultant posts in dentistry as recommended later in this report will increase the demand for prosthetic appliances. The Working Party would wish to see as much as possible of this additional work undertaken by the Irish commercial firms, and, therefore recommends that immediate consideration should be given by the appropriate agencies to the training requirements of dental technicians and the establishment of the necessary training arrangements. Consideration should also be given by health boards to the direct employment of dental technicians capable of carrying out both specialised and routine work.

Operating Dental Auxiliaries:

Denturists

6.22 The Working Party is aware that proposals have been formulated by the Irish Association of Dental Prosthesis with a view to training persons who would be authorised, subject to certain restrictions, to supply full dentures direct to patients. It would appear that the course of training required would ordinarily be from 4 to 4½ years duration, but existing dental technicians might qualify on completion of a shorter course. The introduction of denturists, therefore, would mean the creation of a new profession with a course of training not far short of that undertaken by dentists (5-5½ years).

6.23 In considering the need for denturists, two factors must be taken into account
6.23.1 The present need and demand for full dentures:

At present there is a considerable backlog of Medical Card holders requiring full dentures. In order to overcome this problem the Working Party has recommended (see para 5.11) that the services of private practitioners be used to an increasing extent by health boards with the specific remit of catering for adult Medical Card Holders. It is expected that this will eliminate waiting lists for full dentures in a short period.

6.23.2 The future need and demand for full dentures:

Trends in other countries indicate that the development of preventive and treatment services, together with improving standards of living, will result in an increasing number of persons retaining some or all of their natural teeth throughout their lifetime. Hence, the need and demand for full dentures is likely to decrease. If the Working Party's recommendations for a committed preventive approach and for a wider availability of dental services are implemented, this trend is likely to become apparent in this country also.

In the circumstances therefore the Working Party does not recommend the introduction of denturists. In making this recommendation the Working Party is aware of the need for on-going evaluation of treatment needs, including the need for full dentures.

Dental Hygienists

6.24 The role of the dental hygienist relates essentially to the preventive aspects of dental care involves the giving of instruction both to individuals and groups on preventive care measures, such as, oral hygiene, diet and dental health education in general. While the dentist is responsible in these areas, he is unlikely to have as much time at his disposal for this aspect of dental care, because of the increasing claims on his clinical knowledge and skills. He may also lack training in communication techniques. The dentist must, therefore, have the support of key auxiliary personnel, such as, hygienists.

6.25 Accordingly the Working Party recommends that:

6.25.1 provision should be made for the training and employment of dental hygienists who would work to the prescription of a dentist;

6.25.2 the primary function of the dental hygienist must lie in the field of disease prevention in the community and in the individual. Training
as an educator is, therefore, essential. Clinical training is also required. This must cover the prevention and control of dental caries and periodontal disease.

6.25.3 dental hygienists should be trained in an undergraduate school alongside dental undergraduates;

6.25.4 the requirements for enrolment should be as for university entrants (or equivalent qualification) and such additional requirements as the particular dental school may lay down from time to time.

6.25.5 the training curriculum should be decided by the appropriate authority in discussion with the Department of Health, the health boards and the Irish Dental Association. In deciding on the training curriculum, regard should be had to the training provided for hygienists in other countries, particularly in Europe and North America. Particular regard should also be had to the role which hygienists would fulfill in the public health field in this country;

6.25.6 the scope and nature of the duties and the training envisaged for hygienists in this country would seem to indicate a training course of more than one year's duration. However, more information and advice is needed before a firm recommendation can be made.

6.25.7 it is desirable that dental hygienists should be registered with the Dental Board or other appropriate body.

6.25.8 dental legislation should be amended as soon as possible to enable these recommendations to be implemented.

Expanded Duty Dental Auxiliaries:

This category of auxiliary was developed in the U.S. and Canada. They are trained to carry out limited and clearly defined reversible procedures including the taking of radiographs and impressions, the placing of matrix bands, rubber dams and temporary restorations. At this stage, the Working Party recommends that no action on this category of dental auxiliary be taken but that developments in other countries should be monitored.
Dental Therapists:

This category may be divided into two main groups-

(a) The New Zealand School Dental Nurse and

(b) The (New Cross) Dental Therapist

The essential difference between the two groups is that the New Zealand School Dental Nurse works independently of the dentist whereas the (New Cross) Dental Therapist works under the direction of a dentist. Both groups carry out clearly defined clinical procedures on children.

The Dental Profession in this country is overwhelmingly opposed to dental procedures in the mouth being carried out by auxiliaries unless this is on the prescription and under the direction of a dentist. They are, therefore, opposed to the introduction of New Zealand Dental Nurses or similar type auxiliaries into this country.

The Working Party accepts this view at the present time. However, on available evidence it would appear that irrespective of overall future increases in the number of dentists practising in this country, certain regions may continue to have unfavourable dentist/population ratios. Accordingly, the Working Party recommends that a demonstration study should be undertaken with a view to determining the feasibility of employing New Cross Dental Therapists in the Public Dental Service to carry out prescribed procedures and treatments for eligible persons under the age of 16 years in areas with unfavourable dentist/population ratios. An outline of a proposed study is attached (Appendix 4).
The Provision of Secondary Dental Care

7.1 In the daily practice of Dentistry, the majority of patients presenting can be treated adequately by a dentist with normal training and experience and hence form the primary care aspect of dentistry. However, a number of patients, either because of a complication in the nature of the treatment or because the condition requiring treatment is rare, need to be referred to a dentist with special training and or experience. These latter patients represent the secondary care aspect of dentistry. The inadequacies in the provision of secondary care in Ireland were highlighted in a Report on the Hospital Dental Services by the Irish Committee on Higher Training in Dentistry which was presented to the Minister for Health by Professor N.P. Butler in 1978. In order to provide adequate treatment for those patients requiring secondary care, the development of 4 clinical specialties has been considered by the Working Party.

Oral Surgery/Oral Medicine

7.2 At present, the ad hoc arrangements for patients requiring treatment in these disciplines vary throughout the country. While some services are provided in a number of centres around the country, the overall organisation is not sufficiently comprehensive. It is necessary, therefore, to establish consultant services at major centres.

7.3 The Working Party recommends that initially four consultant posts in Oral Surgery be established at major centres. In due course further posts may be necessary, including the making of paired appointments to ensure continuous consultant coverage. Since oral surgery facilities already exist to an extent in both Dublin and Cork, it is recommended that immediate priority in the expansion of the service should be given to the rest of the country with specific reference to the needs in the Western areas. The posts in the Eastern and Southern Health Board areas should be located in Dublin and Cork respectively and should be linked with arrangements to provide a training pathway for future consultant training. Accordingly, each of the consultant posts in Dublin and Cork should have clinical support staff which would provide training opportunities for persons aspiring to consultant status. It is envisaged that clinical support staff for the remaining consultant posts could be provided by Health Board Service personnel who have particular aptitude and training in oral surgery.
7.4 In the case of Oral Medicine, the Working Party is aware that facilities for the diagnosis and treatment of conditions such as oral cancer and other pathological conditions are inadequate at present. It is recommended therefore that one consultant post in Oral Medicine be created, initially with the specific remit of establishing the level of oral pathology in Ireland and of setting up a national referral, diagnostic and treatment service for oral pathological conditions.

Orthodontics

7.5 At present, the arrangements for the referral and treatment of orthodontic patients vary in each health board area. In most areas, private practitioners who specialise in orthodontics are employed on a fee per course of treatment basis. At present the demands for orthodontic treatment, particularly those requiring more complicated therapy, are not being met and considerable waiting lists have built up in all areas. The Working Party recommends that to meet the immediate situation, five full-time consultant posts in orthodontics should be created on an appropriate population distribution basis. The posts in the Eastern and Southern Health Board areas should be located in Dublin and Cork respectively and should be linked with arrangements to provide a training pathway for future consultant training. Accordingly, each of the consultant posts in Dublin and Cork should have clinical support staff which would provide training opportunities for persons aspiring to consultant status. It is envisaged that clinical support for the remaining consultant orthodontists could be provided, in the first instance, by health board dental personnel who have particular aptitude and training in orthodontic procedures. Where such assistance is not available or is inadequate to meet the demand, it is recommended that consideration could be given to the involvement of private practitioners who possess orthodontic qualifications. It is envisaged that the holder of the consultant post in Dublin might be required to develop a national service for the care of severe cleft palate cases and that he should accordingly possess or acquire the necessary specialist expertise in that aspect of orthodontics.

Paediatric Dentistry

7.6 This specialty covers dentistry for the child patient and includes the care of mentally, physically and medically handicapped children for whom dentistry or dental disease is a major clinical problem. Example of patients in this category are institutionalised handicapped patients, Down's Syndrome patients and patients suffering from
various blood disorders for whom dental treatment presents a serious hazard.

7.7 The services of the paediatric consultant may also be utilised in the care of adults who, by reason of medical, physical or mental disability are unable to care for their own teeth.

7.8 The organisation arrangements in this country for the dental care of the handicapped patients described above is inadequate at present. The creation of consultant posts in this discipline would offer a solution at this time. It is therefore recommended that two consultant posts in paediatric dentistry to serve the whole country be created in Dublin and Cork and advertised as soon as possible.

Restorative Dentistry/Periodontology

7.9 These specialities cover certain categories of patients whose treatment involves the fitting of highly sophisticated appliances and prostheses. For example, in the long-term care of cleft palate cases, as well the services of orthodontists, oral surgeons and plastic surgeons, the inclusion of a specialist restorative dentist in the team approach is also recommended. At present the extent of the need for a specialist service in restorative dentistry is difficult to assess. Until such time, therefore, as the extent of the need becomes clearer, the Working Party recommends that in order to provide the service needed at this stage, arrangements be made with the appropriate specialities in the two Dental Schools and that the possibility of joint hospital/university appointments be considered.

7.10 Periodontology forms part of the training pathway of restorative dentistry as laid down by the Committee for Higher Training in Dentistry. Periodontal disease is a slow progressive disease and is estimated to affect over 50% of the adult population in whom it is a major cause of tooth loss. Individual advise on oral hygiene procedures is now regarded as more effective in halting or slowing its progress than periodontal surgery, which was the treatment of choice up to recently. Of course periodontal surgery is required in certain cases but a large part of this can be regarded as routine 'primary care' dental
surgery. The extent to which the services of consultants are required to provide and develop secondary care is not clear. Until such time, therefore, as the extent of the need for periodontal treatment at secondary care level becomes clearer, the Working Party recommends that, in order to provide and develop a service at this stage, arrangements be made with the appropriate personnel in the two Dental Schools and also recommends consideration of the creation of a joint Hospital/University appointment in this specialty.

**Support Staff**

7.11 It is anticipated that it would be impracticable to provide each consultant post recommended above with the usual training hierarchy of house officer/registrar/senior registrar staff, as this would in effect mean the training of more consultants than could be absorbed by the service. In the case of the recommended posts in Oral Surgery/Oral Medicine and Orthodontics, it is recommended that two in both disciplines should have the trainee support staff and that these be based in Dublin and Cork. In the case of other posts in Oral Surgery/Oral Medicine Orthodontics and, it is recommended that support staff in the first instance be provided by the health board dental personnel who have a particular experience and/or training in the area in question. However the question of manpower requirements and trainee and support staff for all consultant posts should be reviewed within two years.

**Provision of Primary Care**

7.12 The provision of primary dental care in a hospital environment arises when services are provided for special category patients, such as those in long-stay special hospitals and those requiring general anaesthesia for the carrying out of certain procedures.

There are three main groups of patients in this category:

7.12.1 Patients in long-stay hospitals

As for other sections of the population this group requires a dental treatment service. At present, the arrangement for providing this service varies in each area. While the services are provided in a number of centres, the overall situation needs to be improved. The Working Party therefore recommends that health board dental surgeons be facilitated in making arrangements for providing dental care for eligible patients in long-stay hospitals.

7.12.2 Patients requiring primary care treatment services under general anaesthesia;

The frequent use of general anaesthesia when carrying out procedures
such as extractions demands that some aspects of primary dental care be provided in a hospital environment on a day stay basis. The efficient use of these day care centres requires further investigation. The Working Party recommends that the administration of general anaesthesia in dental surgeries should be discontinued unless adequate treatment and recovery facilities are provided.

7.12.3 Patients with medical/surgical problems

Such patients are the responsibility of the appropriate consultants, but health boards dental surgeons should be facilitated in making arrangements for providing the necessary dental care.

7.13 The health board dental service facilities in some health board areas for carrying out routine treatment, such as extractions, under general anaesthesia are inadequate, but proposals to improve the situation have been or are in the process of being formulated. However, it would appear that the measures proposed vary enormously as between health boards; the most notable variation being the extent to which general hospital beds are felt to be required.

7.14 The Working Party makes the following observations with a view to providing health boards with guidelines as to the facilities required.

Waiting and Reception Area:

7.14.1 An adequate waiting and reception area must be provided.

Assessment and Preoperative Area:

7.14.2 As the Anaesthetist will not have seen the patient prior to attending for treatment in most cases, an assessment area must be available at the time of the general anaesthetic. In many centres this area could be shared with other disciplines.

7.14.3 The Dental Surgery:

It is now widely accepted that anaesthetics are best administered when the patient is in the horizontal position. Therefore, in dental surgeries where treatment will be carried out under general anaesthesia, it is essential that the dental chairs/couches be capable of being adjusted to the horizontal position. From an anaesthetic point of view, the clinical facilities required are fairly standard
and will include not only reliable anaesthetic, ventilation and scavenging equipment but also will include arrangements to ensure adequate supply and storage of all routine and emergency materials and equipment for the safe administration of general anaesthesia. From the point of view of dental treatment the materials and equipment required are standard for dental surgery but with particular emphasis being placed on equipment to protect the airway during treatment. The auxiliary staff should be trained and experienced in caring for patients undergoing surgery under general anaesthesia.

7.1h.4 Recovery Area:

Following dental treatment under general anaesthesia patients may require a period of up to three hours, before they are recovered sufficiently to be accompanied home. During this period, patients should be able to rest in comfort in hospital couches in a properly equipped recovery area where resuscitation facilities are available. Their recovery must be supervised by nurses experienced in dealing with patients recovering from surgery under general anaesthesia. The size of this recovery area and the number of couches will depend on the number of patients being treated at each session and the speed at which they are treated. Experience suggests that facilities be made available for up to 5 patients recovering at any one time.

7.15 The above facilities are those required for the vast majority of primary care patients. However, for a small proportion of these patients (most recent estimate was less than 1 per cent) the anaesthetic, the recovery or the dental treatment does not proceed routinely as planned and an emergency situation arises. Direct and easy access to a general hospital bed is essential in these cases. All surgeries, therefore, in which dental treatment is to be carried out under general anaesthesia should be sited close to or within general hospital grounds. A mutual understanding of this requirement should be arrived at between the dental, anaesthetic and hospital personnel. The exact procedure to be adopted in the case of an emergency should be rehearsed periodically and known in detail by all concerned.

General

8.1 The implementation of recommendations made in this report relating to specialist services and services for special category patients will
involve certain health board dental surgeons in extra duties of a higher clinical nature. Such a development would present grounds for consideration being given to an improvement in the career structure of the health board dental services.

8.2 The Working Party is aware that some concern has been expressed about the hazards to which dental personnel and dental patients may be exposed during the practice of dentistry. In addition to the usual hazards such as mercury contamination, dental personnel may, for example, be exposed to radiation in consequence of the more widespread use of x-rays and to the toxic effects of some sedatives and anaesthetic agents used in routine dentistry. There is also the risk of infection by hepatitis B surface antigens (HBsAg), either from known carriers or from those patients who are known to be specially at risk of infection with the disease. In the case of hazards to patients, the modern practice of treating them in the horizontal position requires that additional care be given to protecting the eyes and the airways during treatment. The Working Party recommends that an appropriate authority such as the Department of Health should issue guidelines on these matters to health boards and other relevant agencies from time to time.

8.3 The conditions of employment attaching to consultant dental appointments must take account of the responsibilities and duties attaching to the posts but should not be less advantageous than those attaching to similar medical consultant posts. Dental consultants should have the support of full ancillary services.

8.4 Consultation with the Irish Committee for Higher Training in Dentistry is considered desirable when the professional qualifications for appointment to consultant dental posts are being laid down. Medical qualifications should not be prescribed as essential qualifications.

8.5 It is recommended that in the planning of new hospitals appropriate facilities be made for dental treatment.

8.6 Where a health board dental surgeon is providing a specialist service, it is necessary that adequate and appropriate facilities be made available to him.

Social Welfare Dental Benefits Scheme

9.1 Persons insured under the Social Welfare Acts who satisfy certain contribution requirements are entitled to dental services from a dentist of their choice, if he has entered into an agreement to provide services under the scheme and is
Accordingly listed in the Dental panel of the Department of Social Welfare.

9.2 Dental dentists are paid on a fixed fee basis for services other than the provision of crowns, inlays, bridges and chrome cobalt denture.

9.3 Eligible persons are provided with services such as fillings, extractions, scaling and polishing, free of charge. They have to pay a proportion (2/3 rds. of the cost of dentures and in the case of crowns, inlays and bridges, they pay the balance of the cost in excess of the subvention paid by the Department of Social Welfare. Persons with dual entitlement under the DSW scheme and the health board service are generally refunded by the health board for any costs which they incur through availing of services under the DSW scheme.

9.4 There are approximately 650 dentists on the DSW Dental Panel. The number of eligible persons is of the order of 826,000.

9.5 There are in general relatively few complaints about the availability of services under the DSW scheme. An eligible person who is unable to obtain treatment in his own area may be allowed travelling or other expenses necessary incurred in going to a convenient local centre where such treatment is available from another dentist on the DSW panel.

Fees and range of procedures covered

9. The dental profession has been seeking an increase in the range of procedures available under the scheme, as well as a re-structuring of the fee basis and an increase in the level of fees. The present fee structure does not provide for payment in respect of clinical examinations and reports, except where a patient does not return for treatment or no treatment is prescribed. There have been considerable developments in clinical practice and procedures since the fee structure was originally drawn up. The dental profession considers that it is necessary, on ethical grounds, and for good patient care, that these new and procedures should be followed, where indicated, and that appropriate fees should be paid to the practitioner. In addition, it has been represented by the profession that the existing scale of fees requires to be restructured to take account of current dental practice. These proposals for improvement of the scheme are at present receiving attention in the Department of Social Welfare. The Working Party recommends that decisions on these matters should be expedited.
Furthermore, it is felt that as dentistry is a Health profession the administration of the present Social Welfare Scheme could be best carried out by the Department of Health, so that all dental care of the community would be under the same administration.

**Dental Schools**

The Working Party recognise that a number of the recommendations in this report will have direct implications for the Universities and the Dental Schools and will stretch considerably the existing resources available. This situation will have to be rectified if the recommendations are to be implemented effectively.
APPENDIX 1

IRISH DENTAL ASSOCIATION

THE ROLE OF PREVENTIVE DENTISTRY IN THE PUBLIC HEALTH SERVICE

G.K. COLLINS,
M.D.C., F.D.S., F.F.D.

8th September, 1978
The Role of Preventive Dentistry in the Public Health Service

The need for prevention.

At present in the Republic of Ireland 520,000 children attending National Schools are eligible for free dental treatment. In addition children under 6 years of age, attending child welfare clinics are eligible. Furthermore eligible adults (holders of Medical Cards, and their dependants) are similarly entitled. In 1977 38% of the population (1,220,000 people) fell into this last category. There is at the present time the equivalent of 222 whole time Public Dental Officers to cater for these groups. This number is not adequate to cater for even the National School children, nor would it be adequate if double this number of dentists were made available. This inadequacy is primarily due to the high incidence of dental diseases which brings about an accumulated back-log of treatment need. The public dental officer is faced with this back-log.

The fact is however, that if the public dental officer confines himself to carrying out treatment procedures he will never bring about a reduction in the incidence of major dental diseases in the community. In the case of dental decay in school children for example, if the incidence of the disease (i.e. the number of new lesions per child per year) remains unaltered, then, whether treatment is given or not, no improvement in the total disease experience of school children can be expected. If a very large number of dentists are engaged in treating the whole group then the children who become too old for eligibility and leave the group may have more teeth, but the amount of disease experienced by the group as a whole remains the same.

Measures which lower the incidence of the disease achieve a permanent reduction in the size of the problem. With several such measures operating simultaneously very important improvements can be brought about, making it possible to clear the back-log and reach a situation where future increments of disease will be small enough to be managed satisfactorily. Whether this approach is applied to an individual by a dental practitioner, or to a community by a Public Dental Officer the philosophy involved is the same. When treatment is given to an individual or a group in the absence of prevention it appears an unsatisfactory ad hoc service, poorly planned and lacking awareness of the problem which it sets out to solve.
When treatment is carried out within a framework of a service where every preventive measure is enthusiastically pursued, it becomes rational rather than empirical, gives maximum satisfaction to the patient, and the operator, and has greatly enhanced prospects of success.

**Why is Prevention not more widely practised?**

It is sometimes suggested that prevention is not more widely practised because the financial return to the dentist is poor. This may be the case within the Social Welfare Scheme as it is at present in this country. But there are many patients who would willingly pay for a preventive service if its advantages were made known to them. Similarly, the Public Dental Officer receives the same salary whether he practises prevention or not. The explanation then is not purely financial.

The proportion of undergraduate time spent learning how to maintain health is small, compared to that spent learning how to treat disease. The result is a graduate more competent in treatment than in prevention. Whether he engages in practise or in public health his skills and deficiencies will be the same. (It should be noted that at the present time no post graduate training is required of the dentist who wishes to work in the field of public health).

Traditionally, the dental surgeon is expected by the community to relieve pain, and to restore comfort, function, and appearance. The healthypatient seldom presents, and if he does, a different philosophy is required from the dentist if he is to maintain the dental health of the patient.

Lack of training on the part of the dentist and lack of awareness on the part of the community are therefore suggested as important factors in limiting the spread and acceptance of preventive dentistry. Responsibility for both factors must be borne by the dental profession.

**Techniques of Preventive Dentistry**

Preventive dentistry can be practised on the community, on groups within the community, and on individuals.

At community level fluoridation of public water supplies, mandatory in this country, is the most important single preventive measure in the control
of dental cares. It is to be hoped that the practical difficulties (e.g., difficulties of supply) which have arisen in some cases, will be overcome, and that a standardised reliable method, together with some study of the effectiveness of the measure on a nationwide basis, will become the rule.

For school children without public piped water supplies fluoride mouth rinse schemes have been suggested. Evidence is available of the effectiveness of fluoride mouth rinsing under controlled conditions. If the measure can be shown to be cost-effective under everyday conditions in areas where close supervision by numbers of trained personnel would not be possible then the measure must be given very serious consideration.

Apart from the use of fluorides the second approach to improving community dental health is by education. Here the objective must be to make it possible to maintain health and prevent and control disease. This is clearly the function of the Health Education Bureau in consultation with the dental profession. The result of a successful Education Campaign must be to make dental health socially desirable, and to motivate the individual to seek detailed instruction, advice, and if necessary treatment of his or her individual dental problems.

In the case of smaller groups within the community (e.g., children, parents, or groups with some common interest) more detailed instruction (e.g., the techniques of oral hygiene, dietary factors in dental disease) can be given by expert personnel drawn from the dental profession.

In the case of the individual, preventive dentistry may be operative (e.g., prophylaxis, scaling, treatment of periodontal disease, topical fluoride applications, sealing of fissures against carious attack) or educational. Individual education is diet, oral hygiene techniques and the maintenance of dental fitness is a highly skilled undertaking, involving as it does the imparting of precise factual information on a broad spectrum of topics together with the motivating of the individual to use these facts positively in a daily dental health programme designed to last for life.

Who carries our preventive procedures?

In this country at present all operative preventive measures must be carried out by the dental surgeon. If adequately trained hygienists are introduced these procedures can be carried out by the hygienist as a part, but by no means all of his or her duties. It can be argued that topical application
of fluorides, fissure sealing, scaling, and prophylaxis for example, may be more efficiently performed by someone whose training has placed special emphasis on these procedures than by a dental surgeon.

It would be a mistake, however, to suppose that these are the principal duties of the dental hygienist. In the United States and Canada the hygienist has a three year training which leads to a University Diploma and the community status of a recognised profession. This training is designed to produce a professional person skilled in certain aspects of operative dentistry, but skilled also in communication, capable of playing a vital role in health education programmes and equally at home, in the detailed instruction and motivation of an individual patient, or in conveying the principles of oral health to a group or community. Without adequate training and status, the hygienist is incapable, and may be reluctant to engage in community dental health programmes.

In the United Kingdom the dental hygienist receives a training of less than one year's duration. (Training to become a Registered Animal Nursing Auxiliary is a two year programme).

At present in the United Kingdom recruiting of dental hygienists to work in community dental health is said to be very difficult.

Adequately trained dental surgeons and hygienists, sharing a common philosophy, can form an effective team, whose objective is to achieve and maintain dental health in the individual and the community.

An opportunity for positive progress in the field of preventive dentistry exists in Ireland.
APPENDIX 2

November 1978

Working Paper:

Need and Demand for Dental Care

Dental Manpower

Dental Auxiliary Personnel

Department of Health
1. Introduction.

Dental auxiliary personnel to provide certain specified treatment items in the Dental Care of patients have been introduced in many countries throughout the world in the past fifty years. There has been considerable confusion about the titles of the various categories and about the job specifications of each. Recent efforts to clarify this confusion must be welcomed (Allred 1977 Butler 1978). The rationale for the introduction of dental auxiliary personnel in each country has invariably been based on a desire to solve one or both of the following two problems:

(1) Unsatisfactory dentist to population ratio.

(2) Unequal distribution of dental manpower.

Both of these problems have come to light because the need and more forcefully the demand for dental care is unmet either nationally (1) or locally (2). This understandable sequence of events would also appear to have occurred in Ireland and has led to the past and present discussions on the use of dental auxiliary personnel. Before a decision is made to introduce particular categories of dental auxiliary personnel it is important to be clear on the nature and extent of the procedures they will be expected to perform; in order to be clear on these points the present and projected need and demands for dental care must be considered in relation to the present and projected dental manpower numbers and manpower distribution available to provide it.

2. The need for Dental Care.

2.1 The Present Need

The inadequacies of traditional indices of dental disease such as DMF
2.

and Russells Periodontal Index as measures of treatment need in a community are now internationally recognised (Davies 1977) and Dental epidemiologists have recently been concentrating on developing methodologies for treatment need surveys.

Though a number of traditional surveys of dental health in Ireland have been conducted, only one could be located which had been conducted with the specific objective of estimating dental treatment need rather than simply the state of dental health. This survey of a representative sample of the National School population in Co. Donegal was reported by Gallager (1974). The principal aim of this investigation was to devise a method of conducting a treatment need survey in a rural community by using the methodology developed. The findings suggested that a major part of the treatment needed in the community studied could be provided by auxiliary personnel under the direction of a dentist. Whilst the findings are interesting the inferences that can be drawn are limited.

Little is known therefore about the present need for dental care in Ireland.

2.2 The Projected Need.

In a recent survey in Newcastle-Upon-Tyne in the U.K. it was found that the cost of dental treatment needed in a group of five-year-old children living in a fluoridated area was over 50% less than in a comparable group in a non-flouridated area; also there was a 45% reduction in episodes of toothache and a 47% reduction in general anaesthesia for extractions (Carmichael & Rugg-Gunn 1977). Similar findings have been reported elsewhere in Britain and the world. They suggest that given successful implementation in Ireland of fluoridation of water supplies the projected treatment need in
say 20-25 years could be considerably less than at present. Other preventive methods, such as fluoride tablet schemes could theoretically have a similar effect (probably less) on treatment need. However until studies of the effect of fluoridation on the treatment needed for e.g. caries, periodontal disease and orthodontics are undertaken in Ireland the projected treatment need must remain conjectural.

3. Demand for Dental Care.

3.1 Present Demand.

Increase in the uptake of dental care is a phenomenon repeatedly found to be associated with an increase in standard of living. Whether this increase is due to an increase in demand for dental services or due to an increase in the availability of dental services is subject to some debate. There is some evidence at the moment to suggest that it is the latter; that irrespective of the standard of living or social class structure of a community the uptake of dental services is to a great extent dependent on the availability of them. (O'Mullane & Robinson 1977). For that reason it is perhaps unwise to place too much emphasis on the length of waiting lists as a measure of the demand for dental services. Nevertheless, at the moment, this is probably best measure of demand for dental services in Ireland. Even though they underestimate the demand, waiting lists give some indication of the situation at present.
In table 1 the number on the waiting lists and the waiting periods for treatment under the health board services in Dublin are presented. Similar figures for Donegal are presented in Table 2.

### Table 1

Health Board Services. Number on Waiting Lists and Waiting Periods for treatment in Dublin.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number Waiting</th>
<th>Waiting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adults</td>
<td>Children</td>
</tr>
<tr>
<td>1</td>
<td>3,400</td>
<td>8,000 (Appt.)</td>
</tr>
<tr>
<td>2</td>
<td>71</td>
<td>2,000 (No Appt.)</td>
</tr>
<tr>
<td>3</td>
<td>363</td>
<td>9 &quot;</td>
</tr>
<tr>
<td>4</td>
<td>568</td>
<td>12 &quot;</td>
</tr>
</tbody>
</table>

### Table 2

Health Board Services. Number on Waiting Lists and Waiting Periods for Treatment in Donegal (N.A. = Not Available).

<table>
<thead>
<tr>
<th>Number Waiting</th>
<th>Waiting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults</td>
<td>Children</td>
</tr>
<tr>
<td>Priority 7,000 for treatment</td>
<td>N.A.</td>
</tr>
<tr>
<td>3,000 for Dentures</td>
<td>3-5 months for Dentures</td>
</tr>
<tr>
<td>Non Priority N.A.</td>
<td>Non Priority 5-6 yrs.</td>
</tr>
</tbody>
</table>
Even though the method of presenting the figures is not consistent it would appear that the waiting period for treatment in Dublin is considerably less than in Donegal. The figures for these two counties are examples of the wide variation in the demand for treatment as measured by waiting lists. This variation as well as indicating a true state of affairs could also be partly explained by policy differences between counties on the compilation of waiting lists, the frequency of school inspections and the content and extent of dental health education.

A further indication of the demand for dental services is the proportion of the eligible population who avail of treatment under the Public Dental Service and the Social Welfare Scheme (O'Nourke 1976). It would seem that overall, this proportion is very low in Ireland. However as pointed out earlier the uptake of dental services as well as being an indication of the importance the population attaches to dental care is also dependant on the availability, accessibility and acceptability of dental services.

A third measure of demand for dental care is the number of complaints received concerning the inadequacy of services. It is not known whether these are increasing or decreasing at present.

Despite the fact that the level of demand for dental care in Ireland is uncertain at present, the general impression gained is that it is considerable and that it varies considerably between and within counties.

3.2 Projected Demand

In common with other countries the demand for dental services is likely to increase with increasing standard of living. The extend of this increase in Ireland is likely to be related to such factors as the efficiency of fluoridation and dental manpower numbers.
4. Dental Manpower Numbers.

4.1 Present Manpower.

There has been a considerable increase in the number of names appearing in the dentists register in recent years (Table 3).

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>646</td>
</tr>
<tr>
<td>1967</td>
<td>646</td>
</tr>
<tr>
<td>1968</td>
<td>685</td>
</tr>
<tr>
<td>1969</td>
<td>687</td>
</tr>
<tr>
<td>1970</td>
<td>697</td>
</tr>
<tr>
<td>1971</td>
<td>721</td>
</tr>
<tr>
<td>1972</td>
<td>749</td>
</tr>
<tr>
<td>1973</td>
<td>776</td>
</tr>
<tr>
<td>1974</td>
<td>826</td>
</tr>
<tr>
<td>1975</td>
<td>905</td>
</tr>
<tr>
<td>1976</td>
<td>909</td>
</tr>
</tbody>
</table>

These numbers are the numbers on the register and not the numbers actually practising dentistry. This latter number is difficult to ascertain. Assuming that there are 850 full-time practising dentists the overall dentist to population ratio is approximately 1:3,500 considerably less than that recommended by the World Health Organisation. As pointed out by O'Rourke (1976) however this recommendation does not take into account the effect of water fluoridation on treatment need and dental manpower requirements.

4.2 Projected Manpower

Barrett and Connery (1973) suggested that over 80 new registrations
per year would be required to achieve a dentist to population ratio of 1: 2,500 for the projected three and a quarter million population in 1982. In a previous paper to this working party ("Public Dental Services", September 1978, P.P.7 and 8) factors likely to affect the number of dentists taking up the practice of Dentistry in Ireland were discussed. In addition to the six factors included in this paper other factors such as the age structure and productivity of the present dental manpower and the proportion of female dentists in it should also be taken into account. Though little factual information on these factors is available at present the current shortage of dental manpower is unlikely to alter dramatically in the near future.

5. Dental Manpower Distribution.

5.1 Present Distribution.

There are gross regional discrepancies in the distribution of dentists in Ireland both for the population eligible treatment under the Social Welfare Benefit Scheme and for the population eligible for treatment in the Public Dental Services. For example in Donegal the estimated dentist to population ratio in the Public Dental Service is 1 to 13,997 whereas in Dublin the ratio is of the order of 1 to 5,877. In the case of insured persons in the Social Welfare Benefits scheme the panel dentist to insured persons ratio is estimated to be 1:747 in Donegal and 1:1,711 in Dublin.

5.2 Projected Distribution.

Experience in the U.K. and U.S. suggests that a general improvement in dental manpower to population ratios does not solve the problem of uneven distribution of dental manpower. In the U.K. for instance, where there has been a gradual improvement in dental manpower, recent trends indicate that the better or more favoured areas (from a dental
manpower point of view) are becoming even better supplied with dentists while the worse or less favoured areas are becoming proportionately worse. This trend is also apparent in Ireland as shown in table 4

### Table 4

<table>
<thead>
<tr>
<th>Area</th>
<th>Medical Card Holders (net of children)</th>
<th>National School Children</th>
<th>Whole-time dentists in public services</th>
<th>Dentist: Eligible Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dublin</td>
<td>71,978 143,151</td>
<td>128,934 144,824</td>
<td>36 49</td>
<td>115,561 15,577</td>
</tr>
<tr>
<td>Donegal</td>
<td>26,241 49,889</td>
<td>16,770 20,100</td>
<td>4 5</td>
<td>112,753 19,109</td>
</tr>
</tbody>
</table>

6. Dental Auxiliary Personnel.

The classification of dental auxiliary personnel adopted in this document is that described by Allred (1977) in a paper entitled "The Training and Use of Dental Auxiliary Personnel" published by the W.H.O.

6.1 Non-operating Dental Auxiliaries.

Type 1: Dental technician; carries out technical procedures, usually in a dental laboratory. In general dental technicians create and operate their own laboratories with little or no contact with the clinical situation. A number of countries (Tasmania, Canada, Denmark) train and license "Denturists" to deal directly with patients and provide dentures. In this country the Irish Association for Dental Prosthesis have been pressing to be licensed to perform similar tasks. A major argument in their submissions is that the dental profession in Ireland has failed to provide a satisfactory prosthetic service; by allowing technicians to deal directly with patients the backlog of prosthetic work would be speedily and efficiently solved. There
are two important points to consider when debating this argument. Firstly a recent Prices Commission report highlighted the serious shortcomings of dental technical services in Ireland; licensing technicians to deal directly with patients to provide dentures would further increase their workload. Secondly, even though there is a severe backlog of prosthetic work at present particularly for adult medical card holders the long-term need and demand for this aspect of dental care is uncertain.

Type 2: Chairside assistant; works within the clinical area in which dental care is provided; does not independently provide any part of this care but assists the operator (Dentist or other) to do so. The important role of the chairside assistant is now well established.

Type 3: Dental preventive worker; basically teaches oral hygiene to patients and (or) supervises the self-application of preventive measures. However in some countries wider duties are included under this category. For example in parts of Switzerland, as well as issuing fluoride tablets the dental preventive worker also participates in group preventive education (Manthaler 1977). Implementation of a preventive philosophy has been the main feature of the work of Professor Manthaler; its success cannot be doubted.

6.2 Operating Dental Auxiliaries.

Type 4: Dental Hygienist; is legally entitled to operate on patients but her (or his) functions are limited to oral hygiene and the preventive aspects of dental care. There is now some evidence to suggest that the dental hygienist can be an important member of the team providing dental care particularly for young patients. (Axelsson & Lindhe 1974). The training programme for dental hygienists varies widely between different countries and is obviously linked to
the kind of work they are expected to perform. For example in the U.K. enrolled dental hygienists are permitted to carry out dental work of the following kinds under the direction of a registered dentist who has examined the patient and has indicated the course of treatment to be provided:

a) Cleaning and polishing teeth;

b) scaling teeth (that is to say, the removal of tartar, deposits accretions and stains from those parts of the surfaces of the teeth which are exposed on which are directly beneath the free margins of the gums, including the application of medicaments appropriate thereto);

c) the application to the teeth of appropriate prophylactic materials, including solutions, gels and sealants;

d) giving advice within the meaning of sub-section (1) of section thirty three of the Dentists Act, 1957, on matters relating to oral hygiene" (General Dental Council, 1970). The course of instruction extends over "not less than nine months". Detailed guidance on the course content is provided in the G.D.C. regulations. It is perhaps worth noting that 725 hours practical work in clinical practice, such as scaling and polishing of teeth, is recommended whereas only 12 hours practical work is recommended for dental health education. In some of the widely reported plaque control programmes for children conducted in Sweden chairside assistants were trained for short periods to deliver oral hygiene instructions and carry out professional tooth cleaning using mechanical instruments.

Type 5: Dental therapist; is legally entitled to operate on patients but her (or his) functions are usually limited to the restoration of simple carious lesions and simple extractions. Three types of dental therapist are currently employed in different parts
of the world; the New Zealand school dental nurse, the British New Cross auxiliary and the U.S. expanded duty dental auxiliary (EDDA). For all three types of dental therapist research has shown that the quality of the work performed is equal to that performed by dentists. With regard to other assessments of the usefulness of dental therapists these are very largely dependent on local national conditions such as the cost of providing dental treatment and the numbers and distribution of dental manpower.

The New Zealand school dental nurse at the end of two years training, is licensed to examine, diagnose, and plan and carry out treatment, for pre-school and school children without the direction of a qualified dentist. The most difficult concept to understand and teach in children's dentistry is treatment planning and for this reason the training received by the New Zealand dental nurse must be regarded as inadequate. This skill can only be expected of dental graduates.

Utilization of the expanded duty dental auxiliary has largely centred in the U.S. and Canada. She (he) carries out procedures such as placing a rubber dam, placing matrix bands, inserting temporary restorations and condensing contouring and finishing amalgam or silicole restorations in teeth previously prepared by a dentist.

The British New Cross dental auxiliaries are permitted to "carry out dental work of the following kinds:

a) Extractions of deciduous teeth under local infiltration anaesthesia;
b) undertaking simple fillings;
c) cleaning and polishing of teeth;
d) scaling of teeth (that is to say the removal of tartar, deposits, accretions and stains from those parts of the surfaces of the teeth which are exposed or which are directly beneath the free
margins of the gums, including the application of medicaments appropriate thereto)
e) the application to the teeth of appropriate prophylactic materials including solutions gels and sealants;
f) giving advice within the meaning of sub-section (1) of section thirty three of the Dentists Act, 1957, such as may be necessary to the proper performance of their work and on matters relating to oral hygiene.

Dental auxiliaries work under the direction of registered dentists in the public dental service (hospitals, school dental service, maternity and child welfare service, and health centres). They are concerned with the treatment of children and are permitted to carry out clinical work only if a registered dentist has examined the patient and has indicated in writing to the auxiliary the specific treatment to be provided for that patient by that auxiliary" (General Dental Council 1975).

Recent results from the Experimental Dental Care Project in London (Allred 1977) indicated the increased efficiency of a dental care team composed of a dentist, New Cross auxiliaries and chairside assistants as compared with teams composed of dentists, EDDAs and chairside assistants. Clinical impressions gained from dentists in the U.K. who have worked with New Cross auxiliaries would support these findings. Perhaps the most common complaint is the fact that this type of auxiliary is not allowed to give block local anaesthesia injections. The clinical reasons for this regulation are not clear and it is understood that it is being reconsidered at present.

7. Concluding Comment.

This working paper, though far from being comprehensive, presents some general concepts around which the utilization of dental auxiliary personnel can be considered.
Literature Cited


APPENDIX 3

REPORT FOR MEETING OF WORKING PARTY ON DENTAL SERVICES on 12th October, 1978.

Post-Graduate Training for Dental Officers:

1. The Irish Dental Association and the Society of Chief and Senior Dental Surgeons have been concerned about training in Community Dentistry at both under-graduate and post-graduate level. Recently, however, both the Cork and Dublin Dental Schools have created Senior Lecturer posts in Community Dentistry, and these should help to raise the level of community dentistry in the undergraduate curriculum.

2. Post-graduate training for Dental Officers has been on a limited scale. No special post-graduate qualification is necessary for appointment to a Dental officer post, but in the conditions of appointment given to each candidate by the Local Appointments Commission, it is indicated that candidates will be expected to have knowledge and experience of preventive dentistry. The only post-graduate qualification available in this field in this Country is the F.P.D. in Dental Public Health (R.C.S.I.). There is no specific course for this qualification, but those who aspire to it must follow regulations laid down by the R.C.S.I., and most Dental Officers would not be in a position to comply with these regulations. In the U.K. there are a number of qualifications in this field, among them a diploma in Dental Public Health (D.D.P.H.) and a M.Sc. in Dental Public Health. A number of Public Dental Officers have acquired the Diploma qualification, mostly before taking up duty as Dental Officers. Some Health Boards have released Dental Officers who may wish to acquire this qualification - the course is for an academic year, but as a rule this is leave without pay. The Eastern Health Board did grant leave with pay to one Senior Dental Officer to enable him to acquire a Master of Science Degree in Dental Public Health.

The Society of Chief and Senior has some reservations about the Diploma course as its philosophy is based on the U.K. Welfare state and its all-embracing legislation and is not attuned to Irish conditions.

3. At a meeting in the Department of Health on 20/2/70, at which were representation from the Dublin Dental Hospital, The Society of Chief and Senior Dental Surgeons and the Irish Dental Association, the I.D.A., and the Society put forward proposals about post graduate training for Dental Officers. These proposals recommended training at two levels - (a) short post-graduate courses in subjects of interest to Dental Officers and (b) longer courses leading to a qualification in Dental Public Health.

It was accepted at this meeting that 9/8 dental chairs, lecture facilities, laboratory facilities and library facilities would be available for these courses in the new Dublin Dental Hospital.

4. Subsequent to this the Society entered into discussions with the Faculty of Dentistry at the Royal College of Surgeons in
Ireland and the Institute of Public Administration, and the Irish Dental Association in an effort to implement these proposals. It has not been possible to proceed with a course which would lead to the granting of a diploma. However, the following short courses have been arranged for Dental Officers, (i) in conjunction with the Institute of Public Administration:

(a) Courses for new entrants into the Public Dental Service - these are 4/5 day courses held once/twice a year for new entrants or those up to 2 years in the service. They are non-clinical, dealing with organisation, administration, communication, health education, statistics etc.

(b) Management Courses for Senior Dental Surgeons - these are two-module courses of four days each dealing with management of the Public Dental Services.

(iii) In co-operation with the Royal College of Surgeons in Ireland.

A course in Child Dental Health is run each year. It is a nine day course divided into three sections. 12 Dental Officers attended each year since this course commenced in 1974 (three was no course in 1976). The content of this course is mainly clinical, there is a strong emphasis on prevention and there is some emphasis on child psychology.

(iii) In co-operation with the Irish Dental Association.

Courses at branch level have been organised by the I.D.A. and Dental Officers have attended these. The North Eastern Health Board and the Eastern Health Board have co-operated with the Scientific Committee of the I.D.A. in running courses in clinical subjects specifically for Dental Officers in recent years. In addition, most Health Boards release Dental Officers and allow expenses to attend the Annual Scientific Meeting of the I.D.A. each year. This has been particularly so since the 50th anniversary meeting in April, 1972. An Appendix to this report gives information about post-graduate qualifications and courses attended by Dental Officers. The Appendix indicates that out of a total of 148 dental officers, 7 have post-graduate qualifications in Dental Public Health (D.D.P.H.; H. Sc., F.D.S.), and 2 have passed the Primary Fellowship examination of the R.C.S.; 42 attended the course for new entrants at the I.P.A.; 32 attended the course on Child Dental Health at the R.C.S.I., and 150 attended other courses varying from a Management Course at the I.D.A. to courses organised by the I.D.A. including the Annual Scientific Meeting of the Association, and a course in Orthodontics at Dr. Steevans' Hospital.

This short report does indicate the need for a central body which would co-ordinate all post-graduate training for Dental Officers - the Council for post-graduate dental and medical education should have a role here.

P.L. Pigott,
CHIEF DENTAL SURGEON.
A circular was sent to all Chief and Senior Dental Surgeons. Replies have not been received from all at the time of compilation of this report. Replies were received from 26 Senior Dental Surgeons.

The following is an analysis of the replies:

Number of Dental Officers, (whole-time Permanent) 159.

Number with Post-Graduate Qualifications in Dental Public Health 8. (3 F.F.D.) (2 M.S.C.) (3 D.D.P.H.)

Number with other Post-Graduate Dental Qualifications 4. (1. D.orth.) (1 F.D.S.) (2 with Primary fellowship)

Number of Dental Officers who attended

(a) Course for new entrants at the I.P.A. 46.

(b) Course in Child Dental Health 37.

(3) Other Courses 156.
APPENDIX A

Dental Therapists: A Demonstration Study

(Preliminary Outline)

Department of Health
In a previous paper discussed by the Irish Dental Association/Department of Health Working Party the regional discrepancies in the distribution of Dentists in Ireland were highlighted (November 1978). On the available evidence it would seem that irrespective of any over-all future increases in the number of dentists practising in this country certain regions will continue to have unfavourable dentist to population ratios. It is with a view to investigating this problem of distribution that the proposal to assess dental therapists is made. There is no suggestion that therapists are favoured on grounds that they will provide dental treatment more efficiently and at less cost, nor is there any suggestion that other solutions may not be investigated.

**AIM of Study:** To determine the feasibility of training and employing New Cross Type Dental Therapists to carry out prescribed treatment for eligible school children in areas with unfavourable dentist to population ratios.

**Personnel:** Initially efforts will be made to recruit the New Cross Therapists from the U.K., it is understood that a number of these may be willing to work in Ireland. Failing this it is suggested that 3-4 candidates be sponsored by the selected Health Boards and be sent abroad to be trained. (Terms and conditions of employment and legal liability would need to be examined).

**Location:** Health Board area(s) with extremely unfavourable dentist to eligible child population ratio. The final choice of Health Board Area(s) would depend on the interest of the Senior Dental Officer(s) in the project and their ability to arrange supervision.

**Measurement of Feasibility:** The New Cross Type Therapists will be employed in the Public Dental Service and will treat school children on the prescription of dentists employed in the Public Dental Service. The selection and training of dentists in the study will need careful discussion. Feasibility will be measured using 4 criteria.

1. **Efficiency and Cost Benefit Output.** The number of patients/year "cared" for and the number and type of procedures/year carried out will be calculated. Comparisons
could be made with matched areas with similar dentist to eligible population but which did not employ dental therapists. (Comparisons would be between dentist and the team (i.e. dentist plus therapist)).

(2) Need for Referral: The number of occasions/100 patients in which the assistance of a dental surgeon was required to complete or intervene in treatment.

(3) Quality Control: The quality of care provided by the teams will be assessed in samples of patients by dentist(s) in the public dental service, general dental practitioner(s) and academic(s). The logistics of this assessment will need careful planning.

(4) Subjective Assessments: Inevitably in a feasibility study of this nature some subjective assessments will be made. The extent and type of these assessments will probably only emerge in the course of the investigation. Subjective assessments are likely on such matters as the following:

(a) working relationships between dentist and therapist,
(b) practical problems encountered by the dentists in directing treatment carried out by therapists.

Results: Interim results will be presented yearly.

Inferences: Based on the results of the study and on the dental manpower distribution problem existing at the time of completion of the study, a decision on whether or not to train and employ New Cross type therapists in the Republic of Ireland will be made following discussions with the Dental Board and the Irish Dental Association.