

1. Introduction

The EFP has previously published its recommendations concerning undergraduate and specialist education in periodontology. The aim of this document is to give guidance to those authorities responsible for providing dental hygienist education in an effort to achieve uniformly high standards throughout those countries which are under the umbrella of the EFP. It is also intended to encourage the governments in those countries of the EFP where hygienist practice is not legal (currently Austria, Belgium, France, Greece and Turkey) to make legislation and set up training programmes for dental hygienists.

These guidelines have been subject to extensive consultation amongst all the constituent national periodontal societies of the Federation, the International Dental Hygienist Federation, national dental hygienist societies and many of the training schools for dental hygienists in Europe. There has been a considerable uniformity of opinion which has enabled the EFP to propose a core curriculum which is supported by virtually all of those bodies. It is also able to include certain topics which are currently practised by hygienists in some European countries and receive wide support but because they are more controversial, it is appropriate that decisions on whether they be included should be made locally, according to national opinion. It is not considered that the inclusion or exclusion of these items from the 'Recommended Curriculum' significantly dilutes the recommendations.

The original model for these recommendations was the one prepared by the General Dental Council of the United Kingdom "Curriculum for Dental Hygienists - Requirements for the Education and Training of Dental Hygienists", May 1997.

2. Permitted Work

The EFP recommends that dental hygienists should, after appropriate education and training, be permitted to undertake the following work, providing that a registered dentist has previously examined the patient and indicated in writing, the nature of the work to be performed under the dentist's supervision and responsibility. Despite the fact that in some European countries, dental hygienists are legally permitted to work independently of dentists, the EFP considers it highly desirable that all members of the dental team work in cooperation with each other to the benefit of the health of the patient.

- a. Cleaning and polishing teeth.
- b. Supra- and subgingival scaling of the teeth.
- c. The application to the teeth of prophylactic materials, for example fluoride solutions, and fissure sealants.
- d. The insertion of temporary fillings and of crowns which become dislodged during the course of the hygienist's treatment.
- e. Collection of data, for example, medical and dental histories, plaque and periodontal indices.
- f. Administer comprehensive advice on oral hygiene and the care of the mouth, according to patients' needs.
- g. Dental radiography.
- h. Local analgesics (subject to local agreements and training).
- i. Impressions (subject to local agreements and training) .
- j. Certain orthodontic duties such as the fitting and/or removal of bands/brackets, although not part of the work of a 'dental hygienist' are currently incorporated into the curriculum of dental hygienists in some European countries.

3. Entry Requirements

Applicants for places on training courses should have had a good general education and good communication skills. The precise qualifications will vary from country to country but should include a biological science and be sufficiently high to indicate an ability to benefit from Higher Education. In most cases this will be equivalent to University entry standard. It is appreciated that a substantial number of applicants may come from a dental nursing background. Due consideration should be given to dental nursing qualifications and experience in assessing eligibility for the course.

4. Education and Training

The aim of dental hygienist courses is to develop individuals capable of unsupervised practice within dental teams, working to the prescription of dentists. The objectives of the course are:

- a. To provide a sufficient body of knowledge and understanding to enable dental hygienists to undertake their prescribed work with care, safety and responsibility and to recognise the full scope of their remit.
- b. To develop a professional attitude relating to the care of all types of patient and relating to the role of the dental hygienist in the dental team and the whole health care team.

To this end, courses of education and training should be designed to take into account the following principles:

- a. The development of an understanding of health in relation to disease.
- b. The integration of teaching of basic science with clinical science and practice.
- c. The association of training with other members of the dental team.
- d. The need for continuing professional education and development.
- e. The use of a broad range of educational methods.

A full-time course should extend over a minimum period of two academic years. Where the course incorporates additional duties, such as those listed (h), (i) and (j) in Section 2, the course is likely to require more than two years. At least fifty percent of the course should be devoted to clinical dental practice. In drawing up a timetable provision should be made for time for private study, revision, and continuous assessment. Ideally training should be undertaken in institutions alongside the training of other members of the dental team and should involve all environments relevant to the future work of the hygienist.

5. Course Content

The arrangement of the subjects in the course is left to the discretion of the training body. The subject divisions shown below are not intended to prevent integration, where appropriate, between the various subjects and phases in the course.

Trainees will be required to achieve certain minimum standards of knowledge and competency. The length of training time necessary to achieve these standards will depend on the teaching methods employed and the existing abilities and knowledge of individual students. It is for this reason that this document attempts to describe levels of knowledge, rather than specify minimum training hours to be employed for the various parts of the curriculum.

Outline guidance in relation to courses is given below.

6. Foundation Course

A Foundation Course outlining the work to be undertaken by the dental hygienist and including their professional, legal and ethical obligations, Health and Safety issues, resuscitation and first aid. The precise content of this course will depend on the previous educational background and experience of students.

An introduction to Teamwork in Health Care, dental auxiliaries and current national and international trends in the delivery of dental care.

An introduction to patient care and management including the need to follow a written treatment plan and the need to keep adequate records.

Instruction in information technology skills, including familiarity with computer assisted learning programmes.

7. Cell Biology and General Histology

An understanding of cell biology including the cellular structure and function of human tissues and organs.

8. General Anatomy and Physiology

A general understanding of all the systems of the body, with a more detailed knowledge of the structure and function of the following systems: Circulatory system, Respiratory system, Digestive system, Nervous system, Skeletal system, Lymphatic system, Endocrine system.

9. Regional Anatomy

An overall understanding of the regional anatomy of the head and neck, with increasing content in relation to the para-oral structures and fine detail of the oral cavity structure.

10. Dental Anatomy

An understanding of:

- a. the anatomy and development of the human deciduous and permanent dentitions;
- b. the anatomy and development of oral tissues and related structures;
- c. the processes of eruption and resorption.

The identification of teeth and the use of current terminology and methods for nomenclature and charting.

A knowledge of the morphology of the permanent and deciduous teeth.

11. Oral and Dental Histology and Embryology

An understanding of the histology and embryology of human teeth, their supporting structures and other oral tissues.

An understanding of the functions of these various tissues.

12. Oral Physiology

An understanding of:

- a. the composition and functions of saliva;
- b. the processes of mastication and deglutition;
- c. the physiology of taste.

13. Diet and Nutrition

A knowledge of the principles of diet and nutrition and an understanding of their scientific basis with particular reference to:

- a. the composition of diet;
- b. the relationship of diet to general health, dental and oral health;
- c. the role of diet in the aetiology of dental caries;
- d. the dietary requirement of groups with special needs and the influence on diet of age, culture and occupation.

An ability to carry out diet analysis and provide advice and counselling for the prevention of dental disease.

14. General Pathology

An ability to define the common terms and methods used in pathology.

An understanding of:

- a. acute and chronic inflammation;
- b. wound healing;
- c. routes of spread of infection;

- d. immunology;
- e. neoplasia.

A knowledge of the common pathological conditions relevant to patients' medical histories.

A knowledge of the relevant diseases of childhood and their dental implications.

15. Microbiology and Infection Control

An understanding of:

- a. the classifications and characteristics of micro-organisms;
- b. the relationship between micro-organisms and disease.

A precise knowledge of the modes of transmission of disease.

A detailed knowledge of the principles of infection control and an ability to implement them.

16. Pharmacology

A knowledge of:

- a. the legal control of drugs and the principles of pharmacokinetics;
- b. the therapeutic agents commonly used in medicine and dentistry with particular reference to those of significance to the Dental Hygienist.

17. Local Analgesia

A detailed knowledge of the related oral anatomy and nerve supply.

A basic understanding of the physiology of nerve conduction.

A knowledge of the pharmacokinetics and use of local analgesic agents available in dentistry.

An ability to carry out the safe practice of local infiltration techniques.

18. Medical Emergencies and their Management

An ability to recognise potential and actual medical emergencies and to understand their causes.

The ability to follow the necessary procedures to deal effectively with an emergency and to carry out the technique of cardiopulmonary resuscitation (CPR).

19. Tooth Deposits and Stains

A comprehensive knowledge of dental plaque and its formation and development from a clean tooth surface until its maturity with special reference to the micro-organisms involved.

A detailed knowledge of the role of plaque in the aetiology of caries and periodontal diseases.

The ability to recognise supragingival and subgingival calculus together with a knowledge of formation and the various means of detection.

The ability to recognise the common types of intrinsic and extrinsic staining and a knowledge of their origins and methods of removal.

20. Theory of Periodontal Instrumentation

An ability to describe:

- a. the principles of scaling, root planing/debridement;
- b. the design of scaling instruments and their use;
- c. the action of mechanical scalers, their advantages and disadvantages;
- d. the uses of polishing instruments and the different prophylactic pastes available.

21. Dental Caries

A detailed knowledge of the aetiology of dental caries.

A general knowledge of the clinical and histopathological changes that occur in dental caries.

A good understanding of the epidemiology of dental caries relating this to the relevant studies.

22. Periodontal Disease

A full understanding of the causes of all forms of periodontal diseases, including the initiating, predisposing and systemic factors.

An ability to:

- a. classify the different types of periodontal diseases;
- b. recognise a healthy periodontium and the clinical changes which occur in the presence of periodontal diseases;
- c. record and monitor various parameters associated with disease activity and its aetiology, e.g. pocket charting and indices;
- d. recognise and distinguish between acute and chronic periodontal disease;
- e. recognise those periodontal conditions which necessitate the immediate attention of a registered dentist.

A thorough understanding of the role of bacteria in the pathogenesis of periodontal diseases and the rationale for all forms of periodontal treatment including the indications for the use of local delivery antimicrobial agents.

A basic understanding of the role of the immune system and other systemic factors in the aetiology of periodontal disease.

An understanding of:

- a. those factors which adversely affect the prognosis in periodontal disease;
- b. the features and aetiologies of lateral periodontal abscesses, apical abscesses (both acute and chronic) and perio-endo lesions.

23. Epidemiology

An understanding of the basis for epidemiological studies in the provision of oral health care.

A knowledge of the indices used in oral epidemiological studies and an ability to use common plaque, gingival and periodontal indices.

An understanding of the basic statistical methodology used in the planning and interpretation of epidemiological studies.

A knowledge of the major epidemiological studies of oral disease, the changing pattern of oral and dental diseases, and the cause and effect of the changes.

An ability to interpret the findings of epidemiological studies.

24. Dental Public Health

An understanding of:

- a. public health measures in the control of disease and the promotion of health;
- b. the principles of health promotion, including oral health promotion.

A knowledge of:

- a. the structures of public health services;
- b. community based oral health initiatives.

25. Oral Pathology and Oral Medicine

A basic knowledge of the aetiology and features of tooth anomalies.

The ability to recognise and ascribe causes for tooth wear (tooth surface loss).

A knowledge of the features and aetiology of oral lesions e.g. ulcers, white lesions etc. and their implications.

The ability to recognise the common oral infections.

An awareness of the differing features of benign and malignant lesions and their significance.

A knowledge of the causes, significance and local management of xerostomia.

A basic knowledge of the common causes of facial pain and the relevance of temporomandibular joint (TMJ) disorders to patient care.

An ability to recognise changes from normal in the oral tissues and seek appropriate advice.

26. General Dentistry

A general understanding of restorative dentistry including prosthetics, implants, orthodontics, paediatric dentistry and oral and maxillo-facial surgery.

A thorough understanding of the role of the dental hygienist in these areas and in the holistic care of the patient.

A knowledge of the dental management of patients with special needs (mental, physical, medical, social) and their care in different environments.

A knowledge of the physiology of ageing and the management problems associated with the dental care of the elderly.

A knowledge of the principles and problems involved in providing domiciliary dental care.

27. Dental Radiography

A knowledge of legislation and regulations relating to dental radiography and ionising radiation.

A basic knowledge of ionising radiation and its effect on tissues.

A full understanding of the hazards involved in dental radiography and the measures to be taken to protect patient and operator during the taking of dental radiographs.

A knowledge of the different types of radiographs and their uses in dentistry.

The ability to identify the anatomical features and common pathology visible on dental radiographs.

The ability to interpret dental radiographs, as relevant to dental hygienists.

A knowledge of:

- a. the techniques for taking dental radiographs;
- b. the principles of processing dental radiographs and the faults which may occur;
- c. the importance of quality assurance in dental radiography.

28. Preventive Dentistry

A thorough understanding of the principles of prevention of dental disease with an appreciation of the dynamics involved including therapeutic, educational, social and environmental factors.

A comprehensive knowledge of:

- a. mechanical and chemical plaque control methods, including modified methods for patients with special needs;
- b. the role of fluoride in preventive dentistry; topical and systemic delivery;

- c. the principles and methods of dietary control of dental caries;
- d. the composition, properties, techniques and uses of fissure sealants and other preventive materials currently available.
- e. the effects of tobacco on the oral tissues.

29. Behavioural Sciences

An understanding of human development with specific reference to:

- a. child growth;
- b. physical, mental and emotional development.

A sufficient knowledge of psychology and sociology in order to better understand human behaviour and in particular health behaviour.

An awareness in general of the influence of social, psychological, cultural and environmental factors on human behaviour and in particular the impact of these factors on oral health and the delivery of dental care.

A knowledge and understanding of the theories and methodology relating to communication and of the importance of developing inter-personal skills. An appreciation of the relevance of listening, and of verbal and non verbal communication.

The ability to recognise potential barriers to effective communication and behaviour modification, the ability to develop skills to minimise such barriers.

An understanding of techniques for management of the anxious patient.

An appreciation of the relationship between behavioural science and patient education, patient management and successful teamwork including inter-professional collaboration and communication.

30. Oral Health Education

A detailed knowledge of the principles of education and of the methodology of oral health education with particular reference to planning, delivery and evaluation.

An appreciation of the fundamental role of communication skills.

A comprehensive knowledge of the scientific basis of oral health education.

An understanding of the relationship of oral health education to general health education.

31. Medical Conditions of Oral Significance

A thorough knowledge of the following:

- a. the recording of a patient's medical history;
- b. patients' medical conditions which might affect the treatment given by a dental hygienist or the health of members of the dental team.

An understanding of the oral manifestation of systemic disease.

32. Practical Training

Approximately half the time spent in training should be devoted to practical clinical procedures.

Pre-Clinical Training

Facilities should be available for students to develop their practical skills using phantom head and other appropriate laboratory aids, prior to working on patients.

The students should be able to identify and select the appropriate equipment, instruments and materials for the task to be carried out, use instruments safely and effectively, and maintain them to the required standard.

Students should be able to organise their working environment.

Clinical Training

Scope

Adequate experience should be provided in the full range of practical procedures as permitted by the Council's Regulations including:

- a. preventive procedures such as topical fluoride applications and fissure sealant placement (including the fitting of rubber dam where appropriate);
- b. periodontal therapies such as the polishing of the teeth (including teeth previously filled or crowned), supra and sub gingival scaling, root surface debridement, pocket irrigation, the placement of sub-gingival anti-microbial agents and the care of dental implants;
- c. local infiltration analgesia;
- d. radiographic techniques of oral relevance including the taking of periapical, bitewing, occlusal and panoramic radiographs and the processing of films;
- e. measurements and assessments, including periodontal charting and the use of oral hygiene, gingival and periodontal indices.

Types of Patients

During their training, Student Dental Hygienists should, in association with other members of the dental team, treat the full range of adult and child patients, including medically compromised children and adults and those with physical or mental disabilities.

Locations

Opportunity should be given for students to work or observe in a variety of working conditions, such as community dental clinics, in-patient hospital facilities, general dental practice and the domiciliary setting.

Practical Oral Health Education

Practical participation in the planning, provision and evaluation of oral health education programmes and the practical demonstration of communication skills with individuals and diversity of target groups.

33. Preparation for Employment

An understanding of the legal position of dental hygienists, including the type of work they are allowed to carry out and the areas they are permitted to work in, under the direction and written prescription of a registered dentist.

An understanding of the standard of conduct expected of dental hygienists and the kind of behaviour which may be regarded as misconduct.

An understanding of, and the need to comply with, the legal requirement for annual registration for dental hygienists in employment.

An understanding of the importance for dental hygienists in employment to have membership with a relevant medical/dental protection agency.

An understanding of the importance of a contract of employment.

An understanding of the role of national and international dental hygienists' associations.

A full appreciation of the importance of continuing education, clinical audit and quality assurance programmes throughout a dental hygienist's professional working life.

A thorough knowledge of the Health and Safety regulations pertaining to dental practice.

An understanding of the role of the dental hygienist within the framework of a dental team.

34. Assessments

There should be a properly integrated series of formative assessments throughout the course in order to provide students and teachers with an indication of each student's progress. Provision should be available in the course to provide additional training for those students who need it. The final summative assessment must be appropriate to ensure that not only are the standards achieved sufficient to enable each student to practise legally in their own country but also that the standards are equivalent to those of hygienists in other European countries.