Curriculum Guidelines for Education and Training in Paediatric Dentistry

1996

Table of Contents

Forward

At the first council meeting of the European Academy of Paediatric dentistry (EAPD), held in PARIS (1990) a decision was made to form an Educational Committee (EC). The development of guidelines for training programs in Paediatric Dentistry was decided as the first priority for the committee and a questionnaire was sent to 11 Dental schools in Europe to determine the existing situation. A preliminary report was presented by Luc Martens at the first EAPD meeting (LEEUWENHORST, 1992). At the general assembly of the same meeting the EC was officially installed with a Membership of Luc Martens as chairman (Belgium), Satu Alalusuua (Finland)- Guran Dahllof (Sweden) - Frans Frankenmolen (The Netherlands) - Barry Sheer (UK) - Lisa Papagianoulis (Greece). Further data was collected by this group and a second report presented at the council meeting in LONDON (1993). A task force of Martin Curzon, Goran Koch, Luc Martens and Constantine Oulis was formed to review the 11 existing material.

Preliminary deliberations on the possible aims and conditions of training in Paediatric Dentistry was conducted by mail and in September the task force met in GOTENBORG. A complete review of the existing programs was completed and a more detailed review of those programs of 2 years (or equivalent) or more in length. On the basis of these 11 documents was defined a set of main goals, program objectives, general and specific conditions was drawn up.

Under auspices of the EC, the objectives of the required courses for education and training of a Paediatric Dentist were deliniated. A first draft of the curriculum guidelines was presented at the Symposium of the Second EAPD Congress (ATHENS, 1994). A panel of 15 representatives of Europeans countries discussed with the members of EC and task force these proposals. After all comments and suggestions had been taken into account, a second draft was presented to the Council at its meeting in GOTEBORG (1995). This draft was approved but also some further minor revisions were decided upon eliminating overlaps between material in different chapters.

Six years after the founding of EAPD the final draft of the "CURRICULUM GUIDELINES FOR EDUCATION AND TRAINING IN PAEDIATRIC DENTISTRY "is available. This document should be used as the basis for starting and developing programs throughout Europe. In the mean time, it can be used as a basis for the accreditation of existing programs. The next goal of the committee needs to be the development of an accreditation protocol.

According to the constitution, I have to retire from this committee. It was a pleasure and an honour fulfilling this task. I would like to express my sincere gratitude to a11 the members of the EC and the task force for their support.

Luc C. MARTENS
Bruges, 1996

Definition of Paediatric Dentistry

The specialty of Peadiatric Dentistry is the practice, teaching of and research in the comprehensive preventive and therapeutic oral care of children from birth to adolescence.

1. Main Goals

The overall goals of a program in Paediatric Dentistry should be:

1. To graduate specialists in Paediatric Dentistry who are competent and confdent in all areas of Paediatric Dentistry for the growing and developing child.
2. To produce specialist Paediatric Dentists to meet the oral health need of infants, children, adolescents and patients with special care needs, and who will continue to seek additional knowledge and skills throughout their careers.
3. To produce Paediatric Dentists capable of carrying out scientific investigation in both clinical and basic science aspects of the specialty.
4. To produce specialists able to collaborate in multidisciplinary teams concemed with the welfare of children.
5. To produce specialists in Paediatric Dentistry who are able to teach the dental care of child-ren within the specialty as well as for general dentistry and for other health care workers.

2. Program Objectives

The objective of any current and future training program in Paediatric Dentistry should aim to produce students who:

1. are competent in all the skills of dentistry pertaining to the specialist care of infants, children, adolescents and patients with special care needs,
2. are competent and experienced in the design, implementation and completion of a preventive dental care program for every type of paediatric dental patient,
3. are competent and experienced in behaviour management techniques, so that the majority of their patients can be treated without the use of adjunct medications,
4. are fully trained in the theory and practice of sedation for use in hospital and dental office practice,
5. are competent and experienced in a11 aspects of hospital and operating room practice, the admitting and care of children to hospital and the carrying out of full mouth restorative care and minor oral surgery in the hospital setting,
6. are competent and experienced in the provision of restorative, prosthetic and interceptive orthodontic care for infants, children, adolescents and patients with special care needs.
7. are competent and experienced in the care of oro-facial trauma in infants, children and adolescents,
8. have a knowledge of craniofacial growth and development, to be skilled in the diagnosis of problems of occlusion, facial growth, functional abnormalities,
9. are experienced in the recognition of problems concerning the temporomandibular joint of children and adolescents, and to be able and/or refer such patients.
10. are competent and experienced in the provision of dental care for patients with special care (handicapping) conditions and to be able to treat the majority of such patients in the dental office practice,
11. know the principles of research design and methodology. Each student should be able to conduct library research, literature searches and to design research studies. They should, on completion of a course, have carried out a research project of their own, under supervision, completed a Masters thesis or equivalent and prepared a paper suitable for publication in an internationally recognized and refereed journal.

3. General Conditions

1. Candidates must be qualified within EEC rules and Two years of general dental experience is recommended.
2. The basic objective of the programme is to educate a Specialist in Paediatric Dentistry cfr. the main goals.
3. The postgraduate programmes in Paediatric Dentistry leading to a Master's Degree should be of a minimum of 3 years full time training equivalent to 4800 hrs and appropriate ECTS.
4. Ideally, students should receive a salary.
5. The content of such programs should be distributed between clinical experience, including hospital practice of at least 50%, didactic study and academic courses (40%) and the carrying out and completion of a research project (10%) suitable for publication in an international journal.
6. The core programme requires 75% of the specified training guidelines. The remaining time can be supplemented by additional (elective) activities.
7. The clinical staff-student ratio in supervising treatments should be 1:4
8. Students must treat patients under supervision of qualified paediatric dentists.
9. Students must gain experience in the treatment of patients that require a multidisciplinary approach (see also training guidelines).
10. Teaching of undergraduate dental students is optional and based on local needs. This can be part of the programme but desirable not for more than 10%.
11. Students must conduct a research project and the report should be publishable in an international journal.
12. At the end of the programme final exams have to take place. Type and evaluation procedures of this exams are dependant of the institutional requirements.
13. As part of the final examination an external examiner, being a teacher from a recognized other university or institute (desirable from another country) should be consulted

4. Specific Conditions

1. The director of the programme:
    - must prove credentials in paediatric dentistry.
    - should have an academic appointment/ university recognition (associate professor or above or equivalent).
    - appointed full time.
2. Besides the director, the equivalent of at least one full time position for a paediatric dentist must be present.
3. adequate library, laboratory, clinical research, and administrative facilities must be available.
4. Non academic staff should be sufficient to support the programme with efficient conduct and patient care.
5. Evidence of other discipline staff support and collaboration to fullfill the objectives of the programme is required.
6. Sufficient expertise (other teachers) must be available to realize the necessary subjects within the objectives of the programme.
7. Research opportunities, statistical assistance, and computer facilities must be available.
8. Evidence of collaboration with pediatricians is required.
9. Any programme must address the issue of the care of the chronically sick and other handicapped conditions.

5. Objectives of Obligatory Courses for Education and Training of a Paediatric Dentist

The following subjects are to be covered:

- Basic Sciences
- Aspect of management, administration and ethics
- Diagnosis and treatment planning
- Behavioural science and patient management sedation/general anesthesia
- Prevention
- Restorative dentistry
- Orthodontics
- Dental Traumatology
- Oral surgery/Oral medicine/Oral pathology/Maxillo-facial surgery.
- Children with special needs/Medically compromised.

Students should have an understanding at the following levels

Competent to:
At this level students should have a sound theoretical knowledge and understanding of the subject together with an adequate clinical experience to be able to resolve clinical problems encountered, independently, or without assistance.

Knowledge of:
The students should have a sound theoretical knowledge of the subject, but need have only a limited clinical experience.

Familiar with:
Students should have a basic understanding of the subject, but need not have direct clinical experience or be expected to carry out clinical procedures independently.

I. Basic Sciences

Prepared by E FRANKENMOLEN (NL)

I.1. Pediatrics

Knowledge of:

- growth and development of the human body
- psychological growth and development

Familiar with:

- principles of classification of syndromes in relation to aetiology, prognosis and reaction to treatment.
- epidemiology, pathogenesis and management of diseases in children and adolescents
- concept of biological age and determination of skeletal age, and stages of sexual development

I.2. Growth and development of craniofacial skeleton

Competent to:

- define anatomical features, tissue systems and functional anatomy essential for comprehension of:
- growth of the craniofacial skeleton
- development of skeletal deformities
- dentofacial orthopedics
- orthognathic surgical correction of facial dysmorphology and malocclusion

Knowledge of:

- growth sites in the craniofacial skeleton
- post-natal growth changes in the craniofacial region, including soft tissues
- variation in the function of components within the craniofacial region relevant to facial growth
- adolescent growth spurt and its relationship to growth of the craniofacial complex
- individual variation in facial configuration
- influence of environmental factors on facial growth

I.3. Development of the dentition (normal and abnormal)

Competent to:

- recognize and identify a given situation of the dentition in terms of:
- normality or abnormality
- developmental stage attained
- future development
- possibilities for interceptive measures to improve the ultimate situation

I.4. Genetics

Familiar with:

- genetic principles essential for comprehension of:
- the development of the head
- craniofacial malformations

I.5. Embryology of the head

Knowledge of:
embryology of craniofacial structures for understanding of normal growth and development of face, jaws and teeth, teratogenesis and development of clefts and other facial congenital malformations.

I.6. Cell biology

Knowledge of:
cytological and histochemical aspects essential for the understanding of:

- cell metabolism under normal and abnormal conditions
- tissue formation and proliferation
- development of bone, cartilage, teeth and muscle
- facial growth
- temporomandibular joint
- tooth movements and reactions in tooth supporting tissues
- dentofacial orthopedics
- soft tissue changes related to orthodontics
- mechanisms of root resorption

I.7. Biostatistics

Competent to:

- understand and evaluate statistical aspects in current literature
- evaluate validity of statistical methodology and interpretation of fndings in clinical and research papers relevant to pedodontics and related subjects

Familiar with:

- commonly used statistical methods
- data processing procedures

I.8. Epidemiology

Familiar with:

- principles of epidemiologic surveys
- research designs
- sample composition and requirements for control groups
- data analysis and critical interpretation of findings

I.9. Research methodology

Competent to:

- perform an analytical review of biomedical research and clinical research papers
- write a protocol for a research project
- interprete own research findings
- evaluate validity of conclusions in research papers
- present research findings in oral and written form

Knowledge of:
various methods of research design

Familiar with:

- philosophy of science
- ethical aspects of research on animals and humans

I.10. Dental Materials

Knowledge of:

- property and composition of materials used in paediatric dentistry.
- parameters for selection of correct materials for various procedures
- proper handling and application of the materials

II. Aspects of Management, Administration and Ethics

(Prepared by F FRANKENMOLEN

II.1. Office management

Knowledge of:

- design of a practice in paediatric dentistry; in private as well as in a hospital setting
- equipment and instruments needed in such a practice
- recruitment, selection and training of auxiliary personnel
- financing and administration of a practice in paediatric dentistry
- public relationships

II.2. Use of computers

Familiar with:

utilization of computers in clinical paediatric dentistry and patient management.

II.3. Ergonomy

Competent to:

- optimal position of patient, practitioner, chairside assistant and placement of instruments to conduct specifc clinical tasks
- most efficient sequence to perform specifc clinical procedures

II.4. Legislation

Knowledge of:

- rules and laws that apply to a practice in paediatric dentistry
- responsibilities and services vulnerable to malpractice 1aw suits
- different insurance coverages required
- procedures to follow when a law suit arises

II.5. Professional ethics

Competent to:

- behaviour and conduct expected of a paediatric dentist as health care provider
- ethical standards that apply to relationships with personal, patients and colleagues
- quality assurance, as a tool to define goals, analyze oral health care given and for continuous improvement.

III. Diagnosis and Treatment Planning

Prepared by L. MARTENS (B)

III.1. The Infant and Toddler

Competent to:
assess information by interviewing and counseling the parents with respect to:

- prenatal, natal and neonatal history
- development history
- medical history
- dental history
- evaluation of oral hygiene
- risk factors of early caries development
- sucking habits and risk for early development of malocclusion
- feeding history
- social situation
- examine the infant and toddler in a non-threatening way
- differentiate oral tumours and cysts including Epstein's pearls, Bohn's nudles, congenital epulus, lymphangiomas
- diagnose immature teeth (natal and neonatal teeth)
- diagnose and treat nursing bottle caries or other forms of caries
- treat oral candidiasis and primary herpetic stomatitis
- manage emergencies; trauma related, as well as non-trauma related
- make intra- and extraoral radiographs.

Knowledge of:

- clinical implications of preterm birth
- child abuse/neglect
- abnormalities and pathological conditions that can be diagnosed on radiographs
- methods and risks involved in making radiographs in paediatric dentistry

Familiar with:
digital radiographic and other imaging techniques.

III.2. The 3-6 years old

Competent to:

- examine this age group encompassing:
- behavioural assessment
- extraoral examination
- intraoral examination
- consider any preventive measurement
- assess oral hygiene and risk for caries development
- diagnose oral motor function
- diagnose and manage early loss or displacement of primary teeth
- diagnose early signs of malocclusion
- diagnose pulpal conditions

III.3. The 6-12 year old

In addition to the guidelines for the 3-6 years old, one has to be competent to:

- diagnose the need for preventive measurements related to oral hygiene, sealants, nutrition and fluoride intake
- evaluate occlusal development
- prevent and manage trauma
- participate in health care decisions

Knowledge of:
orthodontic diagnosis and treatment planning

III.4. The over 12 years old and adolescence

In addition to former guidelines, one has to be competent to:

- diagnose early signs of periodontitis
- evaluate growth and development

Knowledge of:

- temporomandibular joint disorders
- sexual abuse
- illicit drug use
- eating disorders

IV. Behavioural Science/Patient Management

IV.1. Patient management

competent to:

- assessment of behaviour management problems
- behaviour management techniques
- approach multi-cultural ethically related problems
- application of the informed-consent-model

knowledge of:

- principles of biological psychology
- cognitive psychology and leaming
- developmental psychology and social psychology
- (theories of child development, age and stages, life span development, person perception, attitudes and social influences on behaviour)
- principles of communication theory
- psychological, ethical and philosophical aspects of the dentist-patient relationship
- structure and content of conversations in the informed-consent-model
- attitudes and types of response in professional conversations

IV.2 Sedation

IV.2.1. Cntrol of pain (painless dentistry)

knowledge of:

- psychology of pain (types of pain, structure of pain perception, social and cultural influences of pain behaviour and measuring pain)
- interaction of local anesthetics with drugs
- local and general complications after administering local anaesthetics

competent to:

- administration of local anaesthetics to children
- recognizing and treating local and general complications during and after administering local anaesthetics
- applying reanimation techniques
- allergic reactions to local anesthetics

IV 2.2. Conscious sedation (*)

competent to:

- informed consent
- instructions to parents or responsible individual(s)
- medical history and physical examination relevant for administration of concious sedation
- medical appraisal and risk assessment (ASA)
- consult from appropriate medical staff members as indicated by the patient's condition
- perform inhalation sedation and sedation by means of pharmacological approach
- operative, postoperative monitoring (oximetry, measuring heart and respiratory rates and blood pressure) and applying appropriate discharge criteria, with proper documentation
- manage any reasonable foreseeable complications
- apply supportive and resuscitation measures

(*) When applicable to the legislation of the various countries.

knowledge of:

- physiology of breathing, blood circulation and central nervous system
- effects of nitrous oxide/oxygen on breathing, blood circulation, protective reflexes, consciousness, coping and patients' experience of pain and anxiety
- indications and contra-indications of inhalation sedation and sedations using of drugs
- drug pharmacology, effects, doses and use of current drugs
- indications and contra-indications of sedation by nitrous oxide hazards to the health of patients and personnel
- scavenging and exhaust systems
- back-up emergency services
- legislation, rules and laws that apply on sedation

familiar with:

- financial considerations and quality assurance
- basic conditions of nitrous oxide/oxygen delivery equipment
- surveillance and maintenance of the nitrous oxide/oxygen delivery equipment

IV2.3. Deep Sedation(*)

knowledge of:

- all skills for conscious sedation including:
- Intravenous access
- preoperative dietary evaluation
- performance of deep sedation

(*) When applicable to the legislation of the various countries.
In most countries deep sedation is not allowed without the presence of an anesthesiologist.

IV.3. General Anaesthesia

In addition to the guidelines previously recommended for conscious sedation, the graduate should be able to demonstrate knowledge of:

- pediatric dental service organization (outpatient, inpatient, emergency and ambulatory services)
- indications and contra-indications for the use of general anaesthesia
- infection control measures in care setting areas
- interpreting laboratory tests
- drugs and equipment used in general anesthesia

V. Prevention

Prepared by S. ALALUUSUA (FIN)

V.1. Management of Dental Caries Prevention

1. Epidemiological and etiological aspects and clinical characteristics of caries.

Knowledge of:

- the disease process in primary dentition and in permanent dentition.
- the role of bacteria
- the role of sucrose
- the role of host-specific defense mechanisms
- biochemical events in dental plaque
- predilection sites
- the acute and the chronic lesion
- psycho-social aspects and risk assessment

2. Scientific basis of caries prevention.

Competent to:

- give dental health education for the child and the parents
- perform professional preventive care

Knowledge of:

- possibilities of caries control by modification of diet evidence for the influence of the diet on caries relative cariogenicity of carbohydrates possible modifications of the diet to reduce caries
- the limitation of sucrose consumption to mealtimes possible replacement of sucrose by other sweeteners in food
- prevention of caries by increasing the resistance of the tooth fluorides
- mechanisms by which fluoride reduces caries
- water fluoridation
- home care
- professional care
- fissure sealants
- remineralisation phenomena
- preventive aspects in restorative dentistry
- prevention of caries by mechanical plaque control
- prevention of caries by antimicrobial plaque control

- chlorhexidine and other antiseptics
- fluoride
- prevention of caries by avoiding transmission of cariogenic
- micro-organisms
- immunology and vaccination

3. Evaluation of preventive methods.

Competent to:

- initiate and cooperate in organization and performance of preventive dental care
- consult of the caries preventive dental care for children and adolescents
- evaluate effect of preventive programmes and methods within dental
- care for children and adolescents
- evaluate cost/value of preventive measures

Knowledge of:

- interpretation of data on caries prevention
- interaction of factors in disease
- estimation of single and combined measures
- prediction of future caries development
- cost/value of preventive measures

V. 2. Management of prevention of periodontal disease

1. Insight in the types of periodontal disease.

Competent to:
make diagnosis upon a relevant patient history and clinical examination

Knowledge of:

- childhood and adolescent gingivitis
- acute necrotizing ulcerative gingivitis
- early onset periodontitis
- localized juvenile periodontitis
- rapidly progressive periodontitis
- pre-pubertal periodontitis
- periodontal disease associated with systemic factors

- conditions which cause gingival hyperplasia
- defects in host defences resulting in accelerated
- periodontal breakdown

Familiar with:
- chronic (adult) gingivitis
- adult periodontitis

2. Epidemiology, etiology and microbiology of periodontal diseases.

Knowledge of:
- micxobial plaque and its significance
- the development of plaque and calculus
- plaque ecology and structure of plaque
- host defences against microbial plaque
- factors influencing plaque formation
- factors modifying the defence system

3. Prevention of gingivitis/periodontitis.

Competent to:
- give dental health education for the child and the parents.
- perform professional preventive care
- initiate and cooperate in organization and performance of preventive dental care
- consult of the preventive care for children and adolescents

Knowledge of:
- mechanical plaque control
- antimicrobial plaque control
- preventive programmes in children
- home care
- professional care

4. Treatment of periodontitis.

Knowledge of:
the principles of periodontal treatment

V. 3. Management of multidiscipline treatment

Insight in preventive measures of caries and periodontal disease for specific patient groups.

Competent to:

- take care that certain so called risk groups among children e.g. children with handicap, chronic diseases or complicated social background will have regular dental care.

Knowledge of:

- social factors and preventive dentistry
- prevention in mental and physical handicap children
- preventive measures for orthodontic patients
- prevention for hospitalized children

VI. Restorative Dentistry

Prepared by L. MARTENS

VI.1. Primary teeth

Competent to:

- design cavities in relation to tooth anatomy and the characteristics of the restorative material
- analyse failures to minimiae future complications
- choose treatment and restorative material in relation to the childs disease activity and age
- perform clinical pulpal diagnosis
- perform consewative as well as radical pulp treatments (pulp capping, partial pulpotomy, pulpotomy pulpectomy)

Knowledge of:

- full coverage techniques of primary teeth
- prosthetic replacement of primary anterior teeth
- methods to assess quality of restorations

VI.2. Mixed dentition

In addition to the guidelines for the primary teeth to be

Competent to:

- prevent or treat pit and fissure caries using sealants and/or
- preventive restorations
- juvenile prosthodontics
- perform clinical pulpal diagnosis and perform pulp
- treatment in immature as well as mature teeth

VI.3. Permanent teeth

In addition to former guidelines, one should be

Competent to:

- perform esthetic restorations using adhesive systems
- perform adequate endodontic treatment in the permanent dentition
- perform vital and non-vital bleaching
- perform esthetic veneering
- perform bonded bridges and splints

VII. Orthodontics.

Prepared by L. PAPAGIANOULIS (GR)

VII.1. Cephalometrics

Competent to:

- identify relevant anatomical structures on cephalograms
- perform several cephalometric diagnostic analyses on tracings
- validity and limitation of growth prediction including computerized prediction

Knowledge of:
limitations of cephalograms and their analyses.

VII.2. Orthodontic biomechanics

Competent to:

- understand basic principles of statics and mechanics of materials
- estimate forces produced by specific orthodontic appliances used for preventive and interceptive purposes

Knowledge of:
effect of different types of force application and force magnitude on cells and tissues

Familiar with:
the property and composition of orthodontic materials

VII.3. Aetiology and treatment

1. Aetiology of malocclusion.

Knowledge of:

- genetic and environmental factors that influence post-natal development of the dentition and facial growth
- unfavorable influence of environmental factors and their interception
- different modes of breathing

Familiar with:

- normal and abnormal speech
- various ways of swallowing
- the process of mastication

2. Diagnostic procedures.

Competent to:

- perform a thorough clinical and radiographic examination including determination of habitual occlusion
- evaluate functional occlusion and different jaw relationships of patients

- evaluate influence of functional components of soft tissues on dentofacial morphology
- predict the likely effect on growth and development of face and dentition if no therapy is implemented

3. Iatrogenic effects of orthodontic treatment.

Familiar with:

- possible influence of treatment on temporomandibular joints
- effect of different types of treatment on dental caries risk and periodontal tissues in the long run .factors involved in root resorption
- possible influence of treatment on dentofacial appearance and aesthetics

VII.4. Orthodontic techniques

1. Removable appliances.

Competent to:

- indication, design and use of removable appliances
- construct and repair removable appliances

Knowledge of:
potential and limitation of removable appliances

2. Functional appliances.

Familiar with:

- indication, design and use of functional appliances
- potential and limitation of functional appliances

3. Extra-oral appliances.

Knowledge of:

- indication, design and use of various types of headgears, facial masks, chin-caps and combined extra-oral/functional appliances
- potential and limitation of these appliances

4. Partial fixed appliances.

Knowledge of:

- indication and application of partial fixed appliances (e.g. lingual, palatal and vestibular arches, maxillary expansion devices and partially banded/bonded dental arches)
- potential and limitation of different approaches in partial fixed appliance therapy

5. Fixed appliances.

Familiar with:

- indication and application of fixed appliances.
- different concepts and treatment approaches in design and biomechanical principles of fixed appliance therapy
- potential and limitation of different appliance systems

6. Retention appliances.

Knowledge of:

- indication and contra-indication, design and use of retention appliances
- potential and limitation of retention appliances
- the most appropriate duration of retention

VII.5. Multidisciplinary treatment procedures

1. Cleft palate treatment.

Knowledge of:

- multidisciplinary approaches in the treatment of cleft palate patients
- indication, timing and application of multidisciplinary treatment of cleft palate patients
- specific aspects of orthodontic treatment in cleft palate patients

2. Orthodontic-periodontal treatment.

Knowledge of:

- indication and contra-indication of orthodontic treatment in periodontally compromised dentitions
- specific aspects of orthodontic treatment in periodontally compromised dentitions
- contribution of orthodontic treatment to the periodontal condition of patients

3. Multiple aplasia

Knowledge of:
multidisciplinary approaches in the treatment of children with multiple aplasia

4. Physiology and pathophysiology of the stomatognathic system.

Familiar with:

- normal and abnormal functional occlusion of the dentition
- normal and abnormal behavior of soft tissue structures
- normal and abnormal functioning of the temporomandibular joint
- diagnostic procedures regarding the temporomandibular joint
- treatment procedures of temporomandibular joint disorders

VII.6. Clinical experience

Competent to:

- diagnose and treat or make appropriate referral of singular conditions in the primary and developing permanent dentition including, but not limited to:
- anterior and posterior space and tooth loss
- transient or definitive crowding and irregularity of the teeth
- oral habits
- ectopic eruption
- anterior/posterior crossbite
- diastema closing by using simple fixed or removable appliances
- diagnose the right timing to refer a patient to an orthodontist

Familiar with:
the techniques used for the orthodontic treatment of malocclusion.

VIII. Dental Traumatology

Prepared by B. SCHEER (U.K.)

Competent to:

- understand the principles of the prevention of injuries including early reduction of overjet, correction of habits and construction of mouth guards
- carry out an examination and assessment of patients with dental injuries
- including appropriate radiographs formulate an appropriate
- treatment plan based on an understanding of the prognosis for the teeth
- evaluate pulp status including an understanding of different pulp testing methods
- carry out appropriate treatment for minor soft tissue injuries
- understand the measures appropriate to prevent infection following injury
- evaluate luxation injuries and the appropriate treatment including the appropriate use of splinting
- treat injuries to the supporting bone
- carry out pulp treatment of traumatised teeth including pulpotomy (Cvek type), apexifcation for immature teeth and root canal therapy for the completed apex
- restore crown and crown/root fractures, including the use of composite resins, acrylic and porcelain crowns and veneers
- diagnose and treat root fractures

- understand the biological processes of hard tissue repair and resorption that occur following the replantation of teeth and clinical experience of the treatment after avulsion
- carry out appropriate treatment following injury to the primary dentition

Knowledge of:

- the orthodontic management of traumatised teeth
- recognising child physical abuse and be familiar with the correct treatment, notification procedures and follow-up
- diagnosing maxillo-facial injuries and arrange for appropriate treatment
- the recognition and treatment of anomalies of the developing permanent teeth that may arise from injury to the primary dentition

Familiar with:

- the classifcation, aetiology and epidemiology of dental injuries
- the mechanism of the response of the oral tissues to injury and wound healing following injury
- the principles of auto transplantation of teeth
- the principles of osseo-integrated implants
- the signs and symptoms of neurological injury
- the planning of space management following the loss of an anterior tooth including the orthodontic options available

IX. Oral Surgery/Oral Medicine/Oral Pathology

Prepared by G. DAHLLOF

Competent to:

- use oral biopsy techniques (excisional and incisional) of pathological lesions in children and adolescents
- examine, diagnose and treat teeth, oral tumours and cysts in the newborn and neonate
- examine, diagnose and treat of oral manifestations of systemic disease in the soft and hard oral tissues, especially in children with.

1. cardiac disease
2. renal disorders
3. endocrine disorders
4. immunologic disorders
5. bleeding disorders
6. malignant diseases
7. convulsive disorders
8. skeletal disease
9. chromosomal abberations

- examine, diagnose and treat bacterial, viral and fungal infections of the oral mucosa, especially in immunocompromized children
- examine, diagnose and treat soft tissue lesions and abnormalities such as frenuloplasty
- examine, diagnose and treat disturbances in tooth development induced by

1. fluorosis
2. tetracyclins
3. amelogenesis imperfecta
4. dentinogenesis imperfecta

- examine, diagnose and treat disturbances in tooth morphology, number and eruption
- examine, diagnose and treat impacted teeth using surgical techniques including surgical orthodontic treatment

Knowlege of:
examine, diagnose and treat bone lesions, cysts, tumours and tumour-like lesions in children and adolescents

Familiar with:
maxillo-facial surgery in children

Competent to:
- understand the principles of the prevention of injuries including early reduction of overjet, correction of habits and construction of mouth guards
- carry out an examination and assessment of patients with dental injuries
- including appropriate radiographs formulate an appropriate
- treatment plan based on an understanding of the prognosis for the teeth
- evaluate pulp status including an understanding of different pulp testing methods
- carry out appropriate treatment for minor soft tissue injuries

- understand the measures appropriate to prevent infection following injury
- evaluate luxation injuries and the appropriate treatment including the appropriate use of splinting
- treat injuries to the supporting bone
- carry out pulp treatment of traumatised teeth including pulpotomy (Cvek type), apexifcation for immature teeth and root canal therapy for the completed apex
- restore crown and crown/root fractures, including the use of composite resins, acrylic and porcelain crowns and veneers
- diagnose and treat root fractures
- understand the biological processes of hard tissue repair and resorption that occur following the replantation of teeth and clinical experience of the treatment after avulsion
- carry out appropriate treatment following injury to the primary dentition

Knowledge of:

- the orthodontic management of traumatised teeth
- recognising child physical abuse and be familiar with the correct treatment, notification procedures and follow-up
- diagnosing maxillo-facial injuries and arrange for appropriate treatment
- the recognition and treatment of anomalies of the developing permanent teeth that may arise from injury to the primary dentition

Familiar with:

- the classifcation, aetiology and epidemiology of dental injuries
- the mechanism of the response of the oral tissues to injury and wound healing following injury
- the principles of auto transplantation of teeth
- the principles of osseo-integrated implants
- the signs and symptoms of neurological injury
- the planning of space management following the loss of an anterior tooth including the orthodontic options available

X. Children with Special needs/Medically Compromised

Prepared by G. DAHLLOF

Competent to:

- provide comprehensive dental care to severely medically, physically, mentally or socially compromised children and adolescents
- provide comprehensive dental care for hospitalized children and adolescents
- participate in multidisciplinary management of oral disease in medically, physically, mentally or socially compromised children and adolescents
- prevent and manage oral motor disturbances in emotionally, physically or medically compromized children

Knowledge of:

- infections in the immunocompromised host
- prophylaxis for bacterial endocarditis
- CDC recommendations on infection control

Familiar with:

in-patient care of children admitted to pediatric, child rehabilitation, child psychiatry departments