THREE-YEAR TRAINING COURSE FOR DENTISTS

WITHIN

OROFACIAL MEDICINE

IN SWEDEN

- ORAL MEDICINE/HOSPITAL DENTISTRY/SPECIAL CARE (NEEDS) DENTISTRY -

ASSESSMENT AND
PRESENTATION OF A TRAINING PROGRAMME

STARTING IN THE YEAR 2004

FOREWORD

This report is based on an investigative study aimed at developing the basis for a training course for dentists at specialist level in Sweden for the care and treatment of adults with complex oral conditions linked to medical disease or disability.

The report presents

- the area of care, which in this report is referred to as "orofacial medicine"
- a description of the aims and a specification of the knowledge, skills and approach that dentists at specialist level within the field should have acquired and
- a three-year training programme as a basis for assessment for future approval of training at specialist level within the field.

The study was initiated by the Mun-H-Center in collaboration with the Public Dental Health organisation in the Västra Götaland region in Sweden. During the investigation many people shared their knowledge and experiences. Their contributions are gratefully acknowledged.

The investigation was carried out and the report collated by the undersigned, engaged by the Mun-H-Center.

Gothenburg, 20 January 2004

Inger v. Bültzingslöwen

FOREWORD II

Based on this report from 2004, a national three-year training program in orofacial medicine at specialist level for dentists in Sweden has since been introduced. To date, twelve dentists have completed the program and 15 more are in training. The Swedish National Board of Health and Welfare is reviewing the program and are currently investigating the possibility to introduce orofacial medicine as a recognised speciality in Sweden. If this will be the case, there will most likely be some revision of the training program.

It is a strong belief of The Swedish Society for Orofacial Medicine that a training program for dentists in orofacial medicine on specialist level will serve long-term patient safety. Recognition as a speciality would guarantee sustainability and further development of patient care in this important area of dentistry in the future.

Gothenburg, 5 October 2016

Inger von Bültzingslöwen

Contents

SUMMARY

The purpose of this report is to describe an existing area of care and to present a training plan to cover an anticipated future shortage of dentists with adequate competence within the field.

The field of orofacial medicine
In complex cases, the care and treatment of people whose oral health is linked to medical disease or disability requires knowledge at a level corresponding to specialist expertise. In this report, the prevention, diagnoses and treatments of the complex oral conditions which can occur in adults with serious diseases or disabilities are referred to as *orofacial medicine*. This field includes the current oral healthcare branches of both hospital dentistry and oral medicine.

Orofacial medicine covers the care and treatment of adult patients within dentistry

- whose disabilities or systemic diseases affect their orofacial health and function, and therefore also their quality of life, or
- whose orofacial health and function adversely affects, or is part of, the patients' disabilities or systemic diseases, and therefore also their quality of life,

and who in complex cases require specialist care and treatment.

Main medical areas of care within orofacial medicine
To clarify the field of orofacial medicine, in this report acute and chronic general diseases and conditions with concurrent oral problems are subdivided into four general *medical* areas. These areas correspond to the four principal fields within which services are provided in hospital dentistry and oral medicine:

- habilitation and rehabilitation
- psychiatry and psychology
- geriatrics
- internal medicine, oncology and infectious diseases

Main odontological areas of care within orofacial medicine
The four main medical areas face many common orofacial issues. The *orofacial* areas of care can largely be described as follows:

- extensive and complex dental care needs that are linked to a deterioration in general condition, or to disease or disability
- difficulties in performing dental treatments as a result of behavioural problems
- oral mucosal disorders and other oral medicine conditions

Common knowledge base
A disease or disability can give rise to a number of complex oral conditions within several of the orofacial areas of care referred to above. Conversely, a special orofacial problem can occur within several of the four medical areas of care. The medical and odontological areas of care are thus intimately linked and rest on a common odontological and medical knowledge base. This makes it clear that this specific field of knowledge rests on a common basis and reflects both patient needs and medical care needs.

Three-year training course
A three-year training course in orofacial medicine is presented in this report. During the three-year training course, the dentists will be given a broad knowledge within the entire field. The

course will consequently contain a major element of what is referred to in the recently presented study of specialist medical training as *common trunk*, a *common knowledge base* for a specialty.

Further specialisations
As with all specialities, the field of orofacial medicine contains areas for further differentiation that represent specialist excellence/enhanced specialist expertise within the discipline and within which research and development take place. Examples of such areas are oral medicine, dental anxiety, gerodontics, oral conditions in patients with rare diseases. Dentists who have completed the three-year course in orofacial medicine can, if they so wish, distinguish themselves in their further development within one of these or other areas of expertise within the discipline.

Description of aims for the three-year training course at specialist level within the field of orofacial medicine
Dentists who complete the three-year course will have expertise within the entire field and will be competent in the following:

- prevention, diagnostics and treatment of diseases and conditions within the field, which are of such severity that they require specialist care and treatment
- coordination of care in interaction with users, general dentistry professionals, other specialists within dentistry and with professionals in the medical field, municipal care and service sectors
- consultancy and supervision
- research and development
- teaching to general dentistry, other specialist dentistry and medical areas with the aim of ensuring that patients can be cared for on the basis of science and proven experience
- the overall planning of oral care for people with serious diseases or disabilities in counties and municipalities.

Scope of the training course
The training course will be full-time over three years and will cover clinical experience and training, theoretical courses, auscultations and case presentations, multidisciplinary interaction, disease prevention and treatment, health economics, epidemiology and ethics, scientific studies and pedagogic training, and practical teaching training.

1. INTRODUCTION

Systemic diseases and disabilities can be linked to serious conditions in the oral cavity, which require highly specialised odontological care. In this report, the prevention, diagnosis and treatment of such conditions in adults are referred to as "orofacial medicine". The field includes both the current branches within the field: hospital dentistry and oral medicine.

Patients with complex odontological conditions linked to disease or disability receive care within this sector. Dentists who currently treat these patients have often acquired considerable experience on their own initiative over the years. This has taken place alongside the development of oral care for people with diseases and disabilities, from a time when our level of knowledge was inadequate and patients only had access to acute dental care. Within medical care, serious conditions can be treated today which a few decades ago were untreatable. Medical developments are necessitating extensive collaboration between medical care and odontology to ensure that medical conditions do not deteriorate or become life threatening as a result of inadequate oral care.

Since 1999 the county councils in Sweden have had a statutory obligation[1] to ensure, in connection with the planning of dental care based on the needs of the population, that sufficient resources are available for patients with special dental care needs and that patient groups who require special support are offered dental care.

Developments have, however, lagged behind on the training side. Until recent years, there has been no structured further education at specialist level for the care and treatment of complex conditions in adult patients whose oral health is linked to disease or disability. The average age is high of dentists who currently work within the field at specialist level. If nothing is done, patients will not receive adequate care in the long term.

The purpose of this report is to describe an existing and defined oral healthcare field, consisting of hospital dentistry and oral medicine, and to present a training plan for an integrated three-year pilot course at a level corresponding to specialist training. The long-term aim is to compensate for an anticipated future shortage of dentists within the field, and secure and improve highly qualified oral care for adults with severe diseases or disabilities.

The report is divided into three parts:

The first part presents the field of orofacial medicine and describes its emergence and development in Sweden. An in-depth description places further the field in the context of medical and dental training.

The second part describes the aims and goals for the field of orofacial medicine in accordance with the Swedish National Board of Health and Welfare's guidelines for existing specialities within dentistry.

Part three presents a three-year training plan that is intended to provide a basis for assessing the future approval of training at specialist level within the field of orofacial medicine.

[1] Section 8 of the Swedish Dental Service Act (1985:125).

2. THE FIELD OF OROFACIAL MEDICINE

2.1. Presentation of the area of care

The area of oral care for people with diseases and disabilities has developed gradually over the past few decades. From a situation where dentists at centralised dental clinics in hospitals treated just a few patients with complex medical problems, and dentists at institutions and nursing homes provided acute dental care a few hours a week, many places in Sweden now have an extensive and structured hospital dentistry and oral medicine care system in place. This has been developed as a result of initiatives within public dental health and the commitment and involvement of individual dentists. These developments have taken place alongside the developments within the medical care sector and an increase in demand for care from patients, relatives and the medical care sector.

A description of the patient categories that may be in need for specialist care as a result of the link between oral health and disease or disability is given below.

2.1.1. Description of patient categories

Children, adolescents and adults with *developmental disorders* previously generally lived in institutions. Today, children and adolescents live with their parents in their own homes or in residential homes providing special services.[2] The knowledge development within this field of care is such that many children born with cognitive disorders, today can be given a more specific diagnosis than the previous, non-specific diagnosis "mental developmental disorder" that was commonly used in the past. Many disabilities have been shown to be the result of genetic disorders, while others may be the result of early brain damage. Some belong to the group of rare disorders.
Regarding medical and dental care, the goal of good health and care on equal terms for the entire population has been a guiding principle.[3] The best possible oral health, despite sometimes major treatment difficulties, is vital for both medical and social reasons. Our knowledge of how patients should be cared for has also improved. People with rare disorders and/or other developmental disorders with severe learning difficulties, and sometimes also with major physical disabilities, who cannot be treated within general dentistry, need specialist treatment by specially trained dentists. This is an obvious matter within children's dentistry and should also be so for adults.

People with *mental disorders* (psychiatric diagnoses) who previously lived in institutions, many in secure sections, can now generally live their lives out in the community with the aid of modern antipsychotic medication and various forms of psychotherapy. Many patients cope well with this, but others experience considerable difficulties. Antipsychotic drugs have been very important in enabling patients to lead better lives, but have also increased the burden on patients, for example, through effects on their oral health in the form of severe hyposalivation and xerostomia and associated side effects. For other reasons, such as behavioural problems and drug abuse, some patients also have severe oral problems and difficulty in maintaining

[2] In accordance with the Act (1993:387) on support and services for certain disabled persons (LSS).
[3] Section 2 of the Health and Medical Services Act (1982:763); Section 2 of the Dental Service Act (1985:125).

good oral hygiene. Quite a few patients also experience difficulties in mastering the dental care situation and maintaining continuity in their dental treatments. There is significant need for individually formulated care that takes the individual patient's problems into consideration.

Approximately ten percent of the population also suffer from severe dental phobia. The further development of dental care for these patients is essential, both within the general dentistry and at specialist level.

Many people in *the elderly population* with severe physical and mental problems can still live at home with the support of home-help services and home nursing. Others live in residential homes or nursing homes. The increasing proportion of elderly people in the population having their own teeth, sometimes with extensive treatment needs combined with treatment difficulties and medication, represents a major challenge for today's dental care system. Most patients have their dental care needs met through general dentistry. However, professionals within general dental practices need to be given training, which requires dentists with specialist expertise in the field. The option of consultations, and a referral body for complex cases, is needed for severely ill patients.

People with severe acute and chronic *somatic diseases* with oral manifestations can today be offered treatment to a greater extent than was previously the case. Also, our knowledge of oral mucosal diseases has improved, and many conditions can be mitigated or cured completely. Many patients with severe systemic diseases now live longer than previously, due to modern medical and surgical treatments aimed at systemic diseases. Examples include cancer patients who are treated with high doses of chemotherapy and patients who are treated with radiation directed at the head-and-neck region. These patients may develop very severe oral conditions. Patients, who have undergone certain types of organ transplants, have a risk of developing severe immunological reactions with subsequent oral manifestations. Our knowledge of the importance of oral health has improved so that health and medical care can be provided safely. In complex cases, the dental care of patients with severe somatic diseases requires specialist treatment.

2.1.2. Care and treatment at specialist level

Children and adolescents with severe diseases and disabilities in need of specialist dental care are normally treated within paedodontics. Adults with severe developmental disorders/diagnoses, rare disorders, severe mental disabilities or geriatric patients requiring specialist oral care have for many years been treated within hospital dentistry. In recent years, patients with various types of somatic disorders, such as those with haematological disorders and those who are to undergo organ transplants, have also been treated within hospital dentistry or oral medicine. Patients with oral mucosal disorders have for many years been referred to an oral medicine clinic, a hospital dental clinic or an oral and maxillofacial surgery clinic. These conditions often touch on other dental specialities, medical specialities and psychological and social fields of knowledge. Multiprofessional treatment is often necessary. Dentists at hospitals, dental faculties and other institutions have developed care services, often in collaboration with representatives of the medical discipline. By coordinating the care services, these dentists have also taken on an important role in the cooperation with other specialists. There is also a need for a referral body for children who have been treated within paedodontics, when they reach adulthood. Collaboration with the general dentistry is important to ensure that patients who do not require specialist care can be treated there.

Collaboration has been developed with medical and other care professionals, and training has been provided by hospital dentists to improve the ability of health care professionals to help people who are experiencing difficulties with oral hygiene. Nursing care professionals also need to have a greater understanding of oral changes in order to identify care needs.

Many dentists within hospital dentistry and oral medicine who treat the patient categories described above have acquired considerable expertise by attending university courses and other courses and through clinic training and experience combined with a special commitment to these patients. It is, however, very unsatisfactory that there has been no structured training for this complex field of dental care. As a result of the absence of specialist training with an established structure, the level of knowledge that is available depends entirely on the commitment of individual dentists. Unfortunately, some skilled dentists who acquired both knowledge and experience within this field through the years, have moved on to other areas of expertise within dentistry since hospital dentistry and oral medicine have not been a recognised speciality in Sweden. Furthermore, the high average age of experienced dentists within hospital dentistry and oral medicine will in the long term also lead to problems when they retire, if there is no continuity with young dentists, educated within the field.

To secure the future care of the adult population with severe diseases or disabilities, a three-year pilot training course within the field, at a level which corresponds to other specialist training courses, is presented here. The field covers both oral medicine and hospital dentistry.

In this presentation, the combined field is referred to as “orofacial medicine”.

2.1.3. Definition of the field of orofacial medicine

Orofacial medicine covers the dental care of adult patients

- whose disabilities or systemic diseases adversely affect their orofacial health and function, and therefore also their quality of life, or
- whose orofacial health and function adversely affects, or is part of, their disabilities or systemic diseases, and therefore also affects their quality of life,

and who in complex cases need care and treatment at specialist level.

2.2. Dental training at basic and specialist levels

To present how the field of orofacial medicine and its content relates to existing training structures, some facts about dental training in Sweden are provided below.

2.2.1. Training structure for dentists

The five-year basic dental training forms the basis for the general dental profession and gives general dentists the skills they need to treat dental conditions in the oral cavity. The medical subjects covered in the dental training are less extensive.

Working as a general practice dentist does not require specialist training, unlike the situation for general medical practitioners.

A dentist who wishes to acquire specialist expertise must undergo further training to acquire the knowledge, skills and approaches that are stipulated for each speciality. Specialist training within the medical profession requires at least five more years,[4] while within the dental profession it takes at least three years.[5] Authorisation to practise and competence as a specialist in Sweden are assessed by the National Board of Health and Welfare.[6]

2.2.2. The National Board of Health and Welfare's review of the structure for medical specialities

In 2003, the National Board of Health and Welfare presented a review of medical specialist training.[7] The report highlights the fact that there are no established general criteria for what, in principle, constitutes a medical speciality or what delimits one speciality from another. Some areas are made up of clearly defined and specific organ-related specialisation, whilst others lie more in *the combination of knowledge and context.*

The National Board of Health and Welfare's report on specialist medical training emphasises the term *common trunk*, an expression that is used by the EU's Advisory Committee on Medical Training (ACMT). The term common trunk means that, within many specialist fields in medical specialist training, a *broad common knowledge base* or common trunk is used as a starting point within a specific specialist field and that, in their training, students then work towards further specialisation. ACMT recommends such an approach within medical specialist training. According to the report, specialist training forms "part of lifelong learning, where *specialist expertise can be followed by further differentiation* of various kinds".

[4] National Board of Health and Welfare's regulations and general recommendations (SOSFS 1996:27) on medical specialisation, etc.
[5] National Board of Health and Welfare's regulations and general recommendations (SOSFS 1993:4) on dental specialisation.
[6] Chapter 3 of the Act on professional activity in the health services.
[7] *Läkarnas specialistutbildning och strukturen för medicinska specialiteter – en översyn.* National Board of Health and Welfare, 2003.

The National Board of Health and Welfare's view of the specialist training for medical doctors corresponds to the structure that is proposed in this report for orofacial medicine, both the combination of knowledge and context, a broad knowledge base so-called common trunk, and, finally, that the specialist may, if he or she so wishes, distinguish themselves by developing further specialist excellence/enhanced specialist expertise within certain areas of each speciality.

2.2.3. The field of orofacial medicine

An important aspect of the field of orofacial medicine is *the combination of knowledge and context.* A broad medical knowledge is required to correctly diagnose and treat the orofacial conditions which are part of, or a result of, systemic diseases or disabilities or which affect disabilities and systemic diseases. For this, comprehensive training is required in many medical fields far in excess of that which is covered in the five-year dental training programme. To provide comprehensive oral care that meets the complex individual needs of many patients with severe diseases or disabilities, knowledge which cuts across a number of dental specialities is also required.

A *broad knowledge base* that covers a number of medical and odontological fields is required to enable dentists to adequately diagnose and treat the complex oral conditions which can affect patients with severe diseases or disabilities.

As with all specialities, within the field of orofacial medicine there may be areas of need for *further enhanced specialist expertise* such as oral medicine,[8] dental anxiety/phobia,[9] oral/orofacial problems in patients with rare disorders,[10] oral motor dysfunction[11] and gerodontics[12]. (Figure 1).

2.2.4. Three-year specialist training course

During the three-year training period, students will be given a broad knowledge within the entire field of orofacial medicine, in what is required to provide patients with good and safe care. The training contains a significant element of common knowledge, or common trunk, for a broad speciality. Training within the field will also give the student knowledge within a number of areas, some of which may be the focus for later enhanced specialist expertise specialisations. Examples are given in Figure 1. Premature differentiation may, however, constitute a risk that a total perspective is ignored and that the care provided becomes

[8] Oral medicine is defined as the field within odontology which concerns the diagnosis and treatment of disorders in the oral cavity and neighbouring tissue, with a concentration on the oral manifestations of systemic disorders and medical behavioural conditions. Source: Swedish Oral Medicine Society.
[9] Dental anxiety is difficult to define and varies in severity. In a small group of patients, the level of anxiety is so great that patients are unable to seek help until an acute situation has arisen. Ds 1997:16.
[10] Small and less well-known disability groups include unusual illnesses/injuries which lead to severe disability and which affect no more than 100 in a million of the population.
[11] Oral motor dysfunction covers reduced muscle tone, reduced muscle strength and reduced or limited mobility in the oral musculature. Source: Sjögren L. Munmotorisk stimulering. Mun-H-Center förlag, 2002.
[12] Gerodontics is a multidisciplinary field which covers both the various odontological specialities and other scientific disciplines such as medicine, nursing science, social science and the humanities. Gerodontics covers geriatric dental care during the normal ageing process, gerodontology and, in connection with geriatric disorders, geriatric odontology. Source: Institute of Odontology, Karolinska Institutet.

segmented.[13] As pointed out, it is therefore important to provide a broad, integrated specialist training which covers all the diseases, disabilities and orofacial problems that are covered by the field.

The training course will cover clinical experience, theoretical training and case presentations, multidisciplinary interaction, dental care planning, prophylactics, ethics, health economics, epidemiology, scientific studies and project work, and behavioural science and pedagogic training and teaching.

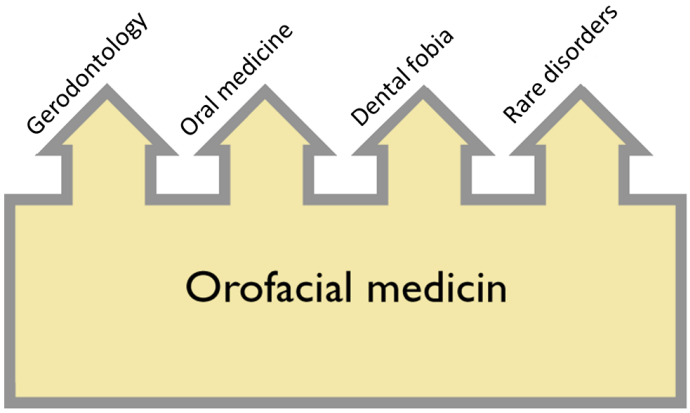

Figure 1. Schematic diagram illustrating the broad base of the three-year specialist training course in orofacial medicine with the option for individual specialists to after specialist examination develop future further differentiation/enhanced specialist expertise within various areas, some examples of which are shown in the figure.

[13] *Läkarnas specialistutbildning och strukturen för medicinska specialiteter – en översyn*. National Board of Health and Welfare 2003.

2.3. Detailed description of the field of orofacial medicine

In the absence of definitions of what constitutes a medical speciality and what separates one medical speciality from another, the National Board of Health and Welfare has, in the report on the review of specialist medical training, formulated a number of guiding principles for the development of a specialist structure for the medical profession as follows.

A medical speciality should

- be coherent in terms of knowledge and (to a certain extent) delimitate from other specialities – or form part of a group of specialities which are related – and consist of a *common knowledge base* and *a specific area of knowledge*
- be of reasonable scope and reflect a *reasonably large specific area of knowledge* and
- reflect the *needs of patients and the medical and healthcare system*.[14]

Transferring these principles to dentistry and the field of orofacial medicine, a description is presented below of the *common knowledge base* in terms of four primary medical areas (section 2.3.1). The *specific knowledge* is described in the form of a three orofacial areas of knowledge (section 2.3.2).

2.3.1. A common knowledge base in the form of four medical areas

To clarify the field of orofacial medicine, acute and chronic diseases and conditions with concurrent oral problems have been subdivided into four overall *medical* areas. This approach to subdivision was chosen because the oral conditions of patients within orofacial medicine are usually linked to diseases or disabilities. Subdivisions with similar implications have been used in many other countries, for instance, Australia.[15] The subdivision generally corresponds to the care specialisations for the various services provided within current hospital dentistry and oral medicine. These four areas are

- Habilitation and rehabilitation
- Psychiatry and psychology
- Geriatrics
- Internal medicine, oncology and infectious diseases.

It should be noted that this only refers to patients with serious conditions and complex issues who need treatment at specialist level within orofacial medicine. Most patients are treated within general dentistry if treatment within another dental speciality is not appropriate.

[14] *Läkarnas specialistutbildning och strukturen för medicinska specialiteter – en översyn*. National Board of Health and Welfare, 2003.
[15] Special Needs Dentistry as presented by the Royal Australasian College of Dental Surgeons: 1. Medically compromised patients, 2. The physically disabled, 3. The intellectually disabled, 4. The psychiatrically disabled, 5. Geriatric dentistry.

A more detailed specification of the four medical areas for the field of orofacial medicine is presented below. Some diagnostic groups could be grouped under several medical areas. The grouping of the conditions has been performed on the basis of treatment needs from an orofacial perspective.

- Habilitation and rehabilitation

This field of care includes significant congenital cognitive disorders, acquired brain injuries and physical disabilities. Examples include

- developmental disorders/learning disabilities/rare disorders
- neuropsychiatric conditions, for example, autism spectrum disorders
- congenital neurological disorders, for example, cerebral palsy
- acquired brain damage, for example, after trauma or a stroke
- neuromuscular disorders

- Psychiatry and psychology

This field includes mental disorders and disabilities and the side effects of medication. Examples include

- severe behavioural disorders
- anxiety conditions
- phobias such as severe dental anxiety
- depressions
- psychiatric diseases, for example, schizophrenia, manic depressive disorder
- eating disorders
- drug abuse

- Geriatrics

This field covers physical or mental disorders and their treatment, in addition to disabilities of the elderly, for example,

- dementia
- psychogeriatric conditions
- other age-related disorders
- multiproblematic cases in the elderly
- severe conditions in palliative care

- Internal medicine, oncology and infectious diseases

This field of care ranges over a broad spectrum of acute and chronic diseases and their treatments, that may present with oral manifestations. Many of the diseases listed below affect a not-insignificant proportion of the population, Certainly, many patients are not affected by orofacial problems. On the other hand, a number of patients develop severe oral conditions and need to be assessed and treated by a team with extensive knowledge of the link between systemic diseases and oral conditions. Examples from the field include

- haematological disorders and their treatments
- immune deficiency disorders and HIV/AIDS
- autoimmune disorders, for example, rheumatoid arthritis, systemic lupus erythematodes, Sjögren's syndrome
- endocrine disorders, for example, diabetes mellitus
- neurological disorders, for example, multiple sclerosis, epilepsy, Parkinson's disease
- cardiovascular diseases
- bleeding disorders
- nutrition disorders
- asthma and allergies
- lung diseases, for example, chronic obstructive lung disease
- chronic inflammatory diseases of the intestine, for example, Crohn's disease, ulcerous colitis
- side effects of radiation and chemotherapy treatments in cancer patients
- infectious diseases
- investigations, for example in cases of endocarditis
- before organ transplantation when complete freedom from infection is a medical requirement
- dermatological diseases with orofacial manifestations and other oral mucosal disorders, for example, lichen planus, erythema multiforme, ectodermal dysplasia, epidermolysis bullosa and pemphigoid.

2.3.2. Specific knowledge of oral manifestations within orofacial medicine

The oral manifestations can be similar for many diseases and disabilities, and yet require completely different treatment strategies, depending on the underlying causal factors. The specialist may act as a consultant with respect to the general healthcare system for less severe cases. The treatments often require complex decisions to be made and a close collaboration with other specialities within dentistry and medicine. A description is presented below on the basis of odontological areas and orofacial manifestations, subdivided into three overall orofacial care areas:

- Comprehensive and complex dental care needs which are linked to a deterioration in general condition, or to disease or disability
- Difficulties concerning care and treatment due to behavioural problems
- Oral mucosal disorders and other oral medicine conditions

- <u>Comprehensive and complex dental care needs linked to a deterioration in general condition, or to disease or disability</u>

Individuals with a long-term illness or a permanent disability may find it more difficult to maintain their dental health compared with healthy individuals. A disease, medication or disability may result in greater susceptibility to oral diseases. Poor dental health can in turn adversely affect the underlying disease.[16]

[16] *Tandvårdsförsäkring i omvandling* (Ds 1997:16), p. 12.

In many cases, dental care may contribute to a significant improvement in the ability of individuals to obtain sufficient nourishment, thereby improving their quality of life. If a person's general condition does not permit comprehensive dental treatment, the treatment may instead be aimed at keeping the patient free of infections in the oral cavity in order to counteract pain or other discomforts.[17]

Experience has shown that, in severe cases, dentists and dental hygienists in general dentistry need to consult their specialist colleagues to get support with treatment planning, individually adapted special solutions and the planning of preventive care. Respect for the patient's autonomy and self-determination must be maintained at all times. Without extensive experience, there is a risk of both over- and undertreatment. To make these difficult decisions and maintain a good overall quality of care, clinical and personal maturity and extensive experiences are required. The specialist in orofacial medicine has an important role to fulfil as a teacher and mentor to dentists within general dental care.

- Difficulties concerning care and treatment due to behavioural problems

People with serious mental disabilities (mental illness), some in combination with long-term drug abuse, often have multiple dental problems. The same may be seen in patients with behavioural disorders, dental anxiety and treatment difficulties caused by depression/anxiety/psychosis conditions together with severe xerostomia/hyposalivation resulting from medication. In these patients, dental anxiety can be part of a more general mental insufficiency. The patients do not have sufficient initiative or insight into their situation as a result of their illness. In a psychiatric study,[18] possible explanations were put forward as to why the dental care needs of mentally disabled patients are markedly greater; these included long-term medication with antipsychotics which result in an elevated risk of oral disorders caused by hyposalivation. The effects of a mental condition that hinders contact with dental professionals have also been suggested (dental anxiety, mental illness, lack of initiative under psychotic conditions, etc.).[19] In a study of patients with mental illness, 95% of patients had objective dental treatment needs, yet only 50% believed that they had such needs.[20] Knowledge of the patient's underlying disease and of the various problems set in their context is required.

People with severely reduced autonomy, severe behavioural disorders or severe physical or mental disabilities often need to be met with special attention and knowledge in the dental care situation. These disabilities affect the care that is provided in the dental care situation as well as the patients' oral health and ability to care for themselves.

Neurological injuries or diseases can cause extreme difficulties in the treatment situation, for example by involuntary movements and spasticity. There can be difficulties with both choice of therapy and performed treatment. A need for multiprofessional care is not unusual.

---

[17] *Propositionen om reformerat tandvårdsstöd* (Government Bill on reformed dental care support) (prop. 1997/98:112).
[18] *Välfärd och valfrihet* (SOU 1992:73).
[19] *Somatisk sjukdom och tandvårdsbehov hos personer med psykiska funktionshinder*. Report of the National Board of Health and Welfare, 2001.
[20] Study at Beckomberga Hospital.

Patients with eating disorders may experience serious oral complications, for example with comprehensive substance loss/tooth erosion due to acidity. Dental rehabilitation may sometimes require extensive prosthetic treatment by a specialist I prostodontics.

Dental anxiety/phobia
There is a broad spectrum of treatment modalities for severe dental phobia, such as dental phobia behavioural treatment by psychologist in cooperation with a dentist. Such treatments have also shown positive effects on psychosomatic and psychosocial parameters. A number of pharmacological treatments are also available, such as nitrous oxide treatment, premedication with benzodiazepines and, in severe cases, dental care under general anaesthesia.

Oral motor dysfunction
Impaired or reduced muscular function in the face, oral cavity and/or throat can cause respiratory, nutrition and speech difficulties in addition to drooling and increased dental wear. Reduced muscle strength and reduced motor functions or developmental injuries and deformities in the teeth and jaw may be the cause. Jaw development in young age may be affected. Habilitation and rehabilitation includes training exercises such as extra- and intraoral sensory and motor stimulation, chewing and swallowing training. Orthodontic and prosthetic treatment can be of benefit. Multiprofessional collaboration in oral motorfuncion teams may be required, with habilitation/rehabilitation specialists, speech therapists, occupational therapists and physiotherapists often having to be involved to produce a successful treatment result.

Extraordinary measures may need to be taken to establish good oral hygiene and to maintain function and aesthetics in the long term. Underpinning this is an overall treatment responsibility for the testing, training and follow-up of specially adapted oral hygiene aids for patients who are unable to use, or who have difficulty using, their arms/hands or who have reduced function in their oral cavity, throat or face. In many cases, it is a question of patients with very severe disabilities who are dependent on assistance 24 hours a day for their wellbeing.

In patients with brain damage, bruxism and occlusal dental wear during daytime are common. This can result in a risk not only of dental wear but also of distracting noise. The cause of dental wear is multifactorial and often the result of a combination of parafunction and erosion. Patients may need to be treated in collaboration between several specialists in a multi professional team.

Orofacial pain syndrome
Orofacial pain syndrome may be difficult to treat and requires extensive investigations and long-term treatment based on a multiprofessional collaboration between several dental and medical specialists to achieve an acceptable treatment result.

- Oral mucosal disorders and other oral medical conditions

This area covers the diagnosis and non-surgical treatment of oral manifestations of bacterial, viral or fungal-induced infections, bleeding, vesiculobullous and ulcerous changes, graft-versus-host reactions and other conditions. Examples of relatively common oral medicine conditions to be investigated and treated include aphthae, burning mouth syndrome, oral dryness, candida infections, herpetic changes, geographic tongue, oral lichen planus, lichenoid

reactions, pemphigoid, oral leukoplakia and HIV-related changes.[21] Mucositis, ulcerations and bleeding as a result of a serious hematological disorder or oropharyngeal cancer and their treatments are other oral conditions which may require specialist care and treatment to ensure correct diagnosis and treatment.

Impaired salivary secretion requires assessment and analysis and, in patients with Sjögren's syndrome, salivary gland biopsies to assess the degree of inflammation.

Mucosal changes which could indicate reactions to dental materials, and therefore a need for the assessment and treatment of this condition, can be treated in general dentistry, orofacial medicine or other specialist sector.

Radiation-induced changes
These changes need preventive measures and treatment before, during and after radiation treatment in the head-and -neck region. The treatment covers elimination of infections, prevention and treatment of mucosal injuries, measures relating to hyposalivation and intensive caries prophylaxis. Specialists in orofacial medicine form part of a multiprofessional team. After tumour treatment, many patients can be treated in the general dentistry by professionals with special knowledge of the field, often under the guidance of a specialist in orofacial medicine.

Investigation of infections
It is known that spread of oral bacteria may occur. The investigation of a possible odontogenic aetiology forms part of the medical investigation in the case of endocarditis, for example. Endocarditis patients are often admitted during their investigation and treatment. Before major general surgical operations on immunosuppressed patients, investigations and, in many cases also treatment, may be necessary.

Prior to organ transplants such as heart and bone marrow transplants, investigations are carried out to eliminate potential focal infections. If time permits, the necessary dental treatment may be provided in collaboration with the patient's home clinic in general dental care.

Extremely immunosuppressed patients require adaptation of the dental care to take into account the patients' general medical status and treatment. For example, patients who are being treated with high doses of chemotherapy are, during certain stages of their treatment, susceptible to both infection and bleeding. An invasive operation during a period with a low white blood cells count and/or a low thrombocyte count can be highly hazardous for the patient if adequate medical precautions are not taken in direct connection with the operation.

[21] According to the website of the European Association of Oral Medicine, www.eastman.ucl.ac.uk

3. AIMS AND GOALS FOR TRAINING IN OROFACIAL MEDICINE

This description of the aims and goals for the field of orofacial medicine follows the guidelines issued by the National Board of Health and Welfare for recognised specialities.[22]

Dentists who wish to acquire specialist expertise within dentistry must have practised as a general dental practitioner for a minimum of two years after dental exam. The three-year further clinical training to become a specialist shall take place under supervision of a specialist in a specialist clinic as set forth by the National Board of Health and Welfare,[23] and include theoretical courses.

The descriptions of aims and goals for each speciality outlines the fundamental features and the knowledge, skills and approaches that dentists must possess in order to fulfil the requirements for specialist expertise within the speciality in question. The descriptions shall include the following subdivision.

3.1. Delimitation and aims
3.2. Goals for the diagnoses and treatments within each speciality
1. Be able to manage and carry out certain diagnoses and treatments in an independent and experienced manner (A)
2. Have a good knowledge of, and certain experience in, less common conditions and measures where consultation with a more experienced specialist or referral to another care unit is an appropriate alternative (B)
3. Have a theoretical knowledge of, or have attended in the management/treatment of, unusual conditions or the like, the investigation, diagnosis and treatment of which require considerable technical and personnel resources and where the decision often concerns when and to whom the patient should be referred (C)

3.3. Prevention
3.4. Collaboration within and outside the dental care system, including the medical and healthcare system, etc.

[22] The National Board of Health and Welfare's provisions and general recommendations (SOSFS 1993:4) on dental specialisation.
[23] Section 12 of Ordinance (1984:545) on the recognition of professional qualifications.

3.1. Delimitation and aims

The field of orofacial medicine covers an in-depth knowledge of prevention, diagnosis and treatment of diseases in the oral cavity that are often linked to systemic diseases or disabilities. It covers both systemic diseases and disabilities that affect oral health and function and therefore also quality of life and, conversely, oral health and function which form part of or affect disabilities and systemic diseases, and therefore, quality of life.

Specialist training in orofacial medicine shall lead to specialist knowledge and skills concerning the prevention, diagnosis and treatment of oral conditions that are often linked to general diseases or disabilities. It includes a particularly detailed knowledge and skills relating to the care and treatment of people with serious diseases or with severe physical or mental disabilities, developmental disorders, behavioural disorders or dental phobia which markedly complicates dental treatment. The specialist training in orofacial medicine shall also provide specialist knowledge and skills concerning treatment of patients with oral mucosal disorders that are difficult to diagnose and treat, both local disorders and those that are linked to serious acute and chronic somatic disorders and oral motor dysfunction.

Students who have completed the training shall possess expertise within the entire field of orofacial medicine and therefore be competent in

- the prevention, diagnosis and treatment of diseases and conditions within the field which are so severe that they require specialist care and treatment
- coordination of care in interaction with users, professionals in general dentistry, other specialists within dentistry, and with professionals in the medical field, municipal care and local authority nursing and other service sectors
- consultation and mentoring
- research and development
- the provision of teaching to general dentistry, other specialist dentistry and medical areas with the aim of ensuring good dental care and treatment and
- the overall planning of oral care for people with serious diseases or disabilities in counties and municipalities.

.

Specialists in orofacial medicine shall have broad medical expertise to integrate the odontological and medical aspects of a patient’s oral problems and to interact with medical experts. This will require extensive training in medical subjects significantly in excess of what is covered in the five-year dental school. To provide comprehensive care that meets the complex individual needs of patients with serious diseases or disabilities, knowledge that cuts across a number of dental specialities will also be necessary and will require additional knowledge and skills at specialist level.

The specialist training shall provide the knowledge that is required in, among other areas, internal medicine, oncology, infectious diseases, pharmacology, ear-, nose- and throat disorders, cognitive disorders, geriatrics, psychology, psychiatry and neuropsychiatry, as well as maxillofacial surgery, endodontics, periodontology, radiology, prosthetic dentistry and paedodontics.

3.2. Goals for the diagnoses and treatments within orofacial medicine

3.2.1. Be able to carry out the following, independently and routinely (A)

- diagnosis and treatment of extensive and complex dental care needs linked to a deterioration in general condition, disease or disability, and adaptation of the dental care accordingly
- diagnosis and treatment of changes in the oral cavity, jaw and surrounding tissue that are linked to systemic diseases and their treatment and assessment of the link
- adequate measures in treatment difficulties caused by different disabilities, behavioural disorders or ageing, and understanding and correct care and treatment of patients and individualisation of the care provided
- ethical decision-making and discussion of care problems
- diagnosis and treatment of mucosal disorders in the oral cavity
- differential diagnosis and the treatment of severe xerostomia/hyposalivation
- diagnosis of dental anxiety/phobia and treatment with evidence-based methods aimed at the condition
- various forms of sedation
- treatment under general anaesthesia
- diagnosis and treatment of eating disorder–induced oral changes
- investigation of infections
- diagnosis and treatment of chemotherapy and radiation induced oral changes
- testing of aids for oral care and dental treatment, for the stimulation of oral motor function and for eating and drinking, in collaboration with speech therapists and occupational therapists
- overall planning of preventive strategies for patients, taking into account the patient's diseases or disabilities
- surgical operations and the special considerations that must be taken in account with operations on weakened and immunosuppressed patients and patients who are susceptible to bleeding

3.2.2. Possess a good knowledge and have a certain amount of experience of the following (B)

- diagnosis and treatment of severe orofacial dysfunction such as speech difficulties, drooling and nutritional difficulties
- diagnosis and treatment of sleep apnoea
- comprehensive prosthetic rehabilitation
- treatment of patients with pain and bruxism with increased dental wear, together with other specialists
- the way in which healthcare, medical care, nursing and social services are organised in county councils
- national guidelines for various diseases and local care programmes within a county council
- the planning of care for people with disabilities and support under Act (1993:387) on Support and Service for Persons with Certain Functional Impairments (LSS)
- overall planning of oral care programmes within a county council
- research and development
- multiprofessional collaboration

3.2.3. Possess a theoretical knowledge of, or have attended in, provision of (C)

- general anaesthesia
- care within internal medicine
- the care of oncological and haematological disorders
- psychiatric care
- geriatric and psychogeriatric care
- the care of infectious diseases, including complex infection risks
- habilitation and rehabilitation
- nutrition difficulties

3.3. Prevention

Specialists shall be able to take responsibility for the organisation of preventive work and care in a county council area for people with diseases and disabilities. Specialists must therefore be able to collaborate with other care professionals within county councils and municipal authorities and with general dentistry. This includes both taking overall responsibility for planning and acting as a consultant and adviser for general dentistry and planning individual preventive care for residents at nursing and residential homes and for individuals in their own home. This also applies to the organisation and planning of teaching and instruction for patients, relatives and care professionals in county councils and municipal organisations and contact with personal assistants and trustees. Specialists in orofacial medicine shall possess a good knowledge of the organisation of care and nursing in county councils and municipalities.

3.4. Collaboration within and outside the dental care system, including the medical and healthcare system, etc.

It is vital that specialists in orofacial medicine have knowledge and experience of collaboration with medical specialists, dental faculties, other specialist dental care professionals and the general dental care system. Specialists must also be able to interact with patient associations and be attentive to the needs of patients, users and relatives.

4. TRAINING PLAN

It is proposed that this training plan be used as a basis for a three-year training course at specialist level within the field of orofacial medicine. The aim of the course is to provide a broad knowledge base at specialist level within the entire field concerning the care and treatment of people whose oral health is linked to diseases and/or disabilities in accordance with the definition and the general description of goals within the subject area as described in this report.

4.1. Tutorship, training plan and plan for follow-up

The National Board of Health and Welfare's provisions and general recommendations (SOSFS 1993:4) on dental specialisation has set out requirements for the tutor, with regard to clinical knowledge, scientific experience and pedagogic insight. Requirements are also imposed on the training clinic concerning all-roundedness and the presence of other specialists in addition to the tutor.

To enable an assessment as to whether a training course for specialist dentists within the field of orofacial medicine should be approved, the following is presented in accordance with SOSFS 1993:4:

1. information on the expertise of the tutor/tutors
2. training plan relating to the description of goals for the speciality that the application concerns
3. the patient base of the clinics
4. plan for the follow-up of skills and knowledge of the dentists who are undergoing the specialist training and
5. information if some of the specialisation practice will be assigned to other clinics.

4.1.1. Information on the expertise of the tutor/tutors

Information on tutor expertise har to be documented.

4.1.2. Training plan relating to the description of goals for the speciality that the application concerns

Clinical training
The clinical practice will take place over 3.5 days (28 hours – 70%) per week. This time will include patient administration work.

Theoretical training
Trainees in orofacial medicine may devote 1.5 days (12 hours – 30%) per week to courses, seminars, teaching, literature studies and research. During the first and second semesters, the trainee will outline a research project which should be further developed during the training.

Planned seminars in accordance with a separate schedule will be held. An individual training plan shall be documented for each trainee.

Multidisciplinary collaboration
Joint seminars are planned together with other specialist clinics that provide specialist dental training, to promote multidisciplinary meetings and discussion. The trainee dentists will also auscultate at appropriate hospital clinics in the region. Auscultation will also take place at anaesthesia clinics and various nursing establishments. The trainee will take part in patient rounds. Trainees will also acquire knowledge of various municipal services. Therapy planning meetings will be held with representatives of other dental specialities.

Pedagogic activity
The trainees will plan and independently carry out teaching activities aimed at dentistry students who are undergoing basic education, at care professionals at various levels within the healthcare and medical care system or at general dentistry. The trainees will also plan and lead seminars. Emphasis will also be placed on meetings and collaboration with, and the training of, patients, relatives and user organisations.

Prophylactics and social odontology
Considerable emphasis will be placed on training in mechanisms for health-promoting measures. The trainee dentists will receive training in the planning of activities. Courses will be planned in health economics, epidemiology, quality development, ethics and so forth.

Scientific work
During their study period, the trainees will each carry out a personal project. To facilitate fulfilment of this project, teaching will be provided in research methodology in collaboration with the faculty. The results of the project will be presented, preferably at a national or international conference. A report, or if possible a scientific article, will be prepared. The Bachelor's degree (Master's degree) may be taken. This will require additional work in the form of a framework report and an article, which must be defended at a seminar.

Other
The trainee dentists will participate in national meetings, and preferably in an international meeting within the field. Three months' clinical practice or research may be undertaken abroad to acquire expanded knowledge.

4.1.3. The patient population

Information on the patient population for the clinic where the trainee is practising is to be presented separately.

4.1.4. Plan for the follow-up of skills and knowledge of the trainee

The trainee in orofacial medicine will keep a diary of all patients whom they examine or treat. A written report and evaluation of 25-30 well-documented patient cases will be prepared and the trainee dentists' knowledge development will be monitored and subjected to assessments through the course. A final oral examination will be held.

4.2. General regulations

4.2.1. Acceptance procedure

- Written application after advertising
- Personal interview

4.2.2. Authorisation requirements

- Degree in dentistry and general practice corresponding to at least two years' full-time practice
- Good written and oral linguistic skills in Swedish
- Swedish licence to practice dentistry

4.2.3. Principles for assessing qualifications

In the assessment of the applicants' qualifications, the same principles that are used for appointments to specialist dental positions in Sweden will apply.

4.2.4. Reference group

A reference group shall

- act as an advisory and support body during the training, and
- consist of people with a special insight into the field.

4.2.5. Course manager

The person/persons responsible for the training shall

- have overall responsibility
- be responsible for ensuring that the training programme is set up, evaluated and adjusted in its entirety in consultation with the principal tutor and after consultation with the reference group
- modify the training programme for the individual trainee dentists in consultation with the principal tutor and the trainees themselves
- be responsible for ensuring that ongoing follow-up, knowledge assessment and quality assurance of the training is carried out and
- be responsible for ensuring that the trainee dentists complete the training.

4.2.6. Principal tutor

The principal tutor shall

- have extensive experience within the field
- have a research education, preferably at PhD level. If the principal tutor does not possess a PhD qualification, he or she should establish links with such expertise in order to provide tutoring concerning the scientific part of the training
- be responsible for operative principal tutorship, both theoretically and practically, and coordinate the training
- be responsible for ensuring that there is a system in place which assigns suitable patient cases to the trainee
- plan theoretical and clinical seminars, courses and research projects
- hold regular, scheduled therapy meetings with the trainees
- maintain contact with a contact person at the auscultation clinics
- be responsible for regular follow-up of the students' progress
- carry out quality control on the training.

4.2.7. Clinical tutors

Clinical tutors will assist the principal tutor with regard to the clinical aspects.

4.2.8. Contact person

At clinics where auscultation will be carried out, a special contact person will be appointed who will be responsible for ensuring that the trainee is given the opportunity to take part in the aspects which form part of the purpose of the auscultation.

4.2.9. Individual training plans

For each trainee, an individual training plan will be formulated and approved.

4.2.10. Knowledge assessment and examination

Continuous follow-ups will be carried out of the trainee dentists' knowledge development and to check that the training plan is being followed. A final report on 25-30 patient cases and an oral final examination with an external examiner will conclude the training.