

Scandinavian Fellowship for Oral Pathology and Oral Medicine: statement on oral pathology and oral medicine in the European Dental Curriculum

C. Kragelund¹, J. Reibel¹, E.S. Hadler-Olsen², J. Hietanen³, A.C. Johannessen⁴, B. Kenrad⁵, K. Nylander⁶, M. Puranen⁷, B. Rozell⁸, T. Salo⁹, S. Syrjänen¹⁰, T.M. Sølund¹¹, I. van der Waal¹², J.E. van der Wal¹³, G. Warfvinge¹⁴

¹Department of Oral Medicine, Section of Oral Pathology & Medicine, University of Copenhagen, Copenhagen, Denmark; ²Department of Medical Biology, University of Tromsø, Tromsø, Norway; ³Department of Oral Pathology, University of Helsinki and HUSLAB, Helsinki, Finland; ⁴The Gade Institute, Section of Pathology, University of Bergen, Bergen, Norway; ⁵Department of Oral Surgery & Oral Pathology, Aarhus University, Aarhus, Denmark; ⁶Department of Pathology, University of Umeå, Umeå, Sweden; ⁷Oral and Maxillofacial Department, Kuopio University Hospital, Kuopio, Finland; ⁸Department of Laboratory Medicine, Karolinska Institute, Stockholm, Sweden; ⁹Department of Diagnostics & Oral Medicine, University of Oulu, Oulu, Finland; ¹⁰Department of Oral Pathology & Oral Radiology, University of Turku, Turku, Finland; ¹¹Department of Oral Biology, University of Oslo, Oslo, Norway; ¹²Department of Oral Surgery & Oral Pathology, VU University Amsterdam, Amsterdam, The Netherlands; ¹³Department of Pathology, University M C Groningen, Groningen, The Netherlands; ¹⁴Department of Oral Pathology, Malmö University, Malmö, Sweden

Abstract

This statement was created by subject representatives for oral pathology and oral medicine from fourteen universities associated to the Scandinavian Fellowship for Oral Pathology and Oral Medicine.

Background: For many years, dentists have migrated between the Scandinavian countries without an intentionally harmonized dental education. The free movement of the workforce in the European Union has clarified that a certain degree of standardization or harmonization of the European higher education acts, including the dental education, is required. As a result of the Bologna process, the Association for Dental Education in Europe and the thematic network DentEd have generated guidelines in the document “Profile and Competences for the European Dentist” (PCD). This document is meant to act as the leading source in revisions of dental curricula throughout Europe converging towards a European Dental Curriculum. In order to render the best conditions for future curriculum revisions providing the best quality dentist we feel obliged to analyse and comment the outlines of oral pathology and oral medicine in the PCD.

Methods: The representatives agreed upon definitions of oral pathology and oral medicine, and competences in oral pathology and oral medicine that a contemporary European dentist should master. The competences directly related to oral pathology and oral medicine were identified, within the PCD.

Results: The subject representatives suggested eighteen additions and two rewordings of the PCD, which all were substantiated by thorough argumentation.

Perspectives: Hopefully, this contribution will find support in future revisions of the PCD in order to secure the best quality dental education.

Keywords: Oral Pathology, Oral Medicine, Curriculum, Scandinavia

Dental education in Scandinavia has been regulated by national Higher education acts and Boards/ministries of health and welfare. Although these curricula have not been internationally harmonised, dentists have migrated between the Scandinavian countries for a long time without much problems. However, the increasing migration within the common European market has prompted a common view on the competence of a dentist.

As a result of the Bologna process, the Association for Dental Education in Europe (ADEE) and the thematic network DentEd, have generated guidelines defining the “Profile and Competences for the European Dentist” (PCD). The first version was published in 2004 (1); in 2008 the document was updated and in August 2009 the latest version was published (2).

The PCD document is structured into seven domains representing broad categories of professional activity and concerns that occur in the general practice of dentistry. Each of these is divided into major and supporting competences. ADEE “envisages that all European schools will adhere to the major competences as described in this document, but that supporting competences may vary in detail between schools” (2). Thus, the PCD is meant to act as the leading source in revisions of dental curricula throughout the European dental schools converging towards a European Dental Curriculum. This process of harmonising dental education is reflected by appropriate changes in the national Higher education acts.

Oral Pathology and Oral Medicine

As subject representatives we feel obliged to analyse and comment on the presence of oral pathology and oral medicine in the PCD in order to render the best conditions for future curriculum revisions providing the best quality dentist. Both in the PCD and in clinical practice, it is difficult to separate oral pathology from oral medicine and at some schools these subjects are taught together whereas at others, they are taught separately. In order to assess their respective proportions in the PCD, it is necessary to define Oral pathology and Oral medicine. At the 38th meeting of the Scandinavian Fellowship for Oral Pathology and Oral Medicine (SFOPOM) in Stockholm 2009, these definitions were agreed upon:

Oral pathology: Causes, progression, and effects of diseases in the oral mucosa, teeth, jaws and salivary glands and knowledge necessary for understanding diagnosis, prevention and management of such diseases. Oral pathology in general includes: classification including terminology and definitions, epidemiology, aetiology and pathogenesis including molecular and genetic aspects, symptoms, morphology/diagnosis (macro/micro), progression and prognosis, indications for and interpretation of diagnostic tests.

Oral medicine: Aetiology, pathogenesis, epidemiology, diagnosis, prevention, and management of oral disorders and symptoms, which may be either primary oral diseases or manifestations of systemic diseases and which may be related to medically complex states including side effects of medical treatments.

A general objective in modern dental training is that the dentist acquires a holistic view of the patient and takes the responsibility as the oral physician (3) and hence, competences within Oral pathology and Oral medicine are important to the contemporary dentist.

Competences in Oral Pathology and Oral Medicine

At the meeting in Stockholm, the participants agreed that the dentist more specifically should be able to:

- synthesise diagnosis, differential diagnoses, and prognosis of common diseases and disorders of the oral mucosa, teeth, jaws and salivary glands

- comprehend cellular and molecular processes, aetiology, pathogenesis, and classifications of diseases/disorders of the oral mucosa, teeth, jaws and salivary glands
- evaluate (react, treat, prevent, and/or refer) diseases and disorders in the maxillofacial area and maxillofacial manifestations of systemic diseases and medical disorders on the basis of clinical presentation (incl. radiography) and/or histological diagnosis
- undertake soft tissue biopsies of presumably benign lesions
- be capable of detailed professional communication with other health professions (orally and in writing).

These competences are mentioned in the PCD and according to our definitions; the competences directly related to oral pathology and oral medicine are given in Table 1. However, we do believe that they need to be clarified. On behalf of the SFOPOM we suggest that the following changes will be taken into consideration as part of the next revision of the PCD.

Suggestions for revision of PCD

DOMAIN I: PROFESSIONALISM

Major competence: Professional Attitude and Behaviour

Addition in bold:

On graduation, a dentist must be competent in a wide range of skills, including Investigative, analytical, problem solving, planning, communication, and presentation skills and has to demonstrate a contemporary knowledge and understanding of the broader issues of dental practice. The dentist should understand the relevance of these issues, including research, team building and leadership skills in clinical dental practice. **The dentist should have a holistic view regarding oral health as an integral part of the general health.**

Argument: The importance of considering oral health in a holistic perspective must be emphasised (see 1.5 below)

Supporting competences

On graduation, a dentist must:

be competent at:

Rewording:

- (1.5) displaying a holistic approach towards patients involving psychological, ethnic, social, and lifestyle issues.

Argument: In order to fulfil the task of a contemporary dentist it is crucial that the patient is approached holistically as the general health, ethnic, social, and lifestyle factors affect the oral health status and intervention possibilities.

DOMAIN III: KNOWLEDGE BASE, INFORMATION AND INFORMATION LITERACY

1. Major competence: Application of Basic Biological, Medical, Technical and Clinical Sciences

Supporting competences

On graduation, a dentist must:

have knowledge of:

Rewording:

- (3.10) the principles of pharmacology and therapeutics including pharmacokinetics, pharmacodynamics, pharmacogenetics, mode of action, interactions, and side effects and their relevance to clinical dental practice.

Argument: pharmacology and therapeutics are rapidly changing disciplines. The dentist must understand the principles of pharmacology and therapeutics and their relevance in order to prescribe drugs and identify possible oral side effects and adverse drug reactions in the oral cavity (4)

Addition:

- (3.12+) common oral side effects from systemic medication.

Argument: the demographic composition of the European population is changing towards a higher proportion of elderly people among whom many are exposed to daily medication (mono- and polypharmacy) for systemic disease (5). Many side effects influence the oral health inappropriately e.g. reduced salivary secretion (6, 7).

DOMAIN IV: CLINICAL INFORMATION GATHERING

Supporting competences

On graduation, a dentist must:

be competent at:

Addition:

- (4.17+) taking a biopsy and/or cytological smear on indication.
(4.17+) the procedures for submitting specimens for histological diagnosis
(4.17+) understanding and interpreting diagnostic reports and take adequate actions.
(4.17+) microbiological sampling

Argument: in order to perform an adequate mucosal examination, the dentist must know when and where a biopsy is indicated, be competent at taking a biopsy, and be able to understand and interpret the diagnostic report (8).

DOMAIN V: DIAGNOSIS AND TREATMENT PLANNING

Major competence: Decision-making, Clinical Reasoning and Judgement

Addition in bold:

On graduation, a dentist must be competent in decision-making, clinical reasoning and judgement in order to develop a differential, provisional or definitive diagnosis by interpreting and correlating findings from the history, clinical, radiographic, and **histological** examination and other diagnostic tests, taking into account the social and cultural background of the patient. A dentist must be competent at formulating and recording a diagnosis and treatment plan which meets the needs and demands of patients. A dentist should recognise those treatments that are beyond their skills and need to be referred on for a specialist opinion and/or treatment.

Supporting competences

On graduation, a dentist must:

be competent at:

Addition in bold

- (5.2) recognising the presence of systemic disease and knowing how the disease and its treatment, including present medication **and possible oral side effects**, affect the delivery of dental care.

Argument: A contemporary dentist must be able to specifically recognise common oral side effects and contribute to the increase of knowledge by reporting side effects to the appropriate authorities.

Additions:

- (5. 21+) recognising the clinical features of oral mucosal abnormalities.
- (5. 21+) recognising the clinical features of salivary gland abnormalities.
- (5. 21+) recognising the clinical and radiological features of jaw abnormalities.

Argument: the dentist encounters the patient on a regular basis and should be the healthcare person educated and trained to recognise salivary and jaw abnormalities.

DOMAIN VI: THERAPY: ESTABLISHING AND MAINTAINING ORAL HEALTH

Major competences:

On graduation, the dentist must:

be competent at:

Addition in bold:

- (6.11) diagnosing and managing common oral mucosal, **salivary gland and jaw** diseases and disorders.

Argument: the dentist is the healthcare person educated to treat common mucosal, salivary gland and jaw diseases or disorders.

Additions in bold:

- (6.20) prescribing and monitoring the effects of appropriate pharmaceutical agents, including the chemical control of dental plaque, **and be aware of risk factors e.g. antibiotic resistance and drug interaction.**

Argument: As the European population grows older, the use of drugs increases and hence, the risk of drug interactions. The general dental practitioner must be aware of the risk of interactions when prescribing drug, and needs the knowledge to avoid it. The increase in the prevalence of multi-resistant bacteria and fungi is a serious threat to modern health care. The dentist has to be aware of the risk of promoting microbial drug resistance both in an individual and global perspective.

- (6.59) participating in the diagnosis and proper referral of the patient with **complicated** or life-threatening oral mucosal diseases including oral cancer.

Argument: Not common or not life-threatening complicated diseases of the oral mucosa need to be recognised and properly referred.

have knowledge of:

Additions:

- (6.69+) the effects of abuse of alcohol and narcotic drugs on the oral health

Argument: Alcohol and drug abuse may compromise the oral health and the dentist should be aware of these patients' special needs.

- (6.69+) the impact of eating disorders on the oral health

Argument: The dentist must recognise typical oral signs of eating disorders and be aware of these patients' special needs.

- (6.69+) the diagnosis and proper referral of the patient with complicated or life-threatening salivary gland diseases/disorders.
- (6.69+) the diagnosis and proper referral of the patient with complicated or life-threatening jaw diseases/disorders.

Argument: It is important that the dentist can adequately handle (incl. proper referral) all patients with serious or life-threatening disease of the oral tissues.

DOMAIN VII: HEALTH PROMOTION

Supporting competences

On graduation, a dentist must:

be competent at:

Addition in bold:

- (7.2) understanding the complex interactions between oral health, nutrition, general health, drugs and **local and systemic** diseases that can have an impact on oral health care and oral diseases.

Argument: To emphasise the importance of knowledge about the effects of systemic disease.

The PCD process

We are delighted to realise that oral pathology and oral medicine has been upgraded significantly in the latest PCD. This is concreted in eight new supporting competences and also by moving the issues of oral pathology and oral medicine to higher competence levels.

The authors of the PCD generously encourage specialist educators/subject representatives to detail more specific competences and learning outcomes in relation to their specialty and we embrace this invitation with the above suggested changes. We gratify this possibility and hope that this contribution will find support in future revisions of the PCD.

Perspectives

After a general approach with review of the Profile and Competences document, we will create a subject specific document for oral pathology AND oral medicine. Those that are available are concerned with either oral pathology OR oral medicine and SFOPOM takes a stand for the integration of the two subject areas. In accordance with the PCD, the curricular content will be defined from a clinical competence perspective.

Acknowledgment

All participants at the Curriculum Discussions at the SFOPOM meetings in Copenhagen 2008 and Stockholm 2009

References

1. Plasschaert AJ, Holbrook WP, Delap E, Martinez C, Walmsley AD; Association for Dental Education in Europe. Profile and competences for the European dentist. *Eur J Dent Educ* 2005; **9**: 98-107.
2. Cowpe J, Plasschaert AJ, Harzer W, Vinkka-Puhakka H, Walmsley AD; Association for Dental Education in Europe. Profile and competences for the European dentist. Update 2009. http://www.adee.org/cms/uploads/adee/TF_I_V2_September2009.pdf
3. Nash DA. Why dentists should become oral physicians: A response to Dr. Donald Giddon's "Why dentists should be called oral physicians now". *J Dent Educ* 2006; **70**: 607-9.
4. European Commission, Advisory Committee on the Training of Dental Practitioners - Core Knowledge and Understanding (XV/E/8011/3/97-EN)
5. European Commission. Europe's demographic future: Facts and figures on challenges and opportunities. Luxembourg: Office for Official Publications of the European Communities, 2007. http://ec.europa.eu/employment_social/spsi/docs/social_situation/demo_report_2007_en.pdf
6. Torpet LA, Kragelund C, Reibel J, Nauntofte B. Oral Adverse Drug Reactions to Cardiovascular Drugs. *Crit Rev Oral Biol Med* 2004; **15**: 28-46.
7. Sreebny LM, Schwartz SS. A Reference Guide to Drugs and Dry Mouth--2nd Edition. *Gerodontology* 1997; **14**: 33-47.
8. General Dental Council. The first five years. A framework for undergraduate education, 2nd edn. UK: General Dental Council, 2002. http://www.gdc-uk.org/pdfs/first_five_years_2002.pdf.