

## Sub-specialty training in head and neck surgical oncology in the European Union

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**Abstract** Sub-specialty training in otorhinolaryngology and head and neck surgery (ORL-HNS) is not standardised across European Union (EU) states and remains diverse. The objective of this study was to assess the current status of sub-specialty training programmes in head and neck surgical oncology within the European Union (EU-15). A postal questionnaire was distributed to 41 representative members of the European Federation of Otorhinolaryngological Societies (EUFOS) in the specialty of ORL-HNS in 15 EU states. The questionnaire included questions regarding the sub-specialty practice, structure, length, access, examination procedures and certification, future developments and also a space for individual comments. Thirty-one respondents (75.6%) from major training centres in 15 different European countries replied. Overall, the data revealed major diversity for all aspects analysed, between and within the different European countries. Only four EU states had formal sub-specialty training in head and neck surgical oncology. This includes Finland, Germany, The Netherlands, and the United Kingdom. In the rest of EU

states, the last year of residency programmes is often spent as an introduction to one of the sub-specialties. Sub-specialty training in head and neck surgical oncology within the EU at present is clearly underdeveloped. Issuing a European diploma in ORL-HNS could be an initial step towards assessing the skills acquired during specialist training within the different European countries and formalising specialist training. This would establish a uniform measure for evaluating candidacy for sub-specialty training both across the EU and for USA, Canada or Australia.

**Keywords** Sub-specialty · Interface · Otorhinolaryngology · Head and neck surgery

### Introduction

Specialisation within medicine occurs as a result of advances made in a clinical field or the development of novel diagnostic or therapeutic measures. It typically follows the increasing body of knowledge and the growth of science and technology. As a result new specialties are created and established ones are sub-divided. Otorhinolaryngology is no exception. Otorhinolaryngology has traditionally been referred to as ear, nose and throat (ENT) surgery. However, although this title is descriptive, it does not acknowledge the fact that the specialty has expanded rapidly since its inception more than 130 years ago. Otorhinolaryngology and ophthalmology were the first two disciplines in medicine to emerge as distinct specialties.

Directive 2001/19/EC of the European Parliament and the Council, amending all previous directives on the recognition of professional qualifications concerning the medical profession refers to the specialty as “oto-rhino-laryngology”. As a result, the title of the specialty as it is still recognised

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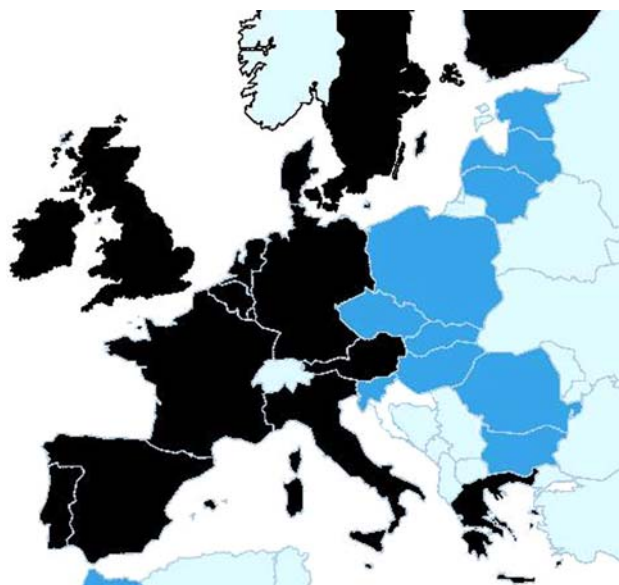
by the General Medical Council in the United Kingdom is “otolaryngology”. Nevertheless, otorhinolaryngology and head and neck surgery (ORL-HNS) is one of the most diverse specialities, allowing specialists to apply both their medical and surgical skills in the management of patients, and affording the specialists the chance to work with a broad spectrum of patients, depending on their chosen sub-specialty. The three fundamental disciplines of otorhinolaryngology are otology, rhinology and laryngology. Sub-specialties have arisen to date as a result of individual expertise rather than constituting formal commitments of the consultant post or even being designated in the structuring of the post. The sub-specialties in otorhinolaryngology are otology, neurotology/skull base surgery, head and neck surgical oncology, rhinology, paediatric otolaryngology, and laryngology and phoniatic surgery [2]. Several aspects of all these sub-specialties can be practiced by board-certified, non-fellowship-trained otorhinolaryngologists, on the basis of their residency training and individual level of expertise.

Advanced surgical training in the sub-specialties of ORL-HNS has long been available to graduating residents in the United States, Canada and Australia. These fellowships are considered essential to be able to practice in teaching institutions in the given sub-specialty. In the US approximately 25% of graduating residents extend their training into sub-specialist fellowship training. The most popular areas of interest include facial plastic surgery, neurotology/skull base surgery and head and neck surgery [3]. Most certificates of added qualifications are granted after formal post-residency training in the form of an Accreditation Council for Graduate Medical Education (ACGME) Approved Fellowship. This has been the result of joint initiatives of several specialty boards which have established fellowship guidelines and created a mechanism allowing them to inspect and monitor programmes for content and quality. In the EU, on the other hand, post-residency fellowships are considered as an advantage even though not a statutory requirement for clinical practice in teaching institutions in the given sub-specialty.

## Results

The response rate to the postal questionnaire was 75.6%, with 31 of the total 41 returned. A total of 15 EU countries were represented for analysis (Fig. 1). Luxemburg is the only country without a formal residency programme, with trainees being trained in Belgium, France and Germany.

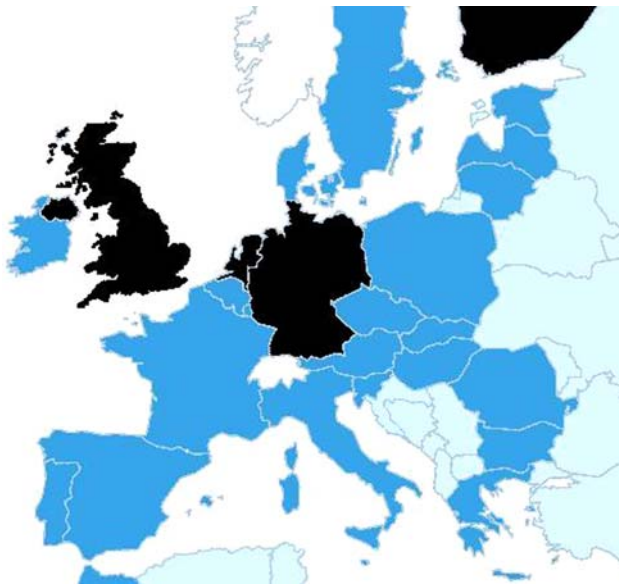
At present, formal sub-specialty training in head and neck surgical oncology only exists in Finland, Germany, the Netherlands and the United Kingdom (UK) (Fig. 2). In Finland all five University training centres offer an official 2-year fellowship, which comprises both practical and



**Fig. 1** Countries included in the present study are illustrated in *black*: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Sweden, Portugal, Spain, United Kingdom. New member states since 1 May 2004 and 1 January 2007 are illustrated in *blue*: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovenia, Slovakia

theoretical training. The programme is supervised by the training master for the specialist training programme in otorhinolaryngology, who is nominated by the Medical Faculty of the University. In Germany and the Netherlands, the training programme is also structured as a 2-year fellowship, following the basic ORL-HNS residency programme. Access to all these fellowships is via a competitive interview; however, the programmes in Germany and the Netherlands have no formal assessment at the end of the training. In the UK, the senate of surgeons has established an interface training programme in head and neck surgical oncology, which can be accessed from the specialties of otolaryngology-head and neck surgery, oral and maxillofacial surgery, plastic and reconstructive surgery and general surgery. All trainees entering into the sub-specialty training programme in head and neck surgical oncology are required to have passed their intercollegiate examination. They are selected on a competitive basis, by a central committee, whose members belong to one of the four surgical specialties as described and the length of sub-specialty training is 1 year.

In all other countries, there is no formal sub-specialty structure. In most EU member states, trainees are encouraged to pursue post-residency fellowships in the UK, US, Canada or Australia. Trainees may also travel between different EU countries to obtain specific training in their areas of interest and in most instances this time counts as part of their training. At present, UK remains one of the



**Fig. 2** Countries offering sub-specialty training in head and neck surgical oncology in accredited training centres are illustrated in *black*: Finland, Germany, The Netherlands, United Kingdom

leading destinations for EU trainees pursuing further specialisation in ORL-HNS. Popular fellowship grants include those from the European Society of Surgical Oncology, the Journal of Laryngology and Otology Traveling and Research Scholarships, and the Traveling Fellowship of the European Academy of Facial Plastic Surgery among others.

The majority of countries (8 out of 15) surveyed predict a trend towards formal sub-specialisation within this discipline in the near future.

## Discussion

A 75.6% response rate represents an excellent return from a postal questionnaire. Countries surveyed in the present study included Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Sweden, Portugal, Spain and United Kingdom (Fig. 1). All the EU states (EU-15) prior to the accession of the new EU member states from May 2004 and January 2007 were represented in this survey (Fig. 1). Only four countries have formal sub-specialty training in head and neck surgical oncology (Fig. 2).

The Netherlands and Germany have 2-year fellowships. These fellowships mirror those in Canada and US, often comprising both clinical and research elements. At present, sub-specialty training posts in Germany are not centrally coordinated or monitored; as a result, their curricula can vary significantly between units offering these posts. They are individually advertised from each training centre according to their operational needs, and the selection criteria

are often dictated by the Departmental Professor, who is responsible for the training programme. After appointment of a trainee, a training agreement between the training master and the trainee is reached, which defines, in terms of education and training, the relationships, duties and obligations on each side. Neither the structure of these fellowships nor the time allocated to research or clinical work was specified by the respondents from these two countries. It was also not specified whether these fellowships are accessible only to ORL-HNS specialists or others as well, same as in the US and UK. UK has a 1-year Fellowship, which is accessible to candidates from several specialties, whereas in Finland the 2-year fellowship is only accessible to licensed otorhinolaryngologists.

In the UK in 2003, the Senate of Surgeons formally recognised the fact that training in head and neck surgical oncology embraces more than one surgical specialty, as defined by the Specialty Advisory Committees (SAC). These specialties comprise otorhinolaryngology, oral and maxillofacial surgery, plastic and reconstructive surgery and general surgery. The Calman–Hine reforms produced in 1995 recommended the setting up of multi-disciplinary teams for the management of head and neck oncological patients. As a result of the latter, the Senate of Surgeons set up an interface group for sub-specialty training in head and neck surgical oncology in the UK. Year 5/6 interface training in head and neck surgical oncology among otorhinolaryngology, oral and maxillofacial surgery, plastic and reconstructive surgery and general surgery was accepted by the Department of Health, and currently up and running with five posts approved in England [4].

All Fellowships are accessed via a competitive interview. However, the information provided by one of the questionnaires from Germany implied lack of transparency and equality in the selection process, as a result of the influence of the Departmental Professor in the selection of candidates. The programmes from Germany and the Netherlands have no formal assessments at the end of the training. In Germany, the training master provides an informal certification, which confirms the satisfactory completion of sub-specialty training. The interface training programme in the UK follows the assessment structure required by the intercollegiate board of examination but with no formal examination at the end of the training period. On the other hand, the training programme in Finland includes a national exit examination and certification, which however does not provide the trainee with a separate legally valid licence in head and neck surgery.

It is our understanding that countries such as Spain have over the past year introduced a pilot post-residency training programme, whereas none of the new EU member states from May 2004 and January 2007 have formal sub-specialty training in head and neck surgical oncology.

Is there a common starting point across EU for ORL-HNS specialists pursuing sub-specialty training?

The European Union of Medical Specialists (UEMS) is the representative organisation for specialist doctors from the national associations of all EU member states. The central authority for the specialty of ORL-HNS, whose purpose is to monitor the uniform implementation of these directives, is the European Board of Otorhinolaryngology (EBO). The EBO consists of two members of each of the EU states, appointed by the National ORL authorities of each participating country. The UEMS-ORL Section and Board of ORL-HNS have developed a European training programme aiming at the harmonisation of specialist training within the 27 EU states.

This programme will serve as a guideline for training centres enabling them to meet the European Standard as set out by the EBO. As stated in the UEMS Training Charter, the residency training programme should prepare the candidate to work as a general Otorhinolaryngologist-Head and Neck Surgeon, capable of performing the most common diagnostic and operative procedures in this field [5]. Although during the training programme an initial training in one of the sub-specialties may be included, the scheme is focussed on the general otorhinolaryngologist. The UEMS charter also states that in the near future sub-specialty training programmes will be created by the UEMS-ORL-HNS Board in collaboration with the European Academy of Otorhinolaryngology/Head and Neck Surgery (EAORL-HNS) [5, 6].

At present, all EU states have distinct well-defined residency training programmes, which both comply with current EU regulations and are considered to be appropriate for their health care systems [7]. Entrance to these residency programmes may be by interview, following examination or acquisition of membership to Boards and Colleges. Occasionally, this is done without competition, simply by order of application, as is the case in Greece. Both the duration of specialty training (range 4–10 years) and the workload differ significantly between the EU states, which impact heavily on the clinical, surgical and academic skills acquired by the certified specialist in ORL-HNS in each of these countries. The accredited UK trainee appears to be the best trained, with a wide clinical and surgical repertoire, whereas the Greek trainee appears to be trained to the lowest minimum standard [7]. A recently published specialist registrar survey in the UK concluded that the Specialist Advisory Committee (SAC) has been generally successful in maintaining common operative training standards and providing a homogenous training environment in ORL-HNS [8]. During the first 4 years of their training registrars in the UK attain an appropriate level of general training while the last 2 years are mainly devoted to sub-specialty

interests [9]. The disparity in the training of young otorhinolaryngologists in certain EU member states results in differences in the level of skills and expertise acquired between graduates and may adversely affect the clinical and especially surgical competence of some ORL-HNS specialists at the beginning of their career.

Both EBO and EAORL-HNS recognise the need for a European Board Certification of ORL-HNS, similar to the one issued in the US [5, 6]. The EBO's purpose should be to establish a successful certification process that would enhance the professional life of its diplomates and provide health care organisations across Europe and patients alike with accreditation of the training and continuing education of otorhinolaryngologists. However, to date the EBO has not introduced a European Board Certification for ORL-HNS, similar to the existing ones for ophthalmology or plastic and reconstructive surgery. The Board should strive to elevate the standards of otorhinolaryngology, certify qualified surgeons, protect against unqualified ones, and advance the cause of the specialty. From the point of view of the European trainee, these aims by the EBO, namely, to guarantee quality of training and to harmonise specialist training, are laudable and to be commended.

To date the following steps were made in this direction. A logbook for the documentation of surgical and other activities has been created and approved by the Section and Board of UEMS-ORL-HNS. This must be completed by all trainees throughout the training period (minimum duration of 5 years). The competence of the trainees should be adequately shown at the end of the training period by presentation of a satisfactorily completed logbook [5]. The logbook exists in a printed and electronic version published on the UEMS-ORL-HNS Section web-page (<http://www.orlu-ems.com/>) and is available in English, Finnish, German, Italian, Polish, Portuguese, Spanish, Swedish, and Turkish. Many EU states have adopted this logbook, whereas others, like United Kingdom and Ireland have already implemented an on-line version and opted not to use the UEMS one. The EBO aims to stimulate and encourage the exchange of trainees within the EU as well as between EU states and associated countries by coordinating approved exchange programmes in conjunction with the EAORL-HNS and the EUFOS [5, 6].

Should sub-specialty training be officially encouraged?

Sub-specialisation in ORL-HNS can be the answer to (a) protect the public against unqualified surgeons, (b) improve patient care, (c) enhance research and advance the specialty of otorhinolaryngology as a whole. Healthcare trends towards centres of excellence, reduced length of stay and reduced overall cost of hospital admissions, emphasise the need for sub-specialisation. The drive towards centralization

and sub-specialization is more evident in designated cancer units, where multidisciplinary teams of sub-specialised doctors provide optimal service to cancer patients with a reported increase in long-term survival by up to 10–15% for certain types of cancer [10]. This trend will have to develop in parallel with the setting up of National Cancer Registries throughout all countries of the EU if we are to sensibly compare cancer morbidity/mortality figures across the EU.

A counter argument against the fragmentation of medical services, which results from overspecialisation, is that a general otorhinolaryngologist may be more useful in certain health care systems across the EU. According to the European training programme, the trainees must acquire the general surgical principles as well as the theoretical knowledge of anatomy, physiology, pathology, aetiology, symptomatology and treatment of diseases of the ear, temporal bone and lateral skull base, nose, paranasal sinuses and anterior skull base, oral cavity, pharynx, larynx, trachea, oesophagus, head, neck, thyroid, salivary and lacrimal glands and adjacent structures. Special attention should also be given to the theoretical foundation of audiology, phoniatrics, vestibular disease, allergy, immunology, oncology and the basic principles of plastic and reconstructive surgery [5]. However, there is a general consensus that ORL-HNS is simply too broad a discipline for every trainee to become competent in every aspect of our specialty [11]. Furthermore, with the implementation of a 45-h working week there is simply not enough training time available to train comprehensively every resident in every sub-discipline. The problem is that without sub-specialisation, ORL-HNS as a specialty is likely to stagnate both clinically and scientifically. There is a lot to gain by creating post-residency training programmes, by standardising their curricula and by providing appropriate quality assurance for this particularly important aspect of training in ORL-HNS.

The most solid argument in favour of certified sub-specialisation in ORL-HNS is fairly straightforward. It constitutes the only way to provide head and neck surgeons with the appropriate recognition of their current and focused expertise, to support continuing medical education and to provide the quality of care, which our patients seek and deserve.

Does the overlap between related specialties make sub-specialisation a necessity?

Certified sub-specialisation in ORL-HNS is considered by many otorhinolaryngologists as the ultimate measure in preserving the specialty's scope of practice against possible diminishment. The issue of overlap between otorhinolaryngology and the related specialties of plastic surgery and oral and maxillofacial surgery should always be taken into

consideration. The overlap between otorhinolaryngology and plastic surgery is clearer than that between oral and maxillofacial surgery and the other two sub-specialties. However, the lack of clarity may be due to resources and the training undertaken by any given surgeon. A variety of skills are likely to be acquired and practised depending on the training any surgeon from the related specialties has undergone in any given EU member state.

In 1986, the American Board of Otolaryngology (ABO) created a new certificate, which listed the six sub-specialties of otorhinolaryngology. This resulted in a lawsuit from the American Board of Medical Specialties (ABMS) and immediate withdrawal of the newly introduced certificate. These sub-specialties (facial plastic and reconstructive surgery, head and neck oncology, laryngo-bronchoesophagology, otolaryngic allergy-immunology, otology-neurotology, and paediatric otolaryngology) were to be plainly listed on the redesigned certificate. The ABO certificate approved in 1997 indicates that a person is certified "in otolaryngology, to include general otolaryngology, otology, facial plastic surgery, head and neck surgery, and paediatric otolaryngology" [1].

The professional bodies involved at national and European levels are most appropriate to formulate guidelines and to identify and manage the boundaries and the overlap between the three related sub-specialties of otorhinolaryngology, plastic surgery and oral and maxillofacial surgery.

## Conclusions

Sub-specialty training in head and neck surgical oncology within the EU at present is clearly underdeveloped; with only 4 of the 15 EU states (EU-15) represented in this study offering formal sub-specialty training. Majority of countries (8 out of 15) surveyed predict a trend towards formal sub-specialisation within this discipline in the near future.

Further studies are needed to re-evaluate the training programmes in Europe. Serious efforts need to be made in the direction of introducing a European diploma for ORL-HNS. It is difficult to assess accurately the surgical competence of each individual surgeon. It would be much easier to establish a uniform measure for evaluating candidacy for sub-specialty training both across EU and abroad.

**Conflict of interest** The authors declare that they have no conflict of interest.

## References

1. Cantrell RW, Goldstein JC (1999) The American Board of Otolaryngology, 1924–1999—75 years of excellence. *Arch Otolaryngol Head Neck Surg* 125:1071–1079

2. Council of the British Association of Otorhinolaryngologists-Head and Neck Surgeons. The provision of otorhinolaryngological head and neck services in the UK. September 2002, London
3. Miller RH (1994) Otolaryngology residency and fellowship training. *Arch Otolaryngol Head Neck Surg* 120:1057–1061
4. Cox GJ (2003) Training in head and neck surgery. *ENT News* 12:51
5. European Training Charter for Medical Specialists, UEMS (1995) Charter on training of medical specialists in the European Union, Chap. 6. Requirements for the specialty of otorhinolaryngology and head and neck surgery. Amended October 2007. <http://www.orluems.com/doc/CHAPTER6%20FINAL%20VERSION%20APRIL%202008.pdf>
6. Maw RA, Bradley PJ (2005) The European Academy of Otorhinolaryngology-Head and Neck Surgery (EAORL-HNS). *ENT News* 14:36–38
7. Simo R, Hartley C, Saeed SR, Zarod AP, Taylor PH (1997) Otorhinolaryngological training in Europe: a comparative study. *Clin Otolaryngol* 22:332–342
8. Georgalas C, Hadjihannas E, Ghufloor K, Pracy P, Papesch M (2005) Operative training in otolaryngology in the United Kingdom: a specialist registrar survey. *J Laryngol Otol* 119:356–361
9. Royal College of Surgeons (London) (1996) Higher surgical training in otolaryngology for the certificate of completion of specialist training version 9, October. London
10. Expert Advisory Group on Cancer (1995) A policy framework for commissioning cancer services. A report by the expert advisory group on cancer to the chief medical officers of England and Wales. Department of Health, London. <http://www.publications.doh.gov.uk/pub/docs/doh/cancerfr.pdf>
11. Maran AGD, Wilson JA (1996) Subspecialization in otolaryngology. *Clin Otolaryngol* 21:47–49