Eeva Widström and Kenneth A. Eaton:

Factors guiding the number of dental specialists in the European Union and Economic Area

In the European Union and European Economic Area (EU/EEA) three member states have no recognised dental specialties and twelve have four or more. Orthodontics is recognised in most countries and oral surgery in over 60 %. Other common specialties are periodontics and paedodontics. Variation in the numbers of specialties and specialists between individual countries is great and can partly be explained by oral health care systems and traditions to study abroad in some countries. Most existing specialties seem to have emerged from professional interests. Only two, orthodontics and oral surgery, are formally recognised by the European Commission (EC). The new Directive on recognition of professional qualifications has left the recognition of additional dental specialties to be negotiated between individual Member States. This calls for better Pan-European co-operation in dental matters in the future.

At the beginning of this paper it is appropriate to define the terms «specialist dentists» and «dental specialty.» A specialist dentist is a dentist trained beyond the level of general dental practitioner and authorised to practise as a specialist with advanced expertise in a branch of dentistry (1). A dental specialty is «a nationally or internationally recognised branch of dental specialisation for which a structured postgraduate training programme exists» (1).

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Questions relating to specialist education for dentists, the need for specialists and, if there is, in which specialities, are increasingly under discussion in many European countries. This can partly be explained by increasing demand for complex dental treatment by adults and elderly, who now generally retain their teeth throughout life, improved technologies in dentistry, improvements in personal wealth and an increased interest in «fashion and life-style.» In many countries dentists have also become more aware of the advantages of specialisation both for patients with complex treatment needs and for their own professional development. They also appreciate that specialisation often implies greater income and respect. However, in some countries dentists have been worried about restrictions (actual or implied) of the range of treatment provided in general practise that may result from increasing specialisation and of competition for patients. It has also been claimed that high level undergraduate education with excellent clinical training diminishes the need for specialisation. Nevertheless, few believe that today's dentists can provide a whole range of services including surgical operations, orthodontics and advanced prosthetics for all patient categories. It is therefore likely that the number of dental specialities and specialists will grow rather than decrease in the future.

Two recent events have focused additional interest on the debate over dental specialists and specialties. The first was the recent enlargement of the European Union (EU) in 2004 which brought ten new members into the Union, who have their own views on oral health care and their own educational traditions. The second was the new European Commission (EC) Directive on Recognition of Professional qualifications which aims to simplify the legal framework regulating freedom of movement of professionals between countries (2).

Against this background, the aim of this paper is to describe the existing dental specialties and specialist education in the countries of the EU and the three countries (Iceland, Norway and Liechtenstein) of the European Economic Area (EEA) and to discuss factors that have guided the numbers of specialists and specialties in these 28 countries. The role of the EC Directives and their influence on the introduction of new national and European dental specialities is also discussed.

The data, quoted in this paper, on dental specialties and specialists were collected from the annexes to the Directive on Recognition of Professional qualifications (2), the Council of European Chief Dental Officers (CECDO) database (3), and a recent survey of EU/EEA Dental Competent Authorities (4). Competent authorities in the EU/EEA are «free-standing» national or regional bodies or organisations, departments of the government or dental chambers (associations) involved with registration and supervision of health care professionals. Specialties listed in at least one of the sources were used in this study.

Dental specialities in the EU and EEA

In 2004, there were no formally recognised dental specialties in three of the 28 EU/EEA countries (Austria, Luxembourg and Spain), and 12 countries had at least four formally recognised dental specialties. The old sectoral directives regulating the mutual recognition of professional qualifications for dentists (5,6) recognised only two dental specialties (orthodontics and oral surgery) within the EU/EEA. The new directive lists 19 countries with the specialty in orthodontics. However, the competent authorities recognise the specialty in 23

Table 1. *Dental specialties in the EU/EEA member states (28) in 2004 and the number and names of countries where specialists in these fields were found (sources 2–4)*

Specialty	Number of countries	Countries
Orthodontics	25	All except Austria, Luxembourg and Spain
Oral surgery	21	Cyprus, Czech Rep, Denmark, Estonia, Finland, Germany, Greece, Hungary, Ireland, Latvia, Liechtenstein, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, United Kingdom
Pedodontics	14	Czech Rep, Estonia, Hungary, Iceland, Latvia, Lithuania, Malta, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, United Kingdom,
Periodontics	16	Belgium, Czech Rep, Estonia, Hungary, Iceland, Liechtenstein, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Sweden, United Kingdom
Prosthodontics	10	Estonia, Latvia, Lithuania, Malta, Poland, Portugal, Slovakia, Slovenia, Sweden, United Kingdom
Endodontics	9	Iceland, Lithuania, Malta, the Netherlands, Poland, Portugal, Slovenia, Sweden, United Kingdom
Dental public health	6	Finland, Germany, Iceland, Malta, Portugal, United Kingdom
Others	7	Estonia, Finland, Iceland, Malta, the Netherlands, Sweden, United Kingdom

countries. It is interesting to note that in addition a number of dentists from Italy and Malta have trained in orthodontics and restrict their practices to this specialty, but are not formally listed. Similarly, the specialty of oral surgery was formally recognised in 19, but existed in 21 of the 28 countries (Table 1). The EC Directives list the specialty of oral maxillofacial surgery as a medical and not a dental specialty. In order to be formally recognised as an oral maxillofacial surgeon (as defined by the EC Directive) it is necessary to hold a medical qualification. This has caused some confusion as in some countries there are both oral maxillofacial surgeons and oral surgeons and their work overlaps to a great extent.

The specialties of periodontics and children's dentistry were the next most common. Periodontics was formally recognised as a dental specialty in 12 and children's dentistry in 11 of the 28 countries. According to the chief dental officers (3) these specialties could be found in 16 respective 14 countries (Table 1). «Prosthodontics» (fixed and removable prosthodontics) was formally recognised in seven, but existed in 10 countries. There are also specialties that only exist in one or two countries e.g. radiology and clinical dentistry including fixed and removable prosthodontics, endodontics, periodontics, restorative dentistry, occlusion/TMJ etc.

Some of the EU/EEA countries have few or no dental specialties: Austria, Belgium, Denmark, France, Greece, Italy, The Netherlands and Spain. Some others have many formally recognised specialties: Iceland, Poland, Slovenia, Sweden and United Kingdom. In addition some countries have many specialists but they are not formally recognised (Estonia, Malta and Portugal). The proportion of all dentists who are specialists also varies greatly in the EU/EEA (Table 2).

Numbers of specialties and number of specialists seem to relate to the oral health care provision system in the country rather than general socioeconomic factors. Thus the fact that there is public provision of oral health care with well-organised specialist services could explain the many specialties and high numbers of specialists in UK and Sweden. In some countries it is popular to study abroad. This factor may partly explain why there are relatively large numbers of dental specialists in Iceland and also in Malta. In the former «Eastern Block» countries dentistry was very well integrated into medicine and followed its traditions in multiple specialisations. Recently some of these countries e.g. Estonia and Slovakia made changes in their educational systems and changed their specialties too and now only register specialists according to the new system. Fewest specialties and relatively low

Table 2. *Proportion of all dentists (by country) in the EU and the EEA who are specialised (source 4)*

Percentage of all dentists who are specialised	Countries
0–4 %	Austria, Belgium, Denmark, France, Greece, Ireland, Latvia, Luxembourg, Portugal, Spain
5–9 %	Cyprus, Germany, Italy, The Netherlands, Liechtenstein
10–14 %	Finland, Hungary, Norway, Slovakia, United Kingdom
15 % or more	Estonia, Iceland, Czech Republic, Lithuania, Poland, Slovenia, Malta, Sweden

numbers of specialists are found in the old EEC countries. During the last 10–15 years the number of specialties and specialists has grown in the old EU member states, but relatively slowly.

However, the situation in some of the EU countries is further confused by the fact that in addition to formally recognised specialties, a number of dentists undergo formal postgraduate courses in some other aspects of dentistry for up to three years duration, then limit their work to this aspect of dentistry and receive patients referred by other dentists. Furthermore, they may receive diplomas from their dental association. Such unofficial fields are e.g. implantology and forensic dentistry.

Dental Specialist Education

In most EU/EEA countries specialists' training takes 3–5 years. According to the directives (2, 5, 6) entrants to dental specialist training must have an EC approved primary dental qualification (degree). The training must last a minimum of three years full time (or part-time equivalent) and it must take place at «institutions» approved by the competent authority in the country concerned. A number of studies have shown wide variations in both the curricula and patterns of specialist training in orthodontics in different European countries (7, 8, 9). There was also a perception of the same wide variations on specialist training across the Europe in other specialties. In response to this problem, a number of Pan-European specialist associations have agreed curricula and criteria for specialist training. They include e.g. the European Federation of Periodontology, who published guidelines for specialist training in their specialty and now operates a system of quality assurance for specialist training programmes in Periodontology in a number of European Dental Schools.

EU-directives and regulation of specialties

Although the organisation and delivery of health care is a matter for each country (member state) within the EU, European Commission has produced directives which are designed to regulate free movement of all workers (including health professionals) throughout the EU/EEA and mutual recognition of professional qualifications by all member states. As mentioned earlier in this paper, so far only two dental specialties, orthodontics and oral surgery, have been formally recognised by these directives.

In October 2005, a new EC-directive on the mutual recognition of professional qualifications (2) was adopted by the European Parliament. It replaces the old directives (5,6). As far as medical and dental specialists are concerned, it states: «To allow for the characteristics of the qualification system for doctors and dentists and the related acquis communautaire in the area of mutual recognition, the principle of automatic recognition of medical and dental specialities common to at least two Member States should continue to apply to all specialties recognised on the date of adoption of this Directive. To simplify the system, however, automatic recognition should apply after the date of entry into force of this Directive only to those new medical specialities common to at least two fifths of Member States. Moreover, the Directive does not prevent Member States from agreeing amongst themselves on automatic recognition for certain medical and dental specialties common to them but not automatically recognised within the meaning of the Directive, according to their own rules». This extract from the new directive refers only to medical specialties and the automatic recognition will apply only to them from the date the new directive definitely enters in force in 2007. This means that it will not be easy to add other common dental specialties to the current list of two. It seems that in order to add additional dental specialties to the list of those officially recognised across the EU/EEC, it will be necessary to obtain agreements between individual countries. This places dentistry in a more difficult situation than medicine where as soon as a specialty is officially recognised in two fifths of the member states, it can become a pan-EU/EEA specialty.

Discussion

This paper has reviewed dental specialties formally recognised or known to exist in the EU/EEA countries. The quality of the data for numbers of dental specialists and those who have completed specialist education is variable across Europe. In some countries the competent authorities keep detailed and regularly updated lists on all health care professionals (including dental specialists). In some of the new member states changes in dental education, required as a consequence of EU membership and also changes in the oral health care system, may have caused confusion between specialties in the old and the new systems. For example in Estonia and Slovakia the number of officially recognised dental specialties has been reduced since 2004, «in response to the requirements of the old EC training directive». In practice, the dentists having the old specialist educations are still limiting their work to their specialties. It is important to notice that the new directive does not prevent the member countries to have any specialties they wish. In some other countries there has been a tradition of going abroad for postgraduate studies. These countries have «imported» specialist educations from a wide range of countries in Europe and North America. Apart from some uncertainties due to conflicting data from different sources, it is obvious that there is a broad range of dental specialties in EU/EEA and that the number of specialties and specialists vary greatly between individual member states. Nevertheless, compared with medicine, with 52 automatically recognised specialties and a large amount of additional specialties in the individual countries, the number for dentistry is very modest.

The need for specialists should be assessed from treatment needs in the populations concerned. There have been few such studies. Historically most specialties have emerged from professional interests. Universities, dental societies and associations have had great influence on the type of specialty as well as numbers of specialists. In addition to orthodontics and oral surgery there are two more specialties that are widely spread across the EU/EEA. They are pedodontics and periodontics. These specialties fulfil the two-fifths criteria in the new directive for medical specialties. As such they would be automatically recognised in the EU in the future if they were medical specialties. However, although the aim of the new directive was to consolidate and simplify the regulations on health care professionals, this paragraph of directive only applies to medical specialties, and dentistry is treated differently. Dental

specialties are in practice left to be accepted in bilateral negotiations or in theory also as a result of multilateral negotiations between individual Member States. In the past there were separate directives for the health care professions. There were also separate bodies, the Advisory committees for each profession. These committees met regularly, evaluated the need for changes and made suggestions for improvements. Partly for economic reasons these groups were «closed down» in mid-1990s. Since then, there has been no formal group in dentistry to fulfil this task. A lack of professional European bodies with interests in migration of dentists may be one explanation that dentistry was «forgotten» in the new directive. Another reason could be that some Member States wish to actively resist the creation of more formally recognised dental specialties and are happy with the current situation. When the New Directive comes into force in 2007, there are plans to set up a Joint Committee to cover some of the tasks that the old Advisory Committees had. However, it is unlikely that a big committee comprising of different professions can handle specific questions relating to one group.

This situation means that in the future much better collaboration between Competent Authorities will be needed to deal with the dental questions, and the role of various Pan-European professional organisations is likely to grow. Various unofficial specialties will put a further pressure on cooperation across borders. One of these in Finland, forensic dentistry, proved to be extremely useful when the Tsunami catastrophe occurred in South-East Asia in 2004 and people competent in identification were needed. The New Directive has made short term consultancies in other Member States easier than before and it might promote such narrow specialties.

Apart from in those countries where specialist treatments are offered in public oral health care delivery systems or where insurance companies fund the provision of dental care, there is little information on which patients are treated by specialists and of the extent to which needs, demands and supply have been meet. It has been claimed that patients can find advertising by different specialists confusing and sometimes misleading (10). From the consumers viewpoint the latest Public Health strategy in the EU striving for better information on health determinants, care arrangements and outcomes of care is important (11). In dentistry a group led by the University of Lyon has completed a project which has developed a list of oral health indicators suitable for comparisons between EU countries (12). The next step for this project is to pilot comparative studies on oral health, access to care, and provision of dental care in the EU. The project is very ambitious, and if successful should be useful for all Member States in their attempts to provide high quality dental services to their populations.

Finally, attention needs to be drawn to one particular problem; that of workforce planning. The common labour market in the EU/EEA calls for better Pan-European workforce planning. Unfortunately, there is no common practice and some European countries appear to have no systems in place to plan their dental workforce (13). This is a challenge for the future, as in order to provide oral health care of optimal quality to the population of the EU, it will be necessary to train professionals with different ranges of skills that are applicable to the complexity of treatment needed.

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