

## **ESE Education Bulletin**

Endodontology: Why we need to support general dentist education *and* the Europe-wide recognition of our speciality

Lise-Lotte Kirkevang, Chair, ESE Benefits of Endodontics Committee

The overarching purpose of dental treatment is to retain and maintain well-functioning natural teeth and thereby enhance and support the quality of life of patients. This purpose is also a cornerstone in the aims of the ESE; to enhance and promote the provision of endodontic care, to save teeth and improve oral and general health.

Endodontic disease is common among adults, where an overall prevalence of 40% of individuals have at least one tooth with apical periodontitis and around half of individuals have at least one root filled tooth (Kirkevang 2018a). Therefore, it is not surprising that endodontic treatments are a frequently performed treatment in dental practice.

In Europe relatively few countries have recognized specialist education programmes in Endodontics. Within the ESE only 13 of our 33 member countries have an endodontic specialty approved and regulated by their national health authorities.

## Changing endodontic disease prevalence in the population

In most countries, general dentists perform the majority of root canal treatments, and even in countries which have specialist education programmes in endodontics, most endodontic treatments are performed by general dentists (Myrhaug et al. 2011, Bernstein et al 2012, Zaugg et al. 2019).

It has long been an aim for the ESE to support the recognition of Endodontology as a dental specialty within Europe. Policy makers ask for proof that the recognition of Endodontology as a speciality will result in an improved endodontic and periapical status at a population level, yet such proof is not readily obtainable.

To change the overall prevalence of apical periodontitis, it is necessary to raise the awareness and knowledge of Endodontology in general.

It should be realized, however, that endodontists cannot do this without collaboration with their general dentist colleagues. There is a need to increase the focus on the providers who perform the most treatments, and therefore education and encouragement of the general dentists is of primary importance if the overall endodontic status is to improve.

Changing endodontic treatment quality for the individual

Demography in Europe points toward change in the demographic composition of the general population with a higher proportion of elderly individuals, who will have retained more teeth and who may need more complex treatment in the future (Kirkevang 2018b).

It is evident that specialists perform more complicated treatments such as for example molars, teeth with obliterated root canals, retreatments and surgical endodontic cases (Tilashalski et al. 2006, Myrhaug et al. 2011, Bernstein et al. 2012, Zaugg et al. 2019).

Endodontic specialists will have benefitted from 3 years of focused postgraduate study, with its emphasis on infection management and more often have access to more advanced equipment, the latter increasing the possibility to solve more complicated treatment challenges compared to general dentists (Myrhaug et al. 2011, Zaugg et al. 2019). As specialists perform more difficult treatments where the prognosis for the treatment is poorer compared to less complicated treatments, it is difficult to compare treatment results directly. Studies have shown that treatment outcome does not seem to differ much between the two groups of treatment providers, even though the specialists perform more difficult treatments (Lazarski et al. 2001, Bernstein et al. 2012, Fransson et al. 2016). However an improved 10-year survival rate of molars treated by endodontists compared to non-endodontists has been reported (Burry et al 2016).

To be able to meet the future demographic changes it therefore becomes equally important to ensure that the availability of endodontic specialist services in Europe increase, that both pre- and post-graduate education of general dentists is prioritized, and that the collaboration between general dentists and specialists is maintained and improved.

## References

Bernstein SD, Horowitz AJ, Man M, Wu H, Foran D, Vena DA, Collie D, Matthews AG, Curro FA, Thompson PV, Graig RG (PEARL). Outcomes of endodontic therapy in general practice: A study by the Practitioners Engaged in Applied Research and Learning Network. J Am Dent Assoc 2012;143:478-87.

Burry JC, Stover S, Eichmiller F, Bhagavatula P. Outcomes of primary endodontic therapy provided by endodontic specialists compared with other providers. J Endod 2016;42:702-5.

Fransson H, Dawson VS, Frisk F, Bjørndal L; EndoReCo, Kvist T. Survival of Root-filled Teeth in the Swedish Adult Population. J Endod 2016;42:216-20.

Kirkevang LL(a). Clinical epidemiology: measuring endodontic disease and treatment outcome. In Textbook of Endodontology, 3 eds. Edited by Bjørndal L, Kirkevang LL, Whitworth J. 2018;315-26.

Kirkevang LL(b). A population-based cohort study of changes in endodontic status over a 10-year period, 1997-2008. Thesis. Aarhus University 2018.

Lazarski MP, Walker WA, Flores M, Schindler WG, Hargreaves KM. Epidemiological evaluation of the outcomes of nonsurgical root canal treatment in a large cohort of insured dental patients. J Endod 2001;27:791-6.

Myrhaug TH, Grytten J, Sandvik L, Ørstavik D. Kliniske rutiner ved rotbehandling hos spesialister i endodonti og allmennpraktiserende tannleger i Norge. Nor Tannlegeforen Tid 2011;121:300-4.

Tilashalski KR, Gilbert GH, Boykin MJ, Shelton BJ. Root canal treatment in a population-based adult sample: differences in patient factors and types of teeth treated between endodontists and general dentists. Community Dent Health Mar 2006;23:21-5.

Zaugg LK, Savic A, Amato M, Amato J, Weiger R, Connert T. Endodontic Treatment in Switzerland. A National Survey. Swiss Dent J 2019;130:18-29.