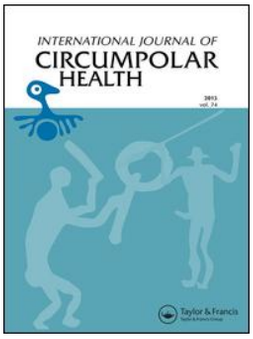

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Employment status of young otorhinolaryngologists in Finland during a 10-year period

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ABSTRACT

We determined the employment status of recently graduated otorhinolaryngologist-head and neck surgeons (ENT doctors) in Finland during the past 10 years. We also investigated the job vacancy rate of the Departments of Otorhinolaryngology–Head and Neck Surgery (Department of ORL-HNS). An electronic questionnaire was sent to all ENT doctors who had graduated during 2007–2017 and to chief physicians of all Departments of ORL-HNS. Chi-square and Fisher's test were used in the analyses. Altogether 129 ENT doctors had graduated and 125 (96.9%) responded. Thirty (24%) physicians had been employed in a position that did not correspond to their ENT doctor training. All 30 chief physicians responded and a total of 306 physicians were working at their departments (215 ENT doctors, 91 residents). However, there were only 241 available positions (197 for ENT doctors, 44 for residents). It was estimated that 65 ENT doctors would retire within 10 years. At the moment there does not seem to be a significant shortage of ENT doctors in Finland. The current national volume of resident intake in the ENT training programme is twofold in comparison with the estimated retirement rate in the public sector.

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Education; employment; otorhinolaryngology; retirement; surgery; training

Introduction

Assessing and forecasting the need of medical ENT doctors even at a national level is challenging. Still, this will affect the plans for the number of residents in the training programmes. The publicly funded Otorhinolaryngology – Head and Neck Surgery (ORL-HNS) ENT doctor training has officially been a five-year programme in Finland as in many other European countries (www.orluems.com). Since the beginning of 2019, a reform has been implemented with a more knowledge-based training that lasts at least 5 years. This still includes a nine-month service in primary health care, and training periods both at a community and university hospital. The university hospital period takes approximately half of the training time at one of the five Finnish universities and the corresponding university hospitals: Helsinki (HUS), Turku (TUH), Tampere (TaUH), Kuopio (KUH), and Oulu (OUH).

The majority of the 336 working-age ENT doctors in Finland, with a population of 5.5 M, work in the public sector and there are also physicians working either solely in the private sector or at both sectors. This density of ENT doctors (1/16000 inhabitants) corresponds well with that of other Nordic countries and with the mean density in the EU countries [1,2]. To assess the need for training medical ENT doctors, a co-ordination division has been set-up in the Ministry of Social Affairs and Health, and for the purpose of guidance, a report regarding all specialities having ENT doctor training in medicine and dentistry until 2030 was drawn up [3]. According to this assessment, in the decade of the 2020s the total number of ENT doctors will increase more slowly than before as the retiring age classes are large. Further, in the 2030s there will be a considerable increase in the number of ENT doctors in general and to prevent excess training, a gradual reduction was suggested in basic medical education for doctors and dentists beginning in 2020.

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In the report of the Finnish Medical Association, there were 345 ENT doctors of working age in 2016, and in a report by KT Local Government Employers, there was a national shortage of six ENT doctors in public health care in October 2017. According to calculations, the current annual level of 12 graduating ENT doctors in Finland up to 2030 will result in 329 ENT doctors, which will cover the number of retirees as well as the manpower shortage at the time the report was made in 2016 [3]. An earlier report (2013) published on the demand for ENT doctors in various university districts gives a slightly different assessment [4]. The report's estimates for the future demand for services are based on the views of chief physicians responsible for clinical operations. An average of a 32% growth in demand for clinical services by 2025 in the field of ORL-HNS was assessed. The report anticipated a labour shortage in all university districts except one (OUH). Hence, the previously conducted studies provide differing views on the future numbers of needed ENT doctors in training.

Regional imbalances in the number of ENT doctors should be better taken into account when deciding on the level of student intake in each of the ORL-HNS training programme. More importantly, governmental funding for the training of ENT doctors in Finland warrants long-term planning to avoid oversized training. The report stated major regional imbalances in the field of medical specialists: There are too many specialists in general in the Helsinki Metropolitan Area and other university cities, are in danger of ending up in a similar situation [3]. However, in the field of ORL-HNS the situation is slightly different: according to the statistics provided by the Finnish Medical Association the Helsinki University Hospital referral area has the lowest rate of specialists per 100 000 inhabitants among the five university hospital areas in Finland. Still, nearly 90% of students who graduate from specialist training in the University of Helsinki stay working in the metropolitan area. In addition, 10–20% of graduates of other university hospitals move to this area at some point during their working career. Correspondingly, 25% of all specialists who graduate from the KUH will move from this area to somewhere else in Finland, mainly to the Helsinki referral area. On the contrary, the KUH and OUH areas do not receive specialists who have graduated from other universities, except for individual exceptions. Because of this, in the assessment by the Ministry of Social Affairs and Health the mobility of specialists is taken into account by increasing the volume of the training estimate in the KUH and OUH areas and reducing the estimate in the HUS area relative to the estimated population in 2030. Consideration of the regional labour need in relation to the student intake serves the interest of both the service system as well as individual physicians. Both the Rellman (2016) and the Parmanne et al. (2013) reports state that merely increasing the intake numbers of specialists will not ensure an adequate specialist workforce in public health care and instead, a strong regional and national co-ordination is needed [3,4].

According to the above-mentioned studies there seems to be a balance of supply and demand in the number of ENT doctors in Finland. However, no attention has been paid to the number of ENT doctors who will not perhaps be employed in their own speciality, at least not immediately after graduation. The private sector will also likely to be very saturated with ENT doctors and consequently, there will not be enough patients in relation to available ENT doctor appointments [5]. More importantly, ENT doctor training is a significant investment by the society in terms of cost and time, and any excess training would be considered as misuse of resources, especially if an ENT doctor ends up performing work that does not correspond to his or her education.

The objectives of this study were to 1) find out the total number of physician posts and the job vacancy rate at the Departments of ORL – HNS in Finland and also, the percentage of ENT doctors working part-time at these hospitals 2) to elucidate how ENT doctors who have graduated during the past 10 years have found employment after graduation and 3) to investigate whether the present results are in line with the report by Ministry of Social Affairs and Health [3]. The ultimate goal was to assess whether there is a need to change the current number of ENT doctors in training and whether there would be regional differences in this issue. To our knowledge, no similar study has previously been conducted in Finland and there is a lack of published reports on this topic even in the recent literature.

Materials and methods

All ENT doctors who had graduated in Finland between 1 July 2007 and 30 June 2017 were included and they received an electronic questionnaire by email in November 2017 (appendix). We sent reminders to those who did not respond to the questionnaire and contacted them by telephone when necessary. The identity of the respondents was removed from the data during the recording phase. In addition, an electronic questionnaire was sent by email to the chief physicians of Departments of ORL-HNS in the public healthcare system, i.e. university hospitals (UH), central hospitals (CH) and regional hospitals (RH), concerning the employment status at these units during the period in question (appendix). Each university agreed to provide us with the list of graduated specialists including contact information. The register notification was made to the office of the data protection commissioner as stated in the law of person registers in Finland and EU. An approval of the Research Ethics Board was not needed as the study only involved electronically sent surveys.

Statistical analysis

The results are presented as the means, medians, and ranges (minimum-maximum) for continuous variables, and scaled variables are presented as frequencies and percentages. The differences of the scaled variables were tested with cross-tabulation using a chi-squared test. All statistical comparisons were made with the IBM SPSS programme 22.0 (SPSS, Inc., Chicago, IL). A p-value of 0.05 was set as the limit for statistical significance.

Results

ENT doctors

A total of 129 ENT doctors had graduated in Finland between 2007 and 2017, one of whom had died (Figure 1). A total of 125 (96.9%) responses to the sent questionnaires were received. An average of 13 ENT doctors had graduated each year (range, 8–16).

The average age of the respondents was 40 years (range, 31–60) and 50.4% were men. With the exception of two who were on parental leave (2/125, 1.6%), all of the respondents were employed. Of these, 7.2% (9/125) had changed their medical speciality. Majority (104/125, 83.2%) of the respondents worked full time in the public sector and 10.4% (13/125) in the private sector. A half (65/125, 52%) of the respondents had a permanent job, 38.4% (48/125) worked as a deputy, and 8% (8/125) as a private practitioner. Seventy-one specialists (71/215, 33%) and three residents (3/91, 3.3%) performed part-time work. Other demographic details (place of graduation, possible research leave after graduation, main occupation, place and type of employment, on-call duties/month, education) of the respondents are described in Table 1.

Physicians who had been ENT doctors for a longer time, had more often a permanent job ($p = 0.013$), and they more often held the position of a chief physician. Physicians who had graduated more recently experienced more insecurity with regard to the continuation of their work ($p = 0.05$), especially if they had a fixed-term employment contract ($p < 0.001$). When looking at the current main occupations, a statistically significant difference was found between the sexes in job placements ($p = 0.05$). Men held the position of a chief physician more often (men 21.0%; women 11.5%), and they worked more often as a clinical instructor (men 11.3%; women 1.6%). More women than men had changed their speciality (men 3.2%; women 11.5%: phoniatrics, oral and maxillofacial surgery, surgery, vascular surgery, psychiatry and occupational health). No statistically significant differences were found between the sexes in job placement or in variables measuring satisfaction, such as quality of training, consultation opportunities, job versatility or working atmosphere.

Of the graduates from HUS, 5% held the position of a chief physician, whereas the average among all graduates was 16% ($p = 0.039$). Although no statistically significant differences were found, a smaller share of graduates from HUS (40.1%) held permanent job

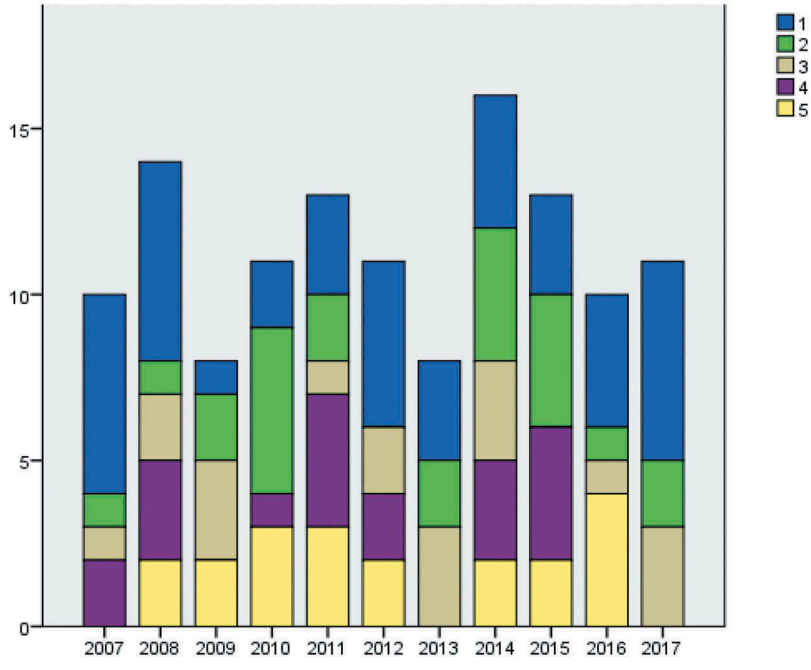

Figure 1. Number of graduated ENT doctors during 10 years.

1 = University of Helsinki, 2 = University of Turku, 3 = University of Tampere, 4 = University of Eastern Finland (former University of Kuopio), 5 = University of Oulu

Table 1. The baseline demographics of otorhinolaryngologists who graduated in Finland between 2007 and 2017. The data are the mean or number of cases and (percentages).

Characteristic	n = 125
Gender: male	63 (50.4)
Age (years) mean [min-max]	39.9 [31–60]
Place of graduation	
University of Helsinki	43 (34.4)
University of Turku	24 (19.2)
University of Tampere	19 (15.2)
University of Eastern Finland	19 (15.2)
University of Oulu	20 (16)
Maternity or parental leave after graduation	57 (45.6)
Research leave after graduation	55 (44)
Main occupation	
Specialist	84 (67.2)
Chief physician*	20 (16)
Clinical teacher	3 (6.4)
Other speciality	9 (7.2)
Other	2 (1.6)
Place of employment	
University hospital	69 (55.2)
Central hospital	27 (21.6)
Regional hospital	8 (6.4)
Private practice	13 (10.4)
Other	8 (6.4)
Type of employment	
Permanent	65 (52)
Temporary	48 (38.4)
Private practitioner	10 (8)
Working hours/week, mean [min-max]	39.9 [31–60]
On call duties/month, mean [min-max]	2.3 [0–15]
Education	
Doctor of Medicine Science	49 (39.2)
Docent degree	5 (4)
Subspeciality**	6 (4.8)
Special competence certificate ***	4 (3.2)
Other speciality	11 (8.8)

*chief physicians of departments, department heads and deputy chiefs
**2 in audiology, 2 in otology, 1 in rhinoallergology and – surgery, 1 in head and neck surgery
57/125 (45.6%) had been on maternity or parental leave after graduating.
55/125 (44%) had been on research leave
*** 2 in physician instructorship, 1 in music medicine and 1 in aviation medicine

positions than graduates from other universities: TUH (56.5%), TaUH (52.6%), KUH (73.7%) and OUH (55.0%). The corresponding percentages of physicians who work full-time in the private sector were HUS 7.1%, TUH 4.3%, TaUH 15.8%, KUH 5.3% and OUH 10.0% (p = 0.359).

After their graduation, a quarter (30/125, 24%) of the respondents had been employed in work that did not correspond to their ENT doctor training (for example, work as a family doctor or as a doctor in occupational health) (HUS 20.9%, TUH 25.0%, TaUH 21.0%, KUH 26.3% and OUH 30.0%) and 22.4% (28/125) felt that after they graduated there was not enough work available that matched their training. No statistically significant difference was found between graduates of different universities or years with regard to the adequacy of work.

Chief physicians

Questionnaires were sent to the chief physicians of a total of 30 hospitals (5 UH, 17 CH and 8 RH), all of which responded. The survey showed that in November 2017, there was a total of 306 physicians working at the Departments of ORL-HNS, 215 (70,3%) of whom were ENT doctors and 91 (29.7%) were residents. However, there were clearly fewer posts, i.e. a total of 241 (197 ENT doctors, 44 residents). Hence, 65 (21.2%) physicians worked as a deputy without a permanent post, 47 (21.9%) of ENT doctors and 18 (19.8%) of residents. In 11 (36.7%) out of these 30 departments, there was a shortage of ENT doctors, in the total amount of 12.6 positions (12.6/197, 6.4%). Of these, nine hospitals (1 UH, 7 CH and 1 RH) had been able to fill the shortage with residents. There was only one department in which a ENT doctor had been working in a resident vacancy. Seventy-one ENT doctors (71/215, 33%) and three residents (3/91, 3.3%) performed part-time work. New posts had been created at 13 departments (13/30, 43.3%) within the past 10 years; a total of 20 posts (11.5 UH, 7 CH and 1.5 RH), and no posts had been lost. It was estimated that 65 ENT doctors (65/215, 30.2%) would retire within 10 next years (27 UH, 33 CH, 5 RH). The data of ENT residents and specialists working at the Departments of ORL-HNS in November 2017 is seen in Table 2.

Discussion

The present study offers an example of how a comprehensive survey of the national employment status in one speciality may have an impact on the volume of residents in training. We used electronic questionnaires to investigate the work history of 129 ENT doctors who had graduated between 2010 and 2017, as well as the employment status at the Departments of ORL-HNS in Finland. Responses were received from 97% of these physicians, and from all the chief physicians of the 30 Departments of ORL-HNS. All 125 respondents were employed – 83% in the public sector – except the two being on parental leave. After graduation, 24% of the respondents had been employed in work that did not match their speciality training. Based on the questionnaire directed to the Departments of ORL – HNS, at the moment of the survey there was no obvious shortage of ENT doctors, and the use of non-permanent vacancies, i.e. deputy positions were common.

In November 2017, there were a total of 306 physicians working at the departments of ORL-HNS in Finland (215 ENT doctors and 91 residents). However, there were clearly fewer posts available, i.e. a total of 241 (197 for ENT doctors and 44 for residents). Therefore, every fifth ENT doctor

Table 2. ENT residents and specialists working at the Departments of ORL-HNS in November 2017. Data are number of cases median [minimum-maximum].

	Total of hospitals (n = 28)	University hospitals (n = 5)	Central hospitals (n = 17)	Regional hospitals (n = 6)
RES vacancies	0 (0–13)	6 (5–13)	0 (0–2)	0 (0)
RES at work	1 (0 – 26)	7 (6–26)	1 (0–5)	0 (0–2)
SPEC vacancies	5 (1–41)	18 (12–41)	5 (2–8)	2 (1–5)
SPEC at work	5 (1–56)	19 (13–56)	5 (1–8)	2 (1–3)
RES part-time work	0 (0–2)	0 (0–2)	0 (0)	0 (0)
X SPEC part-time work	1 (0–19)	1 (1–19)	2 (0–5)	1 (1–2)
Estimated retirement within 10 next years	2 (0–18)	3 (0–18)	2 (0–3)	1 (0–1)

RES = ENT resident, SPEC = ENT specialist

worked in a deputy position for a varying period. At the five university departments, there was an average excess of nine physicians compared with the available posts, at the central hospitals there was an average excess of one physician, and at the regional hospitals 0.2. The majority of the ENT doctors without a permanent post in our series had graduated from the HUS. This is the largest Department of ORL-HNS in Finland with 56 positions for ENT doctors and 13 for residents. A problem stated in the responses from the respondents who had graduated from the HUS concerned temporary working positions and thus insecurity about the continuation of the work. Most of the respondents had experienced accumulated temporary assignments, lasting as long as even 8 years. Even though the practice produces insecurity for deputies, on the other hand a large number of colleagues working at the department makes it easier to have leaves of absence for research and other purposes, which certainly improves wellbeing at work. According to a national study covering all medical fields, nearly two-thirds of young physicians (63%) worked under fixed-term employment contracts for 2–12 years after graduation [6].

There was a shortage of ENT doctors in November 2017 in only 11 Departments of ORL-HNS in Finland. Based on the responses, in nine out of these 12.6 posts (1 UH, 7 CH and 1 RH) the problem had been solved by recruiting residents. Indeed, it was evident in the responses provided by the chief physicians that there seems to be too many ENT doctors being trained, and that there are clearly more residents waiting for a training position than in the previous years.

According to an estimate of a study conducted by KT Local Government Employers in October 2017, there was only a 2.4% (equivalent to six physicians) shortage of ENT doctors in Finland with the total number of available posts being 247.4. This is well in line with the present results. Rellman's report also indicates a similar shortage (four physicians) in ORL-HNS [3]. The same report estimates that the current volume of 12 graduating ENT doctors per year up to the year 2030 will result in 329 ENT doctors, which will cover the number of retirees as well as the shortage at the time the report was made [3]. Our own study estimates the number of graduating ENT doctors to be similar to that of previous studies, i.e. an average of 13 per year. As a summary of regional studies, Parmanne et al. (2013), anticipate a labour shortage due to the growing need for services in all university hospital districts with the current student intake levels, with the exception of OUH [4]. Therefore, these reports indicate a small shortage of physicians in ENT speciality and consequently, no need to reduce the level of student intake ORL-HNS programmes. However, an additional factor is that the baby-boom generation will begin to retire. The chief physicians of the Departments of ORL-HNS in the public sector estimated that 65 physicians will retire in the next 10 years (UH 27, CH 33, RH 5). With the current levels of student intake, the number of graduating physicians over the next 10 years is 130 physicians, which is twice the number of physicians retiring in the public sector. Even though the number of retirees does not include ENT doctors occupied solely in the private sector (only about 10% of graduates), the ratio seems unsustainable. There is an oversupply of physicians particularly at the university departments and only a few physician vacancies open in smaller hospitals. The need for ENT services will grow due to the development of available treatment modalities and due to the increase and ageing of the Finnish population [3]. The proportion of female ENT doctors has increased, and this can contribute to an increased need of ENT doctors due to maternity leaves and part-time working [3,7–9]. However, these factors are not significant enough to compensate for the increasing imbalance in the demand and supply of labour. According to a forecast made by the Finnish Medical Association in 2015, the number of ENT doctors in the field of ORL-HNS, would appear to remain stable up to the year 2030, and it was estimated that 32% (104/325) of the ENT doctors would reach the age of retirement in the following 10 years.

The present study provides evidence of an obvious excess in the numbers of ENT doctors in Finland. A corresponding concern of the existing volume of ENT doctors has been raised based on many observations: unchanged numbers of student intake, a large number of physicians without a permanent vacancy, long-term temporary employment contracts, and shortage of patients in the private sector. Further, one in every four respondents in the present study responded having performed work after graduation that did not match his or her speciality training, and one in four felt that there was not enough available work that corresponded to his or her education. Some of the interviewees had seen general practitioner-level patients after graduation because there were not enough ENT patients in the private

sector. Some respondents had also worked temporarily in occupational health care or in a health-care centre. For graduating ENT doctors, the situation is worrisome because being diverted to a variety of first workplaces can determine the direction of their career more broadly. Even though for many ENT doctors, work at the private sector is the primary workplace, which is attractive especially due to the higher pay level and entrepreneur identity [10], some need to resort to it because there is no hospital work in their own speciality available. If hospital posts are filled, a recently graduated physician can easily end up performing work that does not correspond to his or her education or doing work in the private sector even if there would not be enough patients available. The physician workforce will never relocate or move as the government would wish, and some departments will continue to suffer from a shortage of labour, and the statistical shortage of ENT doctors will be corrected with excessive training.

One weakness of our study is that some of the regional hospitals are administratively subordinate to university and central hospitals, therefore it is difficult to make a direct comparison between university, central and regional hospitals. The strengths of the study include the large number of ENT doctors interviewed (n = 125) and the particularly high response rate (97% of recent graduates and 100% of chief physicians), which is an evidence not only of the sent response reminders, but especially of how motivated the respondents were to reply to a survey focusing on employment. Because our study is based on information received directly from the chief physicians, its reliability, for example, in estimating the number of people retiring at each unit, can be considered better compared with estimates based on statistics only.

Based on this study, there is no significant shortage of ENT doctors in Finland. There is a slight geographical difference in the distribution of ENT doctors between the University Hospital areas. With the current levels of student intake, the number of graduating ENT doctors is 130 physicians per decade, which is twice the number of physicians retiring within the next 10 years in the public sector. The present study shows that obtaining an update of the current employment status may have an impact on the future training prospects of a medical speciality.

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Disclosure statement

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Appendix 1

Dear colleague

You have been selected to participate in a study commissioned by the Finnish Association of Otorhinolaryngology-Head and Neck Surgery on the employment status of Otorhinolaryngologist - Head and Neck Surgeons (ENT doctors). The aim is to find out the job description and placement in the labour market of ENT doctors who have graduated during the past ten years. Your responses are important in order to obtain reliable information, and the questionnaire is fully confidential, personal data will be removed during the recording stage, and hence your personal identity is not identifiable.

You can respond in one of two ways

1. *Reply by email to the questions below*
2. *The questionnaire can be conducted by phone at a separately agreed time*

1. Subject's name:

2. Age:

3. From what university did you graduate as an ear specialist? HU, TU, TaU, UEF and OU

4. Year of graduation as a specialist:

5. How satisfied are you with your own specialist training?
   - Very satisfied o Fairly satisfied ∘ Hard to say ∘ Fairly unsatisfied
   - Very unsatisfied

6. What was "your dream job" when you graduated as a specialist?
   - University Hospital ∘ Central Hospital ∘ Regional Hospital ∘ Private Sector ∘ Other, what?

7. Educational background
   - Another medical speciality: Yes/No, which one?
   - Subspeciality training in ORL-HNS: Yes/No
   - Subspeciality training in another medical speciality: Yes/No, which one?
   - Special competence certificate (Finnish Medical Association): Yes/No, which one?
   - Doctor of Medical Science degree: Yes/No
   - Docent degree: Yes/No

8. Work history after graduation as a specialist:
   - Have you been on maternity/parental leave? Yes/No

   If you answered Yes, with how many children (total) and for how long each time (months) (e.g. 2; 14 months and 12 months)?

   - Have you been on research leave? Yes/No, how long (months)?
   - Have you worked exclusively in the private sector? Yes/No
   - Have you worked simultaneously part-time at a hospital and in the private sector as your day job? Yes/No

9. After graduating as a specialist, have you worked in a job that does not match your specialist training. For example, have you been seeing general practitioner-level ENT patients? Yes/No

10. If "Yes", why and for how long?

11. After graduating as a specialist, have you experienced that there is not enough work available that corresponds to your training? Yes/No

12. Your current full-time workplace?
    - University Hospital ○ Central Hospital ○ Regional Hospital ○ Private Sector ○ Other, what?

13. Your professional title in your current main occupation (and hereinafter in this post):

Are you?

- Working in a permanent job ∘ Working under a fixed-term contract
- Private practitioner

	Main occupation in public sector	Secondary occupation in public sector	Private practice
Hours of work per week			
On-call (times per month)			

15. If you operate a private practice, how many patients do you have per week, and how many appointment slots would you have available per week? _____/_____

16. Would you like to operate your private practice more than you currently do? Yes/No

17. If you answered "Yes" – then why don't you?

∘ Not enough patients available ∘ I do not have enough time ∘ Other reason, explain?

18. How does the specialist training that you have received match the requirements of your current main occupation?

∘ Very well ∘ Fairly well ∘ Moderately ∘ Fairly poorly ∘ Very poorly

19. How much do you enjoy your current main occupation?

∘ Very well ∘ Fairly well ∘ Moderately ∘ Fairly poorly ∘ Very poorly

20. How satisfied are you with the training opportunities of your current main occupation?

∘ Very satisfied o Fairly satisfied ∘ Hard to say ∘ Fairly unsatisfied
∘ Very unsatisfied

21. How satisfied are you with the opportunities for career advancement of your main occupation?

∘ Very satisfied o Fairly satisfied ∘ Hard to say ∘ Fairly unsatisfied
∘ Very unsatisfied

22. What do you think about the strenuousness of your main occupation?

∘ Not strenuous at all ∘ Hardly strenuous ∘ Hard to say ∘ Fairly strenuous
∘ Very strenuous

23. Do you feel uncertainty about the continuation of the work of your main occupation?

∘ Not at all ∘ From time to time ∘ Often ∘ Constantly

24. How satisfied are you with the consultation opportunities of the job of your main occupation?

∘ Very satisfied o Fairly satisfied ∘ Hard to say ∘ Fairly unsatisfied
∘ Very unsatisfied

25. How satisfied are you with the versatility of your main occupation?

∘ Very satisfied o Fairly satisfied ∘ Hard to say ∘ Fairly unsatisfied
∘ Very unsatisfied

26. How do you experience the working atmosphere of your main occupation?

∘ Very good ∘ Quite good ∘ Hard to say ∘ Quite bad ∘ Very bad

27. Where would you like to work in future?

∘ University Hospital ∘ Central Hospital ∘ Regional Hospital ∘ Private Sector ∘ Other, where?

Appendix 2

Dear colleague

We are investigating the employment status of Otorhinolaryngologist - Head and Neck Surgeons (ENT doctors) on behalf of the Finnish Association of Otorhinolaryngology and Head and Neck Surgery. We hope you, as the chief physician, will answer a few questions regarding the employment status of your Department of Otorhinolaryngology – Head and Neck Surgery.

You can respond in one of two ways

1. Reply by email to the questions below
2. The questionnaire can be conducted by phone at a separately agreed time

1. Department: _____
2. How many vacancies for specialists and residents are there at your department, and what is their job vacancy rate?

Physicians	Posts (number)	Physicians working in October 2017 (number)
Specialists		
Residents		

3. Have specialist vacancies been filled with residents during the past 12 months? Yes/No

4. If you answered "Yes", then how many vacancies? _____

5. Have there been many any changes in the total number of posts of your department during the past 10 years? Yes/No/I don't know

6. If you answered "Yes", then how many
   additional posts have your department received:_____
   posts have your department lost:_____

7. How many employees perform part-time work (quantity)?
   Specialists:_____
   Residents:_____
8. How many specialists do you estimate that will retire from your department in the next 10 years?
   _____