

# Increased number of ear-nose-throat malpractice complaints in Denmark

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## ABSTRACT

**INTRODUCTION:** Danish ear, nose and throat (ENT) physicians have little knowledge of the type of decisions made at the Danish National Board of Patients' Complaints (NBPC). The aim of this study was to analyze and describe the epidemiology of ENT malpractice complaints by showing their distribution and volume in order to facilitate learning and evaluate the underlying factors.

**MATERIAL AND METHODS:** This retrospective register study analyzed all ENT malpractice complaints processed by the NBPC in the 1998-2008 period.

**RESULTS:** In 18% of the 480 ENT malpractice complaints, the settlement resulted in criticism of one or more ENT healthcare professionals. A steady increase in the number of ENT malpractice complaints was found over the study period and the total increase observed for the study period was 72%. Younger generations of ENT patients complained more and those older than 70 years complained less than the respective age groups of ENT patients treated at public hospitals. The mean incidence of ENT malpractice complaints was lowest in the Northern Jutland Region and highest in the Capital Region which was the most densely populated region. ENT departments at public hospitals receive complaints six times more frequently than ENT practicing clinics, even though the latter handle more patient contacts. The numbers of complaints and criticisms per specialist physicians at public hospitals were almost identical to those of specialist physicians serving at ENT practicing clinics.

**CONCLUSION:** An increasing trend in the number of the ENT malpractice complaints was found in the 1998-2008 period.

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**TRIAL REGISTRATION:** not relevant

The right to make a complaint is a core element of patients' rights [1] and a source of information on patient safety [2]. Further, the monitoring of patient complaints in health services forms part of quality assurance [3]. Information related to patients' complaints can be utilized to learn from mistakes and to gain information on adverse events [4].

Since 1988 medical malpractice complaints in Denmark have been handled by the Danish National Board of Patients' Complaints (NBPC). Please note that per 1.1.2011 the work of NBPC was transferred to the Danish National Agency for Patients' Rights and Com-

plaints. The number of complaints at the NBPC has increased steadily since 1998 [5]. Equivalent, increasing trends have been described in many countries and specialties [4, 6-11]. The Danish NBPC is not engaged in settling financial compensation for patient injuries. The decision-making is based on the Public Administration Act [12]. In cases of suspected severe negligence, the case is furthermore forwarded to the police authority. General knowledge of the complaint pattern and decisions in the Danish ear, nose and throat (ENT) specialty are unexplored and largely seen as a tabooed issue by healthcare professionals. Thus, the aim of this study was to describe and analyze the pattern and epidemiology of Danish ENT specialty-related malpractice complaints filed at the NBPC from 1998 to 2008 in order to break the taboo and show the distribution and volume of ENT malpractice complaints and their juridical consequences. The following research questions were addressed: 1. Is the number of ENT malpractice complaints and criticisms increasing in Denmark? 2. Does the age distribution of patients involved in the ENT malpractice complaints reflect the age distribution of the treated patients at Danish ENT departments? 3. Do the numbers of malpractice complaints vary between Danish regions, healthcare service systems and healthcare professionals? For other aspects of the filed ENT complaints, see [13] also submitted herein.

## MATERIAL AND METHODS

### Design

The present study is an observational and retrospective register study.

### Ethics

The study was approved by the Regional Research Ethical Committee, the Danish Data Protection Agency and by the NBPC.

### Subjects

All decisions made by the NBPC from 1998 to 2008 were examined and ENT specialty-related cases were identified and analyzed. In those malpractice complaints where several medical specialties were alleged, only ENT specialty-related data were used. A standardized register created for the study was used to record the demo-

## ORIGINAL ARTICLE

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TABLE 1

Annual demographic distribution of ear, nose and throat malpractice complaints and criticisms in Denmark, 1998-2008.

Year	Complaints, n (% of 480)	Criticisms, n (% of the complaints of the year)	Capital region			Zealand			South Denmark		
			complaints, n	population, n	incidence	complaints, n	population, n	incidence	complaints, n	population, n	incidence
1998	36 (8)	6 (17)	13	1,592,362	0.8	6	778,643	0.8	11	1,170,794	0.9
1999	34 (7)	2 (6)	18	1,600,989	1.1	2	782,264	0.3	10	1,172,159	0.9
2000	32 (7)	5 (16)	12	1,609,113	0.7	7	785,751	0.9	5	1,172,877	0.4
2001	42 (9)	7 (17)	18	1,617,581	1.1	5	789,778	0.6	6	1,174,156	0.5
2002	43 (9)	13 (30)	17	1,623,941	1.0	7	794,049	0.9	13	1,176,091	1.1
2003	45 (9)	9 (20)	15	1,627,072	0.9	6	798,068	0.8	8	1,177,817	0.7
2004	26 (5)	4 (15)	10	1,629,254	0.6	3	801,452	0.4	2	1,181,125	0.2
2005	44 (9)	7 (16)	19	1,631,635	1.2	4	805,954	0.5	7	1,183,751	0.6
2006	59 (12)	11 (19)	22	1,633,565	1.3	13	811,511	1.6	14	1,185,851	1.2
2007	57 (12)	15 (26)	17	1,636,749	1.0	11	816,118	1.3	12	1,189,817	1.0
2008	62 (13)	8 (13)	20	1,645,825	1.2	10	819,427	1.2	14	1,194,659	1.2
Total	480	87 (18)	181	–	–	74	–	–	102	–	–
Mean	–	–	–	–	–	–	–	0.8	–	–	0.8

graphic data of each complainant (which in some cases was a family member rather than the patient), age and gender of the patient. Furthermore, healthcare professionals, healthcare services (public hospitals, specialized healthcare and private healthcare), the decision reached by the NBPC and its date were recorded.

#### Background data

The National Patient Register of the National Board of Health provided information on the number of patient contacts, which was used to calculate the incidence of ENT malpractice complaints. The patient contacts sum total for Danish public hospitals was 3,246,549. This figure was calculated as the total number of outpatient contacts (2,890,520) plus the total number of discharges (356,029) from all public ENT departments in the 1998-2008 period. For the ENT practicing clinics, the patient contacts sum in the 1998-2008 period was 11,470,412. As from 2007, private Danish hospitals have been legally obliged to report information about healthcare services to the National Patient Register. They reported such information voluntarily before that. Since 2003 a total of 28,872 ENT outpatient contacts and 2,887 ENT discharges have been recorded at Danish private hospitals. The National Patient Register has also provided information on the age distribution of ENT patients at the time of their outpatient treatment and at the time of their admission to an ENT department at public hospitals in Denmark during the study period. The sum of the age distribution of ENT patients from admission and outpatient care was compared with the respective age groups to determine whether there was an age-dependent trend in the patient complaint pattern.

The National Board of Health has provided informa-

tion on the total number of employed ENT specialists in the 1998-2008 period, on the number of non-specialists working at the public hospitals in the 1998-2002 period and also on the total number of ENT specialists practicing at clinics in the 1998-2008 period.

#### Demographic data

Denmark consists of five regions and 98 municipalities. This organization was established by the municipal reform [14] which came into force on January 1 2007, replacing the previous 13 counties with five regions. The study period of this project embraces the transition from counties to regions. In order to allow comparison of the complaints' demographic incidences, the new regional division was used and adapted to the years 1998-2006. The population numbers were collected from data bank of Danish Statistics [15].

#### Statistics

The data are complete and therefore only descriptive statistics and a  $\chi^2$  test between frequencies were carried out. A p value  $\leq 0.05$  was considered significant.

*Trial registration:* not relevant.

#### RESULTS

From a total of 25,308 [5] NBPC decisions, 1.96% (n = 497) was found to involve malpractice complaints filed against ENT specialty professionals in the 1998-2008 period. One malpractice complaint was reported by the National Board of Health, while 496 were filed by a complainant. Of the 497 decisions, 480 were newly filed complaints, while 17 were requests for the reopening of a formerly settled case. In 15 of these cases, the request



TABLE 1, CONTINUED

Year	Middle Jutland			North Jutland			Greenland, n			Foreign address, complaints, n
	complaints, n	population, n	incidence	complaints, n	population, n	incidence	complaints, n	population, n	incidence	
1998	1	1,175,946	0.1	4	577,116	0.7	–	56,076	–	1
1999	3	1,180,528	0.3	1	577,637	0.2	–	56,087	–	–
2000	7	1,184,451	0.6	1	577,828	0.2	–	56,107	–	–
2001	10	1,189,523	0.8	2	578,174	0.3	1	56,245	1.8	–
2002	4	1,195,644	0.3	2	578,629	0.3	–	56,542	–	–
2003	14	1,201,945	1.2	1	578,605	0.2	1	56,676	1.8	–
2004	8	1,207,321	0.7	3	578,488	0.5	–	56,854	–	–
2005	11	1,212,787	0.9	3	577,278	0.5	–	56,969	–	–
2006	7	1,219,725	0.6	3	576,807	0.5	–	56,901	–	–
2007	11	1,227,428	0.9	6	576,972	1.0	–	56,648	–	–
2008	14	1,237,041	1.1	2	578,839	0.3	1	56,462	1.8	1
Total	90	–	–	28	–	–	3	–	–	2
Mean	–	–	0.7	–	–	0.4	–	–	1.8	–

was rejected as no substantial new information had been provided. One case was reopened, but the original decision was maintained. One case resulted in a new decision in favour of the healthcare professional. The vast majority of complaints were filed against physicians (99% of 480). Only in 4% (18/480) were nurses involved either alone or together with a physician. In 18% (87/480) of the decisions, one or more ENT healthcare professionals were criticized. In 1.4% (7/480), the ENT physician was not only criticized but also enjoined. None of the 480 decisions resulted in a police report.

Data analysis revealed an increasing trend in the total number of the ENT decisions. Apart from 2004, when there was a lack of employees at the NBPC resulting in fewer decisions, the number of settled ENT malpractice complaints rose from 36 in 1998 to 62 in 2008 (a 72% increase) with some variation over the years (Table 1). Table 1 summarizes both the annual distribution of ENT decisions and criticisms and the demographic distribution of ENT decisions by region. Table 1 shows a significant difference in the number of complaints between regions with the Capital region having the highest rate ( $\chi^2 = 106$ , degree of freedom (df) = 4,  $p < 0.000$ ). The male-to-female ratio of the patients mentioned in the complaints was 9:11. The median age of the patient at the beginning of the period mentioned in the complaint was 43 (mean age: 40.5, range: 0-92) years. The age distribution of patients mentioned in the ENT malpractice complaints and of all patients treated at the ENT departments of Danish public hospitals in the 1998-2008 period are shown in Figure 1.

Table 2 shows the distribution of ENT malpractice complaints and NBPC decisions between public hospitals, practicing ENT clinics and private hospitals. In the

vast majority of the complaints, only one healthcare service was mentioned, but in 12 both the primary (ENT practicing clinic) and a secondary healthcare service (public or private hospital) were mentioned.

Many malpractice cases contained several complaints addressed to one or more healthcare professionals. This resulted in 577 different complaints being filed as a result of the 480 ENT malpractice complaints (Table 3). Regarding the NBPC decision, in some cases more than one criticism formed the basis for a decision. Consequently, 114 criticisms resulted from the 87 complaint cases concerning ENT healthcare professionals. There were 59 complaints and six criticisms in cases where the complaint was filed not against one but all the treating physicians during the whole admission period at the ENT department (Table 3).



FIGURE 1

Age distribution of patients involved in ear, nose and throat malpractice complaints (blue) and of ear, nose and throat patients treated at Danish hospitals (red), both for 1998-2008.

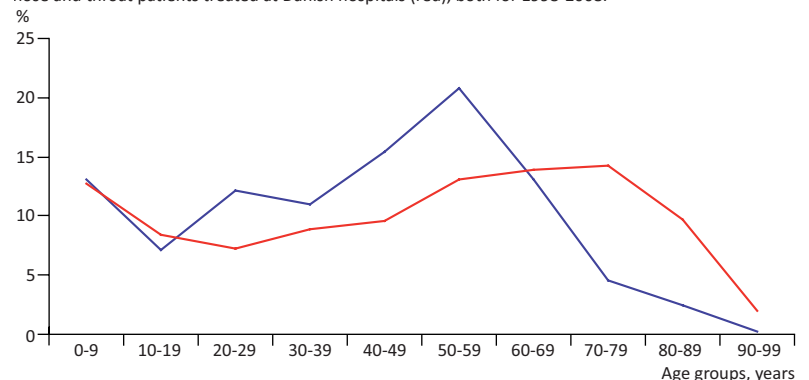


TABLE 2

Ear, nose and throat healthcare services and decisions at the Danish National Board of Patients' Complaints, 1998-2008.

Health-care service	ENT malpractice complaints, n (% of 480)	Complaints resulting in criticisms, n (% of ENT malpractice complaints)	Total patient contacts, n	Total complaints/criticisms, n per 100.000 contacts
Public hospital, ENT department	287 (60)	42 (15)	3,246,549	8.8/1.3
Private hospital, ENT department	6 (1)	2 (33)	31,759	18.9/6.3
ENT practicing clinic	175 (36)	42 (24)	11,470,412	1.5/0.4
ENT practicing clinic <i>and</i> ENT department	12 (3)	1 (8)	–	–
Total	480	87 (18)		

ENT = ear-nose-throat.

TABLE 3

Ear, nose and throat healthcare professionals and decisions at the Danish National Board of Patients' Complaints, 1998-2008.

Health-care professions	Complaints, n (% of 480) <sup>a</sup>	Complaints resulting in criticisms, n (% of 87)	Physicians, n	Complaint/criticism, n per physician
Specialist physician, public hospital	215 <sup>b</sup> (45)	30 (34)	1,653	0.13/0.02
Consultant ( <i>overlæge</i> )	165 (34)	23 (26)	–	–
Non-consultant ( <i>afdelingslæge</i> )	65 (13)	8 (9)	–	–
Non-specialist physician, public hospital	73 (15)	8 (9)	891 <sup>c</sup>	0.08/0.009
Practicing ENT specialist	191 (40)	43 (49)	1,752	0.11/0.02
Specialist physician, private hospital	6 (1)	2 (2)	–	–
Nurse	18 (4)	2 (2)	–	–
All the involved physicians	59 (12)	6 (7)	–	–
Total	577			

ENT = ear-nose-throat.

a) The total sum of ear-nose-throat malpractice complaints was 480, of which 87 resulted in criticism; b) In 15 complaint cases both a consultant and a non-consultant were mentioned which explains the amount 215 as the total for specialist physicians at public hospitals; c) Estimated number based on reports from 1998 to 2002.

## DISCUSSION

Monitoring of patient complaints regarding healthcare services is used as a tool for quality assurance and in the future development of services [4]. This study provides a descriptive analysis of the Danish patient complaints system over a period of 11 years in the ENT specialty. The percentage of the criticisms in NBPC decisions for all medical specialties in the 1998-2008 period was 20.6% [5], placing ENT specialty below the average criticism frequency with 18.1% ( $\chi^2 = 1.57$ ,  $df = 1$ ,  $p = 0.21$ ).

A rise in the number of ENT complaints was observed over the study period. One possible explanation for such a trend is that people are becoming ever more aware of their rights [4] as healthcare patients. Another explanation may be that the level of patient education has risen. Patient support organizations assist patients with the formulation of complaints and also which authority to address. Other factors could be a reduction of physicians' authority over the past decades, higher expectations to medical healthcare services, use of more complicated medical applications and new treatments with a higher risk of complications. Also, physicians' workload has increased and work has become more hectic resulting in a potentially higher risk of errors and deficiencies.

The rise in the number of ENT malpractice complaints has not produced a relative increase in the number of criticisms (Table 1). In fact, the share of the annual ENT criticisms has remained more or less stable (average of 18%) with few years presenting a very low (year 1999) or very high (2002, 2007) share. This emphasizes the fact that the rise of ENT complaints is not a result of decreasing quality of the medical services rendered.

There is an accumulation of malpractice complaints among patients aged 0-10 years and 20-69 years. A similar age distribution is seen for the ENT patients treated at Danish public hospitals in the same time period. The young generations of ENT patients treated at the public hospitals complain more and those older than 70 years complain substantially less (Figure 1). This may be explained by stronger personal competencies or simply by a change in attitude towards the health care system in the younger generations. A limitation of the study is that we were unable to obtain the age distribution of ENT patients treated at private hospitals and ENT practicing clinics. However, as the Danish public insurance is the major healthcare service provider at public hospitals, the age distribution is considered reliable.

The mean incidence per 100,000 citizens was high-

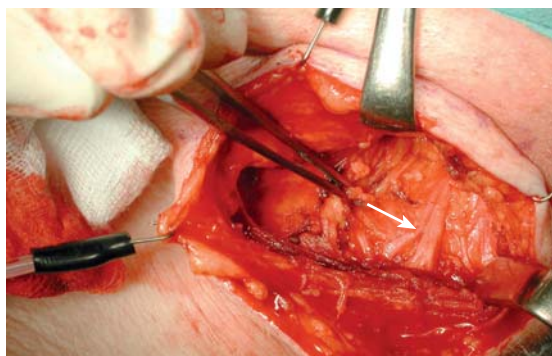
est in the Capital Region (1.0/100,000) and lowest in the North Jutland Region (0.4 /100,000) (Table 1). The same tendency of geographic variation with the highest mean incidence at the most densely populated state province and vice versa was described in Finland for the 2000-2004 period [4]. Population density is not, however, the only factor explaining the high incidence observed in the Capital Region as several highly specialised treatments are placed here, resulting in complicated cases being transferred from other regions. A limitation of the incidence calculation is that the population number was used instead of the total number of patient contacts of the regions. It was impossible to obtain patient contact data and the population number was considered the best standardization alternative.

The ratio of malpractice complaints between ENT public departments and ENT practicing clinics was 1.6/1 (60/36 %) (Table 2). This, however, is not the real distribution, as the ENT practicing clinics have many more patient contacts per day than public hospitals. It can be questioned whether both out- and inpatient contacts at ENT departments may be compared to the total number of outpatient contacts at ENT practicing clinics, but the two numbers are representative for the activity in the two healthcare systems. The incidence ratio of the ENT malpractice complaints of the public hospitals (8.8) relative to ENT practicing clinics (1.5) was 5.86/1. Correspondingly, the incidence ratio of criticisms for the respective healthcare systems (1.3 and 0.4) was 3.25/1. This may possibly be explained by the more complicated nature of ENT treatments and operations performed at public hospitals compared to ENT practicing clinics and by the fact that treatments at public hospitals are more frequently final.

Practicing ENT specialists at clinics received 40% of complaints, ENT specialist physicians at public hospitals 45% and non-specialist physicians at public hospitals the remaining 15% (Table 3). The number of non-specialist physicians is an estimate based on the mean numbers from 1998 to 2002. As the number of ENT specialist physicians employed at public hospitals has not changed through the study years, the number of non-specialist physicians is also estimated to have remained stable. The complaint per physician was slightly higher for specialist physicians at public hospitals (0.13) than for specialist physicians at ENT practicing clinics (0.11), while the number of criticisms per physician was the same for both groups (0.02/0.02). The non-specialist physicians were the group with the lowest number of complaints and criticisms (0.08/0.009).

## CONCLUSION

A steady increase was observed in the number of ENT malpractice complaints over the study years, and the



Spinal accessory nerve (arrow) paresis after surgery is a cause of patient complaint.

highest incidence was seen in the most densely populated Capital Region. Young generations of ENT patients complained more and those older than 70 years complained less than the respective age groups of ENT patients treated at the public hospitals. Patients complain approx. six times more often about treatment received at public hospital ENT departments than about treatment received at ENT practicing clinics, even though the latter have more patient contacts. The numbers of complaints and criticisms per specialist physicians at public hospitals were almost identical to those of specialist physicians serving at ENT practicing clinics.

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**CONFLICTS OF INTEREST:** Disclosure forms provided by the authors are available with the full text of this guideline at danmedbul.dk

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