

Main Article

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Preliminary results of this paper were presented at the ENT Scotland meeting, 12–13 May 2016, Dunblane, Scotland, UK.

Cite this article: Asimakopoulos P, Charalampidis G, Chakravarthy KM, Mamais C. Ten years of ENT Scotland meetings: an appraisal of the publication rates of trainee-presented scientific papers. *J Laryngol Otol* 2019;**133**:526–529. <https://doi.org/10.1017/S0022215119001075>

Accepted: 8 February 2019
First published online: 3 June 2019

Key words:

Abstracting And Indexing; Congresses; Otolaryngology; Publishing; Organization And Administration; Research Design; Societies, Medical; United Kingdom

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Ten years of ENT Scotland meetings: an appraisal of the publication rates of trainee-presented scientific papers

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Abstract

Objective. The ENT Scotland society (formerly known as the Scottish Otolaryngological Society) has two meetings a year and accepts oral presentations from trainees. This study aimed to identify publication rates from these meetings.

Methods. Abstracts of the presentations are published in *The Journal of Laryngology and Otology*. A structured search on PubMed and Google Scholar was undertaken to identify which presentations from the 2005 to 2014 meetings have been published.

Results. Of the 145 abstracts found, 60.7 per cent were presenting clinical research and 44.1 per cent were related to the head and neck subspecialty. Seventy-three abstracts (50.3 per cent) were associated with publication as a peer-reviewed article; otology papers were more likely to be published than those focusing on other subspecialties (64.3 per cent, $p = 0.036$). No correlation was found between publication and other factors.

Conclusion. Presentations at the ENT Scotland meetings undergo unbiased peer review and are as likely to be published as those of other conferences.

Introduction

Conferences and meetings are an ideal place to present research and projects. Choosing where to submit one's work for presentation depends on many factors, such as the prestige of the conference, the audience, extra opportunities generated (e.g. networking with other professionals with similar interests, seeing current trends in one's field of interest) and convenience in getting there (e.g. travel distance and cost). The real value for presenting unpublished work, however, is probably the questions and feedback received, as these will likely cover concerns from potential reviewers and therefore can be used constructively to improve the final paper submitted to a journal.

The prestige of an academic conference is difficult, if not impossible, to define. It depends on the faculty, the presenters and ultimately the quality of the work presented. One possible quality measure of the presentations is subsequent publication in a peer-reviewed journal. In ENT, there are a number of well-established meetings that are considered highly among the ENT community, with great variability of publication rates of presented papers.^{1–3} Knowledge of patterns of topics and research types presented, as well as subsequent publication rates, should be interesting both to professionals who submit their work and to the conference organisers themselves. This information can serve as a means of transparency and external review, to ensure no selection bias and a fair representation of topics relevant to the audience.

The ENT Scotland society (formerly known as the Scottish Otolaryngological Society) was established in 1910 to promote the surgical specialty of ENT.⁴ It hosts two meetings a year, where Scottish trainees submit and present their research, and the abstracts of these are published in *The Journal of Laryngology and Otology*. The selection of the presentations is undertaken via a peer-reviewed process conducted by senior clinicians, all of whom are members of the society. Submissions from outside of Scotland are rejected by default.

The meetings organised by ENT Scotland are the only regular ENT conferences in Scotland. There has been no previous analysis of the fate of oral presentations. Attendance and abstract submission by the local trainees are expected. There are two deaneries in Scotland responsible for higher surgical training in ENT: the East of Scotland Deanery and the West of Scotland Deanery. Although the East of Scotland Deanery encompasses more regions than the West of Scotland Deanery, the number of trainees is similar (around 15 trainees). This study aimed to gain insight into the peer review process and the quality of the ENT Scotland trainee presentation section based on patterns of presentation and subsequent publication rates.

Materials and methods

The abstracts of the presentations were identified from *The Journal of Laryngology and Otology* website by an electronic search. Data extraction and coding were performed using Google Forms.

The data extracted per abstract were: date of presentation, number of authors, affiliated region and involvement of a professor. Each abstract was coded according to subspecialty: head and neck; benign and malignant conditions; otology; rhinology; and other (not fitting in any other category).

In order to have results comparable with other publications, the presentations were also categorised according to the research classification system of Scarney *et al.*⁵ (1) case reports – descriptive reports of single or multiple cases, either clinical or laboratory findings, which did not utilise a scientific method; (2) clinical research – analytical studies involving patients, and utilising retrospective, prospective or cross-sectional approaches; (3) laboratory research – analytical studies undertaken purely in a laboratory setting, without involving direct access to patients, and including work on pathological or autopsy material; and (4) editorials or other papers – articles not fitting into any of the above headings, including editorials, surveys and review articles.

In order to identify which abstracts were subsequently published in a journal, searches on the PubMed portal and Google Scholar search engine were performed. The initial search was based on the first author of each presentation; if the results were too many, keywords from the title or abstract were added. If no publication was identified, a search based on the other authors was conducted to discover articles where the authorship had changed.

A publication (of an abstract presented) was defined as an article with similar content and authors (to the abstract), or, if the content could not be retrieved, a near exact title and authors. The journal's name and impact factor, the article's date of publication (Epub date preferred if available), and whether it was found on PubMed or Google Scholar, were recorded for each published article. The main search was conducted between January and May 2016, while an updated search was conducted in January 2018 to detect any delayed publications.

Statistical analysis was performed with GNU PSPP software, version 0.10.2, on a Linux 64-bit computer, using methods of descriptive statistics, chi-square tests ($\alpha < 0.05$) or the Mann–Whitney U test.

Results

Identified abstracts

Between May 2005 and May 2014, there were 20 meetings, 10 in winter and 10 in summer. Only 12 of the society's proceedings were available; from 2007, none of the winter meeting abstracts were published. The total number of available abstracts was 145, with a median of 11 presentations per meeting (interquartile range = 5.5). Of those, 73 (50.3 per cent) were identified as being associated with a publication, 1 of which was only identified by Google Scholar. On average, each abstract had three authors (median = 3, interquartile range = 2 to 4), and a professor was involved in 20.7 per cent (30 out of 145) of cases.

Abstracts per region

Of the 145 available abstracts, 1 was from outside Scotland; however, it was accepted for presentation as the main author was a recent Scottish trainee. Most of the presentations were from the NHS Great Glasgow and Clyde area (64 out of 145, 44.1 per cent) (Table 1), and those from NHS Tayside had the highest publication rate (13 out of 19, 68.4 per cent). The relationship between affiliation and publication was not

Table 1. Abstracts presented per region

Affiliation	Presented	Published
West of Scotland		
– Great Glasgow & Clyde	64	33
– Lanarkshire	6	2
– Ayrshire & Arran	6	2
East of Scotland		
– Grampian	24	9
– Lothian	20	10
– Tayside	19	13
– Highland	6	4
Other		
– Manchester*	1	0
Total	145	73

Data represent numbers of abstracts. *The submission was from a recent Scottish trainee

found to be significant (χ^2 (degrees of freedom = 7, $n = 145$) = 6.67, $p = 0.464$), even when analysed per deanery (χ^2 (degrees of freedom = 2, $n = 145$) = 1.14, $p = 0.566$).

Abstracts per meeting, subspecialty and category

Although publication rates for individual meetings ranged from 36 per cent to 67 per cent, there was no significant association (χ^2 (degrees of freedom = 11, $n = 145$) = 5.30, $p = 0.916$). Most abstracts and publications were related to the head and neck subspecialty (64 out of 145, 44.1 per cent of all presentations; 25 out of 73, 34.2 per cent of all publications) (Table 2). However, abstracts on otology (18 out of 28, 64.3 per cent) and rhinology (24 out of 38, 63.2 per cent) were more likely to be published than those from other subspecialties. The relation between subspecialty and publication rate was found to be significant (χ^2 (degrees of freedom = 3, $n = 145$) = 8.57, $p = 0.036$).

The predominant category of presented abstracts was clinical research (88 out of 145, 60.7 per cent), and this was true for published articles as well (45 out of 73, 61.6 per cent) (Table 2). However, there was no correlation between category and publication (χ^2 (degrees of freedom = 3, $n = 145$) = 1.06, $p = 0.786$).

Publication time scales and journals

Time of publication was on average just over a year after presentation (median = 16 months, interquartile range = 7 to 29.5), ranging from –49 to 56 months. Excluding eight presentations that were associated with an earlier publication (5.5 per cent of the 145 abstracts), the average delay was 19 months (median = 19 months, interquartile range = 9 to 30). One study published 49 months prior to the presentation had updated results and was hence considered as published. The other seven presentations were published within the 15 months prior to the conference. Nearly all abstracts were published within three years from the date of the meeting (Table 3).

Most of the articles were published in *The Journal of Laryngology and Otology* followed by *Clinical Otolaryngology* (Table 4). There was no statistically significant correlation between subspecialty and journal (χ^2 (degrees of freedom = 54, $n = 70$) = 54.79, $p = 0.444$).

Table 2. Abstracts presented per category and per subspecialty

Category	Head & neck		Otology		Rhinology		Other		Category totals	
	Presented	Published	Presented	Published	Presented	Published	Presented	Published	Presented	Published
Clinical research	44	16	16	11	26	17	2	1	88	45
Laboratory research	4	2	1	1	2	1	0	0	7	4
Case reports	1	1	3	2	4	2	0	0	8	5
Editorials & reviews	15	6	8	4	6	4	13	5	42	19
Subspecialty totals	64	25	28	18	38	24	15	6	145	73

Data represent numbers of abstracts

Table 3. Presentation to publication time delay

Time delay	Abstracts (n (%))	Cumulative %
Before meeting*	8 (11)	11
<1 year	24 (33)	44
<2 years	18 (25)	69
<3 years	19 (26)	95
<4 years	3 (4)	99
<5 years	1 (1)	100

*Eight abstracts had publications prior to the meeting date, ranging from -49 months to -1 month.

There was no correlation between publication rate and: date of presentation, involvement of a professor, or number of authors.

Discussion

Without knowing the details of all the abstracts submitted for consideration for oral presentation, it is impossible to conclude as to the quality of the ENT Scotland peer review process of choosing abstracts for presentation. However, we can make inferences that it is generally of a high standard for the following reasons.

Firstly, selection bias seems to be at a minimum. For example, all regions are well represented. Although there are more abstracts from the Glasgow area, this is because there are more units and hence a larger number of trainees in that region than elsewhere. In addition, the paper session is open only for local trainees and this explains the absence of presenters from other units in the UK.

One interesting observation is the higher percentage of abstracts associated with publication prior to the presentation date (5.5 per cent) compared to other meetings. For example, only 1 per cent of the British Academic Conference in Otolaryngology presentations were associated with a preceding publication.⁶ Even the Otorhinolaryngological Research Society, which normally would not accept previously published or presented abstracts, had a 4 per cent rate of publications before the meeting.¹ In our data, out of the eight abstracts, one presentation had updated results and three were discussing the same results as the associated publication. Of the eight abstracts, four were published within two months prior to the presentation. This indicates that previous publication is not an exclusion criterion for acceptance for presentation, and each abstract is reviewed on its own merit.

Furthermore, there does not appear to be a strong preference towards a specific topic. Head and neck is commonly

more represented than other specialties. In the British Academic Conference in Otolaryngology, there was also a high representation of this subspecialty (39 per cent including laryngology),⁶ followed by otology (22 per cent). A similar trend is seen in the Otorhinolaryngological Research Society meeting (45.6 per cent),¹ and the Canadian Society of Otolaryngology – Head and Neck Surgery conference (28.3 per cent).² The American Academy of Otolaryngology – Head and Neck Surgery (AAO-HNS) annual conference has a more uniform topic representation (26 per cent head and neck including laryngology),³ although this could be related to the inclusion of general otolaryngology and basic science as separate subspecialties.

In this study, there was no attempt to contact the authors of unpublished presentations. Ogilvie *et al.*² identified that the commonest reason of presentations not being published after the Canadian Society of Otolaryngology – Head and Neck Surgery annual meeting was because the authors had not submitted the manuscript (66.4 per cent), as either the research was still in progress (34 per cent) or the resident had moved on (26 per cent). In Scotland, it is likely that the reasons will be different because trainees spend a minimum of two years in one unit. This should ensure that there is adequate time for small research projects to be completed.

If we assume that the ENT Scotland meeting presentations represent the research output of Scottish trainees, then there appears to be a focus on clinical research (60.7 per cent of all presentations), although editorials, surveys and other projects are also dominant. This is comparable to the UK publications trend, where, in 1994, the majority (61.3 per cent) of all publications were clinical research.⁵ Interestingly, the Otorhinolaryngological Research Society has a much higher percentage of laboratory research presented (41.5 per cent) compared to the ENT Scotland meeting, and this reflects the different nature of the meetings rather than the current research output of the UK.

Publication rates are comparable to those for presentations at the Otorhinolaryngological Research Society (56.3 per cent, $p=0.091$)¹ and the Canadian Society of Otolaryngology – Head and Neck Surgery (50.5 per cent, $p=0.105$).² Although presentations at the AAO-HNS annual meeting were more likely to be published (63 per cent, $p=0.045$),³ this rate has previously been reported to be as low as 28 per cent.⁷

There is a possibility of publication bias in our data as the majority of the publications were in *The Journal of Laryngology and Otology*, which has a long-standing relationship with the ENT Scotland society. This is similar to the Otorhinolaryngological Research Society meeting, where most publications were in *Clinical Otolaryngology*, the official journal of that society. It is unclear whether this is a factor

Table 4. List of journals and publications per subspecialty

Journal	Impact factor (2017/2018)	Otology (n)	Rhinology (n)	Head & neck (n)	Other (n)	Total (n (%))
<i>Journal of Laryngology & Otology</i>	0.967	9	10	10	2	31 (42)
<i>Clinical Otolaryngology</i>	2.696	4	5	5	3	17 (23)
<i>Otolaryngology – Head & Neck Surgery</i>	2.444	0	3	1	0	4 (5)
<i>International Journal of Pediatric Otorhinolaryngology</i>	1.305	1	1	2	0	4 (5)
<i>European Archives of Otorhinolaryngology</i>	1.546	0	1	1	0	2 (3)
<i>Rhinology</i>	2.931	0	2	0	0	2 (3)
Others [†]	2.15*	4	2	6	1	13 (18)

*Average impact factor; range, 0.32–7.987. [†]Journals with one publication only.

in deciding where to submit without obtaining further information from the authors, and whether the journals are more likely to accept articles for publication because of these relationships.

- ENT Scotland hosts the only regular ENT meeting in Scotland on a biannual basis
- The most frequently presented area of interest is the head and neck
- Clinical research accounts for most of the presentations
- Publication rates are only one measure of quality
- The ENT Scotland meeting publication rates compare well with those of other conferences

Conclusion

The ENT Scotland meeting is unique because it provides an insight into the research output of trainees of Scotland. It is isolated from other regions of the UK, offering an exclusive opportunity for local trainees to present. Clinical research with a high publication rate is encouraged, something that may improve in the future with the introduction of a trainee-led research collaborative.

Competing interests. None declared

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