SHORT REPORT

Abstract-to-publication ratio for papers presented at scientific meetings: a quality marker for UK emergency medicine research

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Objectives: To determine the publication rate of abstracts presented by UK emergency physicians at major emergency medicine meetings, and to identify the site of publication of papers.

Method: All abstracts presented to the annual scientific meetings of both the British Association of Emergency Medicine and the Faculty of Accident and Emergency Medicine between 2001 and 2002 were identified retrospectively from conference programmes. To identify whether the work relating to the abstract had been published in a peer-reviewed journal, the Medline database (Ovid interface) was searched using the first and last authors as well as key words from the abstract.

Results: Of the 404 abstracts identified, 124 (30%) had been published as full articles. For abstracts presented in the oral sessions, 83 (57%) resulted in publication. A range of journals accepted papers for publication.

Conclusion: The abstract-to-publication ratio for UK emergency medicine is lower than for other specialties, but broadly similar to emergency medicine in the US and Australia.

Communication of information within a profession requires a forum via which it can be transmitted, and within medicine this is commonly at scientific meetings, as poster or oral presentations.

Presentations may be made to describe and evidence new practice, to present research in a public forum or to draw attention to an area of interest. Many trainees in medical specialties are encouraged to undertake oral or poster presentations as part of their training.¹

It has been proposed that a marker of the quality of a presentation is in its realisation, or not, as a publication in a peer-reviewed journal; consequently, it has been suggested that the quality of research output from a scientific body or specialty may be judged by how many abstracts are subsequently published.²

Walby *et al*³ used abstract-to-publication ratios (A:P) ratios to consider the quality of Australasian research output, and compared it with other specialties and with US emergency medicine. To date, however, there has been no such analysis of the output from emergency medicine within the UK.

The aims of this study were to assess the A:P ratio for poster and oral presentations from recent emergency medicine conferences, and to compare it with other specialties and with emergency medicine elsewhere. The sites of publication were also collated.

METHOD

Using conference programmes for the British Association of Emergency Medicine and the Faculty of Accident and Emergency Medicine, we identified abstracts presented at

those conferences in 2001 and 2002. These included posters and oral presentations.

The programmes detailed the title and authors and differentiated posters from oral presentations.

To assess whether the abstract had been published, key words from the title and first and last authors were used for search purposes; first authors were used as they were considered to have written the paper, and last authors were used as they are most likely to be senior and therefore be named on any final paper.

These title and author details were entered into a search of Medline (Ovid interface) from 2001 to December 2005. We judged that a 3-year period should be adequate for the completion and publication of information presented. Date of publication, journal of publication and whether the abstract was originally a poster or presentation were recorded; Excel spreadsheets were used to record the data.

RESULTS

A total of 404 abstracts from four conferences were identified; of these, 124 (30%) had been published. For abstracts presented in the oral sessions, 83 (57%) resulted in publication; only 41 (14%) of the poster presentations resulted in publication.

Papers were published in a variety of journals. The *Emergency Medical Journal* was the most common site of publication, having published 65 (53%) papers; the next most common site of publication was the *European Journal of Emergency Medicine*, with 10 (8%) publications. A wide range of other journals carried publications including *Resuscitation* (2%), *Injury* (2%) and the *Journal of Trauma* (2%). The time interval from abstract to publication ranged from 4 months to 4 years.

DISCUSSION

Calculating the abstract to publication ratio may be useful in judging the quantity and quality of research within our specialty. As a marker, the abstract to publication ratio may allow us to assess our current research status and compare it with international emergency medicine and with other specialties. Furthermore, establishing a baseline abstract to publication ratio now sets a benchmark for UK emergency medicine conferences. However, for a temporal comparison of the abstract to publication ratio to be valid, the “publishing environment” must remain similar. It is worth noting that the *Emergency Medical Journal* was a bimonthly publication during the time frame considered, with an inevitable impact on available copy and delay in publication. Similarly, international comparison and comparison between specialties need to be guarded as peer-review processes and thresholds for publication differ in these different publishing environments.

These results suggest that emergency medicine in the UK in recent years has produced research to a standard similar to that in the US (23–47%)⁴ and to that in Australia (35%).³ However,

Figure 1 Percentage of research published in other specialties (with permission from Walby *et al*⁶). GP, general practice; A/E, accident and emergency.

in comparison with other specialties within the UK, emergency medicine would seem to produce a lower percentage of publishable research (fig 1). This may represent a poorer quality of research, but may also reflect the more unpredictable nature of the caseload and what is traditionally perceived to be a less scientific field.⁵ Weber *et al*⁶ explored the reasons for authors having failed to publish their work in a survey of 183 abstracts presented to the 1991 meeting of the Society for Academic Emergency Medicine. Of the responders, 42% identified time pressure and failing to write the manuscript, rather than rejection during the peer-review process.

We chose not to contact authors directly as part of our study, because previous experience had shown response rates to be

disappointing. We considered publication in a Medline-cited journal to be the standard for publication. It is possible that authors may have published their work in non-cited journals, in journals represented on other databases or that authors other than those presenting the work eventually published the data. This may have led to an underestimation of publication rates.

CONCLUSION

UK emergency medicine compares well internationally within its own specialty but less well with other specialties; emergency physicians and trainees now have a baseline against which future research output can be compared. We hope that this analysis encourages an improved research output from emergency medicine within the UK.

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REFERENCES

- 1 Sloan EP, Bunney B, Silva J, *et al*. A structured process for fulfilling resident research requirement. *Acad Emerg Med* 2001;**8**:A582.
- 2 Gorman RL, Oderda GM. Publication of presented abstracts at scientific meetings: a marker of quality? *Vet Hum Toxicol* 1990;**32**:470-2.
- 3 Walby A, Kelly A, Georgakas C. Abstract to publication ratio for papers presented at scientific meetings: how does emergency medicine compare? *Emerg Med* 2001;**13**:460-4.
- 4 Korn CS, Henderson SO. Publication of research abstracts presented at four emergency medicine research forums. *Acad Emerg Med* 2000;**7**:534.
- 5 Tintinalli J. Publish or perish: easier said than done. *Emerg Med* 2001;**13**:407-8.
- 6 Weber E, Callahan M, Wears RL, *et al*. Unpublished research from a medical specialty meeting: why investigators fail to publish. *JAMA* 1998;**280**:257-9.