International Journal of Surgery 45 (2017) 14–17

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.journal-surgery.net

Review

Support for reporting guidelines in surgical journals needs improvement: A systematic review

Riaz A. Agha [a, *], Ishani Barai [b], Shivanchan Rajmohan [b], Seon Lee [c], Mohammed O. Anwar [d], Alexander J. Fowler [e], Dennis P. Orgill [f], Douglas G. Altman [g]

[a] Department of Plastic Surgery, Guy's and St. Thomas' NHS Foundation Trust, London, UK
[b] Imperial College School of Medicine, London, UK
[c] University of Southampton Medical School, Southampton, UK
[d] Bart's and the London School of Medicine and Dentistry, Queen Mary and Westfield University, London, UK
[e] Department of Medicine, Guy's and St. Thomas' NHS Foundation Trust, London, UK
[f] Division of Plastic Surgery, Brigham and Women's Hospital, Boston, MA, USA
[g] Centre for Statistics in Medicine, University of Oxford, UK

HIGHLIGHTS

- Reporting guidelines are an important method to improve quality of medical literature.
- Guidelines currently poorly endorsed by medical journals.
- Improving endorsement may provide a route to increase uptake and reporting quality.

ARTICLE INFO

Article history:
Received 7 June 2017
Accepted 26 June 2017
Available online 30 June 2017

Keywords:
Systematic review
Guidelines for authors
Evidence based medicine
Reporting guidelines

ABSTRACT

Introduction: Evidence-based medicine works best if the evidence is reported well. Past studies have shown reporting quality to be lacking in the field of surgery. Reporting guidelines are an important tool for authors to optimize the reporting of their research. The objective of this study was to analyse the frequency and strength of recommendation for such reporting guidelines within surgical journals.
Methods: A systematic review of the 198 journals within the Journal Citation Report 2014 (surgery category) published by Thomson Reuters was undertaken. The online guide for authors for each journal was screened by two independent groups and results compared. Data regarding the presence and strength of recommendation to use reporting guidelines was extracted.
Results: 193 journals were included (as five appeared twice having changed their name). These had a median impact factor of 1.526 (range 0.047–8.327), with a median of 145 articles published per journal (range 29–659), with 34,036 articles published in total over the two-year window 2012–2013. The majority (62%) of surgical journals made no mention of reporting guidelines within their guidelines for authors. Of the 73 (38%) that did mention them, only 14% (10/73) required the use of all relevant reporting guidelines. The most frequently mentioned reporting guideline was CONSORT (46 journals).
Conclusions: The mention of reporting guidelines within the guide for authors of surgical journals needs improvement. Authors, reviewers and editors should work to ensure that research is reported in line with the relevant reporting guidelines. Journals should consider hard-wiring adherence to them.

1. Introduction

Medical knowledge is growing at a phenomenal rate, doubling every 3.5 years [1,2]. In an era of evidence based medicine (EBM), health research can have a significant impact on the care of patients and hope drive up quality and outcomes [3]. However, the reporting of health research can be poor, even where reporting guidelines

* Corresponding author.
E-mail address: mail@riazagha.com (R.A. Agha).

http://dx.doi.org/10.1016/j.ijsu.2017.06.084
1743-9191/

exist [4–9]. Clinicians need complete, clear and transparent information to make sense of research and to integrate relevant findings into their EBM practice. The same goes for policy makers setting agendas for future research or deciding where to allocate funds and for other researchers or those doing systematic reviews wanting to incorporate the research into their own work. Since the publication of the first CONSORT statement in 1996, there has been a huge increase in the publication of reporting guidelines [10]. The EQUATOR Network – an umbrella organization for developers of reporting guidelines – lists 362 in its database at the time of writing [11].

The objective of this study was to analyse the frequency and strength of recommendation for such reporting guidelines within surgical journals. Whilst there have been studies looking at the mention of individual guidelines like CONSORT, PRISMA or STARD, to our knowledge, this is the most comprehensive, assessing all available reporting guidelines within GFAs of surgical journals specifically [12–14].

2. Methods

This systematic review is compliant with PRISMA, where items apply. The 198 surgical journals listed within the Surgery category of the Thomson Reuters Journal Citation Reports for 2014 were included [15]. The online guide for authors (GFA) of each journal was searched by two groups independently (IB/MOA and SR/SL) in July–August 2015. Both teams had been given training on reporting guidelines and their use and detailed data extraction instructions. Two complete sets of results were then compared for discrepancies; any which could not be easily resolved were then referred to a more senior author (AJF). Inter-rater agreement between teams was calculated using Cohen's Kappa Statistic [16]. The following data were extracted:

- Strength of recommendation to use reporting guidelines – split broadly into advised and required (the actual words used were documented).
- Which guidelines were mentioned. If only one or two guidelines were mentioned (e.g. only CONSORT compliance was mentioned) this would be advising or requiring “some” guidelines, but if all relevant guidelines for the journals content were mentioned (typically CONSORT, STROBE, PRISMA, STARD as a minimum), then this would be “all relevant guidelines”
- Whether extensions of particular guidelines were mentioned.

All data were extracted and populated into a Microsoft Excel® 2011 database (Microsoft, Redmond, WA, USA).

3. Results

Of the 198 surgical journals included, five had changed their name and the list contained both the old and new names, hence there were 193 surgical journals in total. These had a median impact factor of 1.526 (range 0.047–8.327), with a median of 145 articles published per journal (range 29–659), with 34,036 articles published in total over the two-year period 2012–2013. The majority of journals (62.2%) did not mention reporting guidelines at all within their GFA. Cohen's *Kappa* was 0.67 when analyzing whether guidelines were mentioned at all, implying moderate agreement; only the data for 14 journals ultimately needed referral to a more senior author for adjudication.

Table 1 below looks at the journals who constitute the 37.8% (73/193) fraction, to assess the strength of the recommendation of adherence:

Table 1
Recommendations relating to reporting guidelines within Journal GFAs.

Instructions	Frequency (%)
Advised use of some guidelines	17.8% (13/73)
Required use of some guidelines	53.4% (39/73)
Advised some and mandated others	11.0% (8/73)
Advised use of all guidelines mentioned	4.1% (3/73)
Required use of all guidelines mentioned	13.7% (10/73)

Typical words used for those advising usage were “suggest”, “recommend”, and “encouraged”, whereas for those requiring their use typical words were “must” and “should”. Of the 73 journals advising or requiring use of reporting guidelines, 43.8% (32/73) required the submission of a completed guideline checklist and 11.0% (8/73) mentioned using extensions to at least one guideline. Fig. 1 below shows the frequency with which different reporting guidelines were either advised or required.

4. Discussion

Our results show that the majority (62%) of surgical journals are not mentioning reporting guidelines with their guide for authors. Of the 38% who mention reporting guidelines only 14% actually require the use of all reporting guidelines relevant to their field and the types of articles they accept. Given that the majority of surgical research studies are observational by design, we were surprised to note that only seven journals explicitly mentioned the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) statement [17]. CONSORT and PRISMA were the most frequently mentioned which may reflect their earlier publication and better recognition amongst journals.

Whilst journals may mention reporting guidelines within their GFAs, the level of adherence to these and checking by editors and peer-reviewers will be variable between journals and within journals. Indeed a recent systematic review assessing completeness of reporting in relation to the statement made within the GFA proved inconclusive [18]. An earlier Cochrane systematic review focusing on randomized controlled trials and CONSORT was conducted by Turner et al. It found that 25 of 27 outcomes assessing completeness of reporting favoured CONSORT-endorsing journals over non-endorsers, of which five were statistically significant [19].

Smidt et al. showed that since the publication of the STARD statement, the quality of reporting of diagnostic studies improved slightly over time, more so in those journals adopted the STARD statement [13]. Cobo et al. performed a masked randomized controlled trial assessing the effect of reporting guidelines on the peer-review process [20]. They compared conventional peer-review to conventional review with an additional review looking for missing items from reporting guidelines. They saw an improvement in manuscript quality in favour of the additional review group. In addition, more papers with the additional reviews improved from baseline (43% *vs* 20%) compared to the conventional review alone [20].

Our results are broadly consistent with previous studies of reporting guidelines in surgical journal GFAs. Kunath et al. studied the endorsement of reporting guidelines amongst uro-nephrological journals indexed in the Journal Citation Reports 2009 [21]. 25.5% mentioned at least one reporting guideline (compared with our 37.8%), with CONSORT the most frequently cited. However, other reporting guidelines were mentioned by <6% of the journals, compared with 25% in our cohort (49/193). Smith et al. analysed how endorsement of PRISMA and CONSORT