

Reporting Policies and the Smaller Journal

Jason Roberts

Introduction

Starting with the development of the CONSORT Statement, a movement towards generating reporting statements first emerged in the mid-1990's with the intention of aiding authors to accurately, and effectively, report the results of their research.[1,2] Since then a select band of leading biomedical journals (including JAMA, BMJ, The Lancet, NEJM) have encouraged, or mandated, inclusion of such statements with their submission process. Though evidence suggests such forms have some impact in the quality of reporting, it is perhaps surprising that more journals have not followed the lead of such prominent titles in requesting authors consult a checklist.[3] As of August 2009, only 350 journals were recorded on the CONSORT site as officially endorsing journals.[4] Though their figures are somewhat dated, STARD reported that only 200 journals had adopted the STAndards for the Reporting of Diagnostic accuracy studies guidelines by April 2008.[5] In contrast, a parallel movement, in terms of timing, towards gathering conflict of interest information has spread much more pervasively across the industry. Despite this backdrop of seeming indifference from many titles and our own mild concern about imposing a potentially bothersome hurdle for authors, *Headache*, a mid-sized sub-specialty medical journal, decided to implement a scheme to collect reporting checklists.

This article represents a simple attempt to detail the experiences of a smaller medical journal implementing reporting standards. In doing so, it will offer advice on establishing policies, effective collection of reporting checklists and the benefits and setbacks faced by relating the experiences of the *Headache* editorial office. The article also focuses on executing a wide-ranging policy covering several reporting guidelines, a strategy significantly more complex than a simple endorsement of CONSORT buried in a journal's instructions for authors. The development of practical methods to collect information has been chronically ignored to date and threatens to undermine attempts to secure widespread adoption.

Recognizing a Need to Improve Standards

Edited by John Rothrock, MD and publishing 10 times a year, *Headache* is the official publication of the American Headache Society. It receives several hundred manuscripts annually, with roughly 35% of submissions arriving, respectively, from both North America and Europe. Roughly 60% of submissions report clinical trials, multi-patient case series or constitute a systematic overview. The majority of content is of a clinical nature but a small proportion of papers are oriented towards the

basic sciences. The journal has an Impact Factor that places it just inside the top-third of titles ranked by ISI within Clinical Neurology. In short, it is a typical mid-sized journal.

During 2008, the *Headache* editorial office undertook a critique of its publishing output over the previous decade. We found several cases of otherwise good papers that had failed to report research methodologies satisfactorily or omitted crucial information that hindered study replication. While this review of previously published material was ongoing, we also began to experience a surge in the volume of submissions. Nearly one-third of 2008 submissions were from authors new to *Headache*. Unfortunately, it seemed a sizeable proportion of these new papers contained weak methodological reporting (often to the detriment of otherwise interesting research).

In an effort to elevate the quality of material *Headache* published, we decided to overhaul our submission and peer review processes. An aggressive stance was taken: we would ask *authors* to work harder to improve the quality of their reporting. We also renewed a commitment to our authors to burnish potentially interesting papers. To achieve these twin objectives, we decided to mandate the inclusion of a reporting checklist for all submissions. We hoped the guidelines would compel authors to include pertinent methodological details that in turn would deliver a more uniform standard of reporting across manuscripts. Completion of the checklists would then serve to document where critical reporting elements were recorded in a manuscript, which would assist manuscript evaluation. The provision of reporting guidelines would have the dual purpose of making it clear to authors what the minimum threshold was for publication and aid our reviewers/editorial board in enforcing these standards as part of the peer review process. We took to heart the entreaty of Doug Altman, that though responsibility for good reporting rests with authors, journals have a role to play.

*Journals can also help improve the literature by requiring the full and transparent reporting of research... Editors should continue to be involved in the development of reporting recommendations and explicitly require authors to follow them.***[6]**

Launching an Effort to Collect Reporting Checklists

To institute this new policy, the editorial office was charged with three tasks: establish which checklists could be employed (step 1); devise a method of collection (step 2) and educate our author base of the benefits of utilizing checklists (step 3).

Step 1

Some reporting guidelines were well known to us (CONSORT, STARD) but we needed to explore the full range of options. This led us to EQUATOR. EQUATOR's site was especially useful during this formative stage because it contained a tremendous depth of material from the checklists themselves through to editorials from journals that had already implemented reporting procedures. In reviewing established guidelines we determined 8 were of importance to us (**see table 1**).

We did feel the checklists available left us underserved in three key areas: behavioral and non-pharmacological interventions; basic science and the fundamental tenets involved in composing a first-rate case report. To combat this, members of the editorial board, the editorial office and *Headache's* statistical/methodological consultant worked together to create our own checklists. We were particularly pleased with our efforts to create a behavioral/non-pharmacological extension to

CONSORT specific to *Headache* (**Appendix 1**) as well as a journal-specific case report checklist (**Appendix 2**). So confident were we with the successful development of these checklists, we believe both could be repurposed and utilized by other journals. Unfortunately, we still have yet to devise a satisfactory basic science checklist and few general guidelines exist presently.

Table 1. Selected reporting guidelines

<i>Study Type</i>	<i>Study Type Category</i>	<i>Checklist of reporting standards</i>	<i>Checklist Name</i>
Randomized controlled pharmacotherapy trials	RTC (Pharmacotherapy)	CONSORT – Consolidated Standards of Reporting Trials	CONSORT checklist
Case Reports	Case Reports	Headache Case Report Checklist	Headache Case Report Checklist
Other pharmacotherapy and herbal medicinal trials (noninferiority trials, pragmatic trials, cluster trials, reporting of harms)	RCT (Other)	CONSORT extensions (tailored versions of the main CONSORT Statement produced by the CONSORT Group)	CONSORT checklist
Trials examining behavioral and nonpharmacological interventions	Behavioral and Nonpharmacological Interventions	Behavioral/Nonpharmacological Clinical Trials Checklist for Headache (an unofficial extension of the CONSORT Statement and extension adapted from <i>Guidelines for Trials of Behavioral Treatments for Recurrent Headache</i>)	Behavioral/Nonpharmacological Clinical Trials Checklist for Headache
Observational epidemiology studies	Observational Epidemiological Studies	STROBE – Strengthening the reporting of observational studies in epidemiology	STROBE Checklist
Diagnostic Accuracy Studies	Diagnostic Accuracy Studies	STARD – Standards for reporting diagnostic accuracy	STARD Checklist
Systematic reviews	Systematic Reviews	PRISMA (formerly known as QUOROM) – Improving the quality of reports of meta-analyses of randomized controlled trials	QUOROM Checklist
Meta-analyses of controlled trials	Meta-analysis of Controlled Trials	PRISMA (formerly known as QUOROM) – Improving the quality of reports of meta-analyses of randomized controlled trials	QUOROM Checklist
Meta-analyses of observational studies	Meta-Analyses of Observational Studies	MOOSE – Meta-analysis of observational studies in epidemiology	MOOSE Statement
Quality improvement reports	Quality Improvement Reports	SQUIRE – Standards for quality improvement reporting excellence	SQUIRE Guidelines
Qualitative research	Qualitative Research	COREQ – Consolidated criteria for reporting qualitative research	COREQ Checklist
Letter to the Editor	Letter to the Editor	Headache Letter to the Editor Checklist	Headache Letter to the Editor Checklist
Images from Headache	Images from Headache	Images from Headache Checklist	Images from Headache Checklist
Basic Science	Basic Science	Headache Basic Science Checklist	Headache Basic Science Checklist
Views and Perspectives	Views and Perspectives	Views and Perspectives Checklist	Headache Views and Perspectives Checklist

Step 2

After selecting, or devising, the reporting guidelines to be used, the next challenge was to establish a method of collection to accommodate our desire to see guideline adherence and checklist completion as a mandatory exercise. *Headache* uses the Manuscript Central online submission system, but the challenges of collecting forms through the submission site are similar for other products, such as Editorial Manager, Benchpress and EES. A new step was to be inserted into the online submission process. Authors would identify their study type (for example, Randomized Controlled Pharmacotherapy trials, Diagnostic Accuracy Studies, Meta-Analyses of Observational Studies). The submission system would then respond by providing the appropriate checklist for the author to download and complete (all forms are MS Word documents). The author then has to

upload the completed form as part of their submission. **Figure 1** illustrates the process with the Manuscript Central system. We ruled out requesting authors print, fill out and fax the form to us over concerns regarding the level of compliance. Additionally, we wanted to forward the completed form to reviewers – handling faxes seemed to create an administrative headache (no pun intended). The system was re-engineered in such a way that submission was not possible until a checklist file was uploaded. As the Manuscript Central system did not have an inbuilt workflow template to handle our demands, we had to work with the system programmers to have the system configured appropriately.

Fig. 1 Manuscript Central system adapted for Headache

STEP 1 – Select study type

STEP 2 – Depending on the Study Type selection in Step 1, the system will provide a link to the form in Word format that must be downloaded, completed and uploaded as a Checklist file. In this example, RCT (Pharmacotherapy) was selected. The system provided a link to the CONSORT checklist.

Step 3

Associated with the launch of the checklist mandate was a program to educate our authors, reviewers and readers. Two editorial board members, upon the launch of the new reporting policies, published an editorial outlining our official position:

Good reports should contain a clear explanation of the study methods, describe statistical techniques in enough detail to allow verification of the results from original data, report all results, and interpret and present findings in a balanced and forthright way.[7]

Additionally, the journal editorial office has developed a workshop to run at American Headache Society meetings that incorporates instruction on the benefits of utilizing reporting guidelines within a general conversation on how to write, and submit, a manuscript successfully.

Our education efforts aim to ensure authors understand that *completion* of a reporting checklist is not *the* important task. Instead, it is ensuring the guidelines are used constructively to shape the construction of an article. There is a sense that some authors are not able to make that distinction and see the checklists as an administrative barrier to submission.

Benefits of Instituting Reporting Guidelines

As only one year has passed since we mandated the reporting checklist requirement, we do not yet have sufficient data to report on the apparent success of the policy beyond anecdotal evidence. Our intentions in launching the policy were to: improve the *quality of research reporting* amongst the submissions we received; aid reviewers in their evaluation of a manuscript and assist the decision-making process. First and foremost, we wanted to ensure that every critical element involved in data collection, where appropriate, was documented in a manuscript and recorded on a checklist. We were realistic and understood that reporting guidelines per se may not improve the overall quality of the paper, but we contended that forcing authors to record critical information regarding data collection enabled us to better judge the scientific merit of the article. It is still too early to assess if authors recognize the benefits of reporting guidelines. We have been conscious of pitching the imposition of a reporting policy as an aid to improving an author's submission and not an administrative task.

The consensus amongst editorial board members has been that the checklists are facilitating the peer review process – indeed there is early observational evidence to suggest the checklists themselves are shaping some of the reviews returned as some reviewers structure comments around issues raised in the reporting guidelines. Again, anecdotally, individual editorial board members reported several cases where they felt that following a round of revision, reporting guides had improved several papers by highlighting omissions of important information.

Problems Following Mandatory Implementation

Time Consuming for Authors

Undoubtedly the biggest complaint received to date is that filling out a checklist is burdensome. The criticism has been most vociferous from prominent or experienced authors. We agree that completing reporting checklists creates an additional step in the submission process but have countered this criticism by pointing out that the forms can help inexperienced authors shape their manuscripts. Additionally, we have attempted to confront this “grumbling” by observing that the forms, when presented to reviewers, represent a useful resource that can prompt them to evaluate a manuscript more critically.

Another issue that we suspect may irritate authors is that due to a frequent failure to consult the Instructions for Authors ahead of submission, authors are often only made aware of the checklist mandate when undertaking the submission process. This is problematic for three reasons: authors may rush completion of the checklists and not answer questions properly; some authors may be forced to make last minute changes to their manuscript that they may resent if time is limited (will this drive them away in the future?); and if a proxy is submitting the manuscript for an author, are they able to understand what they need to do? Presently there is no obvious solution to these problems as long as the submission of a checklist is mandatory. Our dilemma is thus: do we dispense with the mandatory requirement or persevere and risk alienating some authors. If an overwhelming number of articles do not require help from the guidelines, or authors/reviewers do not heed the reporting recommendations in the different reporting statements, then all we have achieved is an administrative hurdle. Equally, to not mandate adherence will inevitably lead to many authors not bothering. That too is problematic as there are plenty of submissions that could benefit from a consultation with a set of guidelines. We plan to watch the progress of a similar-sized journal in another discipline that intends to provide a similar array of forms but with a strong *suggestion* that authors consult reporting guidelines rather than mandating completion.

Once we agreed upon mandatory enforcement, we presented ourselves with another problem: as we were pioneering a way to use the online submission system, the eventual solution was not optimal:

- Some authors have figured out that by classifying their manuscript as a “checklist”, they can trick the system into believing they have included the necessary reporting documentation. Over the first year, with an 84% compliance rate, we decided to not follow up with the non-compliant authors, at least not until the revision stage. We will review that policy in the near future. It is worth noting that 66% of the 16% non-compliant manuscripts were rejected. This is certainly not because of non-compliance, but does raise some interesting questions as to why the authors chose not to fill out the form. Such reasons may include recognition of flaws in their manuscript that the guidelines will expose or that the authors may simply be shopping their manuscript around in the hope a journal will accept it.
- We were compelled by the design of the online submission system to provide a reporting checklist for every possible type of manuscript. This forced us to create checklists for documents like Letters to the Editor that really did not need a form.
- Certain forms are less demanding (such as the basic checklist for Letters to the Editor) and some authors incorrectly complete these forms, even if the form is inappropriate. We have yet to explore the reasons for this, but avoidance of completing the more complex forms may be one reason.
- It has been suggested that instead of forcing authors to download a form, they could fill out the form online. A problem with this approach is that there is, presently, no systematic mechanism to pass the forms on to reviewers.

Conclusion

After one year, we recognize we need to refine what we do, be aware of new guidelines and be supportive, and not combative or heavy-handed, with our authors as they navigate this process. We believe that our regular authors are gradually coming to accept superior reporting standards are now an essential element of submitting to *Headache* and that they understand the checklists

are a tool to improve their work and the overall standard of reporting in our journal. Such benefits outweigh any problems and we fully intend to continue asking authors to shape their manuscripts around these reporting requirements and complete a form to prove they have done so. Journals have to weigh up how important an issue this is and whether or not it warrants mandatory enforcement.

Do we suspect we have lost papers as a result of our new policies? It is possible and this is the fear of many smaller titles, particularly if there are several other competing venues to publish in. Whether those papers would be missed is open for discussion. But until journals like *Headache* begin to pursue similar policies we do feel our journal is swimming against the tide of rushing to publish. Reporting guidelines run counter to this trend because they force authors to stop and think.

Every journal has a unique set of circumstances and a decision to commit to imposing reporting standards will likely be based upon perceived advantages, administrative burdens to all parties and any misgivings regarding authors abandoning a journal to publish elsewhere. Prominent titles can make demands and anticipate compliance. The smaller the journal the harder it is to achieve this, unless a journal is in a niche field with few other options to publish elsewhere.

A broad movement towards better reporting standards is foreseeable, though there may be a long road ahead. The more the larger journals lead the way, the greater the chance authors will accept a new reality. Additionally, emerging authors may well receive training in report writing. Therefore, once the problem of poor reporting standards is better recognized and leading journals tackle the problem seriously, it seems inevitable other titles will follow suit. This will force authors to recognize that familiarity with various reporting guidelines can benefit them with the production of a better paper. Furthermore, a journal has to serve its community and once that community demands higher standards, specialty journals in particular will have to act accordingly.

It is my earnest hope that EQUATOR will be there to not only pull together the various philosophical underpinnings behind a need to improve reporting standards, but to also guide journals through the implementation process – perhaps with the development of a launch checklist. It also seems a discussion between interested editors, publishers, submission system vendors and editorial office staff (such as through organizations like the International Society of Managing and Technical Editors) is needed to ensure the ‘administrative burden’ is nullified and that all parties can then separate the documentation aspect from efforts to improve the quality of reporting.

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Jason Roberts, PhD is Managing Editor, *Headache*

Article available on the EQUATOR website (16 January 2010):

<http://www.equator-network.org/resource-centre/library-of-health-research-reporting/case-studies-rg-implementation/>