

How to get published

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The purpose of this article is to guide you through the publication process from start to finish. It will help you to think about where to publish, and provide guidance on writing and submitting your article, and the peer review process.

Why do you want to publish?

Firstly, think about why you want to publish. For healthcare professionals the primary reason is sharing research findings which contribute to knowledge, and influence practice and/or policy. Other reasons include career progression or personal satisfaction (1). Secondly, think about your target audience. Do you want to share your findings with healthcare professionals working in your area, academics or policy makers? How many people do you want to reach? Thirdly, think about time. How much time do you have available? How quickly do you want your findings to be available for others to read?

Publishing in academic journals

Academic journals are good places to publish if you wish to contribute to knowledge in the field and/or to influence practice or policy. There are a lot of academic journals – for example, as of July 2011, 5560 journals were indexed in Medline alone (2).

To identify a list of potentially relevant journals search for keywords in the journal field of PubMed (www.ncbi.nlm.nih.gov/pubmed) and also see where key papers in your field have been published. When you have a rough list, try to find out whether your work is likely to be of interest to the journal. Most journals have information about their scope on their website. It is very informative to look at what types of research the journal has previously published; for example, if you have conducted a qualitative study, has the journal ever published qualitative research? For your target journals consider the issues raised in Table 1 below.

Style and Content

When you have selected your target journal, it is important to follow the journal guidelines (and template, if provided) regarding the formatting, style, word count, and type of information provided (this guidance should be on the journal's website). Submitting an article which does not conform to a journal's guidelines may get it rejected

immediately even if the content is very interesting. It is also good practice to follow international standard reporting guidelines for the type of research you are reporting, even if the journal does not explicitly request this.

Remember that when your article has been published, it will take on a life of its own. Other people will read, appraise, and learn from it; they apply the findings in their practice, to inform guidelines, or to include in a systematic review. It is important therefore that your standard of reporting is appropriate for these purposes, so your article can have the best opportunity to make a difference to healthcare. The EQUATOR Network is an international initiative, which promotes better reporting standards for health research. The EQUATOR Network website (<http://www.equator-network.org/>) has a library hosting guidelines and checklists for a range of research methods (including systematic reviews, experimental designs, observational studies, quality improvement studies, qualitative, and mixed methods studies).

When trying to get published, do not lose your integrity as a researcher! For example, it may be tempting to elaborate on a statistically significant finding discovered in a post-hoc exploration of your data, whilst forgetting that your original primary outcome was non-significant (3). Good research begins with a protocol (you should aim to publish this too) that sets out, before research begins, how the study will proceed. This should primarily describe the rationale, aim(s) and methods of the study, including information about study design, how participants will be recruited, data collection procedures, the outcomes you intend to measure and the approach to data analysis. The World Health Organization offer guidance on writing research protocols at http://www.who.int/rpc/research_ethics/format_rp/en/index.html. When reporting your research keep to your protocol as much as possible.

Remember, it is just as important to know that something may not work, than to know what might work. Users of that information may make decisions to disinvest in something, which may save money and avoid unnecessary treatment of patients. So called 'outcome reporting bias' (where non-significant findings tend to go under-reported) can cause big problems for decision-makers and the consumers of healthcare. As a conscientious researcher, you will not want to contribute to this issue, so you should report the primary and secondary outcomes as originally intended.

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MAIN ARTICLES

Table 1. Considerations when choosing a journal to which to submit your research article

Question	Important if...	Advantages	Disadvantages
Is the journal peer-reviewed? Academic journals are usually peer-reviewed by “experts in the field”. Their role is to advise editors on the merits of the article and whether to accept it for publication or not.	<ul style="list-style-type: none"> You want to contribute to knowledge in the field and academics are your target audience. 	<ul style="list-style-type: none"> Peer review comments can provide “constructive” feedback, to inform and improve your article. 	<ul style="list-style-type: none"> In some cases (but not all), peer review can take some time. It is worth checking the journal’s website to find out how long the peer review process is likely to take.
Does the journal have an impact factor? The impact factor of a journal (or IF) is the average number of citations received per paper published in that journal during the two preceding years. Check out the impact factor of your target journal by going to the ISI Web of Knowledge which indexes more than 11,000 Science and social science journals. Impact factors vary widely with journals such as New England Journal of Medicine and Lancet holding the highest.	<ul style="list-style-type: none"> You want to establish an academic or research career. 	<ul style="list-style-type: none"> Publishing in a journal with a high impact factor conveys a message about what calibre researcher you are The IF will help you to evaluate a journal’s relative importance, especially when you compare it to others in the same field in a given year. 	<ul style="list-style-type: none"> Criticisms have been made of the use of the impact factor, mainly relating to its validity It’s a highly competitive process. More likely to accept novel, well-conducted studies that have obvious implications for theory and/or practice. Can be a time consuming route with no guarantee – even high quality research is not always accepted by such journals.
Is the journal subscription only, open-access or a mixture of both? Some journals can only be accessed by fee paying subscribers. Others are available by “open access” because the author typically pays a fee to publish. Other journals may have alternative funding which allows readers to access articles for free without authors paying a fee to publish.	<ul style="list-style-type: none"> If you want to reach academic readers, many will have access (via their institution) to subscription-only journals. If you want to reach a large number of health professionals go for open-access journals. 	<ul style="list-style-type: none"> Subscription-only journals allow you to publish your work at no cost. Open access journals allow any reader to read your work. 	<ul style="list-style-type: none"> If you want to reach a professional audience, they may not have access to subscription only journals. Cost may prohibit publishing in some (but not all) open access journals. It is sensible to find out how much a journal charges before choosing to submit a paper to them.

Contribution of authors

Many journals have clear guidelines on who can be an author for a research article, typically specifying that to be considered an author an individual must have:

- made a significant contribution to either the conception/design of the research, data collection and/or analysis
- been involved in writing or making critical comment on drafts of the article and
- given final approval of the submitted manuscript.

Only (and all) those individuals who meet these criteria should be listed as authors. Individuals who have made minor contributions (e.g. someone who has assisted with data collection) would not typically be considered an author and should be identified in the acknowledgements section. Some journals ask for the specific contribution of each author to be made explicit upon submission of the

manuscript. You should check a journal’s ‘Instructions for authors’ for their guidelines. If a journal does not have its own guidelines, the International Committee of Medical Journal Editors (ICMJE) offer clear guidance on authorship and contributorship (http://www.icmje.org/ethical_1author.html).

Declarations of funding and conflicts of interest

Personal or financial interests of authors may inappropriately influence the actions of authors, even though they may not be aware that it has. Such influence may be small or large. Any and all conflicts of interest should be declared to the journal to which you are submitting, as should all sources of funding for the research. This is commonly presented as a section in the manuscript, and most journals require a signed conflict of interest declaration from all authors prior to publication. If authors do have conflicts of interest, this is not necessarily problematic. However, a

clear declaration helps the editor, and the readers of your paper, to make an informed judgment about the potential influence your own interests may have had on the outcome of the research. Further guidance on potential conflicts of interest can be found at the ICMJE's website (http://www.icmje.org/ethical_4conflicts.html).

What can I expect from the peer review process?

The peer review process is important for journals to be assured of the quality and relevance of the material they publish. Each submission is sent out to several reviewers who are chosen according to their expertise in the field, and their own record of publications. Some journals ask you to recommend people outside your research team who could provide a review. Each journal provides peer reviewers with a format for the review and some guidelines as to what the reviewers should focus on. Below are examples of common areas that reviewers are asked to look at. You should have considered these before submitting your article, as this makes the peer review process smoother and reduces delays in the path to publication.

- Is the research question clearly defined? The research question and the purpose of the research have to be clear to the reader, and the question should be reflected throughout the article – i.e. the results and conclusions should relate directly to the question outlined in the introduction.

- Are the chosen methods appropriate and well described? The study design used to answer the research question should be appropriate and also clearly stated in the text. The described methods should be an accurate representation of the study design. Ideally, another researcher should be able to replicate the research from reading the methodology of the paper.

- Are the data presented in the results clear and appropriate? Relevant data and analyses should be clearly displayed in tables and figures. An explanation for the presence of any potential biases and/or missing data (including how they were addressed) should be given. Some study designs have recommended reporting guidelines, e.g. the CONSORT statement for clinical trials. Where they do, reviewers will check if the guidelines have been followed. To ensure that the analyses you conduct are sound and appropriate consult a statistician at an early stage, preferably when you are writing your protocol. Mention this in your paper as it will reassure the peer reviewer of the robustness of your analyses.

- Are the discussion and conclusions well balanced and adequately supported by the data? The reviewers will ascertain whether the discussion of the data and the resulting conclusions are justified, and whether limitations

of the work have been clearly stated, and the implications of limitations been taken into account.

- Is the work clearly placed within the current knowledge base and ongoing research initiatives? As peer reviewers are experts in the field, they will identify whether the authors are aware of currently available literature and will expect to see acknowledgement of the key topics within the subject area and the necessary links made to put the submission into the wider context.

- Does the work make an original contribution to knowledge? Peer reviewers will want to be assured that your research makes an original contribution to knowledge in the field, so you need to be explicit about the contribution your work makes. Peer reviewers will not expect you to have made giant leaps in knowledge, such as a cure for cancer, in one small research study. So be realistic; knowledge is gained incrementally; a small, but important, contribution is sufficient. Be aware that leading journals in the field may publish only the most novel research studies.

- Do the title and abstract accurately convey the main points of the article? Reviewers will check whether the title and abstract truly reflect the purpose, method, main results and conclusions of the article, and whether any significant information is missing.

- Is the writing acceptable? Reviewers are not expected to 'proof read' your article, but they may recommend major editing before publication if there are many grammatical and spelling errors, and if areas of text are unclear.

Reviewers will make suggestions for revisions which are either discretionary (i.e. the author can choose to ignore them), minor essential revisions (e.g. missing labels on figures or the wrong use of a term) or major compulsory revisions, to which the author must respond before a decision on publication can be reached. Peer reviewers will also examine the plausibility of the results primarily to identify any likely issues with the data analysis but also to be assured of the veracity of the data (although a rare occurrence, some researchers have been found to have deliberately falsified their data).

Finally, the reviewers will recommend to the journal whether the article should be accepted or rejected, with the decision based upon the level and type of revisions to be made and the scientific soundness of the article. They may also be asked to comment on the relevance and importance of the article to the journal and within the field. The journal editor will then make a decision based on the recommendations of the reviewers, and provide you with the peer reviews to assist you in producing a further version of the article if necessary.

Other ways of getting published

The traditional methods of publishing research in academic journals can take a long time. If you want to disseminate your work immediately or solicit peer review/comment before submission for publication then the World Wide Web may provide an answer.

A blog (or web log) is an interactive website which is maintained by an individual or group with regular entries. Visitors to the site can leave comments about the text, images or links contained within the blog. It may provide a very fast way of receiving peer review or comment on ideas or research. The collective community of all blogs, the blogosphere, can be searched by topic and there are several Search Engines available such as Bloglines (www.bloglines.com), Blogscope (www.blogscope.net) and Technorati (www.technorati.com). Google Blogs (www.google.com/blogsearch) is readily available and free of charge. For example a simple search of "South Sudan Medical Journal" in the Google search engine yields several relevant blogs, for example, one relating to maternity service provision. Other suitable search phrases may be "health and social care South Sudan".

An extension of the blog is the "microblogging" service twitter (www.twitter.com) which enables authors to rapidly send and receive thoughts/ideas using just 140 characters. This could be a useful tool for communicating, say, within a research group. An example of a relevant search on the twitter website using "health care South Sudan" yielded a comment from Keith Martin on maternity services with useful links to further information. Researchers can use both blogs and twitter to formulate and develop ideas and to quickly disseminate information.

A note of caution to potential bloggers – do remember to take responsibility for the comments within the blog and also the comments from visitors to the site. There is a legal

liability regarding defamation of character and liability.

Final pearls of wisdom

- If you are early in the process of planning your own research study, do the study with the paper you want to write in mind
- Do ask colleagues to help you write the article – you can halve the pain and hard work involved. This short article involved some six members of academic staff, snatching time to work together, discussing and reviewing each section. It was great fun and reduced individual effort!
- Finally, practice, practice, and practice the craft of writing.

So remember with careful preparation, lots of hard work and determination, anybody can publish! Good luck.

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More resources to improve our writing skills? AuthorAID at www.authoraid.info is global online network that provides support, mentoring and training for researchers in developing countries. It has an excellent library of resources (e.g. writing CVs, scientific papers, etc).