Reproductive Health Matters

Writing a journal article

by Marge Berer, Editor

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Introduction

This paper gives basic information about writing articles for journals and the prerequisites for a well-structured and well-edited paper. Many of the principles it covers apply to longer papers as well.

I'm an editor because I love words and language, writing and editing. For most people though, writing is a painful and unpleasant duty and task, which they take up only because they have to, and many feel little confidence in their work. Unfortunately, their papers reflect how they feel. Considering how many people have to write articles as part of their professional work, it would be better for them to enjoy and feel competent at it. As an editor, I would also like to get more submissions that need only minor editing prior to publication, because then I could edit less and publish more. That's why I started doing these workshops.

I've been a journal editor for 17 years. Of all the articles I've had to reject, some were based on poor research methodology or used a methodology that produced uninteresting results. Those articles could not be rescued editorially because the problems with them were not related to the writing. Some, both poorly done and well done, did not belong in an international journal because they were relevant mainly to a national- or regional-level audience. Most of them, however, needed a great deal more work to be publishable. The additional work they needed was to do both with inclusion of more information and better analysis of the significance of the contents, as well as more editing and better structure.

Prominent journals reject up to 90% of what is submitted to them, even though they may come out weekly and need a lot of material. RHM's rejection rate at 50–60% is low by comparison but if more people submit papers to fit the same space, the rejection rate will go up. However, there are literally thousands of journals in the world today, because there are so many academics and other professionals who want and need to publish. If you try hard enough you can usually find a journal that will accept a paper that others have rejected. But most journals may not give authors much help in improving their papers beyond what peer reviewers provide. And peer review, as valuable as it can be, can not only fail to help authors improve their papers it can also act as a negative force.

As you go through this text, think about your own writing and specific problems you have confronted. My examples will be taken from RHM articles. No one can teach you how to write in a few hours. But this information may help you to see your writing differently, and more able to analyse critically what you are doing when you are working on a paper, so that you can improve it yourself.

Questions

1. What in relation to your work do you want and need to have published? For example, do you do research and want to publish your findings? Do you have strong views on controversial issues in your field and want to air them? Do you want to describe how policies have been formulated or projects developed and implemented? Or what?

2. Have you had one or more papers published in the past? Were you the sole author or did you work in a group of co-authors? How many of you are planning to try and publish something soon?

3. Where do you most want to be published -- name the journal you would most like to see your work published in.

4. Why do you want and need to be published?

Why publish?

Most authors have more than one reason to publish. Can you add more reasons to this list:

- To share or promote ideas, information and new discoveries.
- To analyse or influence policy and practice, or to discuss how it is possible to change policy and practice.
- To prove or disprove something, or correct commonly held misinformation.
- To expose a wrongdoing.
- To add to your CV publications list.
- To make a name for yourself or your institution.

All of these reasons for publishing are valid, but the last two can lead to problems for authors and editors. Most obvious is the problem of quantity vs. quality. If an academic institution requires you to publish a certain number of papers a year, you are more likely to be forced to produce papers for their own sake, and some authors may try and stretch out whatever information and data they have into more papers than can be justified.

Here is an example of a case where more than one paper was certainly justified. A research group collected a huge dataset on the reproductive health condition of poor rural women in one part of their country, from which they published five or six papers - the subjects were total fertility rate, contraceptive use, maternal mortality, obstetric and gynaecological morbidity, and infertility problems. All these paper were justified because of the distinct topics and the in-depth information on each topic, both qualitative and quantitative. Only parts of the study methodology were repeated. Some years later they put the papers together in a book, which was justified, especially since access to all the papers would have been limited at the time.

When you spend several years on a study and have a large dataset, you are likely to have more information than can be contained in one article. On the other hand, a study that involves a small number of participants or covers a limited range of information cannot easily be broken up into more than one paper. An example is a paper where you have interviewed parents and adolescents on the same issues. In this paper, the only real differences are in the findings, but not in the aims, the methodology, how participants were chosen, the study questions and conclusions. More importantly still, the findings in the two groups of participants need to be together for the sake of comparison and contrast, and the relevance of the differences between them. Making two papers removes the possibility of this analysis. Moreover, when taking a decision whether to write one or more papers, if you find you would have to repeat a lot of the same information for both papers for them to be complete reports, you probably do not have two - let alone more - papers.

Choosing a journal

Choosing a journal to submit your paper to is an important decision. Some information will be out of date within one or two years and some journals take up to one or even two years to publish papers.

RHM publishes almost all submissions in the first journal issue that comes out after the paper is submitted, which is within 6-8 months. With most journals, however, papers are slotted into future issues according to some sort of prioritisation and queueing system, most commonly in the order they are ready for publication. If a journal does not state in their guidelines how long the process from

submission to publication tends to be, it is best to ask how long it is likely to take, before you submit an article, so that you know what you are getting into before you begin. If the journal is taking what you feel is too long over deciding whether to accept it, as long as the paper has not yet been accepted, you have a right to withdraw it and submit it elsewhere − but you must withdraw it in writing before you submit it elsewhere.

However, if a journal has put a lot of effort into helping you to improve a paper, and especially if peer reviews and editorial comments have already been sent to you, which represent a lot of work, protocol says you no longer have the right to withdraw it, even though in fact there is nothing an editor can do to stop you. Obviously, this is not a step to take lightly and you should not make a habit of it, as editors have long memories.

Web publication has become increasingly important, and you will want to know what a journal's policy is on that. There are two main types of access to journal articles on the web. One is so-called open access, in which the author or their institution pays the web publisher for making the articles openly available “free” to readers; the other is access for subscribers either to the web version alone or to both the print and the web version.

Before you decide where to submit a paper, always look at recent back issues of the journal you think you would like to submit to. This is important in order to check that the paper fits the journal content-wise, style-wise and policy-wise; that the length is right; that there haven't been others very like it recently; and to understand and follow the submission guidelines.

Every journal has a particular audience and every paper also has a particular audience for whom it is most relevant and of interest. These need to match each other for an editor to want to consider your paper. Who you are speaking to when you write an article, and who will benefit from the information you want to publish - your answers should affect where you submit the paper.

If you are conscious of a journal's contents and policy before you submit your paper, it increases your chances of the journal being the right fit for your paper and for it being accepted.

There are also considerations such as where the journal is indexed, what its ISI impact factor is and the consequences of these for academic credit or payment for publishing − some university-based authors would only get paid and have their article recognised if it was indexed in a particular database. Also the impact factor of the journal may be counted into how much credit some authors get for the paper. Many editors are opposed to these conditions, but they are a reality for some authors.

Internationally-focused journals need to limit themselves to papers with international significance. International prestige is another matter entirely. If someone wants international prestige for their work − and who would not − they will seek international publication. However, if their paper is most relevant to a national audience and would have the greatest impact on policy and practice at national level − because that's what the paper is about and who its recommendations are addressed to − this is a mistake. I regularly say when I reject a paper for this reason that it would be best to submit it to a national or regional journal. I have no idea whether authors think national journals are inferior (I hope not, they aren’t), and whether they go on to try other international journals or not.

Authorship

Definition of an author

The order of authorship should be a joint decision of the co-authors. Each author should have participated sufficiently in the work to take public responsibility for the content. Authorship credit should be based only on substantial contributions to:

• conception and design, or analysis and interpretation of data;

• drafting the article or revising it critically for important intellectual content; and
• final approval of the version to be published.

(Uniform Requirements for Manuscripts Submitted to Biomedical Journals (International Committee of Medical Journal Editors, 1994)

Many people have been involved in the research process and other aspects of the paper. But that doesn't necessarily make them a co-author. The most difficult issue about authorship is where someone wants credit as an author although they don't have a right to it. Most authors have had to agree to include the name of someone senior to them as a co-author on a paper, even though the senior person did not contribute to writing it. This often happens in academic, medical and scientific circles.

Disputes over who is a co-author and the order of authorship can destroy the best of working relationships. It can even lose you a job or a promotion. However, what we are talking about is a paper − sometimes papers are incredibly important for what they can bring you. Often though it is not that important, so why argue? If you will be working together on more than one paper with someone, for example, then make an agreement in advance to alternate who gets first place in the authors' list. Whatever you do, be fair about it. Lastly, be aware that if you ask the editor to enter into a dispute on these matters, the best an editor will be able to do is give you advice on how to resolve the problem. They cannot act as a referee since the potential bad feeling that may result will damage their need to remain neutral.

The flip side of this problem is when a person deserves to be a co-author but is excluded by the other author(s) for whatever reasons. One of the ways in which this happens a lot in international health and development work is when developed country researchers go to developing countries to do research, engage developing country researchers and assistants to help them, use and depend on them for their results, but do not offer them the opportunity to be co-authors. This is sometimes clear from the acknowlegements at the end of the paper. This is highly discriminatory and led to RHM's editorial policy on this subject:.

Who to co-author with?

*Contributions are welcome from women and men all over the world, from both developed and developing countries. However, more authors from developed countries than from developing countries are published in international journals. To help to redress this imbalance, RHM will give preference to papers about developing countries by authors from those countries or written with authors from those countries. (*RHM Author and Submission Guidelines*)*

Discrimination against authors from the global south in publishing

A survey of the Lancet, BMJ, NEJM, JAMA and Annals of Internal Medicine found that the proportion of space given to articles about developing countries was low. Relatively few articles were specifically relevant to health in Eastern Europe, Latin America, Caribbean, North Africa or the Middle East. Infectious diseases, particularly HIV/AIDS, malaria and TB, were common topics. Most authors, especially for editorials and commentaries, were from developed countries, although southern and northern co-authors wrote the majority of research articles. The data suggested a north-south imbalance in both the production and dissemination of knowledge. A southern researcher's best chances of getting published in one of these northern-based journals was only through collaborating with a northern author. *(Obuaya C. Reporting of research and health issues relevant to resource-poor countries in high-impact medical journals. European Science Editing 2002;28(3):72–77.)*

The journals analysed are five of the major international peer-reviewed medical journalsFour of the five are published in the US and one in the UK. The four US-based journals have or have historically had an affiliation with a national medical institution. Furthermore, their main subscription base, or at

least the institutions and individuals with the funds to take out a paid subscription to them, are in the developed world. It is therefore not surprising that they cater for authors from the developed world and a developed country audience first and foremost.

I believe that unless journals based in developed countries have an explicit policy to publish about health and medical issues in middle- and low-income countries and to open their pages to authors and seek peer reviewers from those countries, this imbalance will not disappear.

References used in papers are another area in which lack of equity exists. Most of the major international databases in sexual and reproductive health were set up in the US and they are biased towards English-language journals and authors, especially US journals and authors.

However, for Spanish speakers working in health, there is a Virtual Health Library which was set up by PAHO's Latin American/Caribbean Center on Health Sciences Information, previously the Regional Library of Medicine (BIREME). Are there systematic databases of work in other languages as well that you are aware of?

Do you mostly read the published work of authors from the country where your work is being done when seeking references? In which country's journals do you find most information about your own subject?

Language – a dilemma

Many science journals that are not in English are having a hard time getting good submissions and readers. If articles in languages other than your own may are the most relevant to your work, what will you do? This may be an important reason why having a co-author who reads the language of the subject you are studying is important.

Authors not writing in English have a much more limited range of journals they can publish in. And if those whose first language is not English have not mastered written English, they will need help with the language in order to write something publishable. Most journals can direct you to places where you might find translators, though you may have to pay them. Some English language journals, including RHM, include all abstracts translated into French, Spanish and other languages as well.

Submitting your paper – do's and don't's

Academic/professional publishing is intended to be a vehicle for sharing information and advancing the public knowledge base. For this to work well, it requires cooperation between publishers, editors, authors, peer reviewers and readers. From the first paper you submit, you are entering into an ongoing collaboration that exists among your peers, governed by many rules, both written and unwritten.

There are no shortcuts to submitting a paper. Sending an abstract to an editor for an opinion on whether to submit a paper (or even to ask whether to write the paper) is common in my experience and rarely worth doing. What if your paper is very good but the abstract doesn't capture the value of the paper's contents? That is not unusual. Or the reverse, the abstract may make the paper sound good but the paper may be poorly written or the data don't actually support the conclusions. The point is editors cannot know if they're interested until they've seen the whole paper, and they cannot tell you whether they will accept it for publication until they have had it peer reviewed.

Once you've chosen the journal and before you submit the paper, you need to read, digest and follow the journal's guidelines − all of them. Most journals will send the paper back to you if you don't, as every requirement in a guidelines has a reason. For example, typesetting with big publishers is highly

automated and aims to produce text for the web, not print. Every section of a paper needs to be in a certain format and coded if it is to appear correctly. When you submit your paper using fancy fonts of different sizes and types, or you centre or indent text or use italics when you were asked not to, or use obscure footnote and endnote programmes, or put graphics in colour when a journal doesn't use colour, either you or the journal's editorial staff will have to spend time changing them. Even minor edits that you feel are below your attention − like putting the period (full stop) or comma before or after the reference number in the text − take an inordinate amount of copyediting time to fix. That time should be spent by the author, not the editor.

Many journals have begun using web submission and peer reviewing processes and these are rigid. If you don't do what you're told, the programme will refuse to process your submission. If you agree to do a peer review and you are given two weeks, if you don't send it back within that period, you start getting automated (or manual) e-mail messages harassing you.

Timetable for submissions - I read submissions twice a year because that allows me to decide on the content of an issue as a whole and to work to a set schedule. If a journal says it reads papers twice or four times a year, they mean it. Many editors are not full-time and have other jobs, such as teaching.

Authors and editors have a mutual obligation to each other once an editor accepts a paper. The editor cannot withdraw the acceptance unless there is a serious problem discovered with the data; and the author is responsible for completing the paper to publication standard. Don't say "Oh sorry, I won't have time to revise it" when you see the reviews and realise you have to do more work. Unless you are a crack writer and editor, you will always have to do more work (possibly a lot more work) after peer review and, in some cases, also before. Plan time for it in advance, don't punish the editor for getting you to make your paper publishable.

Don't submit a paper if you have no intention of finishing. By the time a paper is peer reviewed the journal has usually spent at least several hours finding reviewers, and the reviewers will have spent up to half a day on a proper review. The editor may also have spent up to a day writing up notes for the author which cover things the reviewers do not. That's a lot of other people's time wasted if you aren't serious about your paper. A journal's production schedule is also fixed in advance. Journals should always provide you with timetable information − if they don't then ask, because it's up to you to fit into their schedule.

x Don't send an abstract for an opinion whether to submit or not.
✓Find out the editor's timetable for accepting and reading submissions, review, revision, acceptance and publication.
✓Look at back issues for guidance.
✓Before you submit, ensure you can complete the work on the paper in time for publication, including revision after peer review and proofreading.
✓Follow the editor's guidelines.
✓Meet the editor's deadlines.
x Don't allow a paper to be peer reviewed and then say: "Sorry, I don't have time to revise it."

When is a paper ready to be submitted

- Title, abstract, keywords and headings are mutually reinforcing.
- Introduction, methods, sources of information, subjects/participants, main points/findings, outcomes, discussion, conclusions/recommendations, acknowledgements, figures, tables and references are all in the style required by the journal.
- References are complete.
- You've followed the journalists' rule of thumb – your text answers who, what, where, when, why and how.
- You haven't just written it but have edited <u>and</u> edited <u>and</u> edited.
- You are sure that what's in your head is what's in the paper.

- It's always a good idea to finish it, leave it, and come back to it and revise once more.
- No extraneous words to cut.

A paper is ready to be submitted when you have followed all the journal's guidelines in terms of what to submit and the paper is as complete as you can make it. If you are submitting the paper by mail or e-mail, put everything into one envelope or one file unless directed to do otherwise.

When there are co-authors, a cover letter is usually required, signed by all of them, to ensure that their names have not been included without their knowledge or consent. A statement that the paper is not currently being considered for publication elsewhere is also usually required. Prior publication, for example as a working paper, or as a presentation in a conference, or publication in another language, should always be mentioned. These should be included in the acknowledgements of the paper as well.

Where there is more than one author, the co-authors must appoint one of them to act as corresponding author. This person is then responsible for all contact with the journal from submission through publication. The reason for having a corresponding author is so that the journal has to deal with only one person per submission and no co-author can attempt to change the content of the paper by going through the editor without the other co-authors knowing about it. Editors cannot get involved in disagreements between co-authors; the corresponding author is responsible for safeguarding the rights of all co-authors and ensure that all of them approve the paper as it has been submitted and agree with any decision to amend the paper after submission.

Contents of the paper

The structure of the abstract and the structure of the paper should reflect each other.

The paper should lead the reader towards what are you trying to show in clear steps from A to B to C to D, e.g. from past to future, from trial to results, from findings to discussion to recommendations, and not jump back and forth between these.

The paper is not about the authors. It should not be organised around you or the research process or the research questions, but around the most significant findings and their implications.

Title

The title of the paper should indicate clearly what it is about. It should not be too long or too detailed. Consider carefully whether you want parts of a quote or other "phrases" in the title; often these may become clear only after reading the paper. An obscure or long-winded title may put people off reading the paper at all. Especially for international journals, readers needs to know first of all in which city or country the study took place.

Abstract

- Background statement to set the context.
- Main subject or aim of the research or the paper.
- Main sources of information and participants.
- Most important findings/activities/events.
- Most important consequences/outcomes/conclusions.
- Recommendations/action/plans.
- Keywords should reflect main subject covered in the paper and the country it is about.

Some journals require you to use what are called structured abstracts, that is, abstracts broken up into prescribed sections such as background, aim, methodology, participants, findings, conclusions, etc. These will change according to the journal and sometimes according to which section of the journal your paper belongs in, or what type of paper it is. Science editors regularly debate the value of structured versus unstructured abstracts. Those working in scientific, technical and clinical or basic medical research tend to prefer structured abstracts. Journals like RHM do not, but all journals require certain items to be included. Finding out what each journal wants is the point, and then follow it.

A good abstract tells you everything that the complete paper tells you, but in summary form. It should not only say what the paper is about and describe the process of getting the information, but should state the main aim and summarise the actual sources of information, what the most important findings were and the most important conclusions and recommendations.

The keywords should reflect what is in the abstract and both should reflect what is in the paper.

Because of web-based indexes and databases like Medline, and because many journals require a subscription before giving access to full papers on the web, many people may read only your abstract. Hence, the more your abstract says, the better.

Examples:

Don't say: “This paper is about unnecessary caesarean sections in X country. Interviews were conducted with 100 obstetricians and 100 women giving birth in a public and a private clinic.”

Do say: “This research investigated the reasons why women delivering babies in the private sector in X city of Y country are twice as likely to have a caesarean section than women delivering in the public sector. Interviews on the indications for caesarean section they used were conducted with 100 obstetricians, of whom 50 were in a private clinic and 50 in a public hospital. Interviews were conducted with women giving birth in the same clinics, as to why they thought they had had a caesarean and if their informed consent was obtained.”

Don't say: “This study is about unsafe abortions.”

Say: “This study analysed data for each of the major developing world regions to determine the numbers of unsafe abortions per year and the numbers of unsafe abortions per live births.”

Don't say: “We discuss the consequences.” Instead, say what the consequences were!

Use the most important sentences from each section of your paper in your abstract. If you cannot find those sentences in the completed paper, they need to be added. Write them, insert them in the paper and use them in the abstract as well, though perhaps in slightly shortened form.

Writing the abstract before you start writing the paper can help you to structure the paper. But always go back and revise the abstract when you have finished the paper, because a great deal will have changed in the paper from when you started writing it. Hence, the abstract will need to be changed too.

Introduction

This section needs to set a context for the information in the paper. What is the history of your subject? What is already known? What led to the research? What are the problems that need resolving? For a ten-page paper, this section should be no more than one or one and a half pages. If even 25% of the paper is in the background section, it's far too much because you are summarising other people's work there, not presenting your own. On the other hand, I once got a paper that said, in one sentence: “Recently, studies have been undertaken to elicit information about women's health in X country.” with 16 references cited for that one statement. More details from those 16 studies were needed, at least a couple of paragraphs.

If the paper is about one country, or a part of the country, then give background about that country or city or district, not a lot of global statistics or a global overview of the topic. Introduce background information about other countries only insofar as it helps you to contextualise information about the country or topic you are writing about or helps to prove that what you are showing is also true elsewhere.

At the close of the background section, you need a short paragraph saying what the paper is about, why you carried out the work and what you wanted to find out. For example, is the paper a review, or does it describe quantitative or qualitative research, or both, or does it describe the history of something, or is it an opinion piece of some kind? At least some of the sentences from this paragraph should also be in your abstract.

Additional background information

Some papers have a whole section about the country or the local area that the study covers, as part of the context setting. Or they describe the structure and quality of the local health care services which were involved in the study, or the structure of the local government system, or some other relevant institution. This information might come before or after the methodology and participants section. It can be important when you are writing for an international readership, as you cannot expect people from the other side of the world to know what your country's health system is like, for example. This would not be as necessary when writing for a national journal. On the other hand, don't include information about the population, the economy, the geography or other basic information about the country unless it is relevant to the findings.

Methodology and participants

The next section of most papers is about how the research or review was conducted, which includes the methodology, the participants in the study, and sources used, such as hospital or government records, a review of papers on a particular topic, and/or interviews with key informants. Descriptions of methodology and participants are considered relatively standard in science but not necessarily in the sexual and reproductive health field.

You might find it useful and interesting to go to recent back issues of your favourite journals, including ones you would like to be published in, and read just the methodology and participants sections of some of the articles, looking especially for articles like the one you are planning to write yourself. After a while, you should be able to recognise and describe for yourself the templates used in those sections. You will then find it easier to construct your own.

For example, with participants, you should always include the criteria for choosing them, how they were selected (an accepted method), how many of them participated, and the relevant demographic details you collected about them (e.g. age, sex, marital status, number of children, level of education). If you interviewed key informants, say how many of them and from what professional or other categories, such as nurses, doctors and village leaders, and say how you found them and what you asked them about.

As regards the research methodology - was it qualitative or quantitative - and which method(s were used)? What were the main research questions? Who collected the data? Where? When? How was the information collected, was it through individual interviews, focus group discussions, and/or written questionnaires? Were the questions closed ended or open ended? What language(s) were used? Was translation required? How was translation handled and checked? How were the data analysed and by whom?

It is always possible to write pages and pages on methodology. Some journals expect masses of detail, for example, so that others can see that the methodology and therefore the findings are not flawed or have covered all the ground there was to cover. Others want less detail. Again, check the journal. If you are a researcher and the journal's audience are also researchers, more detail is likely to be welcome than for a broader audience like RHM's. Not long ago I received a paper that was almost all about the study methodology, which was very complex and had a number of different, major

components. It was well described and fascinating, but there was very little about the findings or the outcomes, or the relevance of the study as a model for future work of that sort. The reviewers and I both thought the paper wasn't publishable for that reason.

Findings

This is the place where your work is showcased. What did you learn from the research or the review that is worth reporting to the rest of us? How you structure the rest of the paper depends entirely on what you found of importance and of value.

You will almost always need to break the information up under headings. And you will need to shape how you present each part of the findings. Do not necessarily structure the information around the process of discovering it, however. In other words, don't make the paper a history of the research process. There was probably a good reason why you did the quantitative survey first and then did the focus groups and then the interviews, and you can explain why in the methodology section if it's important. But you do NOT therefore have to report the quantitative information first, followed by the qualitative data from the focus groups and then from the interviews.

In short, this paper is NOT about you the authors, and it is not a diary of what you did and what you learned as the study progressed. It is about what you found out. That means you have to analyse your findings and give them an order and a structure, not just write up your study notes.

Structuring the findings – Here is a simplistic but useful example of two ways of ordering the same data: let's say you interviewed and clinically examined a group of HIV-positive women in their first pregnancy about certain physical symptoms of HIV infection before the pregnancy, during the pregnancy, three months after the pregnancy and one year and two years later, and you want to compare the findings to symptoms in the same women with HIV in their third pregnancy. There are two ways you can structure the reporting of the results, depending on the significance of what you learned. One is to describe everything to do with the group having a first pregnancy and then everything to do with the group the group having a third pregnancy, and then compare them. The other is to describe the symptoms of both groups before the pregnancy, during the pregnancy and at the three stages afterwards. And then compare them overall. Both are valid ways of doing it. For any comparison like this, you will need to choose whichever form of presentation yields the best and clearest picture of the information, so that recommendations for what should be done become clear to anyone reading it.

Presenting data is similar to making a photograph, where the art involved is in including everything that you want the reader to learn (or see, as in a photo) and no more. For example, perhaps you asked people their religion but the data indicate nothing interesting in relation to the main subject and participants' religious beliefs or practice. So leave that information out.

Reporting survey findings – Let's say that in your focus group discussions or in-depth interviews, you asked participants a list of 25 questions. However, if your paper simply says "In answer to the 1st 2nd 3rd 4th question, people said this….etc." − it will be very boring to read. The question is, what is significant in their answers? Why do you want the world to know about it? These points should form the structure of the paper and serve as the headings of the sections, not the questions you asked.

Survey questionnaires in which participants answer closed-ended questions for which you can only extract quantitative data rarely lead to good papers by themselves. RHM rarely accepts such papers. They are often data heavy and cannot show why people answered as they did or what the basis of their responses is. The paper may tell you very useful things − for example, if 87% of parents think schools should be providing sex education or if 47% of young people have never heard of condoms, you know exactly what you need to recommend to the government and the school. A paper about this is going to be rather thin, however, although once some action is underway it might make an interesting letter to the editor or short report, but probably not for an international journal. Papers based on qualitative data alone need to ensure that the findings are relevant to far more people than the group that was interviewed. Sometimes one case history can serve as the touchstone for a broad analysis of a problem; such a paper requires good background material on the issues involved and an

in-depth critical analysis. The most interesting papers, however, are often based on both quantitative and qualitative data, and have gathered other forms of information, e.g. from reports, records and key informants, too.

Reporting a history of events – When you are reporting a history of events, they should be reported in chronological order, that is, in the historical order that they happened; don't jump back and forth in time to fit what happened under different thematic headings.

For example, one paper I published looked at influences on abortion policy in one country over a number of years. When it was first submitted, it described the whole period from the point of view of what the women's health movement did, then what the anti-abortion movement did, then what the national medical association and the obstetrics-gynaecology associations did. But that obscured the interactions between these stakeholders, an interaction that was very important to the significance of events. I asked the authors to re-tell the whole story chronologically, because then the cross-influences could emerge and we could see how the country got from the past to the present political situation historically.

Discussion

In some fields, journal readers look mainly at the methodology and the results. In others, people may go straight to the discussion and then look back through the rest of the paper. A good discussion section contains your explanation of the significance of the study's findings. It is not necessary to repeat your findings, not even in summary form – even though it is true that many readers will “hear” what you've said only if you say it two or three or four times. The discussion section is the place to analyse your findings, to explain what you think is valuable about them and how you think others can make use of them, and what their implications are for the future. The discussion section should not bring in new information from the study; that belongs in the findings. It should also not consist of your own opinions about the subject, but should always be related to the findings.

Conclusions and recommendations – If your discussion is long and in depth, then your conclusions can be a paragraph at the end of the discussion, and should say something about the future. Again, it should not just repeat points already made nor summarise the paper. If you want to make specific recommendations, stick to what is feasible and talk about who should do what you are recommending and how you think they can accomplish it. Don't make an endless wish list or shopping list that will never happen because there is no one to do the work or make the changes.

Don't end the paper with a list of all the research you think could be done in future, preferably by you. That list belongs in a funding proposal, not a journal article. Do talk about the future and discuss where to go from here.

The end of the paper is as crucial as the abstract. The abstract draws people in to read the paper, and in some cases it may be the only thing from your paper that people ever read. It must say everything in microcosm. You also want people to remember the main point of the paper, and it is the last paragraph that should play that role. You want to end with a bang if you can, not a whimper.

References and footnotes

Every journal gives details of how to present references and footnotes. Find out what it is and follow it!

Action-research: seeking to make your research lead to action

What is this? An example would be a study that shows that young people do not know very much about the menstrual cycle and fertility, or about contraceptives, or how to get a sexual partner to use contraception or condoms, and have no easy access to these methods anyway because family planning clinics are used only by married women. The recommendations are clear, e.g. that sex

education in schools is needed, family planning services should welcome young and single people and have informational sessions that meet their particular needs, that condoms should be made available in clubs and cinemas and other places where young people go in the evenings, and so on. But are you the authors going to make this happen? No. Is there anyone else who will be reading your paper who will make all this happen? If not, how can you make sure your research and your paper do make a difference?

The whole concept of action-research was developed many years ago to try and encourage researchers to ensure that the fruits of their work would be shared with the people who are in a position to bring about the changes needed that the research has identified. This means that part of your work may involve presenting your findings to the people who can bring these changes about, in this example to the family planning clinic managers and service providers, and to the schools people - and you should describe in your paper what came out of this action component as part of your findings.

Another example of action-research involves bringing together the participants in your study and presenting your findings and your conclusions and recommendations to them, so that they learn what you have learned, and can make use of your findings as well, even though they would otherwise never have read your journal paper. Your paper could also talk about what happened when you did that. In some cases, participants thought the conclusions of the author were wrong or incomplete and suggested others.

Style

As you work on your paper, remember how many people in the world don't speak, read or write English as a first language. If you want them to read your article, be clear and concise. Keep sentence length down; cut long sentences in half. Don't use jargon or complex, high-handed academic language or obscure terms – find ways to say what you want to say in straightforward English.

Remember also that people living all over the globe are reading your paper who have little knowledge of your country and its laws/institutions, etc.

Don't use acronyms apart from a few of the most known ones globally. Remember that in every country and every profession the same acronym may stand for a different organisation. Use acronyms for shorthand while you are writing if you must, but use “find and replace” to spell them out throughout your paper before you finish it. SRH –

Don't use fashionable words like “discourse” or “challenge” at all or only very sparingly.

Don't make a 2,000 word paper into a 4,500 word paper just because the journal's maximum length is 5,000 words. And don't submit 12,000 words when the journal's limit is 5,000 either.

Don't clutter the paper with headings, sub-headings, sub-sub-headings, numbered lists, and bullet points. You can and should use these, but use them sparingly. These devices will often help you to think through the paper while you are writing it, but in the finished product leave only clear markers of the development of the argument. One journal page should perhaps have two headings on it. Or a double page should have one heading and three sub-headings.

Limit bullet points to the most important points and limit the number of sets of bullet points.

Don't use lots of words in quote marks. This is currently a popular stylistic device, but creates clutter and obscures meaning; avoid it.

One of the most common mistakes is to make assertions without backing them up with references, e.g. don't say that adolescents experience a great deal of peer-initiated abuse without a reference giving evidence that this happens in the place where your study took place. Don't say" Studies have shown XYZ" unless you reference the studies. And don't say "Studies show…" and then give only one reference!

Avoid repetition. I repeat, don't repeat things. Repetition in a paper makes it longer than necessary and puts readers off. When editing the paper before submitting it, repetition is a major weakness to eliminate.

Don't say "as I mentioned earlier" or "as I will discuss in more detail below". Say it in one place or the other, but not both places. Don't tell us what you are going to talk about in the next section or in the rest of the paper, just talk about it when you come to it.

Don't clutter the paper with phrases such as "It is interesting to note that…" Of course it's interesting, otherwise, you wouldn't bother the reader with it. And don't say things like "It was surprising that…". Maybe you're surprised, but I would not be. Comments like this are a way of inserting your personal view of the findings and should be avoided.

Equally, don't say "Only 10% of the women died…" because even though you may consider 10% a small proportion, I think it is a huge number.

Use active voice in preference to passive voice for most papers, unless the journal itself prefers or requires this. You can use "I describe" or you can use "we" to refer to the author(s) as in "We interviewed", or you can write in the third person: "This study shows". The most important thing is to use a style you are comfortable with and to be consistent throughout the paper. However, do not use "we" to speak to the reader. Almost all authors who try to do this end up including different people in the "we" each time they use it.

Another important aspect of consistency is to use either present, present perfect or past tense, but not all of them. If your findings are from two years ago, write about them in the past tense. In the discussion section, the content determines the best choice of verb tense.

Data, tables and figures

Avoid sentences with long lists of numbers/statistics in your text − make tables.

Keep tables/figures as simple as possible.

Study published papers and use styles from them that you find easy to understand and follow.

Don't include data just because you have collected it – it should contribute to the article's findings and their significance.

Discuss what is in the tables/figures in the text, explain them, note the most important points. Don't expect them to speak for themselves; you are the only one who knows their significance.

Ensure that what is included in tables corresponds with what is said in the text and vice versa.

There are two important points to emphasise. The first is to take pity on your readers. You know what it is like to open a paper and be confronted with huge complex tables and complicated figures. Readers are more likely to study your data if you make them as simple and as clear as possible.

The second is that there is nothing worse than someone's numbers not adding up. If the paper says: "We interviewed 10 key informants, including three heart doctors, two clinic directors, and four

nurses." the editor will have to ask who number ten was. This may appear a silly thing to say, but errors like this are common. It is up to authors to ensure that numbers add up in large and more complex tables too. Another common mistake is for the numbers in a table and the discussion of the numbers in the text not to be the same numbers. This may happen when the statistician and the authors are different people, or if the tables are revised and corrected but the text referring to them is not changed accordingly, or vice versa. Careful checking is crucial.

Acknowledgements

Acknowledge advice or technical help with the paper, the study, data collection or interpretation, translator's name, sources of funding, etc. Acknowledge any previous publication, presentation at a conference or in a thesis/dissertation, of part or all of the work. State if the paper was translated, revised, updated, expanded or shortened for this journal. Any named person must have given their permission to be acknowledged (but not donors). Do not acknowledge peer reviewers; the journal should do that.

Editing yourself

Here are two examples of how you can edit yourself. This first example is of a paragraph that requires much more detail. It shows just how important the journalists' rule of thumb is – to include information on who, what, where, when, why and how. This short paragraph ended up being more than a page in the finished paper.

Example:

Editor's suggestions for additions – *[This country] developed its first national RH [SPELL OUT] policy in 1998 [SUMMARISE ITS COMPONENTS]. [14] This policy is currently undergoing updating to reflect evolving programmatic and technical changes [AGAIN, EXPLAIN, GIVE EXAMPLES, DETAILS]. The process of development in [the country] since then has centred around consensus-building for a minimum package of RH [SPELL OUT] services for the different levels of the health system. [WHAT SERVICES EXISTED BEFORE 1998?] This minimum package describes for each level what essential RH [SPELL OUT] information and services should be offered [WHAT ARE THESE?]. On the basis of this, resource requirements were determined [SUMMARISE THESE]. [WE NEED TO KNOW WHAT RH CONSISTS OF IN THIS COUNTRY RIGHT NOW]*

In the second example, the text was shortened to less than half the original length. This shows how much excess baggage you can edit out of a paper without losing meaning. This kind of editing creates space for you to include more useful information.

***Example*:**

Editor's suggestions for cuts – *[OMIT SENTENCES THAT TALK ABOUT WHAT YOU ARE GOING TO TALK ABOUT: ~~The next section turns to a consideration of~~ Two current PEP initiatives ~~Given the need to locate PEP within a broader context, they highlight real challenges and raise key questions that are relevant to the issue as a whole. The two sites~~ have been selected as case studies because both attempt to provide care through the public services, and therefore represent a system which would be the entry point for the majority of [people from the country]. However, they also illustrate the stark contrasts which exist within the country, in terms of [ADD: political support or the lack of it, rural versus urban population bases, infrastructure, and health systems development. Both programmes aim to provide standard clinical and forensic treatment relating to post-rape care. [GIVE A REFERENCE FOR SUCH A DESCRIPTION] ~~and these will not be described in detail. Instead, these profiles will focus on current experiences and challenges in the provision of PEP. Emerging lessons and their implications are discussed in the subsequent section.~~*

Editing is often harder than writing, and can take much longer than initially drafting a paper. You need to hone and polish, cut and paste, move things around, and re-phrase sentences to make them

crystal clear. Say what you mean! Make sure that what's in your head and what you know abiut your subject are actually in your paper.

Peer review: what to expect and your responsibility

Peer review is an essential part of the process of publishing. It is the only way we have of trying to ensure the accuracy and value of the information in a paper, even if it is an imperfect system for doing so. Peer review is something that all authors should consider they have a responsibility to provide for each other.

A good peer review takes time. A good review of a 5,000-word paper may have 2−5 pages of detailed comments. If the paper is too long, it will not only say “I would shorten this paper” but will suggest which parts of the text to shorten or omit. It will not copyedit or correct typos. Rather, it will advise in detail how to improve the paper, including structure and content. It will suggest important references to use if the authors have not used them. Not everyone is willing to do a really good review. Yet it is an essential service that authors must provide to each other and that editors must ensure is provided for authors.

Peer reviewers are sent a paper in confidence. They shouldn't show it to anyone else, or discuss it and must not quote it or use anything from it unless and until it is published. Some people who are willing to do a review can only address some aspects of the paper, which is fine as long as the editor has agreed. Sometimes they suggest or involve a second person in the review to cover aspects they can't, which is also fine, but again only if the editor agrees.

I once got a response from someone I had asked to review a paper as follows: “I don't even have to read this paper to advise you to reject it.” There is no excuse for dismissive or derogatory peer reviews, however. They are written every day, but I do not believe they should be shown to authors. I feel that the open review ethos is the only way to combat them.

Reviewers may also try to delay the publication of a paper. I saw a scientific article of a close friend of mine held up for over a year by a competitive reviewer, and after she had revised 3 or 4 times, she wrote to the editor and said enough is enough, this person is trying to prevent me from publishing, accept the paper or I'll withdraw it. Only then did the editor stop the reviewer from making more demands and accepted the paper.

There are also cases where a paper is not improved by a reviewer’s suggestions. Authors can become intimidated by a review, or for other reasons they may lose a sense of where they want a paper to go and end up making the paper worse. Happily, in my experience, this doesn’t seem to happen very often.

More editors are now asking authors to suggest peer reviewers for their papers. This broadens the group of people who do reviews and is a good thing. However, a review is no use if it only praises the paper. Every paper needs improving; suggestind how to do this is the task of the reviewer. Recommend reviewers who know your subject at least as well as you do, and who will criticise your paper to help you to improve it, to help you ensure that every word is correct and nothing important is missing. Do not recommend people who are unlikely to agree to do the review.

Open vs. blinded review

We decided on open review for RHM (that is, both authors and reviewers know each others’ names) after having received a few nasty reviews. Double-blinded review (the authors and reviewers do not know who each other are) used to be standard practice across the biomedical and scientific fields, and in most other disciplines as well, in the belief that this would allow reviews to “be neutral” or “tell the truth” if the truth was unpalatable. People would spend an inordinate amount of time trying to figure out who the reviewer was, and often managed to do so, especially within small circles of expertise.

In the last ten years, more journals have been changing to an open review system. One very practical reason for this, apart from concerns about the negative aspects of blinded reviews, is the fact that with more and more journals and more and more papers, finding reviewers has become a difficult task for editors. Open review makes it possible to ask the author for suggestions of reviewer to widen their database. For an international journal like RHM that is multidisciplinary, this is particularly helpful as it is almost impossible to know everyone in the field in every country working on all the themes we cover.

RHM operates a system of open peer review, so that authors and reviewers know each others' names. Most reviewers and authors find this a positive experience; reviews are much more constructive, and new contacts and mutual sharing of information can take place. However, there are legitimate reasons why a review might better be done anonymously and RHM is happy to honour such a request. (RHM Peer Review Guidelines 2002)

I see no disadvantages in open review and in some 15 years of experience, have only had half a dozen reviewers or so who asked to remain anonymous. Sometimes, because reviewers have worked closely with the authors, or know them well, they will ask whether this constitutes a conflict of interest. I do no think it is; on the contrary, if they know the authors and work involved, they can give a better review. It is only if they feel unable to be critical when criticism is justified that there is a conflict of interest. This has rarely turned out to be a problem for reviewers. On the other hand, there are many advantages to open review, the most important being that it fosters mutual respect and politeness, and the possibility of exchange of ideas as well.

What reviewers are asked to recommend to the editor

RHM's guidelines state that a paper will only be sent for peer review if the editor is considering taking it forward for publication. This greatly reduces the number of papers that I send to peer reviewers knowing or being fairly sure they will recommend rejecting the paper, which peer reviewers, like editors, do not like to do very much. I also try to avoid this because it means that same reviewer is not available to comment on a paper that looks worth publishing.

Asking a reviewer to re-review a paper a second or even a third time is not common but it is not unusual either.

One of the most interesting aspects of peer reviews is that two reviewers rarely point to the same things needing attention in a paper. Editors too often send comments to the authors without repeating what the reviewers have said because they see papers through a different lens. At the same time, it is rare for two reviewers to make opposing recommendations about accepting a paper, which is a relief.

Aspects of papers that reviewers are asked to comment on

There are four standard choices given to peer reviewers – accept with minor revisions, accept with major revisions, revise and resubmit (calling for re-review), and reject. Editors may agree or disagree with what reviewers recommend, and should always give reasons.

These are the aspects of papers that RHM asks reviewers to comment on, covering each section of the paper:

- originality
- validity and depth
- studies – are the materials and methods, subjects and research questions adequately described? is the study design appropriate to the topic and statistically sound? do figures in the text tally with the tables? are the tables self-explanatory? do the results justify the conclusions? could additional or different conclusions be drawn?
- style, length
- ethical matters

- compatibility with the journal's editorial policy

Overall, RHM asks:

- Please state in writing what is good about the paper, point out anything that is not accurate or ethical, and indicate how the paper must and/or could be improved for publication.
- Please note that it is our policy to hand on your comments – as you have written them – to the authors.
- Please be as constructive as possible and give as much guidance as you can, whether or not you think RHM should publish the paper. *(RHM Peer Review Guidelines)*

A good review does not have to consist of responses to the editor's general questions in the peer review guidelines. Instead, it should speak to the paper and what it is about, perhaps page by page, discussing point by point the issues involved, and then perhaps taking up specific points on specific pages. I prefer to receive the latter kind of review as an editor, and I suspect authors do too. That is, the kind of review that makes you think about the issues rather than one that pats you on the back or corrects your typing errors or grammar.

Authors - dealing with peer reviews

Doing what the reviewer says to do is not entirely your decision but a matter of negotiation. I expect authors to take a good review on board and do what it says, making use of its ideas, and reading the references suggested and including them - unless there are good reasons not to. I always tell authors when I personally disagree with a reviewer's recommendations or comments, which happens rarely, and then I don't expect them necessarily to accept them either, although they in turn may disagree with me! One way to take on board reviewers' comments that you disagree with is to mention them and disagree with them in your paper.

You should not write a long defence to the editor about your response to the reviews unless the journal asks you to do this. I always think it is better to respond by revising the paper and telling the editor that you have addressed all the points. I only expect authors to mention specifically anything they have decided not to amend according to the review and say why - briefly. I have sometimes had authors send me a lot of additional information in their reply to the review, but then they have forgotten to put that same information into the paper. So then I have to write back and tell them to put it in. This strikes me as a waste of authors' time.

Although I don't like rejecting papers, I try to tell authors the truth if I think their paper isn't publishable, or isn't a good fit with RHM, or that it belongs in a national journal. Sometimes I turn a paper down because I don't have enough room for all the good papers I've received. When I think it is publishable, with or without extra work, I encourage authors to try elsewhere and I suggest a journal if I can. I may also give them suggestions how they might want to improve the paper before submitting it elsewhere.

Authors respond in several ways - thankful for a frank appraisal, treating it as a learning process. Most do not respond at all. If you think the reviews are really unfair or the reviewer is trying to stop you from publishing, then it is worth discussing it with the editor. You should always get a fair hearing.

I believe authors have a right to know the reason(s) for a rejection, so if you are not told, ask. The point in the end, though, is that the editor has the power of rejection.

Mostly if you get rejected, my advice is to bite your tongue, improve the paper to the best of your ability and try another journal. If an editor says it isn't publishable, ask someone else you trust for an opinion. Sometimes it's just better to let it go.

Copyediting and proofreading

Copyediting by a publisher's or editor's staff (or an editor) is common and can be maddening when it comes from people who don't know the subject. Typesetters also copyedit and can introduce many mistakes or, as with copyeditors, alter meaning inadvertently. During typesetting data or text in tables may be moved or deleted, a word or even half a sentence may disappear in typesetting.

Proofreading is a critical part of publishing. Some editors leave the proofing entirely up to the authors but it is my experience that authors can miss a lot of mistakes, because they are not really reading every word. Other editors proofread assiduously and even check that every one of the references is correct by looking for them on the web. Mistakes in the title, author name and details, running heads, tables/figures and references are particularly common, and co-authjors get very upset if their names are spelled wrong.

Remember, it is part of the definition of an author to approve the final version. Discuss among your co-authors who is the best at proofreading. Some people are good at text, some at tables. Divide the tasks or better, get everyone to check everything. That means you really have to be organised though, because most journals only give you 48 or 72 hours to proof your paper at typesetting stage. That is why serious proofreading and spell checks before the final version goes to typesetting are a good idea. Don't underestimate the importance of this.

Send corrections all in one file. Don't let co-authors send their own corrections – they are likely to put forward different items and may even contradict each other, and then the editor doesn't know who to listen to. This is the role of corresponding author – to make sure one set of corrections is sent and has been agreed by all authors – respect it.

Cutting the umbilical cord is relevant here too. Don't keep proofreading the paper yet another time after you have sent in your corrections. Do it more than once, send corrections off, and then let go.

Lastly, recognise that errors after publication may be impossible to change. My publisher says that as they cannot change the print copy, they will not change the web copy, and all that can be done is for the journal to print a correction in the next issue.

From dissertation to articles

Compilation dissertations - which consist of half a dozen or so journal papers that all have to be accepted by different journals before the dissertation is approved – are of great value. Consider asking if you can submit one. It solves the problem of whether to try and turn your dissertation into journal articles later all at once.

Or – think about your dissertation as a series of eventual papers and have chapters which can be made separate if this is feasible. Remember that there may be a couple years between your writing the dissertation and your writing up any articles for publication. That means you may have to update the information. Don't expect, in other words, to simple pull ten pages of paragraphs or a chapter and the references for it out of your dissertation and have an instant article.

Do not try to summarise a 100-page dissertation or thesis in 10-15 pages. It inevitably loses depth and is often very unsatisfactory. Rather, choose the part or parts you think most worthy of publication. If you really think the whole is worth publishing, consider turning it into a book instead, which you do not have to shorten.

Last word of advice:

Make sure that what you want to say to the people who will read your paper is actually in the paper and not just in your head !!

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This text was originally a powerpoint presentation which was used as part of a seminar on writing for publication for post-graduate students at the Harvard Center for Population and Development Studies, Cambridge MA, USA, and has been edited for the website of Reproductive Health Matters (RHM). It was first prepared in 2002−2004 when I was a Visiting Research Fellow at the Harvard Center for Population and Development Studies, Cambridge MA, USA © 2009 Marge Berer. All rights reserved.

Information about the Harvard Center for Population and Development Studies (HCPDS) can be found at: <http://www.hsph.harvard.edu/hcpds/index.html>.

Information about Reproductive Health Matters (RHM) can be found on the RHM website at: <www.rhmjournal.org.uk>, which includes information about all RHM's publications, author and submission guidelines, peer review guidelines, themes of future issues of the journal, monthly news items and more.

RHM supports the publication of the RHM journal in translation in Arabic, Chinese, Spanish French, Hindi, Portuguese and Russian, which are available free. Links to these editions can also be found at <www.rhmjournal.org.uk>.

Subscription information, and current and back issues of the RHM journal from Volume 1, 1993 can be found at <www.rhm-elsevier.com>. Abstracts of all back issues are freely available there; full text of all back issues is available to both paid and free (supported) subscribers using the subscriber number above your name on your journal mailing label.

Details & all other queries about RHM to e-mail: <pmartin@rhmjournal.org.uk>.