# An Introduction to Research for Primary Dental Care Clinicians

# Part 9: Stage 10. Writing Up and Disseminating the Results

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#### Introduction

This paper, the ninth and final one in the series, will address the tenth and final stage of a research project suggested in the first

- paper. The ten suggested stages are:
- 1. The initial idea (asking a research question).
- 2. Searching the literature.
- 3. Refining the research question.
- 4. Planning the study.
- 5. Writing a protocol.
- 6. Obtaining ethical approval and funding.
- 7. Piloting the methodology and project management.
- 8. Collecting data.
- 9. Analysing the data.
- 10. Writing up and disseminating the results.

The paper outlines the steps that authors should take when seeking to publish the results of research in peer-reviewed journals and how to disseminate results through presentations at scientific conferences. These steps represent the final stage in the research process.

#### Stage 10. Writing up and Disseminating the Results

This paper is divided into the following sections:

A. Introduction.

- B. Steps to take before starting to write.
- C. Writing the paper or papers.
- D. Submitting the paper and the editorial process.
- E. Presenting results at meetings and conferences.
- F. Further resources.

#### **A. Introduction**

Having performed research, it is the duty of the researchers to disseminate the results and inform the scientific world and general population of the findings. Traditionally this has been done via presentations at scientific conferences and by publishing in peer-reviewed journals. Of late, it has become possible to publish in online journals such as BioMed Central1 as well in traditional 'hard copy' journals. Most journals now publish papers both online and in hard copy. This article includes advice on how to structure a research paper and describes the stages in the publication process. Although the structure of research papers is different, many of the steps are identical for other types of scientific paper, such as reports of systematic reviews and case reports. In biomedicine,

research methodology may be applied to research that seeks to identify answers to a new

problem. It may also be used to confirm the

results of a previous study or studies, clinical audit, or service evaluation.

# B. Steps to take before starting to writeB1. Identify the target readership and journal

The study concerned has been completed and the results analysed. It is now time to report them in a paper or papers. Before starting to write the paper(s), three questions should be asked. They are:

- What message should the paper convey? Ideally, this should be summed up in one sentence.
- What effect will the research have? Apply the 'so what?' test to the message.
- Who is likely to want to read the paper? Apply the 'who cares?' test.

All editors have a very clear idea of their journal's readership and will apply their own versions of these tests to all manuscripts that they receive. If a paper is to be considered, its topic will not only have to be within the journal's scope but also will need to match the journal's audience. It is therefore very wise to review the contents of recent editions of the selected journal. An editor may be reluctant to publish yet another paper on a specific topic that has been covered comprehensively in recent issues.

Some editors welcome enquiries and the opportunity to give guidance to prospective authors. For example, the editor and members

of the editorial board of Primary Dental Care, the journal of the Faculty of General Dental Practice (UK), have expressed a willingness to be consulted on prospective papers related to their areas of expertise.

# **B2. Information/guidance for authors**

Authors should always read in detail the 'Information/Guidelines for Authors' of the journal to which they wish to submit a paper and ensure that they follow the guidelines to the letter. They should ask themselves two questions, namely:

- 1. Can they fulfil the requirements within the guidelines?
- 2. Will the selected journal do justice to their paper?

Some journals also provide check-lists, as well as guidelines. The check-lists are used by those who review papers submitted to the journal in question. Primary Dental Care provides both guidelines for authors<sup>2</sup> and check-lists<sup>3</sup> for research papers, systematic reviews, case reports and opinion papers. A check-list for reviewers of research papers is given in Figure 1. Such check-lists detail the points that the reviewers will consider and that the authors should have covered in their paper.

#### Primary Dental Care peer reviewer's check-list and report form for research papers

MS 421 – GDPs' Views of Preformed Metal Crowns – Report of a Clinical Trial

#### General

- I. Is the topic of the paper appropriate for the journal? yes
- Does the paper conform to the published guidelines for authors of the journal? yes
- 3. Is it on an important or significant topic? yes
- 4. Does the study add to the existing knowledge-base? yes

#### Presentation

- 5. Does the title accurately reflect the content of the paper? yes
- 6. Does the paper have a logical construction? yes
- 7. Does the length of the paper need adjusting (too long or short)? no
- 8. Is the paper written in a clear and easily understandable style? yes
- 9. Is the paper free of grammatical or typographical errors? yes

#### Abstract

- Is there an abstract that conforms to the journal's published guidelines for authors? yes
- 11. Does the abstract present an accurate synopsis of the paper? yes
- 12. Are there key words and do they seem to be appropriate? yes

#### Introduction and Aims

- 13. Is the introduction appropriate to the paper's subject? yes
- 14. Is the literature that has been reviewed relevant and is it comprehensive? Not entirely, in the last six months three relevant papers on the Hall technique have been published. However they are not referred to in the introduction or in the discussion

Figure I Example of a review using the check-list for research papers (continued over).

- From the introduction does the study seem original in concept? yes
- 16. Do the aims of the study follow logically from the literature review and are they clearly stated? yes
- 17. If appropriate, is a null hypothesis stated? Not applicable

#### Methods

- 18. Is the design of the study consistent with its aims? yes
- 19. If applicable, was a pilot study performed to test the methodology? No, the authors should explain why this was not done
- 20. Is the sample representative of the population in question? yes
- 21. Are controls needed and used in the study? no
- 22. If controls are used, are they appropriate? Not applicable 23. Is the method of selecting the sample/cases and controls clearly
- 23. Is the method of selecting the sample/cases and controls clearly described? yes
- 24. Are other details such as numbers, time periods, statistical tests used clearly described and consistent? yes
- 25. If relevant, have examiners been trained and calibrated? Calibration and training are not mentioned in the methods section, they should be
- 26. Are details of such training and calibration given? See 25 above
- 27. If questionnaires and pro formas have been used, have they been tested, are they relevant to the study and are they presented either as figures in the paper or via a link to a web-site? yes
- 28. Could there be ethical objections to the study? I don't think so
- 29. Does the paper include a clear statement on whether or not ethical approval was sought and if so, who from? yes
- If ethical approval was not sought, is there a clear explanation why? yes
- 31. If applicable, has patient/parental consent been sought? yes

#### Results

32. Are the results and any statistical tests presented in a clear and unambiguous manner (tables, figures, graphs, etc)? yes

33. Are there any missing data and if so are they accounted for eg drop-outs, non-responders, etc? missing data accounted for	<ol> <li>Is there a statement of exactly how each author contributed to the paper? No, it should be added</li> </ol>
34. Are the numbers, percentages, statistical values accurate and clear? As far as I can tell	References
35. If statistical tests have been used, are they appropriate? As far as I can tell	49. Are the references accurate, up-to-date and relevant? No, the three recent papers mentioned in answer to questions 14
<ul> <li>36. If statistical tests have not been used, can this be justified? yes</li> <li>37. Is the sample too small to justify the findings? it is small but this paper follows on from other studies when the sample size must have been considered acceptable</li> <li>38. Although the must be traditionally size figure are the findings.</li> </ul>	and 42 should be added Rating: I excellent 4 poor 2 good 5 very poor
clinically significant? Yes	3 satisfactory 6 not applicable
Discussion	Please phrase your suggested amendments on this page so that they may be passed directly to the author(s).
<ol> <li>Does the discussion critique and discuss the methodology used? yes</li> </ol>	PACETURES
<ol> <li>Does the discussion comprehensively discuss the results? yes</li> <li>Are the results discussed in relation to other important literature on the topic area of the study? No, the three recent studies</li> </ol>	The Hall Technique is critical to the article and to the understanding of this paper.
<ul> <li>referred to in answer to question 14 were not mentioned</li> <li>43. Does the discussion extend beyond the methods and results of the study? no</li> </ul>	given a bold sub-heading so that PDC readers can, at a glance, find its explanation. This may encourage them to read the article.
Conclusions	PAGE SIX (last paragraph)
44. Do the conclusions accurately reflect the results of the study? yes	A short sentence, possibly in parenthesis, of the Core <sup>®</sup> Index could be of use to readers.
45. Are the conclusions clearly set out? yes	If the authors can address the points raised in this review, I recommend that the paper should be accepted for publication.
Acknowledgements	* The reviewer meant 'Care Index' (see Appendix 4 above).
46. Is any source of funding identified? No, the authors should clarify this point	
47. Is there a statement of conflict of interest? No, one should be added	

#### **B3.** Preparing to write

Having read the guidelines for authors, referred to any check-lists for reviewers or authors that the journal to which the paper is to be submitted may have produced, and read past editions of the journal to check its preferred style, the principal author is now ready to assemble all the material that should be on hand when writing. As far as style is concerned, it is usual to write in the third person and to use the simple past tense. The third person is used because it implies objectivity, whereas the use of the first person implies subjectivity. The simple past tense is used because the report will detail what has happened rather than what is happening or will happen.

The materials may include all or some of the following: data generated by the study, questionnaires and letters to respondents used in the study, photographs, drawings, other images, letters from ethics committees, and so on. Make sure that the data are complete and are organised into suitable tables and figures. Have copies of the papers that will be cited. Do not rely on memory or copy references from lists at the end of papers published in other journals.

Check the appropriateness of statistical methods that have been used and all calculations before writing the first draft. If the former are wrong, the paper will be rejected. If the latter

are wrong, it will be necessary to carry out a major revision in a later draft. To avoid such problems, it is essential to obtain the advice of a biostatistician when designing a study, and to refer any queries that may arise to him/her during the study and while writing a paper or an abstract for a conference presentation.

If the paper contains illustrations or any material that is copyright protected, it is necessary to obtain permission from the copyright holders to reproduce the material in the paper. If a letter or an unpublished paper is cited in the paper, it is necessary to obtain permission from its author. It is also necessary to confirm with anyone who is acknowledged for their help that they are happy to be associated with the paper. It is possible that they may not wish to be associated publicly with the paper or wish the readers to infer that they have endorsed it.

#### C. Writing the paper or papers

#### C1. The first draft

It is usual to produce a number of drafts of the paper, each of which is checked and commented on and corrected by co-authors (if there are any). It is very wise to add a date at the top of the first page of the first and all subsequent drafts and to save the paper to a hard drive with the date in the file name, such as 'Draft 4, Paper 12 at 27 December 2011'. This facilitates easy identification of the latest version of the paper when retrieving it for further work.

The structure of the paper should follow the standard format for scientific papers and be written under the headings:

- Abstract (with key words).
- Introduction.
- Aim(s).
- Methods.
- Results.
- Discussion.
- Conclusions.
- Acknowledgements.
- References.

# C2. The title and the authors

Begin the first draft by devising a title, which should clearly state the paper's message. In effect, the title is a summary of the abstract and the abstract is a summary of the full paper. It may be the case that the final version of the title is not agreed at the first draft stage, and it may be revised in subsequent drafts. Abbreviations should not be used in the title, and it should not imply more than the study shows. For example, a title such as 'A study of dentists' use of washer-disinfectors' would be inappropriate if the study concerned involved general dental practitioners in just one area. A better title would be 'The use of washer-disinfectors in 2009 by general dental practitioners in Yorkshire'.

Some journals require the full names, qualifications, appointments and addresses of all the authors should be listed under the title on

the first page. If this is the case, an instruction to include these details will be found in the journal's guidelines/instructions for authors. The author to whom any correspondence relating to the paper should be sent should be identified, together with his/her e-mail address and contact telephone number.

#### C3. The abstract

The abstract should summarise the paper. It should not contain information not found within the paper. Abstracts reporting the results of research should be written under the subheadings Aim(s), Methods, Results, and Conclusion(s). Some journals use the sub-heading Objectives instead of Aim(s). The Aims section may include a brief introduction as well as the aim(s). Each section should be one paragraph. References should not normally be cited in abstracts. Some journals have a word limit for the length of an abstract; it is usually 250-300 words.

#### C4. Key words/medical subject headings

At the end of the abstract, key words should be listed. These should be chosen carefully because they will be used by electronic databases, such as Medline, as one of the means of identifying the paper when people perform online searches. A good starting point is to select words contained in the National Library of Medicine's controlled vocabulary thesaurus. These Medical Subject Headings (MeSH) are arranged in an alphabetic and a hierarchical structure. When choosing key words, authors should refer to the MeSH web site at <u>www.nlm.nih.gov/mesh</u>. This is the central access point for additional information about MeSH and for obtaining MeSH in electronic form.

#### **C5. Referencing**

References are not normally cited in the abstract but they should be cited elsewhere throughout the paper and listed at the end of the paper. Many biomedical journals, including Primary Dental Care, use the Vancouver style,<sup>4</sup> in which references are numbered in the order in which they are first cited in the text. The Vancouver style resulted from a conference of the International Committee of Medical Editors, which took place in Vancouver in 1978. This committee has also produced Uniform Requirements for Manuscripts Submitted to Biomedical Journals. Virtually all Medline-listed biomedical journals, including Primary Dental Care, follow these requirements and they form the basis for the guidelines or instructions to authors. The other commonly used system is the Harvard style.<sup>5</sup> In Harvard, the authors' names and the year of publication appear in the text instead of a number. Whichever system the journal uses, it is wise to use the Harvard style until the final draft of the paper. This is because, should further references be added or deleted during revisions to earlier drafts, it is easier to replace names and dates with numbers in the final draft rather than to use numbers in all drafts. This problem can also be solved by the use of reference manager software, such as Endnote.

#### C6. Introduction (Why was the research necessary?)

Along with the abstract, this is the most important part of the paper to the editor of a journal. When a paper arrives in an editorial office, the editor is unlikely to read it through in detail in the first instance. Many editors read the abstract in detail to obtain an overall picture of the paper and then read the introduction to obtain an impression of the author's skills as an investigator and writer. By the end of the abstract, the editor (and readers) should know why the research was started and what gap in the existing knowledge it has tried to fill. An introduction should set the scene for the rest of the paper, commencing with a paragraph on

the broad area in which the research has been performed and describing previous work relevant to the topic, before leading to the reason why the author(s) were prompted to carry out the study. When planning and designing the study, it is essential to perform a literature search (using a database such as Medline) to help find previous key papers on the topic of the research. These key papers should be cited in the introduction. Too few citations in the introduction may lead to a suspicion by the editor (and discerning readers) that the relevant literature was not fully investigated before the project was started. On the other hand, too many citations may suggest that they have been copied from a dissertation or thesis and that there has been no attempt to cite only the key ones.

#### C7. Aims

The introduction must lead on to a clear statement of the aim or aims of the research. This can be linked to the introduction by the use of such words as 'Against this background...' or 'In the light of previous work, the aim of this study was...'.

#### C8. Methods (What was done?)

The quality of research is determined by the quality of the methodology used. Good research design is crucial to the success of a study/project. The methodology used therefore needs to be fully described in the Methods section, so that anyone could verify the research by following the same methodology to repeat the study. If the reader cannot understand exactly what was done, then the Methods section is inadequate. The author(s) must not assume that readers have the same knowledge of the topic as he/she does and it is therefore necessary to give a detailed explanation. The following points should be covered in the Methods section:

• A full explanation of the methodology used.

• If a pilot study was required, a description of how the methodology was piloted to test it before commencing the study.

• Details of ethical approval, or if this was not sought, the reason why.

• If relevant, details of patient consent and how it was obtained.

• A description of how data were collected.

• Copies of any questionnaire(s) used, together with a copy of the explanatory letter to subjects/patients, if this was not included in the questionnaire.

• A full description of any drugs, chemicals and other materials that were used, including their trade names and manufacturers' details.

• Details of any statistical tests that were used and why they were selected

The reasons why the methods that have been described were used, comparison with the methods used in previous similar studies, and indeed any discussion, should be in the Discussion section of the paper and not in the Methods section.

Details of the response rate, the number of subjects who 'dropped out' and the reasons why this happened should also not be given in the Methods but in the Results section.

#### **C9.** Results (What was found?)

Although editors, reviewers and discerning readers consider the scientific validity of a study in terms of the Methods section, they look to the Results section for the factual findings.

Some journals restrict the number of tables that can be published in a paper. However, with increasing use of publishing on the Internet, this is less of a problem, because papers published in hard copy can have annexes, including such items as long questionnaires and multiple tables, published online. Key features of a Results section are that it should:

• Present data and any statistical tests that were used in a clear and unambiguous manner, using tables, figures, and graphs as appropriate.

- List any missing data, which may be due to drop-outs or non-response to questions.
- Provide raw data (numbers) whenever percentages are quoted; for example, '2251 (33%)'.
- Do not present data (numbers) with several decimal points when the potential error in measurements is greater than 1%.

• Comments on any problems experienced during data collection that may have led to statistical errors or a deviation from the study design described in the Methods section should be made in the Discussion section.

#### C10. Discussion (Of all aspects of the study that is being reported)

The section should start with a discussion and critique of the methodology that was used, including an explanation of why it was used and a comparison with the methodologies used previously in other similar studies. The results should then be discussed and compared with those from previous studies, indicating where they confirmed or differed from those obtained in these studies and suggesting why this might have happened. The section should end with a brief summary outlining what the study has shown and a statement of the clinical relevance of the study.

#### **C11.** Conclusions

Conclusions may be listed in the summary at the end of the Discussion. However, it is often wise to list the key findings as bullet points in a separate section headed 'Conclusions', as this makes it easier for a reader to identify them. Nevertheless, some journals do not like bullet points so once again it is essential to see if the journal's instructions/guidelines give advice on this point. They should reflect the results accurately and not draw inferences over and above the results.

#### C12. Acknowledgements

This section should:

- Thank anyone who has helped in the production of the paper or the study that it reports.
- Identify any sources of funding for the study.
- Include a statement of conflict of interests, should any of the authors have them.

• If the journal requires it (Primary Dental Care does) state exactly what each author contributed to the paper.

#### C13. Reference list

All references, including electronic sources, cited in the paper should be listed in this section and numbered at the final draft stage. Personal communications or abstracts from posters and oral presentations at conferences are not generally included in the reference list; details of these should be included at the point within the text where they are cited. As mentioned previously, the style of the references is likely to be either Vancouver<sup>4</sup> or Harvard.<sup>5</sup>

### C14. Revising drafts

If time permits, it is wise to leave drafts for some days before revising them. This helps the author(s) to take an objective view when looking for errors. These may be in the content and structure, or in the style. Look for disparities between statements in the text and data presented in tables or figures. Ensure that there is continuity in the use of terms and that the full version of all abbreviations is given when they are first used; for example, 'General Dental Council (GDC)' should appear when first used in a paper, and then the abbreviation 'GDC' throughout the rest of the paper. As mentioned previously, to ensure an objective style, check that the third person and simple past tense are used consistently throughout the paper. The use of the first person suggests a degree of subjectivity and the second person one of condescension, which should be avoided.

If reference manager software has not been used, the references should remain in the Harvard style, both in the text and in the list of

references, until the final stage. If the journal to which the paper is submitted requires it, they should then be converted to Vancouver style.

If the journal to which to which the paper is submitted publishes a check-list for reviewers, the author(s) should go through the draft with the check-list to help identify any errors or omissions.

When the author(s) are happy with the final draft, it is wise to ask a colleague who is knowledgeable in the field of the paper to read it before it is submitted.

# C15. The final manuscript

Having completed any revisions, the last stage before submitting the paper is the preparation of the final manuscript. This involves:

• Reviewing the manuscript requirements of the journal (as detailed in the guidelines/information for authors).

• Checking that the final version contains all the essential sections, such as title page, abstract, key words, references, and that they conform to the journal's requirements.

• Printing out a copy to check that the width of the page margins conforms to the journal's requirements. These typically require that the lines are double-spaced, that each page is numbered, that all tables and figures are numbered, and that each one appears on a separate page.

# D. Submitting the paper and theeditorial process

#### **D1.** Submitting the paper

Most journals (Primary Dental Care included) require papers to be submitted electronically, either as e-mail attachments or via the journal's or publisher's website. A covering letter from all the authors should accompany the manuscript. Photographs may be sent electronically with the manuscript, tables, figures and the covering letter. However, in order to obtain high-quality reproduction, some journals also require photographs to be sent to the editor as hard copy by surface mail.

#### **D2.**The covering letter

Professor K A Eaton Editor, Primary Dental Care Faculty of General Dental Practice (UK) Royal College of Surgeons of England 35/43 Lincoln's Inn Fields London WC2A 3PE Department of Children's Dentistry Some Place Dental Hospital & School Rose Tree Street Some Place SPI 4HR

I November 2011

Dear Professor Eaton

#### Re GDPs' Views of Preformed Metal Crowns - Report of a Clinical Trial

My co-authors and I would like the attached paper considered for publication in *Primary Dental Care.* My co-authors have all consented to the submission of the paper to your journal. It has not been submitted to another journal in full or in part.

I am the corresponding author. Details of my contact details and those of my co-authors and the contribution that each has made to the paper are set out below.

I. Margaret Adams BDS, MFDS, M Clin Dent, Clinical Lecturer in Paediatric Dentistry, Department of Children's Dentistry, Some Place Dental Hospital & School, Rose Tree Street, Some Place, SP1 4HR e-mail: madams@someplace.ac.uk tel: 09862 753412 Wrote the paper and planned the study.

2. Shashi Patel BDS, MFGDP(UK), General Dental Practitioner, 53 South Street, Some Place, SP6 7ED. e-mail: whiteteeth@yahoo.co.uk tel: 09862 754819 Data collection and study co-ordination.

 Norman Barnes BDS, MSc, MGDS, General Dental Practitioner, 71 Orange Grove, Some Place, SP4 8TX e-mail: npbarnes@btinternet.com tel: 09862 836541
 Data collection and analysis.

Yours sincerely, Margaret Adams

cc: Shashi Patel Norman Barnes

#### Figure 2 Example of a covering letter from the authors.

The contents of the covering letter may vary from journal to journal. However, most (Primary Dental Care included) require it to include a list of all the authors' names, the address and the contact details (e-mail, postal addresses and telephone number/s) of the corresponding author, together with a statement that the paper is not being submitted to another journal and has not been published or accepted by another journal. An example of a covering letter is given in Figure 2. Some journals require all the authors to sign the covering letter. However, others (including Primary Dental Care) do not require this as long as the e-mail that accompanies the manuscript and covering letter is copied to all the authors.

#### **D3.** The editorial process (What happens next)

When a paper arrives at an editorial office it is given an identification number and then forwarded to the journal's editor, who decides whether or not it is on a topic that falls within the scope of the journal concerned and should be sent out for peer review. If the paper does not fall within the scope of the journal, an e-mail or letter is sent to the author(s) to explain this.

#### **D4.** Peer review

The editor nominates two or more colleagues who have particular knowledge of the topic of the paper to peer review it. This process may be performed blind, in which case the author details are removed before the paper is sent to the reviewers. Most journals provide a check-list of points for the reviewers to assess the paper against. Reviewers are given a deadline by which they should return their reviews to the editor. Apart from commenting on specific points, reviewers are also asked to recommend whether a paper should be accepted without revision, accepted following revisions, or rejected.

#### **D5.** The editorial letter

Margaret Adams	
Clinical Lecturer in Paediatric Dentistry	
Some Place Dental Hospital & School	
Rose Tree Street	LA Deventor 2011
some riace or I Hrik	14 December 2011
Dear Margaret,	
Re MS 421 - GDPs' Views of Preformed	Metal Crowns - Report of a Clinical Trial
Thank you for submitting the above paper to	Primary Dental Care. I have now received reports
from its two reviewers. They are attached to t	his letter. As you will see one review was
extremely brief. However, you will be pleased	to see that both reviewers liked the paper and
have recommended that I accept it.	
I am happy to do so subject to you and your o	o-authors agreeing to the following minor
revisions or additions, as well as those suggest	ed by the second reviewer:
• Add the words 'A Group of' at the beginn	ing of the title.
Revise the section currently headed 'Obje	ctives' such that it is headed 'Aims'.
• Add a brief explanation of why you did no	t seek ethics approval for the study.
• Add more detail to the methods section in	ncluding: where the interviews took place, how
many sessions there were, how many inter	viewers were used.
• If there was more than one interviewer, pl	ease explain how you ensured consistency.
I am sure that the second reviewer meant to	write 'Care Index' and not 'Core Index' in the
suggested amendments section of her report.	
Could you please send me a revised manuscri	pt by 31 December 2011.
Best wishes,	
Ken	
Professor Kenneth A. Eaton	
cc: David O 'Malley	

The editor considers both reviews and then decides whether or not to accept or reject the paper. Very few papers are accepted without revision; some are rejected; most are accepted subject to revision. The editor writes to the author(s) with a decision on the paper. Authors are free to disagree with the comments made by the reviewers, and can challenge any of them. However, if they do so, they must provide evidence to support their challenge. Generally, authors do not challenge comments made by reviewers and requests made by editors. A typical editorial letter is at Figure 3 and a typical review, using a check-list, of a research paper is at Figure 1.

#### D6. Revisions made by the author(s)

The authors are given a deadline by which to make revisions and resubmit the paper to the editor. A revised manuscript should be accompanied by a list of the revisions, which should be highlighted in the revised manuscript.

### **D7.** Editing

If it meets the editor's requirements, the manuscript is then edited, either by the editor or by a sub-editor. This involves ensuring that the paper is written in the house style of the journal, that it is consistent and unambiguous, that illustrative material meets the required standard, and that the references are accurate. Many journals will immediately return manuscripts to the authors where references either are incomplete or do not conform to the house style, and it is the responsibility of the author(s) to rectify these. For some journals, including Primary Dental Care, it may also involve revising the text to make it easier to read or to emphasise important points. Depending on the extent of revisions, the edited version may then be returned to authors for their approval.

# **D8.** Production of a proof and publication

Once the author(s) has/have given their approval, the paper is laid out in the graphic style of the journal and a proof of all its pages is produced. The proof is checked by the editorial team and a copy is also sent to the author(s) for proof reading. Authors are provided with instructions as to how to submit corrections (this varies from journal to journal) and a deadline for receipt of these. Substantial changes are not generally permitted at this stage and the journal may levy a charge if the author deems such changes necessary. Any errors are reported and rectified. The corresponding author is generally sent a copyright form requiring the corresponding author to assign copyright to the publishing journal. Once this completed form has been returned to the editorial office, the final copy of the paper can be printed. After publication, most journals (including Primary Dental Care) send the corresponding author a PDF file of the paper in its published form. PDF files are provided to ensure rapid dissemination of scholarly work, on the understanding that it should only be distributed in small numbers, by the author(s), for educational purposes and at no cost to those receiving it. The publishers hold the copyright of the paper(s). It is understood that the PDF files will only be used in a manner consistent with the fair use provisions of the relevant copyright laws. Authors may not use them for any commercial enterprise.

# E. Presenting results at meetings and conferences

Prior to publishing the results of research, it is usual to present them at a national or international scientific meeting that is relevant to the topic of the research. This is not compulsory but is another method for disseminating results. The convention is that only results that have not been published should be presented at such meetings or conferences. Authors must bear this in mind when seeking to publish their results. Such presentations at meetings or conferences, usually present only the 'highlights' of the research, either through a poster or a short (no more than 15 minutes, including questions from the audience) oral presentation. Abstracts of such presentations are published in the meeting/conference programme book and often in the journal(s) of the organising society or association.

### **F.** Further resources

• The Royal College of Surgeons of England. College Style Guide. Accessed (2012 Jan 6) at: www.rcseng.ac.uk/publications/submissions/collegestyleguide.html

• Pears R, Shields G. Cite Them Right: The Essential Referencing Guide. 8th ed. New York: Palgrave Macmillan; 2010.

• Strunk WJr, White EB. The Elements of Style. 4th ed. New York: Pearson Longman; 1999.

• ZinsserW. On Writing Well: The Classic Guide to Writing Nonfiction. 35th anniv ed. New York: Harper Collins; 2012.

#### References

1. BioMed Central. Accessed (2011 Dec 22) at: www.biomedcentral.org

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