Editing and Proofreading Your Own Work

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Editing and proofreading benefit the writing of even the most skillful medical communicators. Yet professional editors and proofreaders are not always available. Even when such assistance exists, first doing some editing and proofreading yourself is advisable. Providing a polished piece demonstrates competence and decreases the time that others must invest. Also, the less editing that others do, the less likelihood there is of introducing errors or distorting meaning.

This article therefore offers guidance on editing and proofreading your own work. In keeping with standard usage, *editing* is defined as revising writing to increase its suitability. *Proofreading*, which comes later, is correction of typographical and other errors in finished writing before submission, publication, or distribution.

First this article discusses how to approach editing your own writing. Then it addresses aspects to consider in such editing; checklists are provided. Next comes a section on proofreading your work. The final section identifies resources for editing your work and for developing skills to do so. The article is largely for early- and mid-career medical communicators, but senior writers may also learn of items to use or recommend.

APPROACHING THE EDITING

Editing your own work has much in common with other editing. A key difference, though, is that distance is lacking. You may already know what you were trying to say; thus, problems with clarity may be difficult to detect. And you may be emotionally invested in the writing and so lack objectivity. Thus, the first step in editing your work may consist of gaining distance.

Unless deadlines require otherwise, set writing aside for a while before trying to edit it. Doing so can help you approach the piece afresh. Suddenly problems—and their solutions—may be more apparent.

If you have been viewing the writing on a computer, print it out. The change in medium may help you consider the writing from a new perspective. A printout also can aid in viewing the document as a whole and help to spot problems such as starting many paragraphs the same way.

As suggested in *Ideas into Words: Mastering the Craft of Science Writing*,[1] consider changing the look of the text to help view it with new eyes. For example, print the piece on different-colored paper. Change the typeface, or change the margins. Printing the text with large margins also can facilitate writing comments and making edits.

Similarly, reading the writing aloud may provide a fresh perspective. You may more easily notice where words are omitted or repeated, and awkward phrasing may become more apparent.

In editing others' work, some editors tend to work first on large-scale aspects, such as organization, and then small-scale aspects, such as wording. Others do largely the reverse or alternate between the two. Some edit the piece from beginning to end. Others start elsewhere than the beginning—for example, with the reference list or tables and figures. Some edit in several passes, focusing on different aspects each time. Others integrate aspects more.

Likewise, in editing your own work, different approaches can be effective. Choose whatever works for you or suits the current piece. Realize, though, that thorough editing usually entails reviewing the writing multiple times, including at least once from beginning to end.

EDITING YOUR OWN WORK

However you approach editing your draft, certain key aspects deserve attention. These aspects—which sometimes are intertwined—include compliance with instructions, suitability for the audience, content, structure of the text, organization, mechanics, clarity, and conciseness.

Most medical writing must follow *instructions*. Review the instructions before editing your work, keep the instructions handy as you edit, and check your writing against the instructions a final time before submission. If the journal or other recipient has provided a checklist, use it.

Also consider suitability for the *audience*. Is a journal article for generalists or specialists? Will a proposal be reviewed by

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scientists or by a community board? What do prospective readers of a brochure know and care about? What about the native language(s) of the readers? Consider whether to modify aspects of the text to suit your audience. Also consider whether any content should be revised accordingly.

Indeed, evaluating *content* is crucial to editing your own work. Consider both the audience and the goals of the writing. Does the writing include all the content needed to achieve the goals? Is there superfluous content to delete? Should any implicit assumptions be made explicit? Is the logic sound? And is all the content accurate? Answering this last question can entail checking the writing against the original data or source material.

Also consider *the structure of the text*. Does the writing follow the standard format for the genre—for example, IMRAD (introduction, methods, results, and discussion) for a journal article or inverted pyramid for a news release? If not, does it differ for a valid reason? Within the format, have good choices been made? For example: If subheadings are allowed, are they used effectively? Are sections and paragraphs of suitable lengths? Should any lists be numbered or bulleted? Would any material in the text be better presented in tables or figures? If tables or figures are present, are they all worth including—and are those worth keeping well designed? Would italics or other typographic devices help anywhere? (Beware, though, of overusing such devices.)

Instructions and convention may determine the overall structure of your writing. However, check aspects of *organization* that you can control. Within sections of the document, is content logically structured? Where warranted, do overviews precede details, thus orienting readers? Do paragraphs generally begin with strong topic sentences? Do items in lists appear in a logical order?

Of course, check the *mechanics* of the writing, both for consistency with instructions and for compliance with overall standards. If a specific style (such as American Medical Association style) is required, has it been followed in all regards? Are grammar, spelling, punctuation, and usage correct throughout? Are verb tenses appropriate? Are antecedents of all pronouns clear? Have all abbreviations and acronyms been defined? Are they all worth including? Within lists, do items have parallel structure? Are sentences of appropriate length and structure—or, for example, should some sentences be divided? Are there effective transitions from sentence to sentence? If there are references, are they in proper format?

Check for *clarity* of wording. Is all the language unambiguous? Does every sentence say what you mean? Is anything still hazy because you remain unsure what you want to convey? Is the wording exact throughout? Is anything likely to be misread or misinterpreted? In medical writing, wording should be so clear as to essentially preclude misunderstanding.

Drafts tend to be wordy. Edit them for *conciseness*, which can increase readability and save space. In editing for conciseness, substitute short, common words for long ones when appropriate; delete needless words; condense wordy phrases; and replace nouns made from verbs with the verbs themselves (Table 1).

Table 1. Examples of Editing for Conciseness

	Original	Revised
Substituting shorter words	attempt	try
	currently	now
	demonstrate	show
	fundamental	basic
	numerous	many
	utilize	use
Deleting needless words	absolutely essential	essential
	completely destroyed	destroyed
	of an efficient nature	efficient
	on a daily basis	daily
	red in color	red
	whether or not to	whether to
Condensing wordy phrases	an adequate amount of	enough
	at the present point in time	now
	in light of the fact that	because
	in the event that	if
	is similar to	resembles
	the majority of	most
Using verbs rather than nouns	conduct an examination of	examine
	have effects on	affect
	make contributions	contribute
	provide help to	help
	supply relief of	relieve
	take into consideration	consider

Consider numbers as well as words. If numbers are present, are they accurate? Are they in the required style (for example, presented in arabic numerals or spelled out)? If units of measure are needed, are they present? Do the choice and presentation of units suit the audience and comply with stated requirements, if any?

Finally, are you comfortable with everything about the draft? Or does anything make you uneasy? For instance, does anything seem inconsistent? Might anything be dehumanizing, disrespectful, or even libelous? Are any copyright or permis-

sions issues unresolved? Might anything merit further checking? In such cases, take the steps needed to resolve the qualms.

Checklists can aid in editing your work. Table 2 is a general checklist based on material in this section. Consider using such a checklist plus a checklist for the genre of writing—for example, scientific paper (Table 3), grant proposal (Table 4), or article for general readers (Table 5). You can individualize such checklists to suit the writing task and the pitfalls you tend to face. Using such checklists can aid in thoroughly and efficiently editing your work.

Table 2. Sample Core Checklist: Editing Your Own Writing

1. Is the content complete, or should any content be added?
2. Should any content be deleted?
3. Is all the content accurate?
4. Is all the logic sound?
5. Do the content and crafting of the piece suit the audience?
6. Does the piece follow appropriate conventions regarding overall format?
7. If subheadings are allowed, are they used effectively?
8. Are sections and paragraphs of appropriate length?
9. Should any tables or figures be added or deleted?
10. If tables or figures are included, are they well designed?
11. Would typographic devices, such as italics or bullets, be helpful anywhere?
12. Is the piece well organized at various levels?
13. Are grammar, spelling, punctuation, and usage correct throughout?
14. Are verb tenses appropriate?
15. Are antecedents of all pronouns clear?
16. Have abbreviations and acronyms been defined (and are all of them worth using)?
17. Are sentences of appropriate length and structure?
18. Are numbers, if any, in the correct style? Are all units of measure suitable?
19. If references are cited, are they in the appropriate format? Do all cited references appear in the reference list, and are all listed references cited in the text?
20. Is the writing clear, exact, and concise?
21. Have all instructions been followed?

PROOFREADING YOUR OWN WORK

Your writing now seems ready to submit. A final step is to proofread it to correct any mechanical errors that have gone undetected or that have been introduced. Likewise, if you are asked to review a proof (a copy of the typeset version of your work) before publication, check it carefully against the most recent marked copy.

How to approach proofreading? Whether proofreading a typescript or a proof, reading it aloud can help, because doing so can force you to notice every word. To most thoroughly check a proof, both read it on its own and compare it with the original text. If the text is long, looking back and forth between it and the proof can be tiresome, and errors may be easy to miss. Solutions include having someone read aloud the original text (including punctuation and formatting) as you look at the proof. Alternatively, you can record yourself reading the text and then listen as you check the proof.

Table 3. Sample Supplementary Checklist: Editing Your Draft of a Scientific Paper*

1. Does the title accurately and concisely indicate the content?
2. Are the appropriate people listed as authors?
3. Does the abstract accurately reflect the content of the paper? Is the abstract a suitable length?
4. Does the introduction provide sufficient context?
5. Does the introduction make clear what gap the research was intended to fill?
6. Does the introduction indicate the hypotheses or research questions?
7. Does the methods section provide sufficient information to replicate the research?
8. Does the methods section provide sufficient information to evaluate the research?
9. In the methods section, are sources of materials and equipment identified?
10. If the research was on humans or animals, are appropriate approvals noted?
11. Are the results presented in logical order?
12. Are the results presented in appropriate detail?
13. Are statistics appropriately presented?
14. Does the discussion address the hypotheses or research questions posed in the introduction?
15. Does the discussion put the results in sufficient context?
16. If relevant, does the discussion address strengths and weaknesses of the research?
17. If relevant, does the discussion identify applications or implications of the research?
18. Have the appropriate parties been acknowledged?

**Such a checklist would be used along with a more general editorial checklist, such as shown in Table 2. It can readily be adapted to suit the requirements of the type of scientific paper that one is writing.*

What should you check for when proofreading your work? Of course, look for typographical errors. Be especially alert for typos that yield homonyms (such as *to* for *too*) or other actual words. (A spellchecker will not help if instead of *public* you typed *pubic*.) Pay extra attention to items prone to computer snafus during typesetting—for example, specialized symbols and Greek letters.

Also be alert for mechanical problems that escaped notice during editing. Such problems may include misspellings, grammatical errors (such as subject-verb disagreement),

Table 4. Sample Supplementary Checklist: Editing a Draft of Your Grant Proposal*

1. Does the title clearly and accurately convey the focus?
2. Is the abstract informative and clear? Ditto for any other sections serving as summaries?
3. Are the goals or hypotheses clear?
4. Is the originality of the work apparent?
5. Is the proposed work clearly relevant to the mission of the funding source?
6. Is the importance of the proposed work explained?
7. Is sufficient context provided?
8. Is the amount of proposed work realistic?
9. Is it clear that the personnel are capable of doing the proposed work?
10. Are sufficient justifications provided for choices of, for example, methods?
11. Is sufficient supporting evidence included?
12. Is sufficient justification provided for budgetary items?
13. If there will be cost sharing, is sufficient information provided?
14. If preliminary studies are required or advisable, is there enough information about them?
15. If a timeline would be advisable, is one included?
16. If evaluation plans are needed, are they sufficient?
17. If dissemination plans should be included, are they sufficient?
18. Have all instructions regarding content and format been followed? For example, if there was a request for proposals, have you complied with it in every way?

**Such a checklist would be used along with a more general editorial checklist, such as shown in Table 2. It can readily be adapted to suit the requirements of the type of grant proposal that one is writing.*

Table 5. Sample Supplementary Checklist: Editing Your Draft of a Medical Feature Article for General Readers*

1. Is the piece the requested length?
2. If a title or headline was requested, have you provided one that is accurate and engaging?
3. If a blurb summarizing the article was requested, have you provided a suitable one?
4. Does beginning of the article (the lead) draw readers in and establish the focus and tone of the piece?
5. If a "billboard paragraph" ("nut paragraph") is needed to orient readers, is one included and effectively written?
6. Does the article deliver what is promised by the lead (and billboard paragraph, if any)?
7. Is sufficient human interest included?
8. Is specialized jargon generally avoided?
9. When specialized terms would be useful for readers to know, are they included and clearly defined?
10. If appropriate, are quotes included? Have you quoted an appropriate range of people?
11. If appropriate, are anecdotes included to support points and enliven the text? Are the anecdotes suitable?
12. Are numbers and sizes presented in ways meaningful to readers?
13. Is the pacing appropriate? For example, are difficult concepts sufficiently separated, and are interesting tidbits frequent enough?
14. Is the reading level suitable?
15. If appropriate, does the article identify sources of further information? Are these sources suitable for the target audience?
16. If appropriate, does the article have a strong ending?
17. If sidebars are required or desirable, have you provided them?
18. If you are to provide or propose photos or other graphics, have you identified appropriate ones?
19. If you were asked to provide potential pull quotes, have you supplied appropriate ones?
20. If you must submit material to use in fact checking, do you have it ready?

**Such a checklist would be used along with a more general editorial checklist, such as shown in Table 2. It can readily be adapted to suit the requirements of the type of feature article that one is writing.*

punctuation errors, omissions or duplication of words, and deviations from the requested style and format. Among other problems to check for are errors in alphabetical or numerical sequence, incorrect arithmetic, inconsistencies of information, and inaccurate cross-references. When checking typeset proof, change only items that are truly errors; changes at this stage can be costly.

When checking a typeset proof, make sure that all components are present; sometimes a line of text is cut off or a table, figure, or reference is missing. Also make sure that any tables and figures are suitably placed and that figures are properly oriented. (Sometimes, for example, radiographs are placed upside down.) Other problems to look for include incorrect spacing within lines, inclusion of text in the wrong typeface or wrong type size, and failure of a periodical to update its template, resulting in the wrong date on the pages.

Sets of fresh eyes can help spot errors. Consider asking colleagues, friends, or family to look over manuscripts or other items. Ideally, include both someone familiar with the subject and someone outside the field. The former may well spot technical inaccuracies, and the latter, undistracted by content, may more readily notice mechanical errors.

SOME RESOURCES

A variety of resources can aid in editing and proofreading your own work and developing skills to do so. Although intended primarily as instruction in editing others' work, *The Copyeditor's Handbook*,[2] by Amy Einsohn, provides abundant guidance useful in self-editing. Other useful sources of guidance include American Medical Writers Association (AMWA) workshops[3] on topics such as grammar, punctuation, and

copyediting; self-study modules[4] based on AMWA workshops; and other workshops and courses on editing.

Using the style manual specified by a journal or other recipient helps ensure that your writing meets requirements. In addition, style manuals commonly include general guidance that can help you edit your writing. Many medical publications use the *AMA Manual of Style*.[5] Even if writing for other venues, reading this manual's chapters on grammar, punctuation, capitalization, and usage and taking the associated online quizzes[6] can provide a fine foundation for editing your own work. Other style manuals often useful for medical writers include *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers*[7] and the *Publication Manual of the American Psychological Association*.[8] *The Chicago Manual of Style*,[9] widely used in book publishing, can be another relevant resource. For editing materials for some lay publications, familiarity with Associated Press style[10] can help.

Most major style manuals are now available online as well as in print. Online-only resources also can be useful when editing your writing. One resource worth bookmarking is OneLook Dictionary Search,[11] which provides access to definitions and associated information from multiple dictionaries. When questions of grammar, punctuation, or usage arise, the Grammar Girl[12] website can be useful. Websites of academic writing centers also offer guidance in such regards; links to many of these websites appear at Writing Centers Online.[13] The blog post "25 Ways to Tighten Your Writing"[14] contains tips for making writing more concise; other resources useful in doing so include *Guidelines for Document Designers*[15] and the classic guide *The Elements of Style*.[16] The article "Copyediting for Reporters: How to Get the Basics Right"[17] provides helpful advice on editing pieces for general readers.

Resources helpful in developing proofreading skills include the AMWA workshop on proofreading,[3] a chapter[18] based on an earlier version of this workshop, and an openly accessible presentation[19] on basics of proofreading. This presentation appears in the resource library[20] of AuthorAID, a project mainly to help researchers in developing countries to write about and publish their work. This resource library also has other materials that can assist in editing or proofreading; they include a handout on editing one's own papers and proposals[21] and a presentation on basics of copyediting and proofreading.[22]

CLOSING COMMENTS

Editing and proofreading your own work can help it to meet high standards. It can thus increase acceptance of what you write and minimize the need for editing and proofreading by others. Most important, carefully editing and proofreading your work can aid in communicating with your audience and thereby achieving the goals of your medical writing.

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