Manuscript Writing

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Help, I can't shorten my abstract! Oh, yes you can (Part 2 of 2)

Abstracts may be the most important part of a manuscript because they are often the only part that is read and used as an information source, and because they are also used by readers and editors to decide whether to read the full article. Abstracts need to be complete, concise, and interesting. This is complicated by strict length and format limitations.

This is the second of two articles that show you how to shorten an abstract. The accent of these two articles is on preparing informational and descriptive abstracts for publications, but these considerations also apply to conference abstracts. The first article described how to shorten abstracts by eliminating unnecessary content and using plain language. This second article describes how to use linguistic devices to reduce the word count.

Use parallel construction – and get rid of 'compared to'

Parallel construction not only reduces the word count but also makes the text easier to read.

Example:

- *The time to treatment failure was 12.2 months in the treatment group, compared to 3.1 months in the group that was treated with placebo.*

can be replaced by

The time to treatment failure was 12.2 months in the treatment group and 3.1 in the placebo [or control] group.

Use incomplete phrases for the objective, design, and setting sections of a structured abstract

In a structured abstract, instead of writing out *the objective of the study was to*, you can simply start the sentence with *To* as in the following example:

- *Objective: To determine the optimal dose of vaccine X for protection against* Herpes zoster *in adults' ≥60 years.*

Likewise, the design and setting sections of a structured abstract can be written as phrases rather than full sentences:

- *Design: double-blind, randomized, parallel-group study.*
- *Setting: academic teaching hospital.*

Convert nominalisations to verbs

A nominalisation is a verb that has been changed into a noun. Nominalisations contain the activity in a sentence, and they are often words that end in -ment, -tion/sion, or -ing.

Because English is a verb-based language, the meaning and activity in your sentence should usually be put into verbs. Using nominalisations always leads to longer and often more clumsy sentences.

Examples:

- *Measurement of the protein concentration was made using* can be replaced by *The protein concentration was measured by*
- *Administration of the vaccine was made by intramuscular injection* can be replaced by *The vaccine was administered intramuscularly* or even better *Subjects were vaccinated intramuscularly*.

Convert prepositional phrases to adjectives

Prepositional phrases are groups of words starting with a preposition. These can usually be shortened by eliminating the preposition as in the following examples:

- *The patient had an infection of the skin* can be replaced with *The patient had a skin infection*.
- *Pain in the joints* can be replaced by *joint pain*.
- *Cancer of the breast* can be replaced by *breast cancer*. (In this case, breast is a noun being used as an adjective.)
- *Abuse of nicotine* can always be rewritten as *nicotine abuse* (again using a noun, nicotine, as an adjective).

This applies to many formulations with of, but it is not always possible – for example, *life quality*

instead of *quality of life* just doesn't sound right – so check this out with a colleague, if in doubt.

Avoid starting sentences with prepositional phrases; start with the subject of sentence instead

Prepositional phrases are often used to start sentences, especially by those whose first language is not English, but this often results in a long and choppy sentence. Prepositional phrases also often result in *there were* or *it is/was* constructions.

Examples:

- *By using whole body scanning in the emergency room, we saved more than 58% of diagnostic time in polytrauma patients.*

  can be replaced by

  Whole body scanning in the emergency room saved more than 58% of diagnostic time in polytrauma patients.
- *In 42 RA patients in 74 treatment courses, Drug A was given between 2004 and 2008.*

  can be replaced by

  42 RA patients received 74 courses of Drug A between 2004 and 2008.

Use plurals to eliminate articles

Example:

- *The vaccine was administered by microinjection* can be replaced by *Vaccines were administered by microinjection*.

Convert text to logical operators when possible

Logical operators are $<$, $\leq$, $=$, $>$, and $\geq$. These can replace text as in the following examples:

- The phrase *in adults 60 years of age and older* can be replaced by *in adults ≥ 60 years of age.*
- *Subjects receiving two or more doses of vaccine* can be replaced by *Subjects receiving ≥ 2 doses of vaccine.*

Use numerals instead of writing out numbers

Sometimes a sentence should be started with a number, but we often hear that numbers must be spelled out at the beginning of a sentence, or even that starting a sentence with a number should be avoided at all costs. We often feel compelled to add words like *A total of* to avoid starting a sentence with a number. However, this is not a rule, just a convention, one that we and many other medical writers

ignore, and in the end, it is the editor of the journal who will decide whether to enforce this 'rule.'
Example:

- *A total of 247 subjects were enrolled or Two hundred and forty-seven subjects were enrolled* can be replaced by *247 subjects were enrolled.*

Remove unnecessary conjunctional 'ands'

Conjunctions are words that link two parts of a sentence.
Example:

- *No treatment-related serious adverse events were reported, and no deaths occurred.*

  can be split into two sentences:

  No treatment-related serious adverse events were reported. No deaths occurred.

  or even better

  No treatment-related serious adverse events or deaths were reported.

Remove spaces between operators and symbols or numbers

Example:

- *P < 0.0001* (3 words) can be replaced by *P < 0.0001* (1 word).
- *Subjects >10 years of age* (6 words) by *Subjects >10 years of age* (5 words).

Compress lists

Lists can be compressed by grouping common information, but avoid using *respectively*. Using *respectively* to do this always makes the reader backtrack in your text to find out which number goes with which item in the list. This should not happen because it tires and confuses the reader.
Example:

- *The incidence of* Herpes zoster *decreased by 17.2% in subjects immunized with 5 μg antigen, by 27.3% in subjects immunized with 12.5 μg antigen, and by 55.2% in subjects immunized with 25 μg antigen.*

  OR

  The incidence of Herpes zoster *decreased by 17.2%, 27.3%, and 55.2% in subjects immunized with 5 μg, 12.5 μg, and 25 μg antigen, respectively.*

can be replaced in an abstract by

Decreases in the incidence of Herpes zoster *by antigen dose were: 5 μg, 17.2%; 12.5 μg, 27.3%; and 25 μg, 55.2%.*

Omit 'the' to save words

The definite article (the) is extremely important in English, and removing it can change what you mean entirely, so exercise care here. *The* can safely be omitted in some cases, and you can save some words this way as in the following example:

- *The patients treated with aspirin experienced pain relief 15.1 ± 4.2 min earlier.* In the abstract, *the patients* refers to the group of patients in the study. You will also be understood if you write in the results section of your abstract, *Patients treated with aspirin experienced pain relief 15.1 ± 4.2 min earlier.*

However, be careful when you use this type of statement in the main text of the article because *the* might change the meaning of the statement. For example *the patients* might refer to all patients or to only a group of patients, depending on the context. Also be careful when deleting *the* and *a* because this can easily cause the abstract to sound like a series of notes, so consider other solutions for shortening your abstract.

Remove unnecessary relative clauses

Relative clauses are clauses that describe and are dependent on the main clause. They often start with *who* or *that*. Using them can increase the word count and lead to more complex sentences.
    Example:

- *The patients who were treated with aspirin experienced pain relief 15.1 ± 4.2 min earlier* can be replaced by *The patients treated with aspirin experienced pain relief 15.1 ± 4.2 min earlier.*
- *The values that were determined on (date)* can be replaced by *The values determined on (date).*

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