

# Medical Communications and Writing for Patients

Dear all,

In this edition of *Medical Writing*, we have a report from the latest Meet & Share session from the MedComm Special Interest Group (SIG). EMWA's SIGs host Meet & Share sessions throughout the year, encouraging open and honest discussion between medical writers on a variety of topics (identified and advertised ahead of the session). EMWA is an incredible community with a lot of very experienced and talented medical writers who never cease to

amaze me with their generosity of time and advice, so I strongly encourage you to look out for the Meet & Share sessions and get involved!

The MedComm SIG's latest Meet & Share session looked at the issues surrounding the approaches to referencing in medical publications. The very informative report comes from the latest recipient of the Geoff Hall Scholarship Sampoorna Rappaz, who is already delving straight into EMWA life and getting involved with the SIGs.

## SECTION EDITOR



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I hope that you enjoy Sampoorna's article as much as I did, and in the meantime, stay safe and sane – enjoy the sunshine (if you have any!), and see you in the December issue!

Bestest,  
Lisa

## Clarifying referencing

### Third Meet and Share session of the Medical Communications Special Interest Group

In March 2022, Med Comms SIG held its third Meet and Share session, which dealt with the nuances of and practical approaches to referencing in medical publications. We regularly use author instructions and style guides that detail reference formatting, but there is a lot more to effective referencing than just making it look correct. A systematic review of studies on reference accuracy in biomedical literature (39 studies identified) estimated a median citation error rate of 36% (range, 4–67) and the median quotation error rate of 20% (range, 0–44).<sup>1</sup> Also, a study by senior editorial board members of *Deutsches Ärzteblatt* showed that the referencing error rate in publications is about 20%, which the authors opine is a conservative estimate.<sup>2</sup> Recently, a study published in *JAMA Surgery* found that 9% of the citations in high-impact surgery articles were inaccurate.<sup>3</sup> Taken together, inaccurate referencing is a frustrating reality in medical publications.

While citation errors (incorrect authors' names, journal name, volume and page numbers, etc.) can make substantiation difficult, quotation errors (inaccurate representation of source study or author statements) can impede scientific progress itself, especially when such errors are unintentionally echoed in the

scientific discourses and publications that follow. Therefore, it is important for medical communicators – as purveyors of accurate and precise scientific information – to follow referencing best practices, which may not always be clearly defined. At the Meet and Share forum, participants were presented with various situations where there were no clear predefined citation or referencing guidelines and were asked to share their approach. A summary of the discussion is presented below.

#### Where and how to cite?

The participants were presented with the following hypothetical situation:

If you have a list or sub-claims within a sentence, do you split the citations or do you place them all together at the end of the sentence? For example:

**Option 1:** “In other studies, death occurred in 5–10% (1-3), myocardial infarction in 2–5% (1,2,4), and revascularisation in 10–20% (2,3,5).”

**OR**

**Option 2:** “In other studies, death occurred in 5–10%, myocardial infarction in 2–5%, and revascularisation in 10–20% (1-5).”

**Response:**

The group agreed that the first option is more

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accurate, precise, and makes recycling content easier. The second option is more useful when facing space or word count constraints. It was highlighted that the manuscript section would also need to be considered when thinking about this issue. For instance, in the discussion section, where arguments would need to be substantiated using accurate and precise referencing, the second option should not be used. Whereas, in the introduction section, the second option provides adequate information and could be used; however, the first option would still be the preferred format.

#### How to decide between primary and secondary references?

The participants were presented with the following hypothetical situation:

You want to cite a claim from a publication by XYZ et al. that says, “Statement a (1-3).” Which option is best?

**Option 1:** You cite all source references from the publication, but not the publication itself (“Statement a [1-3]”).



**OR**

**Option 2:** You cite only the publication (“Statement a [XYZ et al.]”).

**Response:**

There was no clear preference for one option over the other. The consensus was that the primary sources (references 1-3 in the example above) should be checked for accuracy irrespective of the manner of citation. Option 2 would suffice if a systematic review or meta-analysis is the source of the claim. As part of this discussion, it was also noted that recent evidence should be given preference when choosing references, provided that it is well supported by data. However, older publications (>15 years) should not be mechanically discarded. Overall, scrutiny is key.

**Are citations allowed in the results section?**

The majority was against adding citations to the results section; however, it was pointed out that, while rare, such practice is possible. For instance, when the current manuscript contains 5-year data and the 1-year data have already been reported, one could add the sentence, “Data up to 1 year have been published previously (reference)” in the results section instead of the introduction or methods sections. This addition could help the readers who skip these preceding sections. This practice seems to be a matter of personal preference, and the majority recommended adding this information to the introduction or methods sections. Also, at times, outliers can lead to new hypotheses, and citations may

need to be included in the results section to substantiate the reasoning behind the new explorations; this helps maintain a logical flow in the manuscript and strengthens the element of storytelling.

**How many references are required per claim?**

The group agreed that there is no “magic number” of references per claim, but it need not be restricted to just one. Having one reference to support a claim is necessary but it may not be sufficient unless we are restating a well-known fact. Even so, if it is a key point in the manuscript then more than one reference should be used. There may be a thin line between redundant and relevant references, so discretion is important. Also, it is now possible to include references in the supplementary information in some journals, so reference number constraints should no longer stop writers from being thorough.

**How do we avoid citation manipulation?**

The Committee on Publication Ethics (COPE) defines citation manipulation as, “... behaviours intended to inflate citation counts for personal gain, such as: excessive self-citation of an authors’ own work, excessive citation to the journal publishing the citing article, and excessive citation between journals in a coordinated manner.”<sup>4</sup>

The consensus was that the authors’ previous publications and the journal editors’ publications can be cited if these publications are equivalent

in terms of relevance and strength of evidence to other references. It was pointed out that publishers advise keeping self-citations to a minimum.

COPE provides more information and practical advice on this issue on its website.<sup>5</sup>

**How do we cite information that is not available in a published and indexed scientific article format?**

As it is not possible to publish all industry-developed documentation in full, such as regulatory files and product labels, uniform resource locators (URLs) to these sources have to be included in the reference list. However, it may happen that peer reviewers or journal editors disallow references to drug compendia, “data on file”, etc. and insist upon indexed articles. Therefore, the publishing of even seemingly “minor” or “uninteresting” pieces of research is important, as this would make the information discoverable and citeable. Also, unlike the permanent digital object identifiers (DOIs) that may be assigned to journal articles, URLs are short-lived. A study found that about 20% (1 in 5) of all science, technology, and medicine articles published between 2009 and 2012 suffer from “reference rot”, i.e. either the URLs in the reference list have ceased to exist or the originally referenced content in the URLs has changed, making substantiation impossible.<sup>6</sup> Medical communicators must do their best to not add to this growing problem.

While preprints were not discussed during this session, it is important to highlight here that





the updated International Committee of Medical Journal Editors (ICMJE) recommendations now include notes on referencing preprints.<sup>7</sup> Additional information and guidance on this matter can also be found in the AMWA-EMWA-ISMPP position statement<sup>8</sup> and the American Medical Association's editorial style manual.<sup>9</sup>

Overall, the key learnings were that professional medical communicators need to follow referencing best practice, i.e. ensure references are accurate, in-text citations are as precisely placed as possible, information sourced from the references is correctly represented, and the strongest and most relevant evidence is chosen. Referencing, when done well, makes substantiation easy and efficient. After all, precise and accurate referencing is crucial to maintaining the integrity of scientific communication.

Med Comms SIG thanks all participants for sharing their valuable input. All EMWA members are welcome to join the SIG's next forum.

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### Disclosures and conflicts of interest

The author declares no conflicts of interest.

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