## Editorial

## I Need to Write a Paper—How Do I Start?

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Everyone who has completed a residency or made a career in research or academia invariably starts out by writing their very first paper for publication. At this stage, there are many questions as to 'where and how do I start to write my paper'? The task of writing a scientific paper looms just as large as the identification of the subject matter about which to write. While it is never too early to be thinking about writing the paper, the shape and structure of the paper are heavily dependent on the research question to be answered, 1 and most importantly the 'data' that have been assembled for the publication.

There are different types of scientific papers that are categorized and ranked according to the design of the research study and the type of data reported. These categories of scientific papers have been ranked into a pyramid, according to the study design and the strength of the evidence being reported (**Fig. 1**).<sup>2</sup> The case report, or case series, is one of the most common starting points for many veterinary clinicians because this is the most readily available and familiar data in clinical practice. Notice, however, that the case report is lower down the pyramid. This does not mean that case reports are necessarily bad, but the strength of possible conclusions generated by a case report is based on fairly 'weak' new evidence. While case reports can be a great place to start, they may not qualify for completion of a residency or satisfy requirements for board certification credentials in some countries.

So, what are the characteristics of a good case report? To be valuable, case reports of new and unusual diseases, disorders or injuries need to 'fill a hole in our knowledge' about this condition. In other words, they need to help expand our understanding about some aspect of this condition by contributing something significantly new of value. A case report should provide new quantifiable data about the characteristics (such as histopathology or diagnostic imaging) of this condition, or some measurable objective outcomes about the progress of the condition with time, or a specified treatment, or ideally a combination of these. If the proposed case report describes a condition that has been previously described in 10 different case reports for example, then an additional case report that fails to provide

additional knowledge as mentioned above will be very difficult to publish.

Another common question is where can I send my paper that will be friendly and most likely to accept it for publication? Indeed there are a few easy options, but they probably will



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not provide you with an outcome that meets your requirements. It can be very quick and easy to publish your interesting case report in a commercial (waiting room) glossy magazine or a Web site for example. This can be good practice for writing clinical reports and to increase your professional profile. However, these publications are not peer-reviewed, and don't usually 'count' toward credentials for boards or academic promotion.

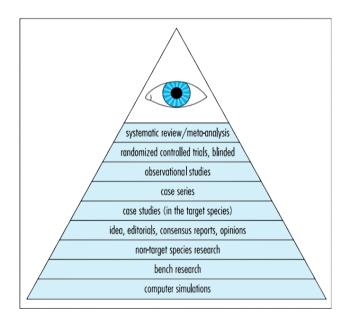


Fig. 1 The evidence pyramid. Study designs at the top of the pyramid have more evidentiary value than those at the bottom of the pyramid. Research surgeons should use designs near the top of the pyramid whenever possible. Studies can always eliminate additional sources of bias; the all-seeing eye represents the ideal biasfree study (Figure reproduced from Evans<sup>2</sup>).

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Peer-reviewed publications are broadly of two or three types. Traditional, subscription-based journals publish accepted papers online or in hard copy issue, or both concurrently. For the author, publication of their paper might be either completely free (such as *Veterinary and Comparative Orthopaedics and Traumatology* [VCOT]) or come with a page charge (e.g. \$40 a page of the published paper). Anyone who wishes to read the complete version of this type of published paper also needs to buy a subscription to the journal, or pay a one-off charge to download it ( $\sim$  \$40), or ideally have free access to a university library that has an institutional subscription to the journal.

The second avenue for publication of peer-reviewed research is with completely open-access journals. These are journals in which all the papers are freely available to any readers who wish to download it via the Internet from the journal Web site. The advantage of this is that readership and citation of your paper are significantly increased. However, to publish your paper in an open-access journal authors will need to pay an 'open-access' fee ranging from  $\sim \$1000$  to \$3000. So this is great for readers, but possibly expensive for authors.

The third option is that some of the traditional subscription-based journals, including VCOT, also invite authors to elect to pay an open-access fee, and make their paper freely available to any readers. This will be in addition to appearing in the print-version of the journal. This is called a hybrid journal.

Sadly you should be aware that there are innumerable new 'open-access' journals operating scams on the Internet. They operate with names very similar to established journals. They promise peer review and acceptance for publication within days or weeks! They still charge an open-access fee (some thousands of dollars), but they are not listed on PubMed, their editorial boards are fictitious, papers are not peer-reviewed and they provide no certainty of long-term, online access to your precious published paper. Clearly these should be avoided.

While it is not easy to publish papers in reputable journals, there are some that specifically encourage the submission and publication of case reports, as do many of the nationally-based veterinary journals. But always remember that the ease of getting a paper accepted for publication is primarily dependent on the inherent quality of the paper. Alternatively, if you are required to have a paper accepted for publication for your programme in a defined time frame, another option can be to design a prospective, randomized, controlled *ex vivo* laboratory study with the collaboration of suitable co-investigators. This might be completed and accepted for publication more easily than a case report.

## Note

A portion of the information in this editorial was presented by the author in an invited lecture entitled "Publishing in Practice: The Journal Editor's perspective", at the British Veterinary Orthopaedic Association meeting in Leeds on November 25, 2022.

## References

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