

## ■ From the Guest Editor's desk:



# Statistics for medical writers... and cats

by Adam Jacobs

Statistics, according to one of those emails that does the rounds from time to time with amusing definitions of terms used in clinical research, is defined as “a subject which most statisticians find quite difficult, but in which all physicians are experts”. There is a disconcerting amount of truth in that definition. The statistical techniques used in clinical trials can sometimes, on the face of it, seem fairly straightforward. This can tempt the unwary into thinking that they understand all they need to. Sometimes this will even be true, but more often than you'd think, it won't. The more you learn about statistics, the more you realise how complicated it can be.

But like it or loathe it, there is no getting away from statistics in the world of medical writing. No medical writer can spend very long at their desk before they find themselves writing about confidence intervals, regression analyses, randomisation schemes, P values, confounding, t-tests, interactions, least squares means, imputation, sums of squares, or similar. As a medical writer, you are going to have to be immersed in statistics on a regular basis, so you'd better get used to it. But if this fills you with terror, take heart. Judit Varkoni-Sepp describes (page 169) how she was also filled with terror, but eventually learned to love statistics.

Most medical writers probably can be found somewhere between statisticians and physicians in their understanding of statistics. A good medical writer will understand the basics of statistics, but will know when to call on a statistician for help with the tricky bits. The relationship between medical writers and their statistician colleagues is therefore an essential part of many medical writers' jobs, and Deborah McPhail and Lucy Seymour give some helpful hints (page 163) on how to make that relationship go smoothly. I would add a further tip, namely always buy your statistician a beer, but as a statistician myself, perhaps I'm biased.

Once I had realised, after a few years of working as a medical writer, that an understanding of statistics is essential to good medical writing, I went back to college as a mature student and studied part-time for an MSc in medical statistics, and have subsequently been very glad I did so. I realise that that rather extreme response isn't something many medical writers will want to do, but any medical writer will benefit from improving their understanding of statistics. One excellent way to do that is to enrol on some of the many splendid statistical workshops that EMWA provides as part of its educational programme, but while

you are waiting for the next EMWA conference in November, you could do no better than read Stephen Senn's article (page 159), in which he describes 3 common errors made in medical writing. If every medical writer were to read that article and act on its advice, then I have no doubt that that alone would measurably improve the overall quality of medical writing in the world.

And the quality certainly needs improving. Jo Whelan describes a splendid example (page 183) of how poor presentation of statistics can result in seriously misleading articles. I hope no EMWA members would write the kind of article that Jo warns us about. Particularly after reading this theme issue of *TWS*.

Although medical writers probably come across statistical techniques most often when describing clinical trials, there is a whole other world out there of epidemiology, which is just as reliant on statistics as are clinical trials (arguably even more so). Andrea Rossi (page 165) gives us a useful tour of the world of observational studies and some of the statistical techniques used in them and other kinds of epidemiology.

This issue also contains a very sad reminder of how, in medicine, statistics have real people behind them: something which medical writers should never forget. Many EMWA members will have fond memories of Pamela Johnson, who died in July this year. You can read her obituary on the next page. I personally remember her with great affection and gratitude. Pamela acted as my mentor when I was a new and inexperienced workshop leader at EMWA, and gave me tremendous help and encouragement which has continued to be of great benefit to me in all the years I have since been giving workshops, both for EMWA and elsewhere.

Finally, in case you were wondering what on earth cats have to do with statistics, allow me to explain the cover image of this issue, which is in fact closely related to one of the most egregious misuses of statistics for marketing purposes you will ever find. An advert for a well-known brand of cat food (with which at least UK-based EMWA members will be intimately familiar, although I don't know if the advert is shown in other countries) makes the proud claim that “in tests, 8 out of 10 owners said their cats preferred it”. Sounds impressive, doesn't it? However, the statement is statistically meaningless, as we are not told two crucial pieces of information: what was the sample size, and what was it being compared with? Maybe they tested 10,000 cats, each cat had the choice of 10 different types of cat food, and

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8,000 of those cats preferred the advertised brand to all the other 9. That would be impressive. On the other hand, maybe only 10 cats were tested, and they had a choice between the advertised brand or a bowlful of stale sawdust. As 8 out of 10 is not statistically significantly different from 50%, the conclusion you would then draw is that you have no evidence that the advertised brand of cat food is any more appealing than stale sawdust. So please remember, when you

are presenting statistical results, to make sure you include enough information to allow the reader to know whether they can believe your statistics or not.

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## Obituary: Pamela Johnson

**Many** of us were devastated to learn that our good friend, Pamela Johnson, died in July. Pamela was a workshop leader for many years and was one of the founding members of the EMWA Professional Development Committee (EPDC), with a focus on the 'Train-the-Trainer' programme for workshop leaders. She was also the liaison person between EMWA and the Australasian Medical Writers Association. She was Australian and had been working as a medical communications consultant based in Paris for 20 years. Several of us would like to take this opportunity to write a few words about how she touched our lives...

**Pamela** and I first met at the EMWA conference in Malta in 2005 and we had been great friends ever since. I was instantly struck by Pamela's sense of humour and generosity. She and I hit it off straightaway and I remember laughing hysterically with her on the airport bus after we'd known each other for less than an hour! Pamela was a pioneer of medical writing in France and did much to encourage and help other freelance writers become established there. When she discovered that I was also based in France, she had no hesitation in sharing business tips with me and passing on clients when she was overloaded. In her usual determined manner, Pamela persuaded me to develop an EMWA workshop with her after I told her that I'd love to give a workshop but was too scared! She stayed at my house for a weekend to plan the workshop and my husband and kids loved her too as she was full of fun and interested in everything they had to say. Our workshop was a great success—largely thanks to Pamela's incredible ability and desire to design and adjust the content according to the participants' needs. Pamela nominated me for the EPDC. Before I knew it, I was standing for vice president and then president! I would never have had the courage to get so involved in EMWA if it hadn't been for Pamela. She was always incredibly complimentary and supportive. It is rare to meet a person so generous with their words and friendship, and who cares so much about other people. I feel incredibly lucky to have known Pamela and I am very sad to lose such a wonderful friend.

*Helen Baldwin*

**I had** known Pamela since 1998 when we met in Madrid at my first EMWA conference. About 18 months later we both joined the newly formed EPDC. In those early days when we were de-

veloping the EPDC, Pamela, who had extensive experience as a trainer, contributed much to the committee especially to the design of the needs analysis and the evaluation forms. Through Pamela I came to appreciate the value of collecting pre-workshop information on participants through the needs analysis. Pamela also ran the early workshop leader training sessions and later proved to be an excellent mentor when Alistair and myself agreed to help by giving some of these training sessions. She was always very supportive and I learned much from her. Over the years I got to know Pamela well and I respected this determined, yet vulnerable, lady who held strong views from which she could not be dissuaded. I enjoyed her friendship and company at meetings and conferences and the occasional chat on the phone. I shall miss her very much. My sympathy goes to her son Christophe who meant so much to her.

*Virginia Watson*



**Pamela** was my observer at the first punctuation workshop I gave for EMWA in Henley in 1999, where we had to contend with an L-shaped room (people 'peeping around a corner'), unstoppable building noise, and power cuts every 10 minutes. She made copious notes, nodding and shaking her head as I did my presentations, and was a great help in the feedback session afterwards (which in a nutshell, presented with charm and competence, was: I'd have to do a better job!) I learned a great deal from Pamela, and had fun doing the 'Train-the-Trainer' sessions with her. She also offered me her hospitality in Paris when we had a preparatory meet-

ing there in 2003, and, characteristically, insisted on sleeping on a camp bed in the kitchen!

*Alistair Reeves*

**I first** met Pamela when I joined the EPDC in 2002. What comes to my mind first is her energy, her friendliness and her sense of camaraderie. I mentored her workshop on writing manuscripts for publications, which was great fun because she was very open to suggestions and extremely enthusiastic. It was fascinating to see how she brought the workshop to life by interacting with participants and focussing on their needs. The example she set as a workshop leader was an inspiration to me and helped me improve my own teaching skills. I greatly enjoyed her company at the EMWA meetings and vividly remember how supportive she was of her fellow medical writers. I am very saddened by the loss of such a wonderful colleague.

*Beate Wieseler*