The Write Stuff

The Journal of the European Medical Writers Association

Status and Heroes



Florence Nightingale



www.emwa.org

Vol. 14, No.4, 2005

The Write Stuff



EMWA Lyon 2006

3-6 May 2006

The future is here: Medical Writing and Electronic Submissions

Lyon, a city of historical significance nestling at the base of the Rhône-Alpes, has long been renowned for attracting the social, intellectual and artistic elite. In the first century BC the Romans made the city, then called Lugdunum, the capital of the three Gauls. In the 11th century, the Church declared it the Primate of Gaul. During the 17th and 18th centuries Lyon established its famous silk industry, dressing the rich the world over and decorating their homes. Now, in culmination of nearly 2000 years of intellectual, artistic and technological development, the city will play host to the 2006 EMWA annual conference.



Lyon 2006 will be used as a forum to present and discuss the current state of affairs regarding the eCTD. This will be an opportunity to obtain information on the electronic submission of regulatory documents and how this will affect the role of medical writing. Facilitating the development of both novice and experienced medical communicators, the EMWA conference will offer a selection of high quality workshops, covering many aspects of our work. From essential writing techniques, comprehendible statistics workshops and the ins and outs of the key regulatory documents, through to report writing and publication planning, there will be something for everyone.

The facilities at the Palais des Congrès Convention Centre will provide our delegates with a superb learning environment and surroundings that are ideal for recharging the batteries. Lyon is a superb location for relaxation: the quays of the Rhône and the Saône, the neighbouring vineyards (boasting famed names such as Brouilly, Côtes de Brouilly and Saint-Amount, to mention but a few) and the 'Historic Site' in Lyon, one of Europe's UNESCO World Heritage sites.

The unique blend of extensive training, discussions on the latest developments, networking opportunities and cultural exposé to be found at the Lyon conference will make it a conference to remember.

I look forward to seeing you there.

Ian Metcalfe Vice President, EMWA

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mpared with that of a scribe in Egypt but the status of the two professions is worlds apart. Is the status attributed to medical writers today what we deserve?

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From over the pond: Heroes for medical writers

Susanna J Dodgson

Florence Nightingale was the first post-industrial medical writer, indeed a medical writing hero, from whom many lessons can be learned as we work together to define medical writing as a profession 150 years on.

Nursing in the London blitz

Kathleen Birch

Heroes and heroines come in many guises. This is a delightful account of humanity and romance wrapped up in the recollections of a nurse working in a London hospital during the blitz of World War II.

Designing persuasive tables and charts

Sally Bigwood and Melissa Spore

Tables and figures are arguably the most important part of any document a medical writer compiles and may even be the only part of the document some readers look at. They need to be of the highest possible quality.

The importance of data presentation:

A commentary on "Designing persuasive tables and charts" **Barry Drees**

Barry comments on the points made in Sally and Melissa's article, and also considers the relative value of tables and illustrations. Opinions differ more than might be expected.

Medical writing in a contract research organisation

Karen Donnelly

Medical writing is a diverse profession. This article gives an insight into the work and opportunities within a CRO.

Medical writing: A fine profession in a "fine" city

Lim Soo Hwee

Although medical writing is well established in Europe and the US, pharmaceutical companies are avidly taking up opportunities for conducting clinical trials in Asia and they need medical writers. Soo Hwee gives an insight into working in Singapore.

Meeow! Marketing medicine in Germany

Ursula Schoenberg

Ever tried to herd cats? Some useful hints about preparing documents and organising a press conference for a new doctors' centre in Germany will help you avoid pitfalls in implementing a marketing plan for doctors and might even help with herding cats.

www.emwa.org

Shanida Nataraja You are given an update of activities on the EMWA website and invited to contribute to the site.

Beginning your first draft: Turtle or rabbit? Alison McIntosh

Need some advice about that tricky task of starting to write your drafts?

Regular features

- From the Editor's desk Message from the President The webscout
- Hey, it's only my opinion

Journal insights

The Write Stuff is the official publication of the European Medical Writers Association. It is issued 3 times a year and aims to provide EMWA members with relevant, informative and interesting articles and news addressing issues relating to the broad arena of medical writing. We are open to contributions from anyone whose ideas can complement these aims.

Articles or ideas should be submitted to the Editor-in-Chief (see back cover) or another member of the Editorial Board.

Subscriptions

Subscriptions are included in EMWA membership fees. Non-members can subscribe at an annual rate of:

- €35 within Europe
- €50 outside Europe

Instructions for contributors

- The Write Stuff typically publishes articles of 500 - 1500 words although longer pieces or those with tables or graphics will be considered.
- All articles are subject to editing and revision by the Editorial Board. Any changes will be discussed with the author before publication.
- Submissions should include the full address of the author, including the telephone and fax numbers and email address. Suitable quotes for side boxes can be indicated or they can be selected by the Editorial Board.
- Material should be submitted electronically on computer diskette or by email as an MS Word file using Arial font (or equivalent), 11 point size, and single spacing.
- Published articles generally include a recent photograph of the author (portrait picture, CV or passport style).

Back issues

Subject to availability, previous issues of **The Write Stuff** can be obtained for the cost of mailing by contacting the EMWA Head Office (see back cover for address).

Advertising rates (in euros, €)

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 Full page 	€1000
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Cover picture

The picture of Florence Nightingale is published courtesy of the Florence Nightingale Museum, 2 Lambeth Palace Rd, London SE1 7EW, UK www.florence-nightingale.co.uk info@florence-nightingale.co.uk Tel 00 44 (0)20 7620 0374 Fax 00 44 (0)20 7928 1760

> The Museum is open every day. Please see website for more details.



From the editor's desk: Medical writers – status and heroes

By Elise Langdon-Neuner

As medical writers we do not seem to have much of this status thing. In Egyptian times to scribes we would have had plenty of it, as we learn in an article in this issue. Social status is the 'standing', the honour or prestige attached to one's position in society. In modern societies, occupation is usually thought of as the main dimension of status [1].

Why do some jobs attract more status than others? More precisely, why doesn't medical writing attract the same high social status as Egyptian scribes did? This is the question explored in the article referred to above, 'Grey, yes – eminence, no way'. Could the answer be that now-a-days 'anyone' can do the job because everyone can write, so it is assumed that writing is easy, or unimportant¹, or that small departments like medical writing ones lack political clout within an organisation, or other department's work is not dependent on products produced by medical writers because these products are at the end of the line, or that status is not important to medical writers themselves?

Another thought occurred to me. Perhaps women have blighted the profession. You do not encounter so many men in medical writing. When a colleague recently said to me, of another overworked colleague that of course, had she been a man, she would have had an assistant by now, I was reminded of an observation made by anthropologists. Throughout human societies what a man did has always been regarded as more important than what a woman did, irrespective of what it was [2]. When the number of women in an occupation is relatively high compared with the number of men, the status of the occupation tends to go down. Even in areas in which the women:men ratio is balanced sex differences still exist in the tasks and status between men and women. There have been a number of studies showing this and one highlighted publishing [3].

In any event Diana Epstein suspected that few medical writers, if they had been asked as children what they wanted to be when they grew up, would have answered, "I dream of being a medical writer". She surveyed a few EMWA members at the Malta conference to find out how we landed up where we are today. The testimonials bore out the suspicions. Many, however, seemed happy with their lot, which brings us to heroes. It might be a surprise to learn that there is such a thing as a medical writing hero, a woman naturally, but no less than Florence Nightingale, whose medical writing feats are elucidated in Susanna Dodgson's article. Unsung heroes also feature in this issue. Both Susanna's parents and Kathleen Birch and her husband, John, manned hospitals in London during the blitz. Kathleen, now a lady in her 90s, relates her memories in her article 'Nursing in the London blitz'.

Status pervades the tasks we as medical writers are required to perform. Lim Soo Hwee in her article about medical writing – which she sees as a fine profession – in a fine city talks about the need for a medical writer to be able to write simply. The compulsion for scientists to write in a complicated style arises from their belief that this enhances the author's image. Why else would many scientists feel popularisation of their writing would

From the editor's desk

reduce their status among their peers [4]? The very reaction Ursula Schoenberg was confronted with at a press conference in Germany where she battled to reduce medical expert-ese speak into something digestible for her parakeet. Perhaps by striving to write simple readable text medical writers are the instruments of their own lowly status.

It's not only words. Figures used in medical writing are frequently overcomplicated. One scientific editor, noting a decline in the quality of graphs, blamed scientists for dispensing with qualified designers in favour of graphics software programs. Many of the programs overcomplicate graphs. This editor's evaluation of the quality of graphs in 25 journals found too many patterns or bars, use of different symbols and different lines, too many shades of grey on bars and lines that were either too thick or too thin to be the main quality problems [5]. An article in this issue discusses designing persuasive tables and graphs. Barry Drees adds his comments, and also brings to light the divergent opinions on the relative value of tables and illustrations.

Some editors of biomedical journals call into question whether figures are appropriate at all. They argue that anyone interested in data wants to see raw data in tables – the tyranny of the table as Barry calls it. Scientists don't look at figures I was told over dinner at a congress a couple of weeks ago. Figures convey less information in more space and at greater expense than a table does (forest plots excepted). One journal editor said that his journal does publish figures but expects the authors to explain/justify their use because of these concerns. Another objection to figures is that they can often be used to mislead or make results look more impressive than they really are. "Our friends in the pharma industry are particularly skilled at this", he smiled.

In an interesting reversal, e-mail might be inverting the correlation between epistolary neatness and social status. This phenomenon has been delightfully expounded by Robert Wright in an article 'E-Mail and Your Social Status' on the Internet [6]:

When I was a boy, tidy correspondence was the hallmark of an alpha male. Only someone important enough to have a secretary could send out flawlessly typed letters. The more typos a letter contained, the more likely it was to have come from a ne'r-do-well. But now that e-mail has taken secretaries out of the loop, it is the missives with the most missing vowels and uncapitalized proper nouns that come from the highest echelons. These people are too busy to bother with niceties. Once, I got an e-mail from an internationally known author that was nearly complete gibberish. I was in awe. I fear that such gibberish holds the secret for success in the digital age.

Another lesson a medical writer seeking status should learn. But do you care about social status? Probably not, otherwise you would be posing your way up the company ladder rather than using your brain – to write. It is worth giving it a thought though and seriously reflecting on why eminence bypasses the modern medical writer.

Elise Langdon-Neuner

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References:

- 1. http://en.wikipedia.org
- 2. Mead, M. Male and female. Penguin: Harmondsworth, UK: Penguin; 1962
- 3. Colgan F, Tomlinson F. Women in publishing: Jobs or careers? Personnel Rev 1991; 20:16-27.
- 4. Willems, J. Bringing down the barriers. Nature 2003; 422: 407
- 5. Schofield, E. K. Quality of graphs in Scientific Journals: An Exploratory Study. Science Editor 2002; 25 (2): 39-41
- 6. http://slate.msn.com/id/75678/

¹ Everyone can paint as well but not everyone's paintings are worth hanging on walls [Gregory M W. The infectiousness of pompous prose. Nature 1992; 360 11-12]



Message from the President

by Michelle Derbyshire

It seems only 2 minutes ago that I was voted president, but time is running fast. Now that the new EMWA (based in Switzerland) and its constitution have been adopted by the membership at our conference in Malta, we can start looking towards the future. We have already made a start by implementing the advanced level training programme and discussion forums in Malta. EMWA will remain highly focussed on the training aspect of medical writing as it is felt that this is the foundation of good writing, but we also hope to expand and be able to offer more to experienced writers in the future. This is where your input is especially appreciated. Please feel free to contact either me, or Ian Metcalfe (Vice President). Your comments and suggestions are always welcome.

On a personal note, I've finally taken the plunge as a freelance writer and so far it's going great and I've been wondering why I didn't do it earlier. Maybe my tune will change when I get my tax bill at the end of the year. That first step was pretty daunting, especially as it was taken in a country where I'm foreign and unfamiliar with the rules and regulations. Luckily I managed to find myself a highly recommended bookkeeper, who led me through every step and answered my millions of questions. Speaking to other freelancers, this seems to be the key to a successful start - choose your bookkeeper carefully because your initial success or failure is held in his or her hands. The only thing I really miss about a 9 to 5 job is the social contact, and from my last job especially the fire brigade (this explains the dodgy photo!). I have managed to get around this by having regular meetings with my clients, which I feel has also improved my output. You can't beat face-to-face interaction! I'm not yet in the enviable position of turning work down [1], which is one of the big issues in a free-lancer's life. But with my growing confidence, and I believe

competence, hopefully it won't be long.

So with taking over the presidency and starting a new venture this has been a busy period for me, and to top it all I

EMWA will remain focussed on training

have now found out that I am expecting a bundle of joy in January 2006. I wonder how that's going to fit in? Well, life never stands still and neither can EMWA. To thrive as an organisation we need to keep changing and keep up with the changing environment. This is where you, the members, must make your voice heard, send in suggestions, take part in one of the discussion forums or write an article for The Write Stuff. Your input on the future of EMWA is needed; after all, this organisation is run by the members for the members!

Hope to see you in November in Manchester.

Michelle Derbyshire

MD Writing Services Mol, Belgium michelle.derbyshire@skynet.be

Reference 1. Young B. Don't just Say "No".TWS 2004; 13, (1) 10-13 Status of medical writers

Grey, yes — eminence, no way

"The Writer"

From the Teachings of Cheti, in the Egyptian Old Kingdom (2700–2225 B.C.)

A) Trad.

B) Mod.

This is indeed the highest of all callings; none other on Earth is like unto it. A writer occupying any post in the employ of the state – he suffers no want. This remember: There is none without a master, except the writer; he himself is the master. If thou canst write, then this will be better for thee than any other calling. The Goddess of Birth, who has destined the writer for his calling, will surely bring him to the head of the council.

It's a prime job; they don't come better. A writer in a big organisation is never short of cash. N.B. Everyone has a boss except the writer, who is her/his own boss. If you can write, then that'll do you better than any other job. If you had the luck to become a writer, then you'll make it all the way to the top.

(Recruiting material, in ancient Egypt, for the profession of scribe; for many centuries, this text was copied out and memorised in schools.)

Take a look at the text box above and see if there is anything you recognise.

If you are a medical writer, then there probably isn't.

So what has gone wrong?

Of course, the ability to write at all was less frequently encountered in the Egypt of antiquity than it is today, and it was certainly no easily acquired skill for people such as Hetep-Ni (see next page), who would have mastered both the hieroglyphic symbols seen on the pedestal of his statue and the hieratic characters illustrated next to him. We can deduce his lofty status from a large and a small detail of the statue: Hetep-Ni is sitting (not standing, as a labourer, a soldier or a tradesman would have done), and his right hand is positioned to hold a pen or graving tool. Thus, his descendents had a perpetual reminder of their illustrious ancestor's highly respected position in society.

Notwithstanding, Hetep-Ni was not a famous creative artist or a media personality. In fact, he was a fiscal officer, and the material he wrote would have been bureaucratic or regulatory in nature – recording, counting, compiling, summarising, reporting. Come to think of it: the sort of thing that you and I do.

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Status of medical writers

Please do not imagine for a moment that I would like to return in 5000 years to see my statue in some National Museum – specs on nose, fingers on mouse – and to read from the back of a post-card that I enjoyed top social rank as a medical writer. However, most of us, especially those working in large industrial organisations, will often feel that the pendulum has swung too far the other way from the days when Hetep-Ni and his colleagues were fêted as pillars of society. Today's reality is one in which the medically writing department, group, team or individual has a permanent fight on its hands – one for recognition on equal terms.



Hetep-Ni, fiscal officer in the Egyptian Old Kingdom (around 2200 B.C.)²



Hieratic script, from the "History of the Sinuhe" Egyptian Middle Kingdom (around 1880 B.C.)²

Equal with whom? Here are some generic quotations, and finally a verbatim one, that tell all:

"There's a new study, which we forgot to tell you about. We had a technical meeting to finalise the study design – we didn't think it was worth your coming, so we didn't invite you. Can you get the protocol finished by next week?"

"The total budget of three million for the entire programme seems about right. But what's this twelve thousand for medical writing – isn't that a bit excessive?"

"The XY department will be equipped with extra-sized, high-resolution monitors on account of the large amount of work they do on the computer. Their old monitors will be passed on to the writing department." [one might continue: "...who don't really use their computers a great deal."]

"The annual conference for middle management will take place on ... to review progress and to discuss strategies for the future. We set store on your opinions and look forward to your feedback. The following departments are required to send a senior delegate" [the list somehow fails to include medical writing].

"The job of medical writing is basically to re-format statistical tables."

Status of medical writers

The negligent manner in which medical writers and their departments are regarded, and treated, in many organisations (there are of course honourable exceptions) is astounding, for two reasons.

First, the "qualificatory" hurdles are high. Many companies require medical writers to have a substantial doctorate, and those that do not demand this still require extensive relevant experience.

Secondly, the medical writer's responsibility is enough to induce severe vertigo: work out, for example, how many man-hours of grind have gone into accruing the data for the Phase III clinical study that you are currently writing up, how many Euros have been invested in the development plan for the drug being tested, and how much profit will be made when the product finally succeeds on the market (I omit mentioning the converse – even scientists can be superstitious – but do the calculation for that as well). Work out what it will cost your company if the protocol that you are expected to dash off in a day or two (or a night or two) is flawed. Work out what delay will be caused, and its consequences, if the regulators discover discrepancies in the dossier that you are painstakingly assembling.

These two points, especially the latter, might make one expect medical writers to be the spoilt darlings of any corporation. Not so: enquiries among colleagues in various companies reveal a trend – admittedly not backed up by blinded controls or a rejected null hypothesis, but still clear enough – to the effect that medical writers are given less (in both senses: *fewer* and *smaller*) financial incentives to perform well, and are afforded poorer working facilities and less training support, than staff with comparable responsibility in other departments.

The reasons for the Cinderella existence often led by practitioners of medical writing remain, as far as I am concerned, a matter for speculation. Discussing this situation with colleagues, I have heard a number of explanations, none of which seem very convincing.

My favoured explanation, on balance, is the existence of a mindset – widespread amongst those who have never practised the trade – which combines (a) ignorance about what is actually involved in medical writing with (b) the assumption that "anyone can do it". If my guess is right, then there may be hope of engendering change by enlightenment. Training sessions for non-writing departments on topics such as "what do medical writers actually do?" have proved a useful initiative, and have been observed to dampen the frequency of ill-informed questions such as "If you can write a narrative in an hour, why do I have to wait a fortnight for a study report?". The way in which medical writers are viewed by their colleagues and chieftains is a matter in which, to turn a phrase on its head, familiarity breeds respect.

There are numerous competing explanations. One is the lack of political clout associated with very small departments that are staffed by (non-union) academics. Another, frequently heard, is that medical writing often attracts people with a personality structure such that they are committed to doing a good job first, sorting out their working parameters second, and maintaining their commercial profile a poor third. If either or both of these explanations hold, then of course it makes good business sense to exploit the fact to the hilt.

Status of medical writers

A further possible factor arises because one of a medical writer's main tasks is to generate the "final product" in a clinical study: the study report. This document often goes largely unnoticed. (Please read on before your eyebrows hit the ceiling!) Of course, a study report will be reviewed for correctness by those whose tasks occur further "upstream" in the clinical research process, and it will be used later by others; however, it is not an entity that most of the writer's colleagues' day-to-day work programme depends upon. They thus have little vested interest in the report's detailed content or the manner of its putting-together. I am not entirely convinced by this explanation; after all, the fate of many is bound up in other medically written documents, such as study protocols, while poorly prepared reports can do much to sour up the life of the regulatory officer who has an impending submission deadline. However, the idea may have some validity – especially in contract research organisations, where the largest observable chunk of a clinical development programme is often the clinical study report, and the sooner the "product" (*sic*) is out of the door, the sooner the invoice can be written.

One might even generalise from the point just made and assert that the better medical writing is done, the less conspicuous it is. This contention has been set out in more detail elsewhere³ and, if correct, certainly helps to explain the prevalence of the wrong assumption, referred to earlier, that "anyone can do it".

Finally, it is frequently observed that medical writing is not exactly a bouncy springboard for upwardly mobile careerists in clinical R&D. In consequence, it is argued, medical writing has disproportionately few advocates, with inside knowledge of the trade, in the upper echelons of many organisations.

This article is not based on the now out-dated premise that talking about your problems on the couch brings them automatically to an end. On the contrary, positive remedial action is called for to enhance – without losing touch with reality – the profile of medical writing throughout the clinical industry. There are no instant recipes. Medical writers and their managers must be willing to set out on the long march through the (that is, their own) institutions.

Notes

- 1. Solely in order to avoid any appearance of pillorying particular organisations with which the author is known to be or have been associated some of which are exemplary exceptions to the tendency described in the article the author's name is not published here. Any reader wishing to discuss this contribution with the author is invited to make contact through the editorial office, care of langdoe@baxter.com.
- The pictures are reproduced by kind permission of the Egyptological Museum and Papyrus Collection, Berlin (bpk/Ägyptisches Museum und Papyrussammlung, SMB/Margarette Bussing, http://www.smb.spk-berlin.de/smb/en/home).
- 3. See the lucidly argued *The future of medical and technical writing*, by S. de Looze (Drug Information Journal 1999; 33: 711–715).

Email trauma

According to Richard Morrison (*The Times* 15.11.05) emails are regularly cited as being the biggest cause of stress in the workplace. We are worn down by their volume (count your blessings Bill Gates gets 4 million a day), compulsion to react to 'you've got mail', and colossal mental effort composing a brief, 'spontaneous', and witty response.



From over the pond: Heroes for medical writers

by Susanna J Dodgson

Ever since I can remember my mother told me stories about bombs and St Thomas' Hospital in London in the 1940s when my father was a medical student and my mother a young physician. Particularly memorable was "bomb duty" when medical students were told to climb onto the roofs of St Thomas', look through the night skies for bombers and unmanned bombs, and sound the alarm when something flew towards them.

On my last night of a visit to London in April 2004 I walked west along the Thames and found St Thomas' on the south bank immediately opposite the Houses of Parliament:

Miss Nightingale's administrative genius decreased mortality undoubtedly a prime target for bombs. I could imagine that imprecise aim could land bombs on St Thomas'. This happened more than once after 1940. One night when my father was on "bomb duty" his fellow medical student was killed. Over 60 years later, I was quietly remembering the student whose life stopped where I

was walking, and enjoying the thought that the lives of my brothers and I started because my mother could not resist my father in the backdrop of the drop-dead gorgeous views across the Thames, when I saw a sign for the Florence Nightingale Museum.

Back in Philadelphia I found the link between Florence Nightingale and St Thomas'. Miss Nightingale responded to her nation's call after William Howard Russell's Times report about soldiers who had survived bayoneting and musketfire only to die in the makeshift hospital in the old Turkish Barracks in Scutari, on the outskirts of Constantinople. The news reports so appalled the British public that Sidney Herbert, the Secretary at War, asked a family friend to organize a group of nurses and take them to the wounded soldiers. Miss Nightingale's letter volunteering to do so crossed with his in the mail, and Miss Nightingale was soon where she was needed most. For 18 months her administrative genius in organizing nursing personnel, supplies, evacuations and hygiene resulted in decreased mortality while she was dealing with jealous male medical personnel, an active war and increasing fragility from chronic disease. Deeply thankful British citizens donated £45,000 into the Nightingale Fund. The fund financed the Nightingale Training School and Home for Nurses which opened in the rebuilt and re-located St Thomas' Hospital.

After occupying space in the south end of London Bridge from 1215 until 1862, St Thomas' was reopened on its present site in 1871 by Queen Victoria (King's College London College Archives). St Thomas' was rebuilt with input from Miss Nightingale according to the principles of hospital design she described in her book "Notes on Hospitals". The architect of the new hospital building, Sir Henry Currey, was a supporter of the "pavilion plan" of hospital design, which Miss Nightingale wrote was essential

From over the pond

for correcting the 4 basic defects of hospital design which can be summarized as 1. sick patients jammed together, 2. limited space to move around 3. limited ventilation and 4. limited light. According to Dr GC Cook, Sir Henry's biographer, after Miss Nightingale's move into public consciousness the "pavilion plan" was widely accepted in UK hospitals and coincided with greater inpatient survival (Postgraduate Med J 2002 78:352-9).

Nurses trained at St Thomas' were known as Nightingales, and when I visited the Florence Nightingale Museum in 2005, the frighteningly formidable, cheerful and wellgroomed short lady volunteering behind the counter introduced herself as a Nightingale, which solved another riddle. On my fifth birthday in Manchester I was given a nurse's outfit, which I wore the rest of the day and wanted to forever. A red cape, a starched white cap and apron- gorgeous. My declaration that I wanted to be a nurse resulted in my mother standing me on her bed and telling me that I had better always remember this: no daughter of hers would ever be a nurse. My father smiled and shook his head: not a good idea. I concluded for years that my parents thought nursing was beneath my talents. I now understand that they spent the years of their professional training terrified by Nightingales and they were not about to incubate one in their own home.

Florence Nightingale was terrifying, how else could she have moved politicians and founded not only nursing but health administration, and changed hospital architecture? I believe she was also the first post-industrial medical writer, and the first modern hero of the medical writing profession. She excelled in regulations, statistics, and healthcare, and pretty much everything we teach our students in the MS Program in Biomedical Writing. Like most medical writers, Miss Nightingale was mostly self-taught; she had started her career after soaking up all the education in nursing and mathematics available to a female with enlightened and wealthy parents. She left behind 200 publications detailing everything needed in a hospital for patients to survive their stays anywhere. In 1860 Miss Nightingale was the first woman elected Fellow of the Statistical Society for her contribution to army statistics and comparative hospital statistics. She was also a consultant in India without ever leaving London. My favorite papers, published in 1864 and 1874, she entitled "How People May Live and Not Die in India" and "Life or Death in India: With an Appendix on Life or Death by Irrigation." She did not write about clinical trials, but clinical trials could not have become a part of healthcare without her rigorous statistical foundation.

Miss Nightingale defined the nursing profession as no other profession has been defined before or since in her book published in 1860 "Notes on Nursing: What it is and

what it is not". Women were not permitted to train as physicians in St Thomas' in 1871. They were only permitted in 1949, 5 years after my mother was hired as a young physician from Ireland. Miss Nightingale was not, however, defining a profession

Miss Nightingale excelled in regulations and statistics

subordinate to that of a doctor but rather a parallel profession for women based on hygiene and hand-washing, concepts unknown to medical practitioners until Dr Ignaz Semmelweis suggested that they might be useful.

The idea that hygiene was invented in the mid 1800s is nonsense. According to Mrs Mary Seacole's account of her work as a doctress in the front line of the battle in the Crimea, her success in keeping her wounded soldiers alive resulted largely from learn-

From over the pond

ing from Jamaican traditional healers, including her mother, about the need for cleanliness in food and water and around the sick bed. Mrs Seacole's efforts in healthcare were heroic, her willingness to stay at the front of the battle and her lack of monetary award for her service despite her high connections, notable. She was not, however, a medical writer, hospital administrator or statistician. She was also not born wealthy; and, like most humans, was not a single-minded genius like Miss Nightingale. I recommend her book, "The Wonderful Adventures of Mrs Seacole in Many Lands", which I bought from the Florence Nightingale Museum.

There was no a hint of scandal, no breach of ethics and no money taken to endorse a product or therapy Many lessons can be learned by medical writers as we work together to define another new profession 150 years after Miss Nightingale's heroic achievements in the public eye. Miss Nightingale never had a hint of scandal, no breach of ethics, and she never took money to endorse a product or therapy. Until her death at 90, she was mostly an

invalid, rarely seen in public, writing her many books and papers in her bed, and yet her audience was huge and paid attention to what she said. Even now, 95 years after her death, I find in the US National Library of Medicine several hundred papers referring to her continuing influence on healthcare and healthcare institutions named after her in Turkey and London.

All these years after modern communications caused a public outcry which forced the British Government to legitimize a profession that had been around since babies were born to humans, Florence Nightingale's life tells us that the impossible is possible, and that a single focused individual without suffrage, titles and university degrees can influence the lives of millions, probably billions.

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Acknowledgements: The Florence Nightingale Museum [http://www.florence-nightingale.co.uk] has been the source for unattributed information in this article. I am grateful to its Director, Alex Attewell, for checking the article text for accuracy.

Articles to look forward to in the next issue of TWS

Experience of preclinical drug development: Is it important for a medical writer? by Carin Larsson-Backström

Transparency in disclosure of clinical trial information by Ruth O'Halloran



Nursing in the London blitz

By Kathleen Birch

I was a nurse in St Bartholomew's Hospital (Barts) in the east of London during World War II. When the blitz came I was on night duty. We had gone to bed as usual, and when we woke up very early in the morning the side of the building was like a big Bunsen burner – a gas main had been hit just outside the hospital. We had to move all the patients to one end of the ward because it got so hot at the other end. Nobody panicked and the fire was soon put out by the Air Raid Prevention (ARP) crew.

When patients came into the hospital they had complete confidence that they were safe. What they didn't know was that there was just one layer of sandbags between them and the "all hell let loose" outside. Of course we didn't tell them. All the children were evacuated out of London, including from the hospitals. But when the blitz started we still had

enough children to fill two coaches. We got them all ready and they were rushed out of London the next day.

The people from the East End of London were incredible. The porters were local Cockneys and they were always cheerful and never complained. If you asked them how their night had been they would say, "fine, but we had to go down to the shelters and when we came out there was a bit of a mess". Despite this they often brought us a bit of fruit and they always cheered up the patients. Before we went



Reading the news in hospital

on night duty we had a meal. There was one night when the electricity failed as we were eating baked beans. So as you can imagine the baked beans went all over the place. Afterwards that night was known as the Baked Bean Night.

As student nurses we had to spend three months in the plaster department or three months in theatre – I was lucky to have the experience of doing both. There were two grades of bandages: one for single use and the other we washed and hung out to dry on a sort of clotheshorse. These were then wound up and packed in a drum for sterilisation. There was no plastic of course; everything was steel or enamel. We saw a lot of fractures – mostly broken legs – and spinal injuries.

The hospital's five theatres were moved underground. One theatre was used just for cleaning up and preparing the patients before they were moved on to one of the main theatres. The Superintendent of Theatres was very good. She had worked in the early radiotherapy treatment of lupus vulgaris (tuberculosis of the skin) and was left without hair and with a very scarred face. Everyone said she had been a real 'hot spot' as a stu-

Nursing in the blitz

dent – that meant she had been into everything. The treatment for lupus involved the nurse sitting on a stool by the bed where the patient lay with something that looked like a microscope. The nurse had to focus the beam emitted from this apparatus on the area of affected skin on the patient's body. For children there was a big lamp they were encouraged to play around. Of course, we knew very little about the effects of radioactivity then.

There were highly skilled surgeons specialising in facial injuries, and lupus. One was Professor Kilner – watching him operate was like watching someone do fine embroidery. Professor Makindoo advocated that people went out and about in the town during their treatment, so they learnt to deal with their appearance and didn't become reclusive. Sir Henry Gavain was the overall head in London.

At the beginning of the war the nurses had to sleep underground in the basement with all the pipes. We had to leave our mattresses and blankets down there. We had no beds and it was rather claustrophobic. After about 3 months we put our collective foot down and said we couldn't do this anymore so the powers that be gave up and let us sleep in our beds.

In the centre of the hospital there was a courtyard with a fountain in the middle (shown in one of the photographs). During the blitz the male medical staff were issued with tin hats as it could be dangerous crossing the courtyard due to falling masonry and such



Fountain and blitz damage at Barts Hospital

like; however there were not enough hats for the nurses. The men were very annoyed about this and would wait for us to come out of the nursing home and lend us their hats to cross the courtyard. Looking back this really was discrimination against women – it wouldn't happen now.

At the beginning of the war the rules were very strict: no nurses were allowed to visit the medical students or junior doctors in their quarters and they were forbidden to visit the nurses' home. But when the nurses' home was in danger of catching fire

everyone was allowed in to pull down the curtains and extinguish small fires, and no one ever really returned to the rules after that. As nurses we decided they couldn't sack all of us so we just started visiting the doctors' quarters. Sometimes we went across the roofs that were used for fire watch. I can still see the route we had to take. I think the authorities just turned a blind eye. This is how I met John, my husband.

When we both had time off we would meet by the fountain in the courtyard. If there was one of the thick London smogs – a 'peasouper' as we called it – I couldn't see him until I was standing right in front of him. He used to say he could recognise my footsteps before he saw me.

It was still wartime when we married. I applied for permission from the Chief Constable of Worthing, my hometown, for people to visit for the wedding. This was necessary because Worthing is on the south coast, which was a restricted area for security reasons. I was told permission could only be given for my fiancé to visit. So we decided we would be married in London at the church of St Bartholomews the Less in the hospital

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grounds. I had seen too many wartime weddings with only one family present. On the morning of the wedding a friend and I got up really early to go to Covent Garden to buy the flowers – they were very reasonably priced early in the morning. My father and I were a little early for the service so we went for a walk in Smithfield's meat market just over the road to pass the time. It was a lovely service but one good friend couldn't come as she was in hospital herself with suspected tuberculosis. When we came out of the

church we were delighted to find that the students had pushed her down to the front of the church in her bed. She later went on to become Matron of Leeds Infirmary. We didn't have any air raid warnings that day – it was quiet.

All the men had to do fire watch. We used to go up on the roof when the all clear sounded to see the colours – different factories that were bombed lit up in different colours. We were very lucky in that very few people in Barts were injured or killed. I remember the rockets. Someone was



View of the blitz from Barts Hospital roof

killed by the third lot of rockets – not by the blitz or the flying bombs but by the rockets. We used to watch the bombers coming over but what was the good of worrying – you couldn't neglect life – you just had to get on with it.

Kathleen Birch

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What takes part in a clinical trial - subjects, individuals, controls or even people?

Sometimes it is comforting to read that you are not the only one. I had such an 'ah ha' experience when I read a letter in the correspondence column of *The Lancet* a few years ago and again when I recently edited an article written by a doctor who is herself the editorin-chief of a medical journal. The author of the letter in *The Lancet* (Vol 358, page 1463) pointed out that many physicians were dismayed by the FDA's suggestion that trial participants be called subjects rather than patients. They considered such a label to be hurtful to the physician-patient relationship. On the same basis I avoid the noun 'individuals' preferring the adjective 'individual'. Thus I changed 'individuals' to 'individual patients' in the editor's article. She objected to this saying that it smacked of medicinalisation (in this particular case not all the people were necessarily already patients).

So just as there are reasons to prefer 'indigenous societies' and 'developing areas' to 'primitive societies' and 'underdeveloped areas', humans should be differentiated from rats – rats on the left, humans on the right:

controls	→	control subjects, volunteers
subjects	→	participants, patients (if they are)
diabetics	→	diabetic patients
geriatrics	→	elderly patients
individuals	→	people, patients, anyone or use as adjective
male/female	→	men/women, boys/girls or use as adjective

Elise Langdon-Neuner, langdoe@baxter.com



Designing persuasive tables and charts

Sally Bigwood and Melissa Spore



Bad data graphics can be expensive, if not fatal. The 1986 space shuttle Challenger tragedy in which seven astronauts died was caused, in part, by bad data graphics. By bad, we mean visuals that did not communicate the intended message. Because NASA officials did not understand vital information, the launch decision was ill-informed and the outcome catastrophic. The question we address is what leads experienced engineers to commit such a grave error? The answers are relevant for anyone in the business of communicating technical information for making decisions that have important outcomes. In dramatic situations, badly communicated technical information can cost lives. More routinely, it degrades decision making and lowers performance.

We will come back to the Challenger tragedy but let us begin by saying that incommunicative data graphics are surprisingly common. We have come across innumerable examples in the past five years. This is puzzling, given that tables and graphs only summarise basic data.

Technical publications usually avoid the more grotesque graphic mistakes of the popular press, yet, as the Challenger story suggests, engineers and scientists are not immune. Technical communicators face at least four problems. Firstly, the principles of data graphics are rarely taught or even talked about among professionals, forcing most technical communicators to work out solutions for themselves. Secondly, the evidence base for presenting data graphics is sadly small and diverse. Finding reliable advice is not easy. Thirdly, clients, colleagues and others frequently misunderstand what makes a good graphic: myths and misunderstandings abound. Finally, designing readable data graphics is time consuming and this is often not appreciated by others.

This article is based on good practice recommendations by experts (see bibliography). Our own objective is to encourage data to be readable and designed for the convenience of the intended audience. In this article 'data graphics' encompasses tables and graphs, while 'graph' is shorthand for bar, line and pie charts. We develop our argument and offer advice under two headings: popular misconceptions and neglect of wording.

Popular misconceptions

Unsupported ideas and faulty logic about data graphics are now part of public consciousness. The public has remarkably low expectations of numeric information: obscure and indecipherable tables or graphs seemingly never surprise them. Too many numerate professionals feed this confusion, either intentionally or negligently. Accountants, for instance, sometimes present basic financial figures in unnecessarily complex and discouraging ways. Such poor communication borders on incompetence. To create lucid, intelligible data graphics, we suggest the following techniques:

Designing tables and charts

Reduce the amount of data. Designing useful data graphics requires decision-making, judging what data is relevant, and what can be ignored. Too much data swamps, confuses and misleads. Think of the needs of your readers. Provide selective, edited demonstration tables – focusing on a specific point – rather than comprehensive tables. Similarly, graphs should focus on an explicit story.

Present refined thought. Persuasive data graphics are the product of time and thought. Serious communicators need time to analyse the data and design it appropriately for the intended audience. A resulting table or graph may look simple (like Figure 1) but is the result of knowledge, experience and commitment to communicating with others.

Don't overestimate graphs. Graphs are fundamentally simple. Bar graphs show that one thing is larger than another, lines show changes over time and pies show the parts of a whole. Graphs that look complex almost always do so because of over-elaborate presentation, not intellectual rigour. The fact is that graphs cannot explain complex messages and complex graphs do not communicate effectively. Compare the simplicity and persuasiveness of Figure 1 with the vague, indecisiveness of Figure 2.

Use a table. Saying the public prefers graphs to tables is like saying someone prefers a hammer to a saw. Both are useful tools but they do different jobs. Graphs excel at a single storyline, at high contrasts and broad trends; they are less good at detail. Tables are more versatile and can present complex stories. Additionally tables hold detail conveniently and, when well designed, are easy to read.



Yet communicators are sometimes pressurised into using graphs when a table is appropriate. People who are interested in your subject will be interested in relevant, readable data, however it is presented.

Remove debris. Gratuitous decoration (such as labels, gridlines, shading, borders, tick marks and embolding) detracts from the message. Emphasise the data, not the decoration. To make your tables and graphs authoritative, keep them simple, small and stripped of clutter. Look at *The Economist*: it serves a highly numerate, serious readership and illustrates articles with small, succinct data graphics with scarcely a gridline or data label in sight.

Steer clear of pie charts and 3D graphs. The public may like pie charts but they force readers into the mental juggling of comparing triangles arranged in a circle. Most of us think linearly and a simple bar chart presents this data more conveniently. Equally, 3D graphs may be popular but they tend to distort data – readers do not know from which point of the image they should measure. Avoid them.

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Neglect of wording. A Picasso or da Vinci may speak for itself but data graphics need words. Inadequate, obscure or unreadable wording is a frequent cause of tables and graphs being incomprehensible. Neglect the surrounding text in a graph and readers will walk away befuddled or, worse, confident in their misinterpretation. Here is some advice:

Make graphics self-explanatory. Readers should not have to refer to the text to understand what the data graphic is about. Obscure abbreviations, jargon and inadequate labelling are common (even in technical journals) and off putting to readers. Keep lettering horizontal and large enough to read. Label all axes.

Use the title to reinforce a graph's message. The best graph titles introduce, summarise and reinforce their message, as in Figure 1: 'The number completing IT training has fallen'. If you can't summarise your graph in a short sentence or phrase, it's probably because the content is too complex to be a successful graph. Look at Figure 2: it cannot be captured in a single phrase because it has no single story to tell. It is not a good graph – it does not communicate with ease.

Avoid key legends. Keys or legends on graphs demand that readers look at two things at once. Label bars, lines and pie slices directly for the convenience of readers.

Conclusion

So, what went wrong with the Challenger? The evening before take-off, engineers involved in the design of the Challenger tried to alert NASA officials that the unseasonably cold weather might damage some of the parts. To persuade NASA to delay the launch, the engineers drew up 13 visuals. NASA remained unconvinced, the rocket was launched and exploded after only 73 seconds. A full analysis can be read in Edward Tufte's in *Visual Explanations*. He shows that the tragedy arose because of the engineers' failure to communicate with decision makers. In particular, a combination of poor selection of data and poor presentation of data fatally reduced the persuasiveness of their warning. The engineers failed to think through what information would persuade their audience and how to present it effectively.

Thankfully, few poorly presented table or graphs contribute to deaths but many lead to confusion, time wasting and poor decision-making. To persuade your audience, invest time in learning to become proficient in expressing numeric ideas as simply as possible. Select and reduce data, showing only what is relevant for readers. Choose an appropriate, effective display. Strip tables and graphs of clutter and ensure the text is coherent and readable. Above all, make a personal commitment to presenting the data for the convenience of the reader.

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The importance of data presentation:

A commentary on "Designing persuasive tables and charts" by Barry Drees

As the EMWA data presentation workshop leader (Data Presentation I and II) and as a firm believer in the importance of good data presentation to medical writing, I was naturally excited to read the subtitle of this article "Bad data graphics can be expensive, if not fatal", in this issue but the opening line "The 1986 space shuttle Challenger tragedy in which seven astronauts died was caused, in part, by bad graphics" struck me as something of an exaggeration. However, after reading the article, including the authors' citation of a leading expert in the field of scientific data presentation, Edward Tufte, who makes the same claim, I had to agree that "In dramatic situations, badly communicated technical information can cost lives." I don't think anyone can question the regulatory authorities have to decide whether or not to approve a new medicine for the treatment of patients with sometimes life-threatening diseases.

Anyone who has taken one of my data presentation workshops will know how strongly I feel that data presentation is one, if not the, most important part of medical writing. This article lays out the argument for this stance as well as offering some basic rules for good tables, graphs, and charts. Aside from the core message and its relevance to medical writing, I really liked that the authors separated their discussion into "Popular misconceptions" and "Neglect of wording". This second point is very important and is frequent-

ly overlooked in books and articles about scientific graphics. No matter how concise and elegant your graphic, the graphic must be explained well or it runs the risk of being incomprehensible.

Sometimes the authors show their greater familiarity with publications or business graphics, as for example when they state, "Yet communicators are sometimes pressurised (sic) into using graphs

Many authors in clinical research suffer from "the Tyranny of the Table" and believe that data are somehow more scientific in a table.

when a table is appropriate". This may be true in business graphics, but I find the exact opposite to be the case in medical writing. Many authors in clinical research suffer from what I call the "Tyranny of the Table" and firmly believe that data are somehow more scientific or accurate when presented in a table rather than a graph. If you are confident of the data and how to interpret it, then the most important thing should be how clearly the message of the data is conveyed. One very unfortunate tendency among those who discuss scientific data presentation is to utterly dismiss pie charts. Edward Tufte even goes so far as to write, "A table is nearly always better than a dumb pie chart; the only worse design than a pie chart is several of them, for then the viewer is asked to compare quantities located in spatial disarray both within and between pies. Given their low data-density and failure to order numbers along a visual dimension, pie charts should never be used." I argue in my EMWA workshops that this is a case of a poor workman blaming

Importance of data presentation

his tools and that just because pie charts are frequently misused does not mean that they should never be used. I was hoping that the authors of this article might agree with me and not follow the Tufte party-line, but alas, they write, "The public may like pie charts but they force readers into the mental juggling of comparing triangles arranged in a circle." Sigh. Pie charts are used to show frequencies and when used correctly can be very effective. The famous pie chart showing how many species of living animals on earth are insects (see figure) very clearly conveys the message that there are an awful lot of insect species on this earth compared to other animals.



The problem of blaming the tools, is also demonstrated in their figure where they compare a "successful graph" (their Figure 1) to one they label as "over-complex, poorly designed graph" (their Figure 2). I would argue that both graphs are perfectly acceptable but just show different comparisons. Figure 1 allows comparisons of the total number with IT training, whereas Figure 2 allows comparisons of the IT training for Teams A, B, and C. Both graphs show these comparisons very clearly, it is up to the writer to decide which comparison is the most appropriate for the message of the document. They claim that Figure 2 cannot be summarized in a single sentence, but how about, "Teams A, B, and C had varying numbers completing IT training until 2005, *when the new training SOPs were introduced*"? Every graphic has a message, the important point is whether that message is the one you wish to present.

However, these are relatively minor points (would it be too pretentious to say, "quibbles among the cognoscente"?) and I think that the article generally does a good job of helping to disseminate the message of the importance of good data presentation to all kinds of scientific writing, including medical writing.

Barry Drees

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So you think you know English?

A spam mail, which also informed that human thighbones are stronger than concrete, mentioned that 'rhythm' is the longest English word without a vowel, i.e. without *a*, *e*, *i*, *o*, *u* or *w* if you happen to be Welsh. This of course assumes that *y* is not a vowel.



Medical writing in a contract research organisation

by Karen Donnelly

I often see postings on the EMWA website's dialogue page from people asking how to "break into medical writing". The EMWA careers leaflet is a good starting point; however, I thought that it would be a good idea for some members to provide their own personal insights. To start the ball rolling, I would like to share details of my own career path and current role in a Contract Research Organisation (CRO) so that others may see at least one of the routes that can be taken.

In the beginning...

Having gained a degree in Neuroscience in what now seems a lifetime ago, I worked in research laboratories for six years. During this period, I found that I preferred reporting my results rather than the actual hands-on process of producing them! I decided to embark on a career as a writer and discovered something called "medical writing" which sounded just what I was looking for. Unfortunately, securing a job in medical writing turned out to be more difficult than I expected, with my initial applications for jobs in medical writing being unsuccessful.

Not to be put off, I decided to look at the other options available to me. Obviously, I had my research background and degree with which to impress potential employers, but also needed to get some writing experience under my belt. I noticed that Quintiles were advertising for a report writer who would be responsible for preparing preclinical reports for their Drug Metabolism and Pharmacokinetics (DMPK) group. This post was suited to my knowledge from the laboratory and an excellent starting point for me to move into the pharmaceutical industry.

Preclinical report writing

For my first job in a CRO environment, I spent over three years preparing preclinical reports for bioanalytical studies, including validation studies for HPLC and LC-MS/MS assays and protein binding studies. Preclinical report writing provided a good ground-ing in the skills that I now use in medical writing.

The preclinical report writing group for Quintiles' DMPK department was a new venture when I joined the company, with only myself and my line manager for the first couple of years. We had the hard job of persuading analysts that they would benefit from handing over the results of their analyses to ourselves, who could provide reporting and quality control of documents. We gradually became busier, recruiting more staff and building a full work schedule.

In making the transition from laboratory work to medical writing, preclinical report writing allowed me to develop and refine my "technical" skills by using word processing and spreadsheet packages on a daily basis. In addition, it introduced me to working with a CRO, including working with different functional groups and customers, working to deadlines and multi-tasking.

Medical writing in a CRO

Preclinical report writing is an excellent place to start when aiming for a career in medical writing, and one of my colleagues also took this path. Although there are limits to the level of interest involved in preclinical reporting (the majority of reports which I worked on focussed on reporting drug concentration data rather than learning about different indications and drug treatments), it does hone skills in the presentation and reporting of data - skills fundamental to medical writing.

The transition into medical writing

In my fourth year of preclinical report writing, the allure of medical writing and working in clinical (rather than preclinical) research was still at the back of my mind, and I decided to contact the manager of medical writing at Quintiles who, as luck would have it, was in the process of recruiting a new medical writer for her group. I have now been a medical writer within a CRO for nearly three years, and find the challenge of clinical report writing interesting and enjoyable.

Medical writing has allowed me to expand upon the skills I developed during my years spent writing preclinical study reports by allowing me to focus on different indications and drug treatments. In medical writing, the presentation and discussion of results is more involved than preclinical report writing. Obviously, results have to be considered in light of the indication or drug treatment being studied, whereas the majority of preclinical reports focus more on the presentation of hard facts (e.g. concentrations of study drug in plasma samples at different time-points) rather than interpretation and discussion of data (e.g. does a laboratory abnormality correspond to a reported adverse event?).

Working with a contract research organisation

There are three main paths for medical writers in the pharmaceutical industry to pursue in their careers: working with a CRO or pharmaceutical sponsor company, or moving on to become a freelance writer. Personally, I only have experience in working with a CRO and enjoy the opportunities that working with such a company provides.

The market for medical writing is growing at a steady rate and CROs in particular are enjoying an increase in demand for medical writing services as our customers' drug development programmes and the pace of these programmes increase, and with company mergers and reorganisation leading to more outsourcing [1, 2]. This in turn has increased the demand for medical writers by CROs, with an accompanying increase in the range of job responsibilities.

Contract research organisations provide many different writing opportunities across the clinical development phases, from clinical research reports to protocols, manuscripts, patient information sheets and informed consent forms. Writers can be involved in preparing the protocol, the accompanying informed consent form and the subsequent clinical study report for a project and so be involved in the clinical study from the startup activities onwards. Involving medical writers in the drug development process from an initial stage has advantages and can have a positive effect on drug development, one of which being that we are trained to recognise the audience and the way in which a particular project document will be used [3]. In addition, CROs have a wide spectrum of customers who all have different requirements in terms of templates, language, presentation, etc. Such a variety of customers also brings a variety of indications to work on, whether it be hypertension, Parkinson's disease, diabetes or oncology. Medical writers within a CRO can therefore be exposed to a wider variety of documents (and indications) in a shorter timeframe than writers within a pharmaceutical sponsor company [4, 5].

Medical writing in a CRO

As part of a medical writing group within a CRO, I am provided with a range of resources to assist me in my role. The medical writing group itself provides the full support of a dedicated team, with my colleagues having different levels of experience and knowledge to share. The team structure ensures that there is always someone on hand to provide an independent quality control review of documents, so ensuring the quality and accuracy of our deliverables. In addition, a team is useful if writer's block occurs, and having an independent reviewer ensures that nothing is missed. We also have other colleagues who provide assistance and information. For example, we work very closely with the biostatistics group, who provide us with the study results and are on hand to address any data issues which we may spot during the preparation of our reports. The biostatistician is available to review the clinical study report from a statistical perspective, while we provide medical writing input during our review of statistical analysis plans and associated shells for tables and listings. (A commentary on "life as a statistician in the world of medical writers" appears in an earlier edition of The Write Stuff [6]). We also benefit from the advice of medics specialising in particular indications, who are able to review documents and provide assistance in the interpretation of data. Data management, regulatory affairs, quality assurance and project management departments all provide a supporting role. An additional resource is Information Services, which can obtain any required publications. These immediate resources may also be available in pharmaceutical sponsor companies; however, freelance writers may not have such ready access.

Where next?

Working with a global CRO provides many career opportunities. The medical writing career path is sustained by the development of detailed job descriptions and a detailed set of job competencies, which include both technical and non-writing-specific skills (e.g. therapeutic and statistical knowledge), allowing progression from entry level to senior level medical writer [4]. Upon reaching the top of the medical writing ladder, the CRO environment provides alternative opportunities, the most natural progression being project management: in following a job competency framework, medical writers within CROs can develop the necessary skills in project management and financial awareness which will enable transition beyond the medical writing role. Global CROs also provide opportunities to expand medical writing skills by working with, or indeed in, other countries, e.g. within Quintiles, working with our US colleagues expands our knowledge of US medical writing processes and associated regulations.

Of course, other than a CRO, the pharmaceutical sponsor company or freelance routes can be pursued; perhaps someone else would like to take up those stories...

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Medical writing: A fine profession in a "fine" city

by Lim Soo Hwee

When I answered an advertisement in the local newspaper for the position of medical writer with a pharmaceutical company a few years ago, I had little clue about its job function. Suffice it to say that I thought I met the criteria described (minimum of a bachelor's degree in the life sciences, a rudimentary knowledge of statistics, and a research background) and wrote in. A few rounds of interviews, an anxious wait, and a telephone call later, and I was sitting in Novo Nordisk's office located in the busy business district of Singapore. The company has a clinical team comprising clinical research associate, data manager, statistician and medical writers in its headquarters in Copenhagen as well as in offices in Singapore, Japan and the US. The climate for conducting trial activities in Asia is increasingly favourable because of Asia's rising awareness of and interest in clinical trials, its potential patient pool, and the lower cost of medical care. Accordingly the company's Asia-Pacific regional office deemed fit to expand the clinical team and I became the second medical writer employed to report the trials conducted.

Recruiting medical writers in Asia is not easy. As a profession, medical writing is relatively unknown outside Europe and the United States; hence experienced writers are difficult to come by. The right candidate should be self-motivated and have sufficient scientific knowledge. Competency in the English, language is essential. Not only have candidates to be competent in, and comfortable with writing and thinking in English but they must also write simply in English. Someone once said he nearly dozed off while reading a trial report. Was the content too dry or the writing too technical, or perhaps it was both? Though no Jules Verne, for want of boring the reader to tears, I always strive to write simply and clearly, and attempt to vary the style of expression, to the extent permissible.

Medical writing is relatively unknown outside Europe and the US

Is my typical day as a medical writer working in a pharmaceutical company any different from the day of such a writer in Europe or the US? I cannot exactly say. When I first started, there were a couple of days of orientation and training on Standard Operating Procedures (SOPs) – a writer's "bible"

of sorts. Reading the SOPs wasn't exactly a breeze, rather it was quite mind-boggling. Certain processes such as reviewing raw data listings, trial validation plans, statistical analysis plans, and statistical outputs (tables, figures, selected listings) were daunting, not least to say tiring on the eyes. In the early days, putting my signature on the approval page while still ruminating on the analysis plan caused trepidation. By-and-by, things fell into place.

My clock starts ticking once I am assigned a piece of work. I am responsible not only for preparing the report but also for the compilation of the appendix documents, as outlined in the ICH guidelines. Sometimes, I review and provide input to trial design and the protocol as well. There is the trial validation plan (a series of electronic checks on the data) prepared by the data manager, which requires attention, followed by the statistician's analysis plan for the trial. Prior to the data being "ready" for review, I will have to plough through hundreds of pages of raw data listings checking for inconsistencies

The Write Stuff

Medical writing: a fine profession

that may have escaped the electronic checks applied. When the data are "ready", I participate in the database release meeting and discuss actions required on deviations of importance and relevance to the interpretation of the results. Then, there are the results meetings where the statistician communicates the essence of the trial results to the team. In between all these reviews and meetings, I am busy compiling the documents (as an appendix for regulatory purposes) that are needed for preparing the report. After all this, the real action begins when I have to first digest the tables, figures and listings, ruminate and then put the results into simple English.

Time is of the essence in medical writing as key performance indicators (in weeks) are a measure of a writer's efficiency. Hence, deadlines are an ever present menace. However, a writer often abides by Murphy's Law. That said, accuracy of the report should never be compromised by doing a rush job. Because producing a report involves many processes and personnel, the ability to multi-task and good time management skills are desirable qualities of a writer. Good human relation skills are essential, especially when pushing deadlines.

Other than the preparation of the integrated clinical trial report, I am also actively involved in the coordination, planning and preparation of abstracts, posters and slide presentations for local or international conferences, according to the requests from both internal and external "clients". Then, there is the communication of results in the form of manuscripts. The occasional ad hoc request for translation (from English to Chinese) or vetting of translation text may also come in. It is usually urgent and despite the challenges of time and the language constraints of the medical text, it is highly satisfying when the work is completed on time to the client's satisfaction. Being "experienced" now also means a more varied workload such as coaching new writers. There is also the periodic review, assessment and revision of instructions, the study reports that land in my mail box with an impossible review schedule to meet, or the documentation and archiving, piled high and on the dangerous verge of a paper avalanche at the slightest tremor of the table top. Learning to deal successfully with different personalities is what I consider the most tedious part of the job. However, I derive great pleasure in being able to

meet unexpected challenges in the job and the personal growth that accompanies them.

Although the department does not have a fully functional medical information unit, medical writers such as myself will occasionally assist in the disDealing with personalities is the most tedious part of the job

semination of medical literature (internal distribution only) or processing the requests for literature from both external and internal customers. Together with an assistant, I am also responsible for maintaining a small library of acquired published manuscripts that has ballooned to nearly 6000 over the years (excluding books and journal subscriptions).

Singapore is a multi-racial nation where people of different faiths coexist peacefully. She is vibrant and continuously re-inventing herself in order to stay ahead of competition. In the years of nation-building, we have learnt to laugh a bit at ourselves. And why is Singapore a "fine city" you ask? If you happen to visit this tiny, sunny island near the equator, you may notice signs that prohibit smoking, littering, food/drinks on the local transport, etc., where a breach will find you a few hundred to a few thousand dollars poorer. Welcome to the "fine city"!

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Meeow! Marketing medicine in Germany

by Ursula Schoenberg

I once heard a public relations professional sigh "Trying to implement a marketing plan with doctors is like trying to herd cats!" I can only agree wholeheartedly with this observation. Please don't get me wrong. I like cats. I also like doctors (one would hope so, as I'm married to one). But both species are (mostly) highly intelligent and independentminded entities, and this can make working with them a real challenge, as the Americans put it. Here's a case in point:

I was approached by the CEO of one of Germany's most recent "inventions", a "Medizinisches Versorgungszentrum" or MVZ for short, who needed PR and marketing support. Let me give you a little background on this: when Germany was re-unified in the 1990s, one of the fiercest battles waged between East and West German health system reformers concerned the East German policlinics. Policlinics pooled personnel and technical resources to supply outpatient care, and their organisational structure was fundamentally sound, if deplorably under-financed. West German physicians' organisations lobbied successfully to disband the policlinics and have specialists go into private practice. Now new legislation has strengthened the position of the GP, putting specialists under considerable economic pressure and encouraging the formation of cost-effective co-operatives, or, you guessed it, MVZs.

My job was to craft a corporate wording for the MVZ and to prepare a regional press conference to market it. I will spare you the story of the image brochure. (Although the scene where I was shown the first layouts with the "gynaecology" section graced with a

The real test was the press conference

picture of an obstetrical chair were pure Edward Albee). The real test was the press conference. Though the strict regulations on how doctors may advertise in Germany have eased up a little bit in the last couple of years, it is still auspicious to tread lightly in some areas. You have to pack-

age the message right, because if the news is just "there's a new medical practice in town", the press will not be beating down your door.

You need to find an interesting teaser topic to dovetail with your client's news and then build an appealing story around it that will convince journalists to come and eat your buffet. We decided to host the event on a fitting World Health Day, and I was delighted to find that there were some brand-new data on an innovative drug used in one of the main treatment areas of the MVZ that we could factor in. Having demarcated the broad approach with the CEO, who, incidentally, was wonderful and needed no convincing or explaining to, I was ready to start with the nitty-gritty of preparing the press conference panel with the resident MVZ physicians.

When I got the doctors together and explained what we planned to do, reactions ranged from the blasé to the hysterical. Unsurprisingly, these reactions correlated directly with

Marketing medicine in Germany

the frequency with which the individuals had been in direct contact with journalists, enhanced by their perceptions on how subsequent coverage had made them look. For the briefing, I decided to focus on the following three aspects, tailoring them to each panel participant and his or her level of experience with the press.

Mindset

There is a fundamental difference in the mindsets of physicians and journalists. The journalist is interested in one thing: the story, i.e. the answer to the underlying question "What is going to interest my reader?" When he or she has the feeling of having found the story, everything else falls into place. The physician is also interested in one thing: the correct diagnosis and treatment of an illness. But due to the complexities of the human body, there lingers the niggling worry whether he or she has really taken every vital aspect into account and reached the right conclusions. This may lead to feelings of insecurity that can effect other areas. Which is why I went to some lengths to explain that a question posed by a journalist during a press conference is not necessarily a direct attack on a speaker's integrity or grasp of subject, but JUST A QUESTION or to put a Buddhist slant on it, to find a branch of the path to THE STORY.

Language

There seems to be an ubiquitous preconception among German members of academia (including doctors) that for something to be deemed truly important, it must be explained in as convoluted and complex a manner as humanly possible. This makes my job so delightful. In my opinion, there is nothing as satisfying as taking a totally outlandish piece of expert-ese and converting it to something that your parakeet can understand. I did this with various texts that were to constitute the press kit – gently but firmly re-iterating to the respective authors that no, journalists were not total imbeciles, but were not necessarily on a day-to-day footing with the alpha-beta-gamma-lipido-chromo-thingy.

Coverage

Last but not least, I had to do what I call "expectations management" with regard to the quantity and the quality of the coverage. Firstly, you have to explain to people that though they think their news is extremely important, it takes work and planning to make sure the press think so too (see above). Secondly, if the press takes an interest, the important thing is the general gist of the coverage, and not whether each word is exactly correct or placed at precisely the right spot. Especially with fast-paced media like television, if interviewees come over as reasonably personable and competent, you have scored a huge success, because the meta-message the viewer (i. e. patients) receives is "Wow, my doctor was on TV!" Of course there is such a thing as bad coverage. But if you have invited journalists for the first time, like in this case, and your management has not been going around putting its hand in the till or harming patients, chances are pretty slim that someone is going to start a smear campaign against you.

The press conference turned out to be a success, garnering positive television and print coverage. A few weeks afterwards, I visited Helsinki and chanced upon a truly amazing street artist with an animal show. The star of the show was a cat that squirmed through a narrow tube and then walked a tightrope – QED.

Ursula Schoenberg

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www.emwa.org

by Shanida Nataraja

Over the last year, you may have noticed some changes to the EMWA website. It continues to be an important source of revenue for the organisation, and a powerful recruitment tool; however, the web team have recently re-vamped parts of the website to better match the needs of the EMWA membership. We've made changes to the section for members only: for example, an archive of articles from past issues of TWS has been made available online, and TWS can be downloaded, before its printed publication. We've also improved the dialogue page, which provides a forum for EMWA members and others interested in medical writing to pose questions and join in discussions.

As EMWA's membership grows, we are keen to further expand the information and resources available to EMWA members through the website and increase the involvement of the EMWA membership in generating content for the website. In this issue of TWS, Diana Epstein publishes the results of an informal survey done at the Malta conference. The responses to the survey, exploring how EMWA members became medical writers, are posted in Members-Only. Recently, we have had contributions from Helen Wiggett, with a report of the Medical Writing Research discussion forum held in Malta, and Alison McIntosh, with a report of the Freelancer and Small Business discussion forum held at the same conference. Rebecca Farrar has given us the first exciting instalment of the Medical Writers' Hobbies Questionnaire findings, and the next instalment is in the pipeline. Our team of web contributors is steadily growing; however, we are still looking for other volunteers. Perhaps you have a feature article or news item of interest to the general EMWA membership. Maybe you are a budding column writer who would like to voice your thoughts on a regular basis, or a wannabe roving news reporter hungry for the latest medical writing scoop. New or old member, if you have something to say, we want to hear from you (shanida@emwa.org; webeditor@emwa.org).

In the next year, the web team hope to continue the process of re-vamping the EMWA website. In addition to a planned series of exciting contributions, we are also discussing a possible re-design of the entire look of the EMWA website. EMWA is a thriving, lively organisation and our website should reflect this. So please come visit our website and get involved!

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The Write Stuff



The webscout: scribes and medical writing

by Joeyn Flauaus

Humans clearly have a strong urge to communicate and writing is a typical system of human communication, expressing spoken language by means of visible marks.

The general purpose of writing is to convey meaning by forming thoughts, telling facts, and prompting the reader to think about the matter. Writing permits analysis, precision, and communication over a long distance, even across different time periods. That is the reason why we know so much about different cultures. Without the written word, exact knowledge of historical facts would be difficult. It also helps to preserve cultural identity since oral history and traditions are lost without a written documentary. A fact that many ethnic groups with an oral tradition, face.

The invention of scribes had a powerful impact on the development of societies. The moment cultures developed writing is often defined as the beginning of civilizations and history. Writing has the function to preserve science, to keep record and to trigger development and innovation. Several civilizations developed their own forms of writing (e.g., alphabet, pictographic writing) as shown by the origins of major writing systems: Maya, Mesopotamian, Levantine, Egyptian, Indus valley, Chinese.

In the past, the skill of writing was only known to few scribes, thus the social status of scribes was very high. Today, about 85% of the world's population can read and write. Unfortunately, the term writer can apply to anyone who creates a written work and especially for medical writers where there is no established education and training. Considering the important role of medical writers in drug development, the need for high quality medical writing cannot be denied. However, the value of medical writing gained more appreciation during the last years, in particular through organizations like EMWA.

The links below provide some interesting insights into the world of scribes in different cultures. In addition, you will find a recommendation for a book about the evolution of medical writing:

http://www.sis.gov.eg/pharo/html/admin.htm

This page about Egyptian scribes provides you with insights into a scribe's education, the high social status they hold, the work of a record-keeper, and the scripts they used. The profession of a scribe was seen as one of the most important in Egyptian society. No illiterate could hold this high office.

http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2001/07/21/MN220298.DTL

This page provides an essay about Mayan scribes whose main task was to keep people in awe of the king. The Mayan civilization, the only literate society in pre-Columbian America, believed in the power of writing. Scribes were responsible for the PR of the Mayan kings by magnifying their king's reputation and consolidating his hold on the realm.

The webscout

http://wwforums.com/groupee/forums/a/frm/f/6606065071

This page provides a message board for discussions on medical writing. This seems to be a great opportunity to get in contact with other medical writers to share and exchange your experiences. Please feel free to post any medical writing related issue.

http://www.cambridge.org/uk/0521831334

This page is a book recommendation for Irma Taavitsainen's study "Medical and Scientific Writing in Late Medieval English". The evolution of the genre of medical and scientific writing and especially the emergence of Middle English scientific writing from the Latin tradition is described with reference to the socio-historical context (e.g. the medieval way of scientific thinking).

Please email me with any URLs, comments or suggestions for the next issue.

Joeyn Flauaus

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Call for Applicants for EMWA Professional Development Committee

The EMWA Professional Development Committee (EPDC) would like to invite applications from EMWA members for a position on the committee which will become available at the end of this year.

As a committee member you will be involved in all aspects of developing and maintaining the EMWA Professional Development Programme including the quality and type of workshops that are offered and aiding the development of new workshops through the mentoring system. The core of EMWA is the EPDP and by serving on the EPDC you can help to shape and guide the future of this vital programme. Remember, there is more to EMWA membership than just leading or attending workshops and networking; the chance to gain experience in a planning or managerial role is also invaluable.

If you would like to contribute to the work of the EPDC by applying for this post, or are tempted but would like to know more, please contact the Education Officer, Virginia Watson (Virginia.Watson@cardinal.com) or any member of the EPDC (details on the EMWA website) who will be happy to provide more details.



Beginning your first draft: **Turtle or rabbit?**

by Alison McIntosh

Recently I came across some information about how a writer begins a first draft of the document, which I thought might be interesting to for readers of the Write Stuff. The suggestion (and I agree with it) is to approach writing in a way that builds and maintains a writer's momentum using your "natural habits" in order to capitalise and make progress towards completing the writing task. This means spending some time working out which approach to writing that first draft is best for your personality.

Two types of writer are described by Michael Alley [1]. You can decide which category best fits you – a rabbit or a turtle? A rabbit he suggests hates first drafts:

"In a first draft, they sprint; they write down everything and anything...rabbits strap themselves to the chair and will not get up for anything. Rabbits finish drafts quickly, but their early drafts are horrendous, many times not much better than their outlines. Nonetheless they've got something. They've got their ideas on paper, and they're in a position to revise."

On the other hand a turtle is the opposite:

"A turtle tries not to write down a sentence unless it's perfect. In the first sitting, a turtle begins with one sentence and slowly builds on that sentence with another, then another. In the second sitting, a turtle...revises everything from the first sitting before adding on. It usually takes a turtle several sittings to finish a first draft, but the first draft is strong...the beginning and the middle are usually very tight because they've been reworked so many times. Revision usually entails smoothing the ending as well as checking the overall structure."

If you have turtle tendencies Alley suggests starting with the sections you feel most comfortable writing and for many this will be the methodology section, whereas a rabbit type should begin at the beginning and work through each section to the end.

When I wrote my PhD thesis I was certainly a turtle. The emphasis for this task was very definitely on writing because I used a pen and paper during the day to complete the sections, transcribing only the finished text onto the computer at night. For those of you too young to remember, back in 1989 this was cutting edge technology! When I started my first job as a medical writer I soon realised that with tight timelines I couldn't continue to write as a "turtle". So now my writing style combines a bit of "rabbit" with "turtle". I suspect that few medical writers fit strictly into one or other category. Depending on the time available and client requirements a mix of both types will emerge and as deadlines approach rabbit tendencies might be what's most required!

It might be interesting to survey the membership to find out if we have tendencies one way or the other, or try it out with some of your colleagues and let us know the results.

Alison McIntosh

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Hey, it's only my opinion: How did we end up medical writers?

by Diana Epstein

Here is a list of eight children – he next generation – and what they would like to be when they grow up (age in parenthesis):

Chris Drees (14) Evelyn Epstein (12) Julie Epstein (10) Kobi Grossman (11) Beni Grossman (8) Matthew Jordan (10) Christopher Jordan (6) army/police officer, architect billionaire, inventor, celebrity author, actress, singer lawyer, racing driver, rock star football/badminton player, engineer scientist, doctor, zoo keeper chef, farmer, zoo keeper

Notice that none of them dream of becoming a medical writer. Mind you, I doubt that any of us would have put medical writer on our wish list either. So, how did we end up medical writers?

When I lived in Israel I was in the hotel business, organising groups and conferences. Then I moved to Germany. On an outing to the Cologne zoo in 1996 with a group of English speakers and small children, between the camels at the entrance and the bears 10 meters on, I was offered a job as editorial assistant. I was told it would be boring and monotonous, but I should take it for 6 months because it would look good on my CV. Initially I worked 10-15 hours a week. After 6 months the journal incorporated another journal and the hours increased to 15-20 a week. While working I often helped doctors write their papers. These papers were always accepted for publication! A friend discovered EMWA on the Internet and suggested I join. I attended the first conference in Henley-on-Thames, ruined my good shoes and wrote a letter of complaint to TWS, which was actually printed. All the rest is history! Today I am a freelancer in the UK with a 40-hour week, managing three peer-review journals.

At the Malta conference I questioned 29 EMWA members about their 'beginnings' in medical writing¹. The members I interviewed fell into two groups. One group consisted of those who got fed up with working in a laboratory:

"I didn't want a bench job"

"I decided I liked the writing more than the research"

"I did not want to continue as a bench scientist and found writing to be a natural skill" "I was a research scientist and wanted a career change, which would allow me to travel and use my science skills without being stuck to the pipette"

"I decided working from home was a better plan"

"My wife got fed up with me going to the Lab 7 days a week and told me to get a 'proper' job"

Only my opinion

The other group consisted of those who became medical writers by accident/default.

"When they offered me the job I had no idea what it entailed-turns out I love it" "I was promoted into a position I thought I wanted and found I hated it, then realized what I loved most was science"

"My boyfriend gave my CV to his golf partner who offered me a job as a medical writer" "My first degree is in English and my second degree is in dramatic arts and dance"

Twelve of the 29 members I questioned fell into the 'fed-up with lab' group and 17 into the 'accident/default' group. I thought I would be one of the few from a non-scientific background but did I prove myself wrong! My humble beginnings seem to be in the majority. Of course, a much larger and more serious questionnaire would be needed to find out the 'real' numbers behind the 'how' and 'why'. Perhaps the EC would be interested in following up this topic. It certainly has the makings for surprising results.

But, hey, it's only my opinion!

¹ See www.emwa.org members' only section for testimonials

Erratum

The exclamation "What the hect!" in the second box on page 98 in the article 'Are you my Mommy' published in TWS, Vol. 14, No 3, 2005 should have read "What the heck!". TWS apologises for any inconvenience caused to readers as a result of this error and is grateful to Barry Drees, who pointed out the error, for his careful scrutiny of the journal.

For those interested in how inconvenience might have been caused, the expression "What the hect" could have confused a reader with the impression that, many, indeed hundreds of 'the's' were being referred to with the notion that the whole thing was quite hectic, instead of the comfort of being assured that only one hell or cow was what had been intended. As for whether the alternative euphemistic 'hell' or the Heck cow might cause less distress only the reader can decide. The history of Heck cows is less than docile.

"Biggest scientific swindle of the 20th century"

When Professor Pucek said this he was not referring to any misrepresented data from a clinical trial but rather the flawed and deceitful methods used to create Heck cattle, reconstructed aurochs. Aurochs – a word adapted from the German Urochse¹, which means 'original ox' – were recent, but now extinct, ancestors of modern cattle. Hecks were developed in the early 20th century by the Heck brothers in Germany. During World War II they were promoted with extensive breeding programmes at Berlin Zoological Gardens. The Nazis supported these as part of their propaganda to recreate the ancestral cow grazing idyllically in the history of the Aryan nation. The controversy does not end here. Hecks are positioned as fulfilling the role of aurochs in the ecosystem and used in some places for low-intensity grazing systems to protect nature reserves. However it is by no means certain that aurochs lived in open landscape as there is some suggestion that they inhabited dense forests and marshes. Supporters of the surviving native Wisent (European Bison), indigenous to open areas, claim that landscape management with Hecks is a public relations ploy to raise support for Hecks at the expense of Wisent, which are a genuine native species².

¹ Thanks to Barry Drees for this information

² Source of information on heck cattle, http://en.wikipedia.org

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