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AMWA JOURNAL MISSION STATEMENT

The AMWA Journal expresses the interests, concerns, and expertise of members. Its purpose is to inspire, motivate, inform, and educate them. The Journal furthers dialog among all members and communicates the purposes, goals, advantages, and benefits of the American Medical Writers Association as a professional organization.
Leonardo Could Have Qualified for AMWA Membership. Can You?

The great Renaissance man could’ve made it on the strength of his medical writing alone. Or as an illustrator. Or simply as a medical scientist. But you can earn membership in the American Medical Writers Association by being any one of these. As well as by being an editor, librarian, clinician, medical photographer...or practically anything else connected with medical communications. The one inflexible criterion: you must share the conviction of AMWA’s current 1,500 members that clear, concise communications is a vitally important art to be cultivated and refined.

These words appeared in a 1973 advertisement in Medical Communications, a forerunner to the AMWA Journal. More than 40 years later, AMWA is now closer to 5,000 members. As we celebrate our 75th anniversary, I like to think that we continue to share that one inflexible criterion.

But how do we achieve clear communication? AMWA has long sought to raise the bar of medical communication through its educational programs, its publications, and the exchange of information, member to member. Anyone can claim to be a medical writer; the conundrum is to learn to be good at it, then to continue to work to be better.

In this issue of the Journal, we include the text from the Swanberg Address from AMWA’s 74th Annual Conference in Memphis, Tennessee. In his address, J. Patrick Barron tells his inspiring story of his decades-long efforts to improve medical communications in Japan. He has sought to bridge the language and cultural divide so that medical advances there would become known in the English-speaking world and so that, in Japan, international standards of medical research and communication would begin to be adopted.

Barron dreams of a day when AMWA will bring its educational program to Asia. “I think the response would be enormous,” he said.

Also in this issue, Tom Lang presents his point of view about challenges facing the profession of medical writing and the type of training needed to make medical writing “more visible, more distinct, more credible, and more valued.”

In his essay, Lang suggests that “scientific-technical-medical writing is distinct from literary or creative writing and from journalistic or popular writing.” You may recall that in a recent issue of the Journal, we heard from William Van Nostran, who presented a different point of view, positing that training in the humanities can serve the medical writer well (“Cracking the Medical Writer’s Genetic Code,” AMWA J. 2014;29[3]:112–117).

Despite the different perspectives, the essays of Lang and Van Nostran have much to recommend them. They both note the importance of training in medical communications. AMWA encourages lifelong learning.

Medical writers and editors operate in many different spheres. Each individual writer and editor, in fact, may be called upon to switch gears from one kind of audience, publication, regulatory document, what-have-you, to another. As a result, it can’t hurt to have diverse backgrounds represented among AMWA members or to have individual members who seek to learn the best of what various traditions have to offer. Meanwhile, Barron’s work reminds us that there is a big world out there, hungry for the information AMWA has to provide.

Some people work primarily as medical communicators, while others—scientists, clinicians, illustrators, or practically anyone else—recognize that their work would improve with excellent medical communication skills.

For any of us, however, it’s not enough to say we’re writers or editors. As the Leonardo da Vinci ad copy so wisely asserted, we must share the conviction that clear, concise communications is a vitally important art to be cultivated and refined.
Good afternoon, dear colleagues. Since time is short, I would like to immediately begin by thanking all who have been involved in my receiving the greatest award, and surprise of my life, the Swanberg Award. When I think of my predecessors over the past 60-odd years, such as Morris Fishbein, Edward Huth, Karl Menninger, Edith Schwager, Barbara Gastel, MaryAnn Foote, Art Gertel, Tom Lang, Cindy Hamilton, and too many others to mention, I can only say I am overwhelmed and truly honored. Whether I feel worthy or not is a completely different matter.

I would like to use these few minutes to give you some information about the history of medical writing in the Far East. I would also like to make just a couple of points concerning the future of medical writing in the Far East and what I hope AMWA can do, both for it and for society in general.

I have arbitrarily divided up the period from 1970 into several periods, primarily based on my own experiences since then. About 6 months after I arrived in Japan in 1969, I answered an advert for an English teacher in my university’s student center. This was from a Professor Yoshihiro Hayata at Tokyo Medical University (TMU) in Shinjuku, who had been rushed through medical school from age 16 to 19, graduating 4 months before the end of the war; he was within hearing range of the Nagasaki atomic bomb.

English education, given its status as an enemy language, had been forbidden, all foreign medical textbooks being in German, therefore Dr Hayata was completely unable to speak English or even to read it. Fortunately, I had studied Japanese intensively since arriving in Japan and was fluent enough to be hired on the spot.

Now, before I went to Japan, one of my many part-time jobs had been working in the medical library of my university in Philadelphia, and I had always leafed through the various journals and had been impressed at how it seemed only the West, especially the United States, was capable of academic medical research and figured that the rest of the world just relied on the West and used its medications, devices, or whatever.

Was I in for an eye-opener! Dr Hayata quickly introduced me to his colleagues, who were among the very top lung cancer specialists in the country. By being able to follow Dr Hayata around at conferences, I was able to obtain some grasp of the level at which they were working. I am sure that some of his colleagues considered me in the same light as when I started attending the closed US-Japan lung cancer conferences with the Japanese contingent. Several of the US attendants seemed to look at me in the way the Japanese so evocatively express as kingyo no fun—“the excrement trailing behind a beautiful goldfish.”

THE UNHERALDED MEDICAL ADVANCES OF JAPAN

By the mid-60s, Dr Hayata had performed 2 of the first lung lobar transplantations in the world, but not having access to any immunosuppressants, had discontinued his failed attempts. But nobody in the West had heard of him or the achievements of his colleagues. This is the only minuscule record of his achievements I could find—none in English (Figure 1). Also, many, including me, didn’t realize that the world’s first known surgery performed under general anesthesia was a radical mastectomy in Japan, 210 years ago—40-odd years before the first US demonstration of ether—when Hanaoka Seishu used his own personal herbal medicine lore to induce general anesthesia.
Other huge contributions had been made by handfuls of scholars of Dutch, who obtained knowledge of European medicine through Dutch texts, which were the only texts allowed in through the single trading port of Deshima during the more than 2 centuries of self-imposed national isolation (from the early 1600s to the mid-1800s): Dr Watanabe, who introduced the world’s first arthroscope 96 years ago in 1918, and Dr Komei Nakayama, a brilliant surgeon who invented, among many other devices, the gastric stapler-suture device, which markedly reduced the time of gastrectomy, around 60 years ago. I had the privilege of knowing both these gentlemen when they were still practicing. Nakayama is considered the man who made surgery an option for cancer of the esophagus and founded the International Society for Diseases of the Esophagus, for which I have been an advisor to the Tokyo office since its 1979 founding.

When I arrived, Dr Hayata’s associate professor, Dr Oho, had pioneered the fiber-optic bronchoscope, together with Dr Shigeto Ikeda. The Tokyo Medical University department of surgery was producing many of the devices that are now standard in fiber-optic endoscopy, but they lacked the linguistic ability to write them up in English.

I was hit by the unfairness of all this work and innovation going unrecognized. With some encouragement from me, Dr Hayata wrote a paper on the rejection mechanism of the 2 transplantations he had done about 6 years previously. I did the translation and banged it out on an old Olivetti portable. Now that was state-of-the-art technology! We waited 6 months after submission to the US journal, as we had no idea how long these things took; this was our first experience. Then we wrote inquiring as to the status of our paper. They said they hadn’t received it, so out with the old Olivetti again, and this time there was an immediate response: rejection because of so-called incredibly bad English.

I was extremely embarrassed, as this was the first major editing work with which Dr Hayata had entrusted me. I really puzzled about what to do and finally wrote a letter to the editor-in-chief. I thanked him for his careful review but added that if his allegation that the manuscript was written in extremely poor English were true, then this indicated there was a major problem in English language education in the United States of America. The reason for my saying this, I continued, was that I was born and bred in Britain, finished high school in the US, and completed my undergraduate degree in English literature at an Ivy League university. I asked him to kindly inform me about the mistakes in the manuscript so that I could learn to improve my English. We never received a reply to my letter, but they published the paper almost verbatim.

A PUSH FOR IMPROVED MEDICAL ENGLISH AND PUBLICATION STANDARDS

The 70s were a period in which many Japanese were finally enabled to go abroad, especially because of the strength of the yen, with resulting growth in participation in international societies, the founding in Japan of international societies, etc. Until the late 60s, Japanese could only take about $200 US out of the country, so only those lucky few with scholarships could go abroad. Things changed with the Nixon Shock of 1972, which freed the dollar against the yen, which had been set at the unchanging rate of 360 to the dollar since the end of the war. In 1974, symbolic of the outflow of Japanese medical capital, Dr Hayata founded a clinic at 14,000 feet, in Nepal, and here you see him decorated by the late King Birendra and the Queen of Nepal (Figure 2).

With this increasing international contact came increasing recognition of the need to accept international (or US) standards like informed consent and prospective randomized trials, which until then had been looked upon with suspicion. These gradually came to be accepted. This also led to the recognition of the need for regulatory writing education and the importance of organizations such as AMWA.

My own teaching career began in 1980, under the aegis of Professor Eizo Toguri, a close colleague of Dr Hayata. He was the brother of the famous Rose Toguri, Tokyo Rose.
I had always been astounded by the poor quality of English education in Japanese medical schools, and I soon realized why. There was no national standard, and, moreover, the English teachers in medical schools were those who had failed to obtain a job in a regular humanities department in a conventional university, so they were mostly incompetent and barely able to express themselves in understandable English. For the most part, they abhorred the idea of teaching anything with medical content.

However, in my youthful exuberance, I decided I would solve everything by setting up a society that would work together on producing nationwide texts and standards. So I wrote to every English language department of every university with a medical school to compile a list of those teaching English in medical schools. Then I wrote a short questionnaire, on a single page, both sides, and sent it off to each teacher with postage-paid, self-addressed envelopes. The last question of the questionnaire was, “If there were an academic group for promoting medical English language education in Japan, would you join it?”

Of the more than 400 teachers to whom I sent the questionnaire, I received about 10% of responses, and of these, only 4 people—including me—expressed an interest in forming such a group. I was so disappointed I let the matter lie for a while, but when Dr Uemura, the eminent neurosurgeon, founded the Japanese Society for Medical English Education (JASMEE) around 1990, I immediately joined.

Through that organization, I was able to help found a national exam evaluating English for medical purposes (Figure 3), but even today there is no official joint text and no standard national approach to improving language or communications in the field of medicine, and there is almost no undergraduate teaching in the field of medical publication ethics. This situation is unlikely to change unless about one-third of the national medical licensing exam questions were in English, concerning both medicine and ethics, including medical publishing ethics. Then there would be a huge motivational increase to study English and ethics. This would ensure that all Japanese medical graduates would have a modicum of English language ability and medical writing and medical English communications facility.

Even at the graduate level, there is almost no such education, nor is there any coherent education or mentoring in medical writing. Some fellow educators even call Japan “the medical education Galapagos”—which brings me to the chaos that is medical communications education and the need for ancillary staff and communications centers and education in medical publishing ethics throughout Asia. The fact that so much clinical material disappears unpublished is in fact a moral dilemma for the entire Far East. It’s not for lack of individual trying; academic systems are just not set up to support them.

One other point is the question of medical publication ethics, including conflict of interest (COI). Of course, concepts of publication ethics vary according to culture, which I hope to address tomorrow in my open session [Current Controversies in Medical Writing]. COI has attracted much attention in Japan and Korea, but still much has to be done about it.

This year, in my role as member of the subcommittee of COI in the Japan Association of Medical Societies (JAMS), the equivalent of the AMA, I was asked to report on the situation of COI management of all medical societies publishing journals in Japan. I developed a questionnaire with the help of my colleagues and sent it out through JAMS, which kindly forwarded the completed questionnaires to me. We obtained 100% response from the offices of all 118 medical journals in Japan.

Unfortunately, at present in Japan, there is no well-indexed work dealing with COI. As many of you know, the 10th edition of the AMA Manual of Style is considerably larger than the 9th edition. Much of the additional material is connected to ethical considerations. What I like about the Manual of Style is the superb indexing system, which allows you to quickly locate the areas you are having problems with and to determine appropriate countermeasures.

Figure 3. A flyer promoting a national examination that evaluates test-takers’ skills in using English for medical purposes.
This is not so in the case of the JAMS system. As a member of the JAMS COI subcommittee, I would suddenly be sent reams of material unindexed and largely unsubtitled, usually the equivalent of 150 printed pages of Japanese, and be asked to give my opinion at the upcoming subcommittee meeting in 2 or 3 days. As a result, medical society offices in Japan have been aware, especially in the last 10 years, of the fact that COI is important, but they don’t know how to handle the various problems entailed.

In fact, we asked all the secretariats if editorial board members were asked to disclose their own COI. In more than half of societies, COI self-disclosure is not required of editorial board members. This is an untenable situation. Few of the many societies publishing journals have proactive education systems for their COI committee members or reviewers. Most of them do not even make use of the Committee on Publishing Ethics flowcharts, which are relatively easy to use.

This is despite the fact that we have made available, in our free educational writing site (www.ronbun.jp), a vast amount of medical writing educational material, completely bilingual, and Japanese translations of the excellent Committee on Publication Ethics flowchart materials. This shows that a comprehensive program in COI education and development of a nationwide COI policy education program is absolutely necessary.

In 1975, not realizing that the Mayo Clinic at Rochester had beaten me to the idea by a mere 68 years, I suggested to TMU that they establish a center to promote the international acceptance of the copious amounts of research, some of it quite excellent, being done at TMU. My mentor, a man of few words, curtly replied with the Japanese equivalent of my elegant native Glaswegian patois, “We’re skint”—that is, we’re skinned to the bone (as in no money).

Nevertheless, 17 years later we established the International Medical Communications Center, and when we did, I brought the number of accepted full papers in impact factor journals from 18 to almost 400 per annum, with an acceptance rate of close to 100%. That is one reason I believe a good communications center is a must for every medical school. Editing is a particularly important, but not the only, condition to enhance the probability of acceptance of papers.

Now let us look at the actual working conditions of clinicians in Japan. In the early- to mid-80s, it seemed that Japan was on the point of developing educational systems for medical secretaries. However, then there was the advent of the personal computer. This meant that instead of hiring extra ancillary secretarial staff, senior staff expected junior staff to handle all their secretarial work using PCs.

As a result, even today, there is a serious lack of people capable of providing in-hospital clerical help, never mind advising on writing or editing. I have tried to spread the idea of the importance and the potential value of an international communications center or department that can provide in-house scientists with in-house clerical support editors who, after some experience, know what the scientists need to do and gain experience regarding various journals and techniques in publishing.

Old slides from the Mayo Clinic at Rochester, courtesy of Dr Joseph Murphy, indicate a correlation with the numbers of papers published in given fields [cardiology, gastroenterology, orthopedics, and endocrinology] and institutional name recognition value [as ranked by US News & World Report].

Japanese clinicians spend a huge amount of time on their work and are expected, in addition to their clinical work, to educate students and junior staff; do their own research work; and also write the results up in English, which has a totally different grammatical and orthographic structure compared with their own language. The burden is tantamount to inhuman. Many senior medical school staff do not realize the tremendous financial benefits that can be obtained by competent writing and editorial staff. Some things are universal!

It is my firmly held belief that the Mayo Clinic would never have developed so much if, beginning in 1907, it had not started the equivalent of a communications and publication support system through the efforts of Maude Mellish Wilson. With increased communications comes increased name value and greater likelihood of successful grant applications.

**A ROLE FOR AMWA IN ASIA**

One other point that has always puzzled me is why AMWA has not sought to develop its educational market in Asia, which is crying out for regulated guidance and leadership in medical writing, not only for regulatory affairs but also for academic papers and for CME and physician education. In addition, the advent of medical tourism will cause a huge need for improved communications education in nursing.

If AMWA were to show an interest in education in Japan, Korea, and China, I think the response would be enormous. The success of Barbara Gastel, Tom Lang, Don Samulack, and also write the results up in English, which has a totally different grammatical and orthographic structure compared with their own language. The burden is tantamount to inhuman. Many senior medical school staff do not realize the tremendous financial benefits that can be obtained by competent writing and editorial staff. Some things are universal!

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1. The fact that so much clinical material disappears unpublished is in fact a moral dilemma for the entire Far East.
MaryAnn Foote, and our Asian AMWA members in promoting medical writing in Asia testify to the effectiveness of such efforts. Many Asian freelancers would love to attend AMWA but just cannot afford to come across the Pacific to attend AMWA, spending about $3,000 to 5,000 in the process, and they would be delighted to have AMWA chapter meetings in Japan on a regular basis. Japan is well interconnected by rail, and semianual meetings would be well attended and would provide extra benefit to membership alone, especially if they included useful and effective on-site workshop programs, self-study modules, the new book on guidelines for technical communicators, and consulting expertise.

Moreover Japan, as its international relations have shown, is notoriously responsive to many forms of "gaiatsu"—that is, pressure from the outside. I believe that a comprehensive approach to leading the way in medical writing and communications for Japan, by AMWA, in combination with societies like the Japanese Society for Medical English Education (JASMEEE) and the Japanese Medical Communicators Association (JAMCA), would have far more impact, unfortunately, than say a similar effort by one single domestic society alone. I therefore leave you with the suggestion that it is ultimately good for all society to facilitate the improvement of communications in the field of medicine from the Far East—that AMWA itself would benefit enormously from this certain-to-be-welcomed approach in this area in the Far East.

But most of all, the ultimate beneficiaries will be patients for whom the flow of information will certainly lead to an acceleration of the development of pharmaceutical drugs and medical devices and to better health care.

Thank you all again for this great and unexpected award. I will try to live up to it. In closing, I would particularly like to thank my good friend Tom Lang for his support and encouragement over the years, and his excellent poster outside.

**Author disclosure:** The author notes that he has no commercial associations that may pose a conflict of interest in relation to this article.

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http://www.medicalwritingtraining.com

InQuill Medical Communications
Medical writing is not widely known, at least outside the pharmaceutical industry. Even people who have heard of it tend to think of it as “writing about medicine” rather than as “expert writers with specialized skills in communicating complex, technical information.” Here, I suggest some reasons the profession may not be as identifiable as we might like, propose a definition of medical writing, and argue that medical writing differs markedly from literary writing and journalism. Finally, I describe some advanced training that could further our development as an association of expert writers.

WHY MEDICAL WRITING MAY HAVE A LOW PROFILE


The Australian government classifies “technical writer” under “Journalists and related professions,”4 and the US government classifies it with the creative arts.3

Medical writing is a relatively new profession, in the sense that it consists of specialists whose primary task is to prepare medical communications rather than to practice medicine. Although the American Medical Writers Association (AMWA) was founded in 1940,7 its membership was limited to physician-editors of small medical journals until 1951,7 and not until the 1970s did professional communicators become a dominant group. So, given that we are not yet 50 years old in our new iteration, that we prepare documents mostly not intended for the public, and that we have fewer than 5,000 members, the relative lack of workplace and employment statistics is perhaps unsurprising.

There are no widely accepted, standard texts in the field, other than perhaps the American Medical Association and Council of Science Editors style manuals.8,9 Unfortunately, these manuals can give the impression that medical writing is limited to copyediting. I recently analyzed the contents of almost 80 books on medical writing published since 1900 and found that almost all concern preparing scientific arti-

ABSTRACT

Medical writing is not easily defined, not widely known, not well understood, and thus not always appreciated. Each of these issues is a challenge we need to overcome if we are to advance the profession. Here, I suggest some reasons for our low profile. I propose a definition of medical writing that identifies some key skills and suggest that these skills are not necessarily learned in school but require additional training. I describe some common misconceptions acquired about writing in school and assert that they need to be dispelled before medical writing can be fully appreciated. That is, if we are to develop the profession, we need to educate employers and clients about the nature and potential of medical writing. In fact, changing the way people think about medical writing is essential, not only to defining the profession but to having one. People need to know that we are not just professionals who like to write but that our knowledge, skills, and experience make us expert writers and allow us to communicate more effectively than can writers without advanced training. They need to know that scientific-technical-medical writing is distinct from literary or creative writing and from journalistic or popular writing. Finally, I identify areas we can develop to make medical writing more professional—more visible, more distinct, more credible, and more valued.

* We’re actually a craft, not a profession, but that’s a separate discussion. Besides, it would change the title to “Up Close and Crafty,” which doesn’t sound right. Or maybe it does.

† William Van Nostran and Tom Lang have been debating the relationship between English composition and medical-technical writing for some time. Neither was aware of the other’s manuscript until just before Bill’s went to press in the Fall 2014 issue of the Journal (Volume 29, Number 3), when Tom’s was already in review.

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TOWARD A DEFINITION OF MEDICAL WRITING

Scientific writing is concerned with the problems faced by scientists, technologists, and industrialists in communicating their findings. Technical writing is writing done on the job, especially in fields with specialized vocabularies, such as science, engineering, technology, and the health sciences.

Medical writing is not easily defined, other than it is a subset of technical writing (or “scientific-technical writing”; the terms vary), but definitions generally include at least 4 characteristics: it has a specific audience, a specific purpose, and a utilitarian style, and it concerns technical topics. For example, AMWA defines medical writing as writing about medical topics:

Medical communications is a general term for the development and production of materials that deal specifically with medicine or health care.

However, what distinguishes technical writing is not the topic but the specifics of how, why, when, where, and to whom these topics are communicated. I propose a more comprehensive definition:

Medical writing is the craft of efficiently and effectively communicating and documenting in words, tables, graphs, photographs, and cinematic images the information needed to develop and use health care technologies by preparing individualized and standard communications that provide specific information, formatted for a specific medium, to help a specific audience achieve a specific purpose; communications that are designed to help audiences understand, find, remember, and use this information.

This definition includes some important, if not defining, characteristics of medical writing in that it involves:

- Approaching communication as both a process and a product
- Valuing communication that is as informative, as denotationally accurate, as unambiguous, and as succinct as possible
- Documenting as well as communicating information

Medical writing is not well understood, probably because medical topics are communicated. However, what distinguishes medical writing is not the medical writing itself, but the specific characteristics that are important to its success.

There is no universally accepted definition of medical or technical writing, and this one is no exception, although I think it does identify several important characteristics.

HARMFUL MISCONCEPTIONS OF WRITING

... most universities organize the required first-year composition course as if there were an intuitive set of general writing “skills.”

There is a discrepancy between the skills being emphasized in high-school English and college composition and the skills most in need in college courses and in all professions.

Much of what people believe about writing they learn in school. In particular, 3 widely held, intertwined misconceptions can inhibit medical writing from being seen as a profession and AMWA as being an association of expert writers.
Misconception 1: The content and its written presentation must always come from the same person.31-33
A major purpose of academic writing is to improve skills in self-expression,34 so grading requires that the content and the writing come from the same student. Further, writing in the humanities (the model for many writing assignments), is generally writing about personal experience or opinion,35 which also requires the content and the writing to come from the same person. In contrast, much writing in the sciences is about describing and documenting observations and experimental activities. Separating writing from content is possible because research conducted by one person can legitimately be described by another, and it is desirable because trained writers usually communicate better than researchers do.36 This misconception may underlie the claim that medical writers are de facto ghostwriters.37-42

Misconception 2: Writing is a single, generalized skill that can be applied in any situation with equal skill.35,36,43-53
In the United States, until the mid–19th century, grammar and composition were taught through studying Greek and Latin classics. After the Civil War, anxiety about expanding higher education to the “industrial classes” led to replacing the classics with modern English literature and to grammatical correctness being viewed as a sign of social class.36,43,54 Good writing began to be seen in both society and academia as the absence of grammatical errors and good teaching as the correcting of these errors.43 Further, writing continued to be taught (mostly begrudgingly) by literature professors.36 Later, when writing instruction was divorced from the (academically “more legitimate”) study of literature, composition instructors, to survive,32 promoted writing as a generalized “skill” that was necessary “to achieve in almost any subject.”30,36,52 Thus, freshman composition came to be seen as a service course, reinforcing the idea that writing is a single, undifferentiated skill that could be refined in college English classes but that was supposed to be adequate after high school.36,38,52 Fortunately, most colleges no longer approach writing this way, but the misconception persists.29

Misconception 3: Writing well in school means that one can write well in the sciences without additional training.30,32,43,49,50,55,56
In school, we usually learn how to write for one person (the instructor), who often knows more about the topic than we do, who has no need to use the information that we provide, and who can answer in advance specific questions about his or her expectations of the assignment.31,34,55,56

These conditions differ greatly from those in medical writing, where the audience may be a few to a few thousand people who know less about the topic than the writer does and who have to use the information the writer provides. In addition, good writing includes identifying the appropriate audience, purpose, topic, and form of the communication, and “good” is determined by what readers are able to do with what they read, not by the efforts of the writer or the qualities of the text.30,36,57
Writing under these conditions requires a different set of mental processes than those needed to complete most academic writing assignments.34,36,50

This misconception is the most problematic because it does not acknowledge that medical writing has a knowledge base and skill set that are both different from and more advanced than what is taught in school. If employers and clients assume that they know pretty much what we know about writing,56 our perceived value may be more related to what others don’t want to do than to what we can do that they cannot. This perception undervalues the profession, if it acknowledges the need for the profession at all.

Fortunately, these myths are not part of current, informed composition instruction.47,53,59,60 Further, the purpose of writing instruction in school is not to develop expert writers, outside of specific programs to do so. Few professors have the time,35,60,61 training,32,53 or desire61,62 to teach writing. Most assignments are unrelated to those encountered after college,29,31,34,35,50,61,63,64-66 and students typically do not write enough to develop true expertise.34,53,59,62-64,67-69

These circumstances mean that AMWA has an opportunity—if not an obligation—to provide the additional training necessary to create expert medical writers.

SCIENTIFIC–TECHNICAL WRITING AS A DISTINCT TRADITION OFWRITING

[From an authority in composition instruction] “I once had to advise a new TA . . . that a course theme of ‘refrigeration’ was too narrow. . . . On the other hand, one of the course themes I’ve used lately for academic writing courses is Locating Self in Landscape.”65

Science demands great linguistic austerity and discipline, and the canons of good style in scientific writing are different from those in other kinds of literature.70

I distinguish 3 general traditions of writing: that from the humanities (including writer-centered academic assignments and creative or literary writing), that from the sciences (scientific-technical writing), and popular writing (writing for newspapers or magazines; Table). These traditions overlap in some applications (Figure), and the distinctions are not always clear. However, they do have differences that can help define us.18
Table. Characteristics of Three Traditions of Writing

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Literary, writer-centered academic, or creative writing</th>
<th>Popular writing/journalism</th>
<th>Scientific-technical-medical writing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Document types</strong></td>
<td>Novels; poems; essays; term papers; short stories; personal narratives; biographies; songs; plays; etc</td>
<td>For newspapers and magazines: local, national, and international news stories; features stories; editorials; columns; reviews; news releases</td>
<td>Regulatory documents; scientific articles; technical reports; training materials; instruction manuals; grant proposals; letters; business communications</td>
</tr>
<tr>
<td><strong>Purpose of writing</strong></td>
<td>General: to entertain, enthral, evoke, soothe, challenge; inform</td>
<td>General: to report and comment on “news”; to inform; to entertain</td>
<td>Specific: to provide targeted information to help a specific audience accomplish a specific task</td>
</tr>
<tr>
<td><strong>Readers</strong></td>
<td>Usually general; a heterogeneous public but often differentiated by genre (eg, juvenile fiction; humor)</td>
<td>Usually general; a heterogeneous public but often differentiated by market sector (eg, business; fashion)</td>
<td>Usually more specific; more homogeneous and targeted to roles in an organization or profession</td>
</tr>
<tr>
<td><strong>Elements used to communicate</strong></td>
<td>Writers use primarily words; others may provide artwork or graphic design, with or without input from the authors.</td>
<td>Writers use primarily words; tables, visuals, and graphic design may be contributed by others, with or without input from the authors.</td>
<td>Writers use primarily words, tables, graphs, and images and usually have substantial input into their content and form.</td>
</tr>
<tr>
<td><strong>Qualities of the content</strong></td>
<td>Text must engage readers, usually in both content and presentation (style).</td>
<td>Text must engage readers, usually in both content and presentation (style).</td>
<td>Text must provide information needed by readers to perform their tasks.</td>
</tr>
<tr>
<td><strong>Qualities of the presentation</strong></td>
<td>Writing must be engaging so readers enjoy the act of reading; the words themselves are part of the art; the writer’s style is often an essential part of the text.</td>
<td>Writing must be engaging so readers enjoy the act of reading; journalists may develop reputations; magazines and newspapers develop readership</td>
<td>Writing should be so transparent that the reader is not aware of the act of reading; content is more important than a writer’s expression of it.</td>
</tr>
<tr>
<td><strong>Motivation to read</strong></td>
<td>Reading is optional, so the text must therefore be interesting; sensationalism can be a value; readers self-select.</td>
<td>Reading is optional, so the text must therefore be interesting “depth of read”; sensationalism can be a value; readers self-select.</td>
<td>Reading is often required de facto or even assigned, although readers often self-select; the topic is of interest; sensationalism is incidental.</td>
</tr>
<tr>
<td><strong>Evaluation criteria</strong></td>
<td>How well readers enjoy what they read; popularity over time of the text; literary critics evaluate the text</td>
<td>How well readers enjoy what they read; financial success of newspaper or magazine; journalism critics evaluate the topics covered and how well they are covered</td>
<td>How well readers understand, find, remember, and use information; usability testing of readers evaluates how well the text accomplishes these goals</td>
</tr>
</tbody>
</table>

Writing in the Tradition of the Humanities: Academic, Creative, or Literary Writing

Writing in the humanities is largely concerned with writing about the human experience. It offers enjoyment, insight, and emotional release and often has evocative or artistic qualities. In school, drafting personal-reaction essays, book reports, short stories, and term papers helps students understand their experience, values, and reasoning as they formulate their thoughts in writing. This tradition also produced the classical forms of discourse (exposition, argument, description, and narration) and of rhetoric, the principles of which are applicable to medical writing. Expository writing in broad terms includes popular and scientific-technical writing, although these forms are now distinct traditions.

Writing in the Tradition of Popular Writing: Journalism and Magazine Writing

Broadly, popular writing for newspapers, newscasts, and magazines is writing designed to appeal to current taste or public interest. It usually involves writing for a wide, general audience or for more homogeneous market segments about news, current events, or popular topics, and it is generally distributed through the mass media. The primary purpose of journalism is to sell newspapers, magazines, or airtime, albeit with (mostly) good reporting, careful analysis, or skillful story-telling. News stories may provide readers with information that they may or may not use in decision-making or to take action but generally not in how to use a specific technology. Popular writing can, however, combine all 3 traditions in the same publication.
or program: fiction (“The fish that got away”), news (“What is Madonna doing now?”), and how-to articles (“Choosing your next car”).

Writing in the Tradition of the Sciences: Scientific—Technical Writing

In addition to the characteristics proposed earlier, scientific—technical writing has some other attributes that are generally not found, at least to the same degree, in literary or popular writing:

• The information is almost always factual or speculation based on facts.22,80
• The information in the text is more important than the author’s “style” or expression.20
• Writing that is misunderstood, misdirected, missing, or inaccurate can have substantial adverse personal, organizational, and economic consequences.75,69,81-85

Despite the fact that these traditions have their own educational and career tracks, their differences do not prevent someone from excelling in all 3, but they do mean that each requires unique training to do well. Also—critically—the conventions in one tradition do not always apply in another. In medical writing, we don’t need to tell “stories,” require engaging “writing styles,” “spice up” leads to create interest, or worry about “spatial and economic inflections on genre change.” We just need to give readers the information they want.

HOW WE CAN ADVANCE THE PROFESSION

“There is clearly a difference between competent writing and sophisticated writing.”50

“Those who can, do. Those who can do better, teach.”86

Medical writers generally know what our audiences look for, what information goes where, and what standards are required of the finished communication. Developing or refining several skills can make us even more effective.

Developing Advanced Writing and Editing Skills

Writing is a largely unnatural skill that must be explicitly taught and learned.59,87,88 At the same time, the universal (if understandable) criticism of writing instruction is that not enough time is devoted to it.20,46,50,59,60,66,83,87,88 Teacher expertise is also a key factor in student success.59,60,66

Just as experienced physicians “attend” to different aspects of a patient than do residents, experienced writers attend to different aspects of written communication than do less-experienced writers. One way to learn what experts attend to when writing is through apprenticeships, which I propose AMWA begin to offer. Such apprenticeships would be built around analyzing, in great detail, every word, punctuation mark, and sentence of a text.89-92 Such training can greatly improve writing and editing skills.59,65,89

The training would be more individualized (one-on-one or one-on-two) and hence more intense than our 3-hour workshops. In my experience (in both roles), it takes fatigue to replace old habits of thinking with new ones, so sessions would ideally take hours with few breaks. Participants could take as many sessions as they like, at regional and national conferences, by teleconference, or even by email, with probably tens of hours required to develop marked and lasting expertise.

These apprenticeships could involve many senior members and, in fact, might keep them involved in the Association longer. Especially because of the absence of standard texts, the knowledge and skills of medical writing held by our senior members is the core of the profession, and apprenticeship is one way to pass these skills along.

Applying Written Communication Theories and Research Findings

Research findings from psycholinguistics, cognitive psychology, human factors research, readability, English composition, organizational communication, and instructional design constitute a knowledge base and a skill set that, if mastered, would allow us to do more than what we learned in school.51-99 Indeed, it’s hard to imagine a profession whose members are unaware of the research that supports their practice.

Meeting the Needs of Evidence—Based Medicine

Evidence-based medicine depends on properly documented, published research. Learning to evaluate and correctly document research designs and activities and statistics (what I call analytical editing25) would make us more professional. The demand for properly documented research is great, and journals and regulatory agencies increasingly require that specific guidelines (such as those on the EQUATOR website) be met. This demand is an incredible opportunity for us to develop and market a new and valuable expertise. A certificate in writing and editing for evidence-based medicine would have real meaning and value to clients and employers.

Consolidating the Knowledge About Medical Writing

Books on medical writing are essentially limited to preparing scientific publications, and most devote a substantial number of pages to basic composition skills. As a group, these books present a skewed, limited, and unremarkable view of medical writing. One way we can define the profession is to publish books on key topics, such as preparing regulatory documents or writing collaboratively. Our self-study manuals are excellent examples. A library of such manuals would be an invaluable
resource for prospective and practicing medical writers, as well as create and preserve the corpus of the profession. 36

CONCLUSIONS

Each of us represents all of us in our professional roles as medical writers. Thus, building consensus on what we do, what we know, and how our training and skills differ from those acquired from conventional writing instruction is essential to defining and establishing us as a profession and as an association of truly expert writers.

Author disclosure: The author notes that he has no commercial associations that may pose a conflict of interest in relation to this article.

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References


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I n 2012, the Food and Drug Administration Safety and Innovation Act (FDASIA) was signed into law. In addition to reauthorizing and amending several drug and medical device provisions, FDASIA required the Food and Drug Administration (FDA) to provide guidance for industry (pharmaceutical and medical device companies) about the use of social media to promote regulated medical products (both drugs and medical devices). At that time, the FDA agreed to the development of guidances on the following topics:

- Fulfilling regulatory requirements when using social media platforms that have character or space limitations
- Fulfilling all postmarketing submission requirements when using social media platforms, including the use of Internet links
- Defining the kinds of online communications that manufacturers, packers, or distributors are responsible for
- Correcting online misinformation from independent third-party sources

In 2014, the FDA’s long-awaited response came in the form of 3 industry guidances aimed at helping companies and their representatives accurately communicate online about their medical products. These guidances focused on social media concerns about the promotion of medical products regulated by the FDA, the correction of independent third-party misinformation about medical products, and the presentation of risk and benefit information for medical products via social media platforms (eg, Twitter, Google search engine, and Yahoo search engine) that have character space limitations.

For medical writers, these guidances couldn’t have come at a better time. Engaging in social media was a hot topic in 2014, not only at the AMWA annual conference, but also at the DIA (Drug Information Association) annual meeting. Understanding the FDA’s current opinion about online communications, in addition to following AMWA’s Code of Ethics, enables medical writers to be conscientious about the information they broadcast through social media and the effect this may have on clients, employers, and consumers. This article highlights some of the key aspects of the FDA guidances and what they mean to medical writers.

Interactive Online Promotional Materials

In January, the first draft guidance outlined new requirements regarding submission of interactive online promotional material to the FDA and pointed out the rights and responsibilities of companies when using the Internet. Key points of the guidance cover who is responsible for the online content, which parts of the online content are required to be submitted to the FDA for approval, and when submission of this information is required (Figure 1).

There are 2 situations that require submission of postmarketing material to the FDA:

1. A company is responsible for the submittal of static and interactive promotional material to the FDA that is managed by the company.

2. A website is considered to be “managed” by a company if it “is owned, controlled, created, influenced, or operated by or on behalf of a company.” This includes content found on third-party websites. In other words, a website is considered to be managed by a company if it collaborates on the promotional material placed on the website, or the company edits, reviews, or has review privileges of such material, even if such activities are limited in scope. Additionally, financial support of the website alone, without the ability to manage the website, does not necessarily indicate control and/or influence. Therefore, if a company does not meet the requirements for “managing” the website, it is only responsible for submitting the promotional content the company provided to the website.

By Jennifer Minarcik, MS / Freelance Science and Medical Writer, Moorestown, NJ
Figure 1. New submission process and timing of interactive promotional material.3

Figure 2. Correcting independent third-party misinformation.5

Misinformation on Internet/Social Media Platforms

In June, the second draft guidance was released shedding light on how companies can respond to misinformation related to their own FDA-approved products created or shared by an independent third-party through the Internet/social media (Figure 2).4 The FDA defined “misinformation” as both “positive or negative incorrect representations or implications about a firm’s product.”4

The FDA clearly stated that correcting misinformation is voluntary.5 If a company decides to correct the misinformation, it must be truthful and not misleading. In addition, the company may remove the misinformation or request that the third-party remove the misinformation.

The FDA further recommends the following to companies:4

- Be relevant and responsive to the misinformation
- Limit and tailor responses to the misinformation
- Remain nonpromotional in nature, tone, and presentation
- Ensure that corrective information be accurate and consistent with FDA-required labeling for the product
- Support corrective information with sufficient evidence

The FDA acknowledged limitations within this guidance. Companies are not expected to correct all of the misinformation on the Internet.4 However, when correcting misinformation, companies should clearly identify what they are correcting and where the misinformation was found. In addition, companies should address misinformation that is both positive and negative in tone about their product to remain fair and balanced.

In the event that a third-party does not remove or correct misinformation after a company has notified it of its error, the FDA states that it will not hold the company responsible for the misinformation.4 Rather, the company is to keep a close and accurate record of all attempts made in contacting the third party about the misinformation.

(2) A company is responsible for the user generated content (UGC) of an employee or agent who is acting on behalf of the company.3

The FDA suggested that if an employee or agent of a company comments on a third-party website about its product, the company is responsible for the content.3 An agent is defined as anyone acting on behalf of the company, which includes direct employees, contractors, and subcontractors.

What Does This Mean to Medical Writers?

The guidance is especially important to medical writers who engage in social media on their own personal websites because a company is considered to be responsible for the content on a writer’s website if the writer is “acting as an agent” for the company—even if the company does not meet the criteria for “managing” the website. In addition, medical writers should be cognizant of the limitations they face, both legal and ethical, while writing an independent blog or posting online content. Some courts have held that medical writers who blog are entitled to the same free speech protections as news journalists. However, medical writers have unique ethical responsibilities, such as being a “part of the checks and balances on the transmission of information on therapies and medical issues.”9 Moreover, the first principle in AMWA’s Code of Ethics recommends that writers “recognize and observe statutes and regulations pertaining to the materials they write, edit, or otherwise develop.”10
Implications for Medical Writers
All medical writers are charged with writing good material that is clear, concise, accurate, and honest. Furthermore, a medical writer’s online content should communicate relevant, correct, and truthful information to its readers. The communication of untruthful, inaccurate health-related information runs rampant over the Internet. This is a serious problem for the healthcare industry because surveys have shown that most Americans search the Internet to find answers to health-related questions. It is the duty of a medical writer to make every effort not to contribute to this problem. When communicating medical information on the Internet, following the FDA’s recommendations for correcting misinformation is an excellent way for medical writers to remain truthful and accurate.

Internet and Social Media Platforms with Special Considerations
In the third and final draft guidance of the year, the FDA addressed company participation on Internet and social media platforms that have character space limitations, e.g., Twitter and online paid searches. The concern of the FDA has been that a post on a Twitter account could result in “misbranding” if the communication represented a product’s use without disclosing the product’s risks. The key takeaway from this guidance was that regardless of character space limitations, risk and benefit information must be balanced to ensure compliance with the Food, Drugs and Cosmetics Act. If a company cannot provide all the risk and benefit information because of space limitations, the FDA recommends the company should reconsider participating on the platform.

In an effort to work together with the companies, the FDA did agree to the use of abbreviations and concise text in the online communication (i.e., Tweet) only when a “prominent” reference is attached (via a hyperlink) to allow consumers direct access to risks associated with a product (Figure 3).

In the interests of fair balance, the FDA recommends that companies:
• Ensure products that require risk information include presentation of actual risks and not merely a link to risk information
• Ensure existing product websites include a page dedicated to the presentation of risk information
• Establish obvious URLs for pages dedicated to product risk information (not shortened URLs)
• Review product indication and risk profiles to determine whether information CAN be developed for use in space-limited contexts

What is the Medical Writers’ Responsibility?
AMWA’s 2nd principle in its Code of Ethics states “Medical communicators should apply objectivity, scientific accuracy and rigor, and fair balance while conveying pertinent information in all media.” By applying this principle and following the FDA’s recommendations in this guidance, medical writers can participate on these types of social media platforms without fear of negatively affecting their employers’ or their own reputations when discussing product information.

Thoughts and Future Direction of the FDA
The FDA continues to work toward understanding the Internet and its evolving technology. Thomas Abrams, the director of the FDA’s Office of Prescription Drug Promotion, remarked in a blog post that the 2 draft guidances issued in June were aimed at ensuring that “the information provided by drug and device companies is accurate and will help patients to make well-informed decisions in consultation with their health care providers.” He further explained these guidances were the FDA’s current thinking on social media, “not the final word, but rather a work in progress.”

Moving forward, the FDA plans to continue reviewing the ever-changing social media landscape, develop new approaches to help companies communicate with consumers via the Internet, and create best practices that can be applied to existing websites.
Takeaway Message for Medical Writers

It behooves medical writers interested in blogging and participating in social media to be knowledgeable of both the AMWA Code of Ethics and the FDA’s current opinion since there is an overlap in their guidances. Acting in accordance with one of the above organizations usually satisfies the other. In conclusion, when writing a blog post or engaging in social media it is important that the medical writer recognize and observe the statutes and regulations pertaining to the content of the blog or post. This in turn provides the writer with all of the necessary information to communicate his or her message appropriately.

Author disclosure: The author notes that she has no commercial associations that may pose a conflict of interest in relation to this article.

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References

CALL for PAPERS

The AMWA Journal is seeking contributions of carefully conducted, up-to-date reviews of topics of interest to medical communicators.

Send article queries to JournalEditor@amwa.org.
San Antonio, Here We Come!

By Noelle H. Demas, MS / 2014–2015 Annual Conference Administrator

This year, we will be celebrating AMWA's 75 years of leading and polishing medical writing, in a quest toward brilliance that will lead us to San Antonio, Texas. This city, with its historic Wild West backdrop, was named No. 3 on Condé Nast’s 2014 list of top 10 friendliest US cities and is known for its landmarks like the Alamo, the San Antonio River Walk (pictured above), the Tower of the Americas, and the River Center Mall, all of which are within walking distance of AMWA’s conference hotel, the Grand Hyatt San Antonio.
CONFERENCE PROGRAMMING
The Annual Conference Committee has been creating innovative programming that meets the needs of our diverse membership. And once again, the committee has reached well beyond AMWA to solicit speakers with unique expertise of value to AMWA members and other medical communicators.

Many of last year’s sessions were highly interactive, and we have continued that trend by asking speakers to develop sessions that involve attendee participation. In addition, we are offering a wide variety of session topics.

The final list of open sessions according to topic area (track) will be posted on the AMWA website to make it easier to see the value in attending and to create your conference schedule. Look for the list of sessions in the next few weeks.

CONFERENCE SCHEDULE
The Annual Conference Committee and AMWA headquarters continue efforts to develop an attractive conference schedule that addresses the needs of conference attendees.

Come early or come late, you will have access to an outstanding array of educational and networking events. You can find the preliminary schedule-at-a-glance on the AMWA website.

Award Lectures
By popular request, we have scheduled a general session with an award lecture for Thursday morning and a general session with an award lecture on Saturday morning. We are thrilled and honored to announce the recipients of this year’s McGovern and Alvarez awards.

The 2015 Walter C. Alvarez Award winner is Jay Ingram. Jay Ingram is one of Canada’s best-known and most popular science personalities. Ingram has hosted both of the premier radio science program in Canada, CBC’s “Quirks and Quarks,” and its TV counterpart, Discovery Channel Canada’s “Daily Planet.” In 2010, Ingram was appointed as a member of the Order of Canada for a lifetime of service in science communication. He has received several awards for his work, including the Queen Elizabeth II Diamond Jubilee Medal and honorary degrees from Carleton University, McGill University, McMaster University, King’s College, and the University of Alberta.

A prolific author, Ingram has written 12 books, most of which have been best sellers. His 13th, The End of Memory: A Natural History of Alzheimer’s Disease, is due out later this year. His books have been translated into 14 languages.

Since 2005, he has been chair of the Science Communications Program at the Banff Centre. He is also cofounder and chair of Beakerhead, an annual weeklong series of events in Calgary that “advances the understanding of science and engineering as part of everyday life – through art and culture.”

The 2015 John P. McGovern Award winner is Ivan Oransky, MD, the vice president and global editorial director of MedPage Today, cofounder of the MacArthur Foundation–funded Retraction Watch, and founder of Embargo Watch. He previously was executive editor of Reuters Health and held editorial positions at Scientific American and The Scientist. His publications have won numerous awards, including 2 Gold Eddie Awards for science magazines from FOLIO and the Magazine of the Year Award from the American Society of Business Publication Editors. He has authored or coauthored 4 books and written for numerous publications, including the Boston Globe, the New Republic, The Wall Street Journal Online, The Lancet, and The New York Times.

Dr Oransky earned his bachelor’s degree at Harvard University and his medical degree at New York University School of Medicine. While a student, he served as executive editor of the Harvard Crimson and as co-editor of the medical student section of the Journal of the American Medical Association.

In addition to his work as a medical writer and editor, Dr Oransky teaches medical journalism at New York University’s Science, Health, and Environmental Reporting Program, and he is a clinical assistant professor of medicine at New York University School of Medicine. Dr Oransky currently serves as vice president of the Association of Health Care Journalists.
CONFFERENCE SCHEDULE (CONT.)

Extended Exhibitor Schedule
In response to member feedback, we are extending the number of days the exhibitors are in the exhibit hall, from 3 to 4, so that everyone has more of a chance to visit them and also to encourage exhibitors to join in the dinner celebration of AMWA’s 75th Anniversary.

Sablack Awards Lunch
The Annual Conference Committee feels strongly that every attendee should be able to attend the Swanberg Award lecture given at the Sablack Awards event, so once again this important event has been scheduled as a free lunch on Friday. The Sablack Awards Lunch is another great networking event for all attendees, adding to the value of your conference registration fee.

Friday Night Dine-Arounds
Friday night will once again be a free night for conference attendees to get together and enjoy the nightlife of the host city. Attendees can sign up to enjoy live music venues, wine bars, martini bars, and much more along the San Antonio River Walk. The sign-up sheet tables will be near the conference registration desk.

First Certification Examination
The first Medical Writer Certification (MWC) examination will be offered in the morning on Wednesday, September 30. See page 26 for more details about the certification examination.

Speed Networking
By popular request, the Speed Networking session will again be offered at the conference. Get your elevator speeches, business cards, and questions ready for this fast and efficient networking session. We plan to schedule this event early in the conference so you can follow up in the following days with your most interesting connections.

75th Anniversary Celebration Dinner
On Saturday evening, join your fellow conference attendees in a fun and energetic 75th Anniversary Celebration Dinner. This upscale buffet dinner, free with registration, will be in a setting that allows for lots of networking, so do not miss it.

Your Feedback in Action
We want you to know that we’ve heard you. The Annual Conference Committee and AMWA headquarters listened to your feedback. The results of the 2014 postconference survey were important in developing this year’s program. Our goal is to create a conference that offers you professional development content of the highest quality at a great value. Make sure you keep the new conference schedule in mind when making your travel arrangements and hotel accommodations. You can reserve your hotel room now on the AMWA website (www.amwa.org/2015_hotel_and_travel). The conference registration brochure will be available on the AMWA website in mid-June, and conference registration will open in early July.
As AMWA begins our 75th year, we invite you to celebrate the history of AMWA, to uphold the association’s tradition of defining medical writing excellence, and to build a bright future together.

**Our experience. Your future.**

**HISTORY IN THE MAKING**

75 years ago, AMWA created a new community of like-minded professionals interested in promoting standards of quality and effective medical communications. Join us in taking a look back to honor 75 years of educating, supporting, and connecting the medical writing community in pursuit of excellence.

**EVERYBODY HAS A STORY**

Why did you become a member of AMWA? What was your favorite part about your first AMWA Annual Conference? Tell us how you became a member of AMWA and compare notes with fellow members in the Online Forum. From the AMWA homepage, click on “Exchange Ideas” in the Community box, and you will arrive at the forums. AMWA’s 75th Anniversary Forum is listed first.

**LET’S PARTY!**

AMWA’s 75th Annual Conference will be the culmination of our anniversary celebration. Make plans to participate in our Quest toward Brilliance, September 30–October 3, 2015, in San Antonio, TX. Watch for the news about the conference throughout the year and register early so you don't miss the party.
The Medical Writing Certification Examination has officially launched, and applications are being accepted for the first exam date—September 30, 2015, in San Antonio (the day before the main programming of the annual conference begins). The exam is intended to identify persons who have the degree of competency and knowledge that is considered essential for the work and responsibilities of a medical writer, regardless of the setting. To be eligible for the exam, a candidate must have a bachelor’s degree in any field of study and a minimum of 2 full-time work years or equivalent within the previous 5 years in a paid capacity in the field of medical writing. Membership in AMWA is not required.

If you are considering applying to sit for the exam, you should read the Medical Writing Certification Applicant and Candidate Handbook, which can be found online at amwa.org/mwc. The handbook includes detailed instructions about eligibility requirements and examination policies. To apply, you will need to provide 2 letters of reference from individuals who can document your previous or current relevant work experience and a university transcript. If after you have reviewed the candidate handbook you are still uncertain whether you meet the eligibility requirements, you can email the Certification Commission at certification@amwa.org.

To sit for the September examination, the deadline for applications is June 30, 2015, so it is important to read the handbook soon to learn the specific requirements if you wish to sit for this exam.

Why Become Certified?
By obtaining the Medical Writer Certified (MWC) credential, you can enhance your professional credibility and give an employer or client increased confidence in your knowledge in core content areas specific to medical writing, as certified by a third-party, standard-setting organization. Certification also shows a high degree of commitment to continued professional development in the field of medical writing. In addition, those who earn the MWC credential are required to adhere to a code of ethics and professional standards. All of these factors may increase your marketability and opportunities for career advancement and higher earnings. Also important is the personal satisfaction you will gain from passing the exam and being granted the MWC credential.

What’s in the Examination?
The Medical Writing Certification Examination is based on the results of a job analysis survey of medical writers that was completed in 2012. The examination is also based on the definition of a medical communicator, as developed by an AMWA task force and found on the AMWA website:

Medical communicators write, edit, or develop materials about medicine and health. They do this by gathering, evaluating, organizing, interpreting, and presenting information in a manner appropriate for the target audience. Professional medical writers also have communication expertise, awareness of ethical standards, and health care knowledge.

From the job analysis, a content outline for the exam was developed that delineated the core competencies (ie, knowledge, skills, and abilities [KSAs]) of professional medical writers.1,2 (You can find the entire content outline in
the handbook.) The KSAs were then divided into 5 domains derived from AMWA’s definition of a medical writer, i.e., gathering, evaluating, organizing, interpreting, and presenting. The exam questions address all 5 KSA domains according to rankings of importance indicated by the survey data and are presented in the context of different types of medical writing, such as:

- Patient education brochures, news articles, Web content, and books for the general public
- Journal articles and continuing education monographs for health care professionals
- Regulatory documents for government agencies
- Grant proposals for research scientists and institutions
- Sales training and marketing materials for the pharmaceutical industry

How Do You Prepare for the Examination?
Reviewing the content outline is the best way for you to decide whether you have the core competency and skills addressed in the Medical Writing Certification Examination. Work experience should provide many of the needed skills. However, the exam will cover broad aspects of medical writing, so additional review may be necessary for medical writers who are unfamiliar with a particular type of medical writing found on the content outline. For example, if you are unfamiliar with regulatory writing or grant writing, you can prepare in those specific areas before taking the exam. You might review content from the references listed in the resource list in the handbook or from other resources that cover the content areas, including those from a more comprehensive list on the AMWA website (www.amwa.org). Additional opportunities for learning new content or reviewing material for the exam could include attending workshops at an AMWA annual conference or chapter conference, or attending meetings of other organizations.

The timed exam (2.5 hours) is composed of 125 multiple-choice questions and is administered by paper and pencil. You can find example questions in the handbook that will not be included on the exam but that are representative of the types of content and questions that may be included.

Remember that you do not need to get every question correct to pass the examination and are not expected to answer all questions in all topic areas correctly. Areas with which you are more familiar are likely to make up for areas in which you may be less knowledgeable. While study preparation in all section areas is recommended, you should prepare based on your assessment of where you are stronger or weaker in knowledge or experience, remembering that the exam is designed to assess core competencies.

The Future
We believe that the Medical Writing Certification will have an extremely positive impact on our profession. The certification program will help to define and establish standards for essential competency in medical writing and will add to the available tools that enable individuals to demonstrate knowledge relevant to the profession. The commission looks forward to granting the first MWC credentials this fall!

References
American Medical Writers Association

By Christine F. Wogan, MS, ELS / AMWA Treasurer and Publications Program Manager, Division of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX

I am pleased to provide this annual financial report for the American Medical Writers Association (AMWA), which operates on a fiscal year from July 1 to June 30. As of June 30, 2014, AMWA had generated $1,904,774 in revenue (including $181,818 in net investment revenues) and $1,718,673 in expenses, resulting in an excess of revenues over expenses totaling $186,101.

Financial Performance Trends
The organization’s revenue sources for the fiscal years that ended in the middle of 2011, 2012, 2013, and 2014 (Figure 1) reflect a stable organization, with more than 80% of revenues coming from membership, the annual conference, and the certificate program.

Figure 1. Sources of revenue for the previous 4 fiscal years.
“Other” includes income from advertising and sales of self-study modules.

A slight increase in membership dues each year accounts for the revenue growth in that category. Revenue from the annual conference remains relatively flat, but revenue from the certificate program and onsite training has shown a slight increase. The minimal investment income in 2012 reflects the market performance during that period.

Expenses for 2013–2014 were lower than those of the previous year (Figure 2). The increase in expenses during 2011–2012 primarily reflects development costs for the organization’s certification program and a period of transition in which AMWA’s current executive director came on board before the departure of the previous executive director to ensure the organization’s stability. Despite increased investments in enhanced member services and educational offerings in both 2013 and 2014, the association was able to bring expenses down by 4.5% in 2013 and by an additional 5.3% in 2014 by restructuring headquarters staff positions and implementing operating efficiencies.

Figure 2. Expenses for the previous 4 fiscal years.

AMWA is actively investing in products and services that bring value to the medical writing community. Implementation of the certification program and enhanced educational offerings, particularly online products, will require a continued investment of resources. Consistent with
the approved budget for the current fiscal year (June 1, 2014, through December 31, 2015). AMWA has committed to spend up to $96,150 more than the current year’s expected revenue to fund these initiatives.

**Reserves**

Reserves are the accumulation of funds over time that enable the organization to withstand an emergency or to invest in new programs (Figure 3). Unrestricted reserves of 6 to 12 months of annual operating expenses represent a standard target for not-for-profit organizations. With budgeted annual operating expenses of $1,903,450 for the fiscal year from July 1, 2014, to June 30, 2015, the target for AMWA’s reserves ranges from $951,725 to $1,903,450. AMWA’s current reserve level of $1,495,590 remains comfortably within the target range.

**Conclusions**

AMWA continues to be in a secure financial position. The future of the organization depends on a stable membership base and growth in our educational offerings. Targeted investment in these areas began in fiscal year 2012–2013 and will continue into fiscal 2015–2016.

**Acknowledgments**

I thank Vickie McCormick of Calibre CPA Group PLLC for providing the financial data and the members of the 2013–2014 Budget and Finance Committee for their invaluable insights in their review of reports and budgets during that year: Mary Alice Ditzler, Jane Krauhs, Leslie Netsidot, Judi Pepin, Deb Whippen, and Jeanie Woodruiff (and ex officio members Brian Bass, Karen Klein, and Susan Krug).

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**Making Sense of the Dollars**

2015 AMWA Salary Survey

Grab your W-2 or your profit-and-loss statement and get ready to participate in the 2015 AMWA Salary Survey. Over the past 26 years, AMWA’s periodic salary surveys have served as the most dependable sources of information for employers of medical communicators to set salary ranges and for employees and freelances/independent contractors to negotiate salaries and fees.

AMWA enhances each salary survey by adding questions that will capture new and interesting data while retaining key questions to allow comparison of the results with those of previous surveys. This year, the AMWA Salary Survey Task Force reviewed the questions from the most recent survey (2011) and streamlined them for clarity and a better reflection of today’s work environment. The task force also developed a survey prep guide to help you get ready to take the survey; the guide will be available at [www.amwa.org/salary_surveys](http://www.amwa.org/salary_surveys). Armed with the guide, you will need only about 10 minutes to complete the survey.

For the first time, AMWA is inviting medical communicators outside of AMWA to complete the survey. Broadening the base of respondents will provide more data across medical communication settings, with the potential for even more meaningful results.

Don’t be left out of this important project that will help prove your value in dollars to your boss or your clients. Take the survey today. And encourage your colleagues—AMWA members or not—to complete the survey. You can also enter to win a prize in a drawing.

For more information and to participate in the survey when it launches, visit [www.amwa.org/salary_surveys](http://www.amwa.org/salary_surveys). The 2015 Salary Survey will be available until April 24.
Note from the President

What Else is New?

Karen Potvin Klein, MA, ELS/ 2014–2015 AMWA President

I write this note at the beginning of a new year, and it’s no surprise that AMWA staff and volunteers are demonstrating their characteristic dedication and energy. Here, I’d like to fill you in on some of their work in progress.

The Annual Conference Committee, led by Noelle Demas, has already lined up an intriguing slate of distinguished speakers for the 2015 Conference in San Antonio (September 30 to October 3). They’re also working on a slate of vibrant and varied Open Sessions. Since these are free with a conference registration, they are an incredible value to our members. If you’d like to engage in a focused discussion with your AMWA colleagues, you will want to consider the roundtable offerings (for a small fee). Roundtables are also a great way to start as an AMWA presenter, so do keep that in mind for future years.

If you are leading a roundtable this year, check out the tips and inspiration and motivation. from the “Roundtable Leader Junkies” at our website for some help with the process. Roundtables are an AMWA presenter, so do keep that in mind for future years.

Other group of volunteers well on their way with their tasks is the Medical Writing Certification Commission. As you can see on pages 26-27 of this issue, the commission has announced the opening date for applications to sit for the inaugural medical writing certification exam, which will take place in San Antonio at the annual conference. What you may not realize is the amount of behind-the-scenes work that was needed to get to this point. The commission has updated members regularly on its activities, but when you read the major accomplishments all together, they’re even more impressive.

For example, policies and procedures for applicants were needed. So minimum qualifications, the process of applying, fees, and guidance for prospective exam-takers all had to be created and determined via consensus. AMWA’s lawyer was consulted to be sure that we were following best practices in setting certification policies. The Commission decided on the acronym MWC (Medical Writer Certified) to identify those who pass the exam, and they also approved logo designs. And finally, the questions for the exam have been painstakingly drafted, revised, and redrafted, with guidance from our test vendor.

And the commission’s just getting started! As we move into the next phases of activity, there will be proctors needed for overseeing the exam’s administration and subcommittees who will work on test metrics and continued refinement of the bank of questions.

This remarkable group of volunteers, with unflagging support from the AMWA staff, has so far accomplished a remarkable body of work. Whether you plan to take the exam or not, AMWA has taken the lead in defining the profession of medical writing, which should be a point of pride for every member—and work that benefits the profession as a whole, not just AMWA members.

New and Improved…

That’s not just a slogan—it’s a pithy description of what else is happening in AMWA.

• A regular slate of top-quality webinars is now being offered monthly. Volunteers are also hard at work to create new educational opportunities that will enhance the ones we now offer, either in person or as self-study modules. If you have ideas for a webinar, or are a web-savvy presenter, now’s the time to let us know.

• A renewed focus on marketing AMWA’s products and services is being led by Immediate Past President Brian Bass and a new staff member at AMWA, Kim Grimm. Kim’s solid credentials as a marketing professional in the association world, plus the expertise of Brian and his dynamic Communications and Marketing Committee members, are being applied in exciting ways. Our goal is to create and carry out a coordinated approach to marketing everything AMWA has to offer, including all the media formats available to today’s information-seekers. This committee is another great volunteer opportunity for AMWA members who blog, tweet, write for the Web, or otherwise know how to design effective marketing strategies. If this sounds like you, let us hear from you! The energy in this group is infectious; I can’t wait to see how their ideas come to fruition.

• Last but not least, I continue to be impressed at the new features and design elements that Vicki White, our creative and hard-working Journal editor, has put in place. She also continues to attract contributors whose high-quality articles continue to show, in many ways, how AMWA sets the standards for “Excellence in Medical Communication.”

Although being AMWA’s president does not provide me with a crystal ball, these projects, and others that are under way, give me high confidence that innovative programs and fresh approaches will continue as 2015 unfolds. Let’s take part in them together.
You are likely to have used them a hundred times in your writing. The terms mean, median, and mode are in almost every text about clinical studies or medical investigations. Writers may be so used to these terms that they sometimes do not fully appreciate their very specific meanings (Table). This short piece is designed to serve as a little reminder of the underlying concepts and the limitations of these terms.

Medical writers are frequently called upon to describe data and draw conclusions from the analysis of data. Very often, 2 or more sets of data are compared. The most direct way to compare groups is by listing their values side by side. This way, all data are presented, and the reader can compare them one by one. However, such a procedure is only practical for very small groups, and even then the comparison of individual values is not very informative.

What we really want is to summarize data of groups into single measures and then use these measures to compare the groups. To be meaningful, these measures need to be representative of the group, ie, they need to embody the center or focal point of the data. When we plot the data, we can visualize their distribution. We can then see whether the data cluster around a particular value. We can also see to which extent the data vary around the central point.

Thus, the measure of central tendency is the single value that best represents all of the data. There are 3 major measures of central tendency: the mean, the median, and the mode. When we use one of these measures, we abstract from the individual observations to obtain a single measure for an entire set of data. The measures of central tendency are a kind of shorthand for the distribution of the data. For an appropriate description of numerical data, we also need a measure of variation or dispersion around the central tendency.

The Mode
Let’s start with the one that is least used in biomedical texts, the mode. The mode is actually a very handy method to describe the central tendency when used for the appropriate kind of data. The mode is calculated by counting how often each value in our data occurs. Once we have identified the most frequently occurring value, we have identified the mode. The mode is best used to describe categorical (ie, non-numerical) data. Examples for categorical data are disease stages, such as the New York Heart Association stages of heart failure (I to IV), blood groups, or sex. When several values appear equally often in our data, we have several modes, and the initial purpose to have one single value characterizing our data is betrayed (eg, bi-modal distributions with 2 peaks). Likewise, the mode would be unhelpful if each value in our data appears only once. This is usually the case with continuous numerical data such as height or clinical laboratory values. In these cases, we need to choose another measure of central tendency, eg, the median or the mean. Because the mode represents the most frequently occurring value, it does not need to be accompanied by a measure of dispersion. If we use the mode, we have decided that the most frequent value in our data is the best representation of the entire data set, and therefore as a measure of dispersion it is not really helpful. However, we should always provide the number of potential categories (for NYHA it would be 4) should the number of categories not be obvious.

The Median
To find the median, we first need to order our data, from low to high or vice versa. We then look for the one data point right in the middle, with 50% of the values above and 50% below, and this is our median. The median divides our list in half. In a data set with an odd number of data, the median
value is the true middle value. If we have an even number of data, the median value is the mean of the 2 middle values. The median is best used to describe continuous numerical data, such as age, height, or heart rate. The median is the best representation of the central tendency when the data are not normally distributed, ie, they do not form a nice symmetrical and bell-shaped curve when plotted. Instead the resulting curve might be leaning to either side—that is, be skewed to the left or the right (Figure). The median is very robust because it is not affected by extreme values (outliers), and it is independent of the shape of the distribution. There are several appropriate measures of dispersion that could be reported with the median. Most simply, the minimum and maximum value could be reported to provide the reader with the overall range of the data. As the median is the 50% point of a distribution, a good indication of the spread is the interquartile range. This is the range of the values between the 25th and 75th percentile of a distribution (ie, a subtraction of the value at 25% of the data from the value at 75% of the data).

The Mean
The mean (also called the arithmetic mean or the average) is probably the most widely used measure of central tendency. It has the advantage of taking all data into account, both the number of observations and all their values. The mean is the result of adding all the values in the data and dividing the total by the number of data points. The mean is well suited to describe continuous numerical data such as height, weight, or blood pressure. Since the mean takes every value into account, it is sensitive to extreme values or outliers. If extreme values are entered into the calculation, the resulting mean will not accurately represent the central tendency. Furthermore, the mean is only then an appropriate representation of the central tendency when the data are normally distributed, ie, when the shape of the plotted values resembles the outline of a bell (Figure). The shape needs to be symmetrical with the mean in the middle. We need to realize that we might not have a single representative of the mean value in our observations. If we measured 150 participants and their mean height was 168.4 cm, we may have not any individual who is exactly that tall. How well the mean represents the central tendency can be evaluated when we also know the measure of dispersion.

Table. Measures of Central Tendency and Their Uses

<table>
<thead>
<tr>
<th>Measure of central tendency</th>
<th>Calculation</th>
<th>When applied</th>
<th>Appropriate measure of dispersion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode</td>
<td>Most frequently occurring value in the data</td>
<td>With categorical data, eg, sex, blood groups, disease stages</td>
<td>Not required</td>
</tr>
<tr>
<td>Median</td>
<td>Order data from low to high or vice versa, pick the value that divides the data in 50% above and 50% below</td>
<td>Continuous numerical data that is non-normally distributed (“skewed”), eg, height, weight, lab values</td>
<td>Range (minimum–maximum) and/or Interquartile range (25th–75th percentile)</td>
</tr>
<tr>
<td>Mean</td>
<td>Add all data together and divide the total by the number of data points</td>
<td>Numerical continuous normally distributed data (“bell-shaped”), eg, height, weight, lab values</td>
<td>Standard deviation</td>
</tr>
</tbody>
</table>

Figure. a) Data that have a normal distribution. In this case mean, median, and mode all have the same value. b) Data are negatively skewed. The data cluster toward the right side of the x-axis; mean, median, and mode are different. c) Data are positively skewed. The data cluster towards the left side of the x-axis; again mean, median, and mode are different.
For the mean, an appropriate measure of dispersion is the standard deviation. The standard deviation tells us the spread of the data around the mean. The smaller the standard deviation, the steeper the slopes of the bell-shape, and the smaller the average differences of the values from the mean. The reverse is also true: the greater the standard deviation, the flatter the slopes of the bell-shape and the greater the average difference of the values from the mean. The size of the standard deviation depends on our sample size. The more data we have, the smaller the standard deviation.

If the mean and median and the mode have the same value, we have a symmetrical distribution of the data. We can crudely estimate the skewedness of data when we subtract the median from the mean; the larger the difference, the greater the skewedness of the data. When the mean is substantially greater than the median, the data are right skewed (Figure).

In summary, there are 3 measures of central tendency: the mode, the median, and the mean. Each one has a special purpose and should only be used within its limitations to avoid unintentional misrepresentation of data.

### Know the Central Tendency of Your Data

No matter the text you are working on or the audience you are writing or editing for, understanding the central tendency will enable you to appropriately describe or explain medical research.

- If you have a study in which an intervention was tested in a large group with a mean age of 43 years and a standard deviation of 4 years, the results from the study will have little bearing on how the treatment would fare in teens or the elderly.

- If you have just a few data points in a study of a new miracle weight loss treatment, and the mean weight loss was 7.2 pounds, consider whether a few individuals lost a lot of weight while others stayed unchanged or even gained weight. The median with the minimum and maximum (or with interquartile range) will more accurately represent the data. Your description of the results needs to acknowledge the small sample size and the wide variation in results.

- When you have a fairly large sample and don’t know the distribution of the data, have your statistician (or your computer) calculate all 3 measures of central tendency (mean, median, mode). If they are very similar you can assume a normal distribution. In this case you can use the mean and the standard deviation for reporting; if the 3 measures are not very similar, the median is more appropriate for continuous values.

### Resources


Send your ideas for articles for Your Stats Refresher! to JournalEditor@amwa.org.
ClinicalKey is Elsevier’s clinical search engine for physicians, nurses, and other health professionals. It provides access to over 1,000 textbooks, 500 journals, thousands of videos, and millions of images and is integrated with Elsevier’s First Consult (formerly a separate product), which aims to provide point-of-care answers to clinical questions. Subscribers to ClinicalKey receive full-text access to content from Elsevier, although the precise configuration of text access depends on which subscription package is purchased. ClinicalKey also searches the MEDLINE literature, but results from other publishers are not full text unless the subscriber already has access.

The home page is very clean, with only a search box in the middle and links for content browsing in the top right corner. Entering a word or short phrase in the search box yields results from various source types, such as full-text articles from Elsevier journals, MEDLINE abstracts, clinical trials from ClinicalTrial.gov, books, drug monographs, practice guidelines, patient education materials, images, videos, and First Consult clinical monographs.

If the search term matches one of the 1,400 topic pages found within ClinicalKey, it will automatically display the topic page containing a general overview from Ferri’s Clinical Advisor 2015, Conn’s Current Therapy, Goldman’s Cecil Medicine, or First Consult (Figure 1). The right-hand side of the topic page includes links to related material such as the full texts of the latest articles on the subject published in Elsevier journals, drug information, patient education materials, practice guidelines on the topic, and “specialty views” (texts within a specific specialty). In this way, ClinicalKey appears to be trying to create something of a point-of-care tool.

If the search term does not match one of the topic pages, then ClinicalKey displays content from all of its resources on the page. For example, if the search terms arrhythmia and caffeine are entered, ClinicalKey lists links to full-text Elsevier articles, clinical trials from ClinicalTrials.gov, drug monographs, book chapters, and MEDLINE abstracts with links to PubMed (Figure 2). Results are sorted automatically by relevance, but users can choose to sort by date. ClinicalKey has recently undergone a considerable site redesign, and it is not clear what algorithms work in conjunction with relevance.

Searchers can also click on the gray tabs for source type, study type, specialties, and date to jump to specific results from the search. In the example of arrhythmia and caffeine, searchers clicking on the tab for source type can easily see the number of books, full-text articles, MEDLINE abstracts, images, patient education resources, clinical trials, First Consult monographs, practice guidelines, and drug monographs that contain the search term (Figure 3).

Searchers can also browse for a specific journal or textbook. This is best accomplished by clicking on the links in the upper right-hand corner of the main home page.

Figure 1. ClinicalKey search results for the term renal cell carcinoma display tabs for a general overview from full-text books and First Consult monographs. Links on the right-hand side lead to other materials on the topic.
Both the books and journals are listed in alphabetical order. Unfortunately, there is no way to jump to another section of the alphabet. Searchers must scroll through the entire list or know the title and type it in the search box, although an individual word from the title can be used to search. The listed results can also be filtered by specialty. The full text of a book chapter is available in HTML with an institutional subscription, but PDF files of book chapters are only available to people who have logged in with a personal login. People searching for books using an institutional subscription can create a free personal login.

In the past, one of the benefits of an AMWA membership was free access to MD Consult through the AMWA website. Unfortunately, MD Consult is no longer available; it has been replaced by ClinicalKey. Whereas some institutions have chosen to subscribe to ClinicalKey, others have been unable to afford the price increase associated with the new product. Although AMWA members do not get free access to ClinicalKey, they can get a 20% discount on personal subscriptions. For many individuals, the price may be too high to bear; for those fortunate enough to live close to a university with a subscription, however, it may be worthwhile to determine if visitor access is available.

Author disclosure: The author notes that, although her institution has a subscription to ClinicalKey, neither she nor her institution has any commercial association that may pose a conflict of interest in relation to this article.

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See reference list on page 44
What are the most effective marketing tactics you have recently used to market your business?

Nearly all of my clients have come from direct mail and networking. Direct mail, done right, is very effective in targeting—and landing—your best prospects, especially when you’re starting out and don’t have much of a network yet. My first direct mail campaign (3 flyers during my first 18 months in business) landed me as much business as I wanted. That was 18 years ago, and I’m still working with 2 of those clients! Direct mail is also great for exploring specific medical writing markets. Researching potential clients and developing your mailing list takes a lot of time and effort, but it’s worth it. You also should write a creative direct mail piece and hire a great designer to design it.

Networking, mostly through AMWA, has resulted in many referrals and new clients for me. As a volunteer for AMWA, at the national level and for and my chapter, Delaware Valley, I show that I’m trustworthy, competent, and reliable. I also focus on helping others without expecting anything in return by sharing relevant information and resources and connecting people. Volunteering and focusing on helping others are the keys to my success in networking. When I have work to refer, I choose freelances I’ve worked with through AMWA. I need to know that anyone I refer is trustworthy and will do a great job for the client.

Networking in person, at the AMWA Annual Conference or chapter events, is best. AMWA’s LinkedIn group (and chapter LinkedIn groups, where available) also offers good networking opportunities, as long as you focus on giving rather than taking. You also need a persuasive LinkedIn profile so that people who read your discussion or comment and click on your profile will be impressed.

By and large the most effective overt marketing tool (ie, beyond referrals) is my website. It comes up very high on searches for freelance medical writer, and I probably get more than 30 inquiries a year, at least a third of which turn into business.

Next, I would say LinkedIn. I’m still learning my way around LinkedIn, but the more I learn, the more effective it is. I’m not even using one-tenth of its potential.

Finally, I’m finding that nontraditional marketing efforts, such as speaking at events and conducting or participating in webinars, are beginning to pay off. I did a webinar for continuing medical education professionals that resulted in several new clients as well as 2 paid speaking engagements.

—Debra Gordon

I have used multiple print and online tactics to market my business. The most effective has been my LinkedIn profile. LinkedIn can be a powerful way to advertise both your expertise and experience. I get requests to connect almost daily, and I accept most of them. This increases my presence on LinkedIn. The more people I am connected to, the higher I will show up in searches. I have met many of my clients on LinkedIn and continue to meet more.

The second most effective tactic for me has been to network. This involves networking through my local AMWA chapter and nationally too. Getting involved as a volunteer both at a local and national level can result in your name being more recognized. In addition to these tactics, I have started to increase my Twitter presence as well as give more oral and online (webinar) presentations to demonstrate my expertise in various topics. I also make sure my website is updated with my latest work samples and references. My print tactics have involved sending out a postcard, but I have not found that to be very effective for me.

—Ruwaida Vakil

—Lori De Milto
How do you bill a client that expects you to obtain references needed for a project?

I always ask the client to supply all references. If a reference is missing, I will look quickly to see if a PDF is available for free online. If not, I give the client the full reference information (or whatever reference information I can find) and ask the client to provide the PDF. When I have been asked to supply PDFs, I add a line item to my invoice or do a separate invoice for reimbursement.

If anyone is looking for reasonable document delivery services, I have developed a list of websites to search (Box).

—Melissa Bogen

In my proposals for pharmaceutical projects that have any literature component (which include most of my projects, even regulatory documents), I make sure to stipulate that the client is responsible for paying all literature-related costs. These include (but are not limited to) the following:

- My time (hourly rate) spent searching for literature on publicly available websites or any other sites I might have free access to (such as local universities)
- My time (hourly rate) gathering, reading/evaluating, summarizing, annotating, tabulating, and/or preparing bibliographies or reference lists
- Use of outside professional services for searching databases I do not have access to (pass-through cost)
- Copies of papers not freely available online (pass-through cost)
- Obtaining any permissions (especially copyright permissions) for reproduction or dissemination of any literature (or any parts of it, such as reproduction of tables or figures from published manuscripts) (pass-through cost)
- Long-term archive/storage of any literature (hard copy or electronic). You do not want to keep all those files in your own office forever! It’s prudent for all companies to maintain some kind of library of documents important to their drug, but not all newer companies have started such a process. Perhaps suggest this to your client if you see the need.

—Sherri Bowen

My contracts always specify that the client is responsible for the full text cost of any references. Right now, I have access to an online database through which I can obtain most references. Otherwise, we agree on a budget for references and I pass through the cost.

—Debra Gordon

**Box. Websites to Search for Cited Literature**

http://docdel.net/
http://pubget.com/
http://scholar.google.com/
http://sumsearch.org
www.biomedcentral.com/
www.docjax.com/home/index.shtml
http://library.med.utah.edu/docsupp/index.html
www.lindahall.org/ ($16 for nonacademic use)
www.merckmedicus.com/pp/us/hcp/hcp_home.jsp
www.pubmedcentral.nih.gov/
www.scirus.com/
www.tripdatabase.com/index.html
www.gkdocuments.com. Reduced article rates available for AMWA members. Information at: www.amwa.org/member_benefits

**Free, open-access articles:**

www.doaj.org/
http://highwire.stanford.edu/lists/freeart.dtl
www.plos.org/
www.freemedicaljournals.com/

**Books:**

- You can find some of the bigger/popular texts in ClinicalKey (www.clinicalkey.com)
- Check the PubMed bookshelf or Google Books to see whether a full-text version is freely available.
- Then you can check worldcat.org to see whether a library near you has a copy
Published literature is critical to most medical writing work. Although beyond the scope of the original Freelance Forum question related to billing for needed references, here are some other important things I've learned over the years (in no particular order of importance):

- For clinical study reports, there is an appendix in the International Conference on Harmonisation E3 guidance called “Important Publications Referenced in the Report” (Appendix 16.1.12). If you search on what is required for this appendix, you won’t find much (there are no instructions in ICH or FDA guidance documents that I could ever find). However, I generally subscribe to the recommendations for this appendix as set forth by Linda Fossati Wood and MaryAnn Foote in their text, Targeted Regulatory Writing Techniques (2009 Birkhäuser Verlag, Switzerland; pg. 98), which are to include in this appendix any paper necessary to understanding some aspect of the disease, assessment methods, or statistical methods used in the study, or “any other characteristic of the study that would not be considered general knowledge” (emphasis mine). In my experience, it is not necessary to provide all the background references used in each protocol or statistical analysis plan that do not meet such requirements.

- Ask your client if they require you to highlight hard copies of references to substantiate the content or location of any information you have cited in the document you are writing for them. This can be an onerous process, although potentially important if there is a quality control review process planned. (It is a good idea to ask about the quality control process.) It’s always best to cite data from original papers rather than review papers that repurpose text or otherwise quote such original papers. There can often be misinterpretation or misquoting of original papers in subsequent summaries or reviews by others.

- Ask whether you are expected to check the accuracy of any citation list. There are often mistakes (mostly typographical) in client-supplied documents or reference lists, and it can be time-consuming to check each citation for accuracy. I usually include a clause in my proposals indicating that I am not responsible for the accuracy of any documents supplied by them, but if time permits, I do fix mistakes I happen to notice.

- Related to the point about accuracy above, it is important to understand whether you are responsible for checking the accuracy of any of the information presented based on literature supplied to you as a source. For example, if you are asked to overhaul an investigator’s brochure and discover that the previous version had mistakes in the reference numbers or citations or (worse) inaccurately cited information (eg, wrong percentages quoted versus the primary source document), it would be important to alert the client to this as soon as possible and perhaps negotiate extra time/cost for you to straighten this out. Even if you stipulate that you are not responsible for accuracy of any provided source documents, sometimes you just need to clean up any past mistakes to prevent perpetuation of them.

- Ask about the format/style of the reference list/bibliography the client uses and that you are being asked to provide. It’s helpful to have an official company style guide or an approved document with a reference list to use as an example.

What are some of the strategies you use to balance multiple clients and projects at once?

I am often working on 2 or 3 projects at a time. Some are small, such as a blog post that might take me an hour to write, while others are large, such as a white paper that will take a few days. Sometimes I am also writing a book that will take months. The latter I break into discrete chapters and work on them as if they were a smaller project.

The most important thing is my spreadsheet, which lists every project for the month, client, deadline, fee. I assign specific days to work on each project on the basis of how long it typically takes me. I also estimate how many hours it will take. When I finish a project, I go back and enter in the actual hours. This helps me see trends and make sure I’m estimating project rates correctly.

On Sunday nights, I make up my to do list for the week and break the deadlines into pieces throughout the week on the basis of the days assigned. For instance, I might put “Write 1,000 words for project X” for Monday; “Finish drafting project X” for Tuesday; and “Finalize and send project X” for Wednesday. This is a very fluid process—things change, fires flare—but it helps keep me focused.

I usually try to hunker down on the writing for larger projects in the morning, when I’m most productive, saving the afternoons for more administrative tasks and smaller projects, as well as editing works in progress.

No matter how organized I tend to be, however, there are times that I drop a ball. I think that’s just part of being a busy freelance. When that happens, I figure out why and try to take steps to fix it.

—Debra Gordon
Here is how I handle multiple clients and projects:

1. To pull off meeting multiple projects due within a close proximity of each other, I get up at 4 AM to get some work in before getting my children off to school. I go to bed around 9 PM to get enough sleep, or I will nap after lunch to refresh my mind.

2. I have one client that gives me regular work that is normally due within a day. Because I don’t mind working early in the morning, I prefer deadlines of 9 AM or 10 AM the next day instead of the end of the same day. If something is due at the end of the day, chances are good that the client won’t mind getting the document first thing in the morning. (Check to be sure, of course.) This gives me a few extra hours to take my time or check my work, and it opens my day to work on another project that day.

3. I avoid telling clients if I have a busy schedule because, ultimately, they just want to know when their project will be done. I will suggest a deadline and ask if that works for them. Most of the time they accept this suggestion.

—Cherie Dewar

Our company situation is different from that of the sole-operating freelance since we have 2 full-time writers in our group. Whenever there is an overload of multiple clients and projects with overlapping due dates, we work together to meet all commitments, even if we both must work evenings and weekends.

It needs to be stated that often projects do not keep to the schedules originally set. Often, the client or the review team will miss a deadline or request additional information to be included which will affect the scheduling. For those reasons, I often try to schedule deadlines for close of business Monday, thereby giving me time over the weekend to do final reviews or tweaks.

I also let clients know what other projects are in the house while working on theirs. I do not give them content details but will give general information such as “we are currently working on a long-term journal supplement project with commitment dates that will not interfere with your project.” We do this for 2 reasons: 1) to let clients know that we have other work under commitment, and 2) in the event that project dates change, the client knows in advance that we have other commitments and, rarely, adjustments may need to be made to accommodate both (or more) project schedules.

The majority of our projects are long-term ones, so we do not often have the last minute rush deadlines that plague other freelances. But, if there is a potential deadline conflict, we always let the client know as soon as we recognize it. Communications with clients is the key to a good working relationship when multiple clients or projects are in need of our services.

—Elizabeth L. Smith
In his latest book, *The Sense of Style*, Steven Pinker draws on his knowledge as a noted Harvard scholar of linguistics and as author of several best-sellers, such as *The Language Instinct*, *The Better Angels of Our Nature*, and *The Stuff of Thought*. He also chairs the American Heritage Dictionary Usage Panel. Pinker’s vast experience in psycholinguistics, research, teaching, and composition all are evident as he analyzes the challenges of writing for 21st century readers and explains how to create good writing.

*The Sense of Style* offers a deep dive into the murky waters that exemplify the complex, confusing, bloviated prose often produced by lawyers, bureaucrats, executives and, yes, some medical writers. Pinker’s philosophy is that readers deserve engaging, informative, and lucid prose. In the Prologue, he writes:

*My focus is on nonfiction, particularly genres that put a premium on clarity and coherence. But unlike the authors of the classic guides, I don’t equate these virtues with plain words, austere expression, and formal style. You can write with clarity and flair, too.*

Pinker acknowledges that good writing is not easily achieved. To become a good writer, he suggests first being a good reader. “Writers acquire their technique by spotting, savoring, and reverse-engineering examples of good prose.”

The book contains abundant examples starting with a description of the “classic” style and progressing to the “arc of coherence”—an especially fine chapter. Pinker is adept at contrasting the rigidity of grammar police with his nuanced analysis of how shaping and sequencing nonfiction prose is too complex and multifaceted to follow inflexible rules, many of which, he argues, are outdated.

If you’re seeking a prescriptive style guide, such as Strunk and White’s *The Elements of Style*, or *The Chicago Manual of Style*, this book is not the best choice, although it does include a mini usage guide at the end. As Pinker explains:

*The rules often mash together issues of grammatical correctness, logical coherence, formal style, and standard dialect, but a skilled writer needs to keep them straight. And the orthodox stylebooks are ill equipped to deal with an inescapable fact about language: it changes over time.*

Pinker’s main message is that writers have a responsibility to earn a reader’s trust by working diligently to write well. For medical writers, this style simply makes sense.

—William Van Nostran

William Van Nostran is a medical communications specialist at the Rebecca D. Considine Research Institute, Akron Children’s Hospital, in Akron, Ohio.
**The Recovery Book: Answers to All Your Questions About Addiction and Alcoholism and Finding Health and Happiness in Sobriety**

Al J. Mooney, MD, Catherine Dold, Howard Eisenberg  

This book came to my attention when Catherine Dold, a fellow medical writer, gave a presentation about the newly revised edition at the Association of Health Care Journalists 2014 conference. First published in 1982, the book’s original authors had brought in Catherine to restructure and update it.

A classic in the recovery community, The Recovery Book is dedicated to a specific philosophy: An alcoholic or drug user who follows his or her path to recovery can develop fulfilling relationships with others, satisfying work, and a sense of belonging to a community, without relying on alcohol or drugs to mask uncomfortable feelings. The authors restructured this path into red, yellow, and green zones and describe the challenges along the way during the early, middle, and lifelong recovery process.

The book covers the basics and the latest in addiction science and recovery techniques. Included are descriptions of what each type of treatment program (inpatient, outpatient, white-knuckling it) is really like. But the book’s strength lies beyond that in its approach of how to handle day-to-day challenges in each color zone, especially challenges with emotional foundations:

- Managing strong emotions (such as anger) that are no longer numbed by the drug of choice
- Recognizing emotional cues that might lead to relapse
- Repairing relationships that deteriorated due to drug or alcohol use

The revised book also includes information about the neuroscience of addictive behavior.

Also added was practical advice covering a new range of topics, from cleaning up online life and removing tattoos, to raising substance-free children and having fun without alcohol and drugs. Online resources and support groups that didn’t exist when the first edition came out also are included.

As a prospective book author, I found The Recovery Book offered an additional benefit: It is a good template for how to lay out an engaging and informative how-to book. The content is encyclopedic and well-indexed, with question-and-answer sections, and lots of sidebars.

I have recommended this book wholeheartedly to friends and family who are recovering substance users. Now I extend that recommendation to fellow medical writers.

—Jane Neff Rollins, MSPH

*Jane Neff Rollins is a medical writer for Arnell Communications in Montrose, California.*

Do you have an idea for a recently published book to review? Send it to JournalEditor@amwa.org.
Style gives cohesion to all types of writing and guides the writer or editor in consistent application of mechanics. Considerations as minor as where to place a comma or as broad as language bias fall under the directives of a style manual. These manuals are so pervasive for writing professionals that it may be easy to take the preferred text for granted. However, style manuals are learning tools for writers of any experience level, and a quick look through these manuals almost always provides something new to ponder. Take your style capabilities to the next level by expanding into new reference manuals and developing your ability to put new styles into practice.

Why Choose a Style?
Style can be simply defined as the way an author puts together words. A manual of style collects not rules but recommendations for compiling those words in a standard way according to one or more professionals. The manual resolves writing and grammar issues for its users; as such, it will always be limited in scope by its designers and will evolve as needs and standards change.

Communicators in any genre typically rely on one comprehensive manual for their daily tasks, which likely is supplemented by favorite reference books and dictionaries. One telltale sign of a seasoned writer is a dog-eared or post-it–marked style guide on his or her desk. But have you ever considered why a particular manual is selected for a project or company, or how it is selectively applied? Sometimes, the choice is obvious (eg, American Medical Association [AMA] style for medical journals). Often, though, selection is more complex. Readerships, document types, and even the size of the writing team can play roles in the selection of a specific style manual.

For this discussion, major style manuals are textbooks by multiple authors that have been released directly by publishers and are supervised by experts who have developed multiple updated editions. Manuals in this category include the AMA Manual of Style, the Chicago Manual of Style (CMoS), the Publication Manual of the American Psychological Association (APA), and the Associated Press (AP) Stylebook. These guides have expanded beyond their original user population to meet the needs of a wider audience.

Team-based manuals, or house guides, are usually small in size and scope and often limited to exceptions from a preferred major manual. Size alone does not define a house guide; pagination of some can expand to hundreds of pages, particularly for dense or complicated internal topics. House styles clearly identify differences from guiding documentation or explaining different approaches to various projects under one company. It is possible to have multiple house guides to explain individual recommendations for specific projects. House guides are highly specific and not commercially available.

Between these comprehensive and limited options are published manuals that are large in scope and not limited to a single team or project but reside in more of a niche than common textbook manuals. Often these guides are organization- or genre-specific documents (eg, style and citation publications from the Government Printing Office, the Council of Science Editors [CSE], and the National Institutes of Health). These direct the writing approaches across multiple offices or publications and are often applied at the request of the client or employer. As noted in 2005 at an AMWA Annual Conference open session on style manuals, the CSE’s manual, Scientific Style and Format, acts as an international clearinghouse for style, not as an enforcer or publisher. The manual’s latest revision, its 8th edition, continues to present comprehensive content by subject instead of by discipline, which supports its wide and overlapping reach across scientific fields.

Learning a new style can be as daunting to a tenured professional as it is to a new writer. It helps to explore the histories and goals of each style before putting the content into practice.
Origins, Applications, and Updates

Today's comprehensive manuals originated as brief in-house guides, a short-term necessity. The first versions of the AMA and APA guides were fewer than 10 pages, progressed to journal supplements, and eventually to stand-alone textbooks.6,7 CMoS began as a short collection of standard usage for the University of Chicago publishing house and was only formalized more than 10 years later.8 The AP Stylebook, with its extensive history in journalism, began as a compilation of topical points to supplement high-quality writing by AP wire reporters; today, it continues to focus on news-related details and includes A-to-Z listings of notable proper names and locations.9

These collections of grammar, usage, formatting, and citation methods were born of the efforts of a few practicing editors who wanted to establish a format for consistency, without intending to create a guide for wider audiences. The Table summarizes the origins of each book and follows updates into the 21st century.

As house guides grew, they became more definitive in their specialties, covered more ground, and outlined in detail their preferences for referencing, statistical presentation, and more. They also became models for new and smaller guides.

Today's editions tackle the same new topics: use of technology and its terminology; electronic reference formatting; professionalism concerns (eg, ethics and bias); and selective publication sections (eg, indexes). The manuals and supplementary materials are now interactive—as online textbooks, style blogs, or tutorials, and as static Q&A sites. The manuals' online presence enables users to suggest, debate, or even question style rules.

**Table. Style Manual Editions, Applications, and Updates**

<table>
<thead>
<tr>
<th>Supervising organization</th>
<th>AMA</th>
<th>CMoS</th>
<th>APA</th>
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<td>Originated</td>
<td>JAMA</td>
<td>University of Chicago</td>
<td>APA</td>
<td>AP</td>
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<tr>
<td>First edition</td>
<td>1938 by JAMA</td>
<td>1891 by UCP</td>
<td>1929 under NRC</td>
<td>1953 (first modern form)</td>
</tr>
<tr>
<td>Application</td>
<td>Medical and scientific scholarly journals</td>
<td>Books, trade news, scholarly nonscientific publications</td>
<td>Social science texts, books, and articles</td>
<td>Journalism outlets (news outlets)</td>
</tr>
<tr>
<td>21st century updates</td>
<td>Bias-free language</td>
<td>Electronic reference formatting</td>
<td>Modern (closed) hyphenations for technology terms</td>
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<td>Extremely current on language changes and events</td>
</tr>
</tbody>
</table>

JAMA, Journal of the American Medical Association; NRC, National Research Council; OUP, Oxford University Press; UCP, University of Chicago Press.

Keeping Style Options Open

Despite the similar goals and paths of the comprehensive manuals, their readerships have remained distinguishable throughout the years: CMoS specializes in general interest and book publishing, and AP in news formats. AMA and APA overlap in scientific fields but branch into medicine and social sciences, respectively. However, each manual can be relevant to a medical communicator at any career stage.

Most writers focus on developing skills around one manual, and one manual likely predominates even when others are consulted. It can nonetheless be valuable to learn more than one style. For freelances, it provides an additional marketable skill. For staff writers or editors, it can help in making internal house style decisions. The evidence is anecdotal, but an informal survey I conducted in 2014 of more than 20 attendees at an AMWA chapter conference showed that many medical communication professionals regularly rely on 2 or more guides.

Looking at different manuals provides an introduction to style options in grammar, word choice, and formatting and it also can become an informative continuing education exercise. As readerships broaden and overlap across electronic platforms, medical communicators cannot become complacent in using one writing style.

Comprehending New Style Rules

How does an interested medical writer learn new style rules? First, identify basic topics and subsections that are highlighted in each manual. Consider mechanics such as punctuation and grammar, citation styles, and document-specific formatting suggestions for heading levels, white space, and the like.
Specific differences could include font recommendations in text, titles, or graphics; formatting preferences for bulleted and in-text lists; table formatting; and the use of abbreviations. It is important to consider points that differ and why they might be applicable to different readerships.

Second, review usage and language recommendations that supplement mechanics and formatting standards. Each manual addresses rhetoric and provides suggestions for making writing interesting and clear. These points range from broad instruction to genre-specific suggestions. Compare their recommendations for voice or tense, turning a phrase, avoiding tricky structural presentations, avoiding bias, and removing clutter.

Third, combine the manuals as necessary for your particular use. Consideration of the styles together can provide variation and determine a best-fit standard for your team’s or client’s basic style. Can internal documents use certain abbreviations without explanation even as client-facing materials strictly follow APA recommendations? Note how each guide approaches abbreviations in texts, table footnotes, and other parts of a manuscript. Similarly, genre topics from one manual can supplement basic knowledge. Do you research oncologic mutations? Perhaps gene terminology and cancer staging details from AMA should be a cornerstone, even if your style as a journalist is the AP.

Comparing each of the major manuals side by side might be the easiest way to visualize the directives of each manual, whether for only a handful of contentious points or for a thorough, alphabetical comparison of standards. List the different approaches by topic and the source location in each manual for easy reference. Make a comparative table specific to your own content needs or use it to explore the manuals broadly—whether to consider new aspects or to become a better all-around writer.

Comfort with multiple styles comes with regular use, but education about styles must be ongoing. Resources from the publishers of these comprehensive manuals support professionals in their efforts to maintain current knowledge.

Author disclosure: The author notes that she has no commercial associations that may pose a conflict of interest in relation to this article.

Author contact: nicolesvicer@comcast.net

References


ClinicalKey continued from page 35

References

Calendar of Meetings

**American Copy Editors Society**  
March 26–28, 2015  
Pittsburgh, PA  
www.copydesk.org/national-conference/

**Association of Health Care Journalists**  
April 23–25, 2015  
Santa Clara, CA  
http://healthjournalism.org/index.php

**Association of Clinical Research Professionals**  
April 25–28, 2015  
Salt Lake City, UT  
www.acr2015.org/

**International Society for Medical Publication Professionals (ISMPP)**  
April 27–29, 2015  
Arlington, VA  
www.ismpp.org/annual-meeting

**American Society for Indexing**  
April 29–May 1, 2015  
Seattle, WA  
www.asindexing.org/category/conference/

**European Medical Writers Association**  
May 5–9, 2015  
Dublin, Ireland  
www.emwa.org

**Council of Science Editors**  
May 15–18, 2015  
Philadelphia, PA  
www.councilscienceeditors.org

**Society for Scholarly Publishing**  
May 27–29, 2015  
Arlington, VA  
www.sspnet.org

**DIA**  
June 14–18, 2015  
Washington, DC  
www.diahome.org

**Canadian Science Writers Association**  
June 18–21, 2015  
Saskatoon, Saskatchewan  
http://sciencewriters.ca/

**Society for Technical Communication**  
June 21–24, 2015  
Columbus, OH  
http://summit.stc.org

**International Society of Managing and Technical Editors**  
August 20–21, 2015  
Baltimore, MD  
www.ismte.org

**Plain Language Association International**  
September 17–20, 2015  
Dublin, Ireland  
www.plainlanguagenetwork.org/

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**International Society of Managing and Technical Editors**  
August 20–21, 2015  
Baltimore, MD  
www.ismte.org

**Plain Language Association International**  
September 17–20, 2015  
Dublin, Ireland  
www.plainlanguagenetwork.org/

**AMWA’s 75TH ANNUAL CONFERENCE**  
**SEPTEMBER 30–OCTOBER 3, 2015**  
**SAN ANTONIO, TX**

**AMWA CHAPTER CONFERENCES**

**Indiana/Ohio Valley Chapters Conference**  
April 10–11, 2015  
Indianapolis, IN  
www.hoosieramwa.org/

**Southwest Chapter Conference**  
April 18, 2015  
Dallas, TX  
www.amwasouthwest.org/

**Delaware Valley Chapter Princeton Conference**  
April 25, 2015  
Princeton, NJ  
www.amwa-dvc.org

**Carolinas Chapter Conference**  
May 1, 2015  
Chapel Hill, NC  
www.amwacarolinas.org/wp/spring-conference

**Pacific Coast Conference**  
May 1–2, 2015  
San Diego, CA  
www.amwa-pacsw.org

**Rocky Mountain Chapter**  
June 6, 2015  
Denver, CO  
www.amwa-rmc.org/
To ensure that all of my present participles are being used correctly, I use my word processor’s Find-and-Replace feature to highlight every instance of the character string \textit{ing}. It highlights the \textit{ing} that appears at the end of every English present participle. (Of course, it will also highlight the \textit{ing} in words like \textit{string} and \textit{stringent}). Then I look at each highlighted word and remove the highlighting from the words that are being used correctly.

A participle is a word that has been formed from a verb and that can be used as part of a compound verb or as an adjective or noun. In English, there are 2 types of participle: present and past. In this article, I will limit the discussion to present participles, the ones that end in \textit{–ing}.

An English present participle is always formed by adding \textit{ing} to the end of the stem of the verb. Sometimes, you have to make minor adjustments to the spelling of the stem, such as dropping the silent \textit{e} at the end of some words (\textit{write}, \textit{writing}) or adding an additional consonant after a short vowel but not after a long vowel (\textit{strip}, \textit{stripping} but \textit{stripe}, \textit{stripeing}).

\textbf{Verb, Adjective, or Noun?}

When you see an English present participle, you need to think about whether it is being used as part of a verb, as an adjective, or as a noun. In English, a present participle is used along with one or more auxiliary verbs (\textit{is, are, was, were, had been, have been, will have been}) to express the progressive aspect (ongoing action) of a verb:

\begin{itemize}
  \item She \textit{is eating}. (Present progressive tense)
  \item They \textit{were laughing}. (Past progressive tense)
  \item By that time, he \textit{will have been waiting} for an hour. (Future perfect progressive tense)
\end{itemize}

The following examples show how a present participle (\textit{barking}) can be part of a verb or serve as a verbal adjective or a verbal noun. Notice how the Reed-Kellogg diagrams of these sentences make the syntactical relationships clear:

\begin{itemize}
  \item The dog is barking. (\textit{Barking} is part of the verb phrase \textit{is barking})
  \item The barking dog lives next door. (\textit{Barking} is being used as an adjective.)
  \item The barking is a nuisance. (A present participle that is being used as a noun is called a gerund.)
\end{itemize}

\textbf{Verb Phrases and Participial Phrases}

A present or past participle can be part of a phrase. A phrase is a string of words that can act as a single part of speech. The head of the phrase is the word that determines what kind of phrase it is (eg, a verb phrase or a noun phrase). The rest of the phrase is called the complement of the phrase. Note that the head of the phrase is not always the first word in the phrase.

The sentence \textit{The dog is barking} consists of 2 phrases: the noun phrase \textit{The dog} and the verb phrase \textit{is barking}. The noun \textit{dog} is the head of the noun phrase and the auxiliary verb—\textit{is}—is the head of the verb phrase. In that sentence, the word \textit{barking} is the complement of the verb phrase.

A present participle can serve as the head of a participial phrase:

\begin{itemize}
  \item Barking furiously, the dog scared the burglar.
\end{itemize}

In that example, \textit{furiously} is an adverb modifying the participle \textit{barking}, which in turn is an adjective modifying \textit{dog}. Note
that you could also incorporate that adjective and adverb into
the noun phrase:

- The furiously barking dog scared the burglar.

Because participial phrases are derived from verb phrases, the
other words that appear in the complement of a verb
phrase can appear in a participial phrase. For example, if the
participle is from a transitive verb, the participial phrase will
include the direct object of the verb.

- Hurling insults (participle and direct object of a
  transitive verb)

If, on the other hand, the verb is a linking verb, then the
predicate complement (the noun or adjective that the linking
verb links to its subject) will show up in the participial phrase.

- Feeling strong (participle and adjective complement of a
  linking verb).

If the present participle is from a transitive verb, its com-
plement would represent the direct object of the verb. The
participial phrase could also include the modifiers of the parti-
ciple and complement.

- Carefully reading the fine print (participle and direct object,
  plus modifiers)

**Usage of Present Participles**

When you see a verb that has been put into the –ing form,
ask yourself whether that verb is being used as part of a verb
phrase (the dog is barking), as a noun (the barking is annoy-
ing), as an adjective (the barking dog), or as the head of a par-
ticipial phrase (barking furiously, the dog scared the burglar).
If the –ing word is the head of a participial phrase, look for the
subject of the participle, and make sure that the participial
phrase is modifying its subject.

You can use a participial phrase at the beginning of a sen-
tence, but only if the subject of the participle is also the subject
of the sentence:

- Shivering in the cold, he waited for the doors to open.

A misplaced participial phrase can end up modifying the
wrong noun:

- A woman found the body walking along the path. (Misplaced
  modifier, unless this sentence describes a scene from a
  zombie apocalypse.)

This confusion results from the fact that adjectival phrases
usually modify the noun that directly precedes them. One way
to fix the problem is to move the participial phrase so that it
directly follows the noun it modifies:

- A woman walking along the path found the body.

In the following example, you merely need to insert a comma:

- He threw a brick at the window breaking the glass.
- He threw a brick at the window, breaking the glass.

A dangling participial phrase is one whose subject is miss-
ing from the sentence:

- Walking to school today, my book fell in the mud.

To fix a dangling modifier, you need to add the subject:

- Walking to school today, I dropped my book in the mud.

However, adding the subject fixes only part of the problem
in that sentence. A participial phrase is supposed to be adject-
ival, which means that it is supposed to describe a noun. But
if you want to say how or when or why something happened,
you are really modifying a verb or a clause or a sentence. Thus,
you would need to use an adverbial modifier, not an adjectival
modifier. One way to do that is to turn that participial phrase
into an adverbial clause, by adding an auxiliary verb to turn
the participial phrase into a verb phrase, then adding the parti-
ciple’s subject to turn the phrase into a clause, and then adding
the subordinating conjunction while:

- While I was walking to school today, I dropped my book in
  the mud.

In the following example, the writer used a participial
phrase in an attempt to express how something was done:

- The patients were assigned to treatment groups using a
  random number generator.

If a participial phrase follows a noun, it will seem to modify
that noun. As a result, it seems that the treatment groups, not
the investigators, were using the random number generator.
There are several possible ways to fix that sentence. One is to
turn the participle into the main verb of the sentence, in either
the active or passive voice:

- We used a random number generator to assign patients to
  treatment groups. (Active voice, first person)
- The investigators used a random number generator to assign
  patients to treatment groups. (Active voice, third person)
- A random number generator was used to assign patients to
  treatment groups. (Passive voice)

Another way is to add a preposition (by)—thus turning the
participial phrase into an adverbial prepositional phrase—and
make the appropriate adjustments:

- We assigned the patients to treatment groups by using a
  random number generator.

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