IN THIS ISSUE

Retractions in the Medical Literature: Who is Responsible for Scientific Integrity?

Publication Planners and Medical Writers: A Natural Alliance

2010 Swanberg Address: Demons and Idols... and a Blue Corvette
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 (AMWA) as a professional organization. Specifically, it functions to:

- Publish articles on issues, practices, research theories, solutions to problems, ethics, and opportunities related to effective medical communication
- Enhance theoretical knowledge as well as applied skills of medical communicators in the health sciences, government, and industry
- Address the membership’s professional development needs by publishing the research results of educators and trainers of communications skills and by disseminating information about relevant technologies and their applications
- Inform members of important medical topics, ethical issues, emerging professional trends, and career opportunities
- Report news about AMWA activities and the professional accomplishments of its departments, sections, chapters, and members

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The AMWA Journal is in the MLA International Bibliography and selectively indexed in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) print index, the CINAHL database, and the Cumulative Index of Journals in Education (CIJE).
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ABSTRACT
Retractions in the medical literature may be associated with scientific misconduct, but it is unclear how to prevent misinformation from permeating the medical literature. If misinformation is due to inadvertent (random) error—rather than to deliberate (non-random) fraud—then it may not be possible to prevent misinformation. I hypothesized that misconduct severe enough to result in article retraction reflects inadvertent error and should be randomly distributed in the literature. I evaluated all English-language research articles retracted in the PubMed database from 2000 to 2010. Of 4.8 million articles published, a total of 788 (0.016%) were retracted; for every 6,109 articles published, 1 article was retracted, suggesting that misinformation is rare. However, there are striking trends in retraction. In 2000, 4 articles were retracted and the longest time to retraction was 8 months; in 2004, 49 articles were retracted and the longest time to retraction was 50 months; in 2009, 184 articles were retracted and the longest time to retraction was 117 months. Furthermore, retractions are not randomly distributed in the literature. Retractions tend to appear in journals with an impact factor significantly above average. Retractions are also significantly clustered in a specific subset of journals and are written by a specific subset of “repeat offender” authors. That retractions are not random suggests that scientific misconduct by some authors is deliberate and could potentially be prevented. Science is a deeply collaborative effort involving first authors, coauthors, editors, referees, and peers, and all parties must share responsibility for maintaining scientific integrity.

Misinformation in the medical literature can cause serious harm. In 1998, The Lancet published a case series of 12 children who had chronic enterocolitis and a history of a regressive neurologic disorder developing after exposure to a common childhood vaccine. Wakefield et al, the authors of the case series, stated, “Rubella virus is associated with autism and the combined measles, mumps, and rubella vaccine (rather than monovalent measles vaccine) has also been implicated.”

News that autism was potentially caused by the measles-mumps-rubella (MMR) vaccine was reported by international wire services, which led to a clamorous and effective antivaccine movement. In the United Kingdom, there were no mumps cases in 2003 but widespread vaccine rejection led to 63,500 mumps cases in 2005. In the United States, the MMR vaccination rate decreased from 93% before the publicity to 79% in 2003. Subsequently, there was a mumps outbreak in the United States, and the number of cases in 2006 was 21-fold higher than in the prior year.

The article by Wakefield et al was troubled from the start; a careful epidemiologic analysis in The Lancet repudiated the causal link between autism and the MMR vaccine within a year of publication. Soon after that, all but 3 of Wakefield’s coauthors retracted the interpretation that MMR vaccination causes autism, and the other coauthors denied any financial conflict of interest in the monovalent measles vaccine. In February 2010, editors at The Lancet retracted the article by Wakefield et al, citing ethical lapses.

That same month, The New York Times reported that Wakefield had filed for a patent on the monovalent measles vaccine before his article was published and that he had been receiving payments from a lawyer who was planning a legal suit against the manufacturer of the MMR vaccine. These financial conflicts of interest were undisclosed in the 1998 article and were explicitly denied in the later article.

Retracted articles raise several questions: How pervasive is the problem of research fraud and who is to blame? Is a fraudulent paper the responsibility of only the first author or are named coauthors also responsible? Do unnamed collaborators, perhaps even professional medical writers, also bear responsibility? Did the referees who evaluated the work before publication miss something in the data? Or are editors who act as journal gatekeepers culpable, so that journal editors are responsible for checking the data in papers under review? Alternatively, is science self-correcting, so that current practices need not change?

I hypothesized that misconduct severe enough to result in retraction of a scientific article reflects ignorance, error, or naiveté, rather than deliberate fraud; that is, that misconduct resulting in retraction is inadvertent, not deliberate. If that hypothesis is correct, inadvertent misconduct should be randomly distributed in the literature and not clustered by journal or author. Instead, deliberate misconduct should involve a few dishonest authors or a few inadequately edited journals. This hypothesis was tested by determining whether retraction was indeed randomly distributed in the literature.

METHODS
I tested the “inadvertent error” hypothesis by evaluating every research article
noted as retracted in the PubMed database in the 10-year period from 2000 to 2010. I searched PubMed on January 22, 2010, using the limits of “only items with abstracts, retracted publication, English.” A total of 788 articles were identified by the search, and I exported all citations and abstracts of those retracted papers from PubMed and saved the data as a text file (available from the author upon request). This search did not identify the article by Wakefield et al. because it had not yet been retracted.

The potential impact of a retracted article cannot be assessed, as retraction alters its impact. Hence, I used the impact factor for journals with an article retraction as a surrogate for the potential impact of a retracted article. For each journal that had a retraction, I documented the impact factor according to the Institute for Scientific Information (ISI) Web of Knowledge Journal Citation Reports 2008 (Science Edition).12 I approximated the average impact factor of all medical journals by averaging the impact factor of all 190 journals listed by ISI Web of Knowledge under the headings of “Medicine, General & Internal” and “Medicine, Research & Experimental” in 2008. I categorized the impact factors as low (≤7.0), moderate (>2.0 but ≤7.0), or high (>7.0).

I determined the research type of each retracted article by reviewing the abstract, and I sorted the articles into the following categories: basic science (research not involving humans), clinical science (research involving humans or human-derived material that does not use competing treatments), case reports (clinical descriptions of 1 patient or a small case series), clinical trials (reports of research involving humans prospectively allocated to competing treatments), or reviews (descriptions or analyses of previously reported data). I then categorized each retracted article according to several characteristics:

- research type
- journal of publication and its impact factor
- year of publication, year of retraction, and time to retraction
- authorship (surname of first author and number of authors)

I entered these data for each retracted article into an Excel spreadsheet (Microsoft Corp, Redmond, WA) for descriptive analysis. I tested randomness with use of an online Poisson probability calculator.13

**RESULTS**

Article retraction was rare (Table 1). Of the 4.8 million articles archived in PubMed from 2000 to 2010, 788 (0.02%) had been retracted; for every 6,109 articles published, 1 article was subsequently retracted.

### Table 1. Descriptive Statistics for Retracted Articles

<table>
<thead>
<tr>
<th>Article Category</th>
<th>Total articles published</th>
<th>Total articles retracted</th>
<th>Retraction rate (%)</th>
<th>Publications per retraction</th>
<th>Journal IF (Mean)</th>
<th>Journal IF (SD)</th>
<th>Months to retraction (Mean)</th>
<th>Months to retraction (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>NA</td>
<td>468</td>
<td>NA</td>
<td>NA</td>
<td>8.16</td>
<td>9.64</td>
<td>23.43</td>
<td>20.71</td>
</tr>
<tr>
<td>Clinical</td>
<td>NA</td>
<td>166</td>
<td>NA</td>
<td>NA</td>
<td>5.44</td>
<td>8.58</td>
<td>24.27</td>
<td>21.89</td>
</tr>
<tr>
<td>(Basic+Clinical)</td>
<td>3,737,300</td>
<td>634</td>
<td>0.017%</td>
<td>5,895</td>
<td>7.45</td>
<td>9.44</td>
<td>23.65</td>
<td>21.01</td>
</tr>
<tr>
<td>Review</td>
<td>552,760</td>
<td>88</td>
<td>0.016%</td>
<td>6,281</td>
<td>2.61</td>
<td>3.63</td>
<td>21.95</td>
<td>19.85</td>
</tr>
<tr>
<td>Case report</td>
<td>257,114</td>
<td>22</td>
<td>0.009%</td>
<td>11,687</td>
<td>2.54</td>
<td>2.66</td>
<td>21.90</td>
<td>25.88</td>
</tr>
<tr>
<td>Clinical trial</td>
<td>267,063</td>
<td>44</td>
<td>0.017%</td>
<td>6,070</td>
<td>5.33</td>
<td>7.90</td>
<td>31.05</td>
<td>27.61</td>
</tr>
<tr>
<td>Total</td>
<td>4,814,237</td>
<td>788</td>
<td>0.016%</td>
<td>6,109</td>
<td>6.65</td>
<td>8.93</td>
<td>23.83</td>
<td>21.48</td>
</tr>
</tbody>
</table>

*estimated

Abbreviation: NA, not available; IF, impact factor.
frequently retracted had the lowest impact factors (Table 1). Among all retracted articles, 226 had been first published in a journal with a low impact factor (≤2.0); 378 in a journal with a moderate impact factor (>2.0 but ≤7.0); and 184 in a journal with a high impact factor (>7.0).

**Time to Retraction**

The average time to retraction for all retracted articles was less than 2 years (23.83 months) (Table 1). The longest retraction time was almost 10 years. The time to retraction was shortest for case reports and longest for clinical trial reports.

The number of retracted articles and the time to retraction have increased strikingly in recent years (Figure 1). This increase in number of retractions in recent years is at least in part due to the longer time until articles are retracted. In 2000, 4 articles were retracted and the longest time to retraction was 8 months; in 2004, 49 articles were retracted and the longest time to retraction was 50 months; in 2009, 184 articles were retracted and the longest time to retraction was 117 months. The year with the highest number of published articles that were later retracted was 2006 (Figure 1); however, given the increased time to retraction, it is possible that more papers published after 2006 may be retracted in the future. Most journals did not publish articles that were retracted from 2000 to 2010. Of the 6,620 journals listed in Journal Citation Reports, 6,184 had no retraction; 376 journals had published 1 or 2 articles that were later retracted; and 9 journals had published 10 or more (Table 2). To determine whether retractions were randomly distributed in the literature, I assumed that 788 retracted articles were equally likely to appear in any of 6,620 journals. A Poisson distribution predicted that no journal would have 7 or more articles that were retracted, but I found 10 “repeat offender” journals that were collectively responsible for 19% (152 of 788) of all retracted articles (P < .001) (Table 2).

**Authorship**

The number of retracted articles per first author ranged from 0 to 17 (Table 3). Of the authors with retracted articles, 73% (578 of 788) had only 1 retracted article, but 7 people were first author of 5 or more retracted articles, which accounted for nearly 9% of all retracted articles (69 of 788). If one assumes that there were 1 million first authors over the decade who were all equally likely to produce a retracted article, the Poisson distribution predicts that no author would have 10 or more retracted articles. However, I identified 2 “repeat offender” authors who together were responsible for 4% (32 of 788) of all retracted articles (P < .001).

Most retracted articles had multiple authors. The mean number of authors per retracted article was 5.1 (+3.3). Only 57 of the 788 retracted articles (7.2%) had 1 author, and 13% (105 of 788) of the retracted articles had 2 authors.

**DISCUSSION**

The vast majority of published articles in the medical literature are not retracted and evidence of misconduct in science is rare (Table 1). However, retractions do not appear to be randomly distributed in the literature. Retractions were significantly clustered in “repeat offender” journals (Table 2) and were written by “repeat offender” authors (Table 3). The study did not prove beyond reasonable doubt that the distribution of authors with a retracted article was nonrandom (Table 3). The same distribution would result from a small number of deliberately fraudulent authors among a larger number of authors who made an inadvertent error that resulted in retraction.

The argument that there are deliberately fraudulent authors is compelling, nonetheless. The first author with the most retractions in this study was Jan Hendrik Schön (Table 3), who wrote 17 articles in 2 years (9 of which were published in *Science* and 7 in *Nature*) that were subsequently retracted. Schön wrote about molecular-scale electronic devices, and his fabricated data represent the largest fraud ever to taint the physical sciences. In 2001,

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**Figure 1.** Trends in article retraction. The continuous line represents the number of subsequently retracted articles that were published in a given calendar year; more retracted articles were originally published in 2006 than in any other year. The data points in columns represent the number of months between publication and retraction, categorized by year of retraction. In 2000, 4 articles were retracted and the longest time to retraction was 8 months; in 2004, 49 articles were retracted and the longest time to retraction was 50 months; in 2009, 184 articles were retracted and the longest time to retraction was 117 months. A total of 788 retracted articles are represented as data points in this figure (many points overlap).
Schön produced a new paper every 8 days; although his coauthors enjoyed the benefits of his prodigious production, they claimed to be unaware of his data fabrication and they were eventually cleared of scientific misconduct. No one is in a better position to detect data fabrication or falsification than a coauthor. There is, however, no consensus about the responsibility of coauthors to maintain data integrity. Guidelines from the International Committee of Medical Journal Editors (ICMJE) state the following: “Authorship credit should be based on 1) substantial contribution to conception and design, acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3.” These criteria fail to address the integrity of data that underlie a manuscript. The ICMJE acknowledged this shortcoming by advising that “each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content.”

Coauthor responsibility for maintaining the integrity of the data is a critical issue; most scientists found guilty of misconduct by the Office of Research Integrity engaged in data falsification, fabrication, or misrepresentation, and coauthors should be able to detect and prevent such data manipulation. Therefore, coauthors should take responsibility for the integrity of the study data in addition to the usual authorial tasks of data analysis, drafting and revising the manuscript, and bask in the publication glow. A medical writer who helps in the publication process—but who has no insight into data integrity—should not be listed as a coauthor. Instead, medical writers who helped draft a manuscript should be named in an acknowledgment section of the article, as recommended by AMWA.

One could argue that authors are more dishonest now than in the recent past. This interpretation is consistent with the finding that the number of article retractions has increased significantly in recent years. However, it seems unlikely that a cultural change in the past decade has prompted this increase. Instead, journal editors may have become more aware of misconduct after the publicity about Schön, leading them to set a lower threshold for retraction when an article comes under question. These reasons may also explain why the time to retraction has increased in recent years: Journals are making a more aggressive effort to weed out questionable articles, even if they were published long ago.

Retraction does not necessarily end the damage that may be caused by a fraudulent article. Although

### Table 2. Frequency of Retracted Articles (N=788) per Journal

<table>
<thead>
<tr>
<th>No. of retracted articles</th>
<th>No. of journals in class</th>
<th>Retracted articles in class</th>
<th>Class percent</th>
<th>“Repeat offender” journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>297</td>
<td>297</td>
<td>0.377</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>79</td>
<td>158</td>
<td>0.201</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>28</td>
<td>84</td>
<td>0.107</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>60</td>
<td>0.076</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>25</td>
<td>0.032</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>12</td>
<td>0.015</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>9</td>
<td>0.011</td>
<td>Phytotherapy Research</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>40</td>
<td>0.051</td>
<td>Anesth Analg, BBRC, Cell, J Immunol</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>11</td>
<td>0.014</td>
<td>Journal of Hazardous Materials</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>15</td>
<td>0.019</td>
<td>Proceedings of the National Academy of Sciences USA</td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>18</td>
<td>0.023</td>
<td>Journal of Biological Chemistry</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>21</td>
<td>0.027</td>
<td>Nature</td>
</tr>
<tr>
<td>38</td>
<td>1</td>
<td>38</td>
<td>0.048</td>
<td>Science</td>
</tr>
</tbody>
</table>

### Table 3. Frequency of Retracted Articles (N=788) Categorized by First Author

<table>
<thead>
<tr>
<th>No. of retracted articles</th>
<th>No. of authors in class</th>
<th>Retracted articles in class</th>
<th>Class percent</th>
<th>“Repeat offender” author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>578</td>
<td>578</td>
<td>0.734</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>46</td>
<td>92</td>
<td>0.117</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>45</td>
<td>0.057</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>5</td>
<td>0.006</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>114</td>
<td>0.018</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>18</td>
<td>0.023</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>15</td>
<td>0.019</td>
<td>Reuben SS</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>17</td>
<td>0.022</td>
<td>Schön JH</td>
</tr>
</tbody>
</table>
the Internet makes it possible to link articles in the literature to a relevant retraction, there is evidence that articles continue to be cited long after they have been retracted and so may influence the direction of future research. In addition, researchers who examined fraudulent articles spanning more than 20 years concluded that efforts to correct the medical literature are often ineffective; among 60 articles judged fraudulent or questionable, retractions were found for only 18. Among the 788 articles examined here, 31.8% were not noted as retracted in any way by the journal that published the paper. It may be instructive to consider which journals have published more than 1 article that is later retracted. Several such journals had an impact factor of less than 3, which suggests that marginal manuscripts are published in journals with a relatively low impact factor. In contrast, some journals with more than 1 retraction had very high impact factors (more than 28), which suggests that these journals may represent prime targets for “repeat offender” authors.

Who is to blame for retracted articles in the literature? My findings suggest that the editors of “repeat offender” journals bear at least some responsibility for retracted articles. Editors are gatekeepers for their journals, and if a journal does not offer a trusted brand, what does it offer? Some scientists have already blamed journal editors for failing to provide a rigorous review for papers before accepting them for publication. After the retractions of articles written by Schön, the editors of Nature wrote an editorial in which they blamed referees and said, “If a referee of Schön’s Nature submissions had looked at [other] papers on different materials, he or she might have spotted the duplications in data that, in the end, were the smoking gun.” In contrast, the editor of Science wrote, “It is asking too much of peer review to expect it to immunize us against clever fraud,” and he noted the responsibility that coauthors have in ensuring the validity of data. The present study leaves many questions unanswered. The results did not prove beyond doubt that the distribution of retractions among authors is nonrandom, although it appears to be. It is not known which other stakeholders—coauthors, editors, or peer reviewers—are most culpable for the misbehavior of a first author. It is not known whether medical writers bear any responsibility for article retractions, since the help of medical writers may be undeclared, and examining the entails of an article cannot overcome a deliberate lack of transparency. It is not known whether there are any warning signs that could alert editors or peer reviewers to the possibility of research fraud. Finally, we do not even know if science is self-correcting.

Detailed examination of an article also cannot address scientific bias. Ultimately, it may not be possible to eliminate bias from the medical literature; one person’s bias is another person’s firm belief. Every article has bias, whether or not that bias is deliberate, and eliminating bias is far harder than aggressively policing data. A rigorous focus on data purity, so as to eliminate fabrication, falsification, or misrepresentation, is more likely to result in a reduction in retractions—and more likely to be fair to all stakeholders—than is an unrelenting focus on eliminating perceived bias.

Minimizing data manipulation in science is in the interest of all stakeholders. Science is a deeply collaborative enterprise involving first authors, coauthors, editors, referees, and peers, and all parties share a responsibility to protect the integrity of science. Retraction of an article is evidence of a systemic failure. Although the research enterprise is generally sound, adversarial relationships should be encouraged at every stage of publication: coauthors must know the data and press the first author to describe the data accurately; editors must find appropriate referees and urge them to do a thorough review; referees must take their charge seriously and do a fair-minded review; and readers must always be skeptical. It makes no sense to demonize 1 or a few stakeholders, as has happened recently. And it is neither fair nor wise for politicians—who may have no experience with the publication process—to imply that the scientific literature is tainted by the participation of pharmaceutical companies or medical writers. Perhaps the simplest way to protect the integrity of the scientific enterprise is for all stakeholders to focus on the integrity of the data: to collect it fairly; to analyze it rigorously; to describe it simply; and to make it available for outside review.

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
11. Adam D, Knight J. Publish and be damned... Nature, 2002;419:772-776.
In 2007, a legislative earthquake of 5.1 magnitude hit the US pharma-
ceutical industry. Congress passed
the Food and Drug Administration
Amendments Act (FDAAA), which
expanded requirements for
ClinicalTrials.gov such that phase
II–IV clinical trials of drugs, biologic
agents, and medical devices must now
be registered there.¹

The FDAAA changed clinical trial
registration in 2 other vitally impor-
tant respects. First, it required post-
ing of study results at
ClinicalTrials.gov (an added requirement to the basic
trial design and contact information
required previously). Second, it set
onerous deadlines for doing so.¹ But
publication planners (also sometimes
referred to as medical publication pro-
fessionals) were well-poised to respond.
Faced with the prospect of having to
post trial data even before they could
be published, along with the gathering
storm about disclosing funding sup-
port and medical writing assistance,
the medical publication industry cre-
ated 2 professional societies well before
the legislation was passed. Publication
planners, the least well-understood
participants in medical publishing,
were suddenly at the forefront, working
with medical writers and other stake-
holders to create guidelines for timely
and transparent communication of
clinical trial results.

AN OVERVIEW OF PUBLICATION
PLANNING
A publication plan is a structured
approach to disseminating basic
research results and clinical trial data
for a new product, a new use for an
existing product, or a new approach to
disease management. In its simplest
form, publication planning involves
developing timetables and venues for
publications and presentations that
will come out of a single study. More
often, the term refers to managing the
complex communications needs of an
entire development program, taking
into account very early phase I studies
through large, multicenter phase III tri-
als that involve many investigators and
that are critical to the evidence base
that informs health care.

When done without integrity, pub-
lication planning has been criticized
as “ghost management” of scientific
research for marketing purposes.²
In the current environment, there
are published standards, guidelines,
and position statements of profes-
sional organizations for publica-
tion planners and medical writers
to follow.³⁻¹¹ The most comprehen-
sive of these is “Good Publication
Practice for Communicating Company
Sponsored Medical Research” (GPP2,
published in 2009),¹⁰ which updates
“Good Publication Practice for
Pharmaceutical Companies” (GPP,
published in 2003).¹ There are several
key differences between these 2 sets
of guidelines (Table 1). Like GPP, the
GPP2 guidelines are designed for use by
companies that sponsor clinical trials
and any companies or individuals who
work on industry-sponsored publica-
tions (eg, freelance writers, contract
research organizations, and medi-
cal publications and communications
companies). GPP2 guidelines apply to
oral/audiovisual presentations at sci-
entific meetings as well as to journal
publications (both peer-reviewed and
non-peer-reviewed). The AMWA Board

Exploring
Diversity and
Common Ground
in Medical
Communication

This article is the last in a series of
articles based on interviews with
leaders in allied organizations in
an effort to explore the diversity of
medical communication and the
“hot topics” that AMWA and other
groups are confronting.

PUBLICATION PLANNERS AND MEDICAL
WRITERS: A NATURAL ALLIANCE

By Leslie Charles, MS³ and Faith Reidenbach, ELS⁴
³GreenTree Medical Writing, LLC, Spring Valley, WI, and
⁴Caley-Reidenbach Consulting, LLP, Corvallis, OR

AN OVERVIEW OF PUBLICATION
PLANNING
A publication plan is a structured
approach to disseminating basic
research results and clinical trial data
for a new product, a new use for an
existing product, or a new approach to
disease management. In its simplest
form, publication planning involves
developing timetables and venues for
publications and presentations that
will come out of a single study. More
often, the term refers to managing the
complex communications needs of an
entire development program, taking
into account very early phase I studies
through large, multicenter phase III tri-
als that involve many investigators and
that are critical to the evidence base
that informs health care.

When done without integrity, pub-
lication planning has been criticized
as “ghost management” of scientific
research for marketing purposes.²
In the current environment, there
are published standards, guidelines,
and position statements of profes-
sional organizations for publica-
tion planners and medical writers
to follow.³⁻¹¹ The most comprehen-
sive of these is “Good Publication
Practice for Communicating Company
Sponsored Medical Research” (GPP2,
published in 2009),¹⁰ which updates
“Good Publication Practice for
Pharmaceutical Companies” (GPP,
published in 2003).¹ There are several
key differences between these 2 sets
of guidelines (Table 1). Like GPP, the
GPP2 guidelines are designed for use by
companies that sponsor clinical trials
and any companies or individuals who
work on industry-sponsored publica-
tions (eg, freelance writers, contract
research organizations, and medi-
cal publications and communications
companies). GPP2 guidelines apply to
oral/audiovisual presentations at sci-
entific meetings as well as to journal
publications (both peer-reviewed and
non-peer-reviewed). The AMWA Board

Exploring
Diversity and
Common Ground
in Medical
Communication

This article is the last in a series of
articles based on interviews with
leaders in allied organizations in
an effort to explore the diversity of
medical communication and the
“hot topics” that AMWA and other
groups are confronting.

PUBLICATION PLANNERS AND MEDICAL
WRITERS: A NATURAL ALLIANCE

By Leslie Charles, MS³ and Faith Reidenbach, ELS⁴
³GreenTree Medical Writing, LLC, Spring Valley, WI, and
⁴Caley-Reidenbach Consulting, LLP, Corvallis, OR
of Directors endorsed GPP2 in April 2010.

In addition to its emphasis on ethical practices, GPP2 recommends that authors follow established reporting standards, such as the CONSORT guidelines for reporting randomized, controlled trials and the PRISMA guidelines for reporting systemic reviews and meta-analyses. A library of reporting standards can be found at www.nlm.nih.gov/services/research_report_guide.html.

Any publication plan should be based on a needs assessment, conducted to determine the current knowledge of each audience (e.g., physicians, nurses, and pharmacists) and its informational needs. Publication planners also determine when, and in what format, each audience should get the information. For example, for a late phase III trial of a lung cancer treatment, the publications team might decide to target the following:

- An oncology congress that will be held just after the final data are expected to become available
- An oncology journal whose submission-to-publication lead time is such that it can be expected to publish the primary report within a year of trial completion
- An oncology journal with a higher impact factor, for publication of a secondary analysis
- A journal for oncology nurses, for publication of a review article that helps provide clinical context for the data

For years, publication planning has been done inhouse by the pharmaceutical, biotechnology, or medical device company or has been outsourced to a medical communications or publications company. Before

### Table 1. Key Differences between GPP and GPP2

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Development process</td>
<td>Draft created in 1998 by a working group of what is now CSE; after review by the authors’ companies, published in 4 journals in 2000; final version published by 3 authors in their individual capacities</td>
<td>GPP revised/expanded by a 14-member ISMPP steering committee, then submitted to 193 consultants from all areas of medical publishing (including AMWA representatives); 116 blinded sets of comments evaluated by the steering committee; final version published in a peer-reviewed journal</td>
</tr>
<tr>
<td>Authorship</td>
<td>Follow ICMJE guidelines where possible or list contributors if the journal requires that. Whatever the criteria, apply them in the same way to both external investigators and company employees.</td>
<td>As in GPP, plus “Before writing begins one author (a lead author, who may also be guarantor) should take the lead for writing and managing each publication or presentation. One author (identified as guarantor) should take overall responsibility for the integrity of a study and its report.”</td>
</tr>
<tr>
<td>Contributorship</td>
<td>As above</td>
<td>Gives detailed guidance about how contributors, including sponsor companies, should be acknowledged</td>
</tr>
<tr>
<td>Acknowledgement of professional medical writers</td>
<td>The medical writer should be acknowledged</td>
<td>“We recommend that authors and professional medical writers working with authors use a published checklist to discourage ghostwriting.” We recommend that particular care is taken to ensure appropriate acknowledgment of the contributions made by medical writers and to describe their funding.”</td>
</tr>
<tr>
<td>Reimbursement</td>
<td>No guidance</td>
<td>Authors should not receive honoraria for peer-reviewed articles or presentations. Reimbursement of travel expense and payment for specialized services such as statistical analysis may be reasonable.</td>
</tr>
<tr>
<td>Documentation</td>
<td>No guidance</td>
<td>Companies should develop policies on the types of documentation to be maintained and for how long (e.g., retain main versions of the draft to document how comments on previous versions were incorporated)</td>
</tr>
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Abbreviations: CSE = Council of Science Editors; ICMJE = International Committee of Medical Journal Editors; ISMPP = International Society of Medical Publication Professionals.


beginning to implement the plan, a publications team must reach consensus on the roles and responsibilities of the authors; the medical writer; other contributors, such as statisticians; the medical communications or publications company, if any; and the sponsor company. The GPP2 guidelines note that it may be useful to form a publications steering committee that comprises members of the study steering committee and the protocol development team, other investigators involved in the clinical program, and employees of the sponsor company.  

According to GPP2, study sponsors also have a responsibility to make all data available to all authors and other publication contributors. Designation of authors versus contributors to be acknowledged should follow the ICMJE criteria. The authors must be involved with the manuscript from inception through publication, and they have ultimate authority over the content and responsibility for it after publication. The roles of all participants in the process—including the professional medical writer—must be transparent, and all contributors to the publication, including the sponsor company, must be acknowledged according to the journal’s guidelines. Some journals still do not have requirements for disclosures, but proponents of good publication practice advocate providing the disclosures regardless.

**ISMPP**

The development of GPP2 was led by the International Society for Medical Publication Professionals (ISMPP), which was founded in 2005. According to its Web site (www.ismpp.org), its goals are to “advance the medical publication profession, including pharmaceutical, biotechnology, and medical device companies; publishers; medical communications and publication agencies; academicians; investigators; editors; and independent medical writers.”

ISMPP describes itself as “the only not-for-profit professional organization dedicated to supporting medical publication professionals.” It is member-driven through volunteer committees and a member-elected Board of Trustees. Remarking on the differences between ISMPP and AMWA, ISMPP President Julia Ralston says, “Although there are clear differences between the 2 organizations, certainly in terms of history, scale, and focus of the member functions, there is also overlap where medical writing plays an appropriate role in the publication arena. This provides the basis for our collaboration to maximize the best of both organizations in terms of ensuring transparency and integrity in medical publications.”

ISMPP holds an annual conference, open to members and nonmembers; presents monthly educational Webinars on a range of topics relevant to the profession at no charge to members; and provides a member lounge on its Web site, where members can access job postings, a Listserve, news alerts, and other resources. To both members and nonmembers, ISMPP offers the opportunity to sit for the Certified Medical Publication Professional (CMPP) examination, discussed at length in a previous issue of the AMWA Journal. According to the January 2011 issue of the ISMPP newsletter, approximately 300 individuals worldwide hold the CMPP credential.

**TIPPA**

The International Publication Planning Association (TIPPA) is a membership organization run by a group of volunteer board members sponsored by Pharmaceutical Education Associates, LLC (PEA), a division of Financial Research Associates, LLC. Although TIPPA is a for-profit organization, its Web site explains that it “is not and has never been intended to be a revenue-producing ‘business’” (www.publicationplanningassociation.org). TIPPA was established in 2005 following a conference hosted by PEA on publication planning; the tremendous interest by participants in that meeting led to the development of the more formal group.

Each year, TIPPA sponsors 2 conferences that comprise discussions by industry leaders about ethics, editor/journal views on industry-sponsored publications, current publishing guidelines, and much more. Featured speakers are professionals from the publication planning industry, but no advertising or commercial messages are allowed, in order to maintain the unbiased open exchange of information, ideas, and feedback by TIPPA members. Membership in the organization is free.

TIPPA aims to “foster excellence in the publication planning and communications within the biopharmaceutical industry by providing a foundation from which the industry can stand together to organize thoughts and present recommendations and ethical guidance,” its Web site states. “In addition, TIPPA provides practical strategies for developing, implementing, and executing an effective publication and communication plan.” According to Art Gertel, a member of the TIPPA advisory board and an AMWA past president, TIPPA does not have a formal organizational goal of advocating for the publication planning industry. However, he notes that, by coming together for dialog with thought leaders and other industry professionals, TIPPA members can raise awareness of issues that affect publication planners. So, although TIPPA does not concentrate on education or advocacy, it does present forums for discussion of current
industry practices, views, and news. Among other offerings, any qualified person who registers at the Web site can tap into a job bank, article archive, and message boards.

WHERE ARE WE HEADED?

At recent meetings of ISMPP and TIPPA, speaker presentations addressed authorship, industry transparency in publishing, and the FDAAA regulations on the posting of clinical study results, among other topics. These regulations deserve particular attention from medical writers. For trials involving approved products, the results must be posted within 1 year of completion, which is defined as “the date that the final subject was examined or received an intervention for the purposes of final collection of data for the primary outcome.” For new products, and new indications for approved products, the results must be posted within 30 days after initial approval of a drug or new indication. Companies may be fined up to $10,000 per day if they fail to post their data on time.

The ICMJE does not consider posting of trial results on ClinicalTrials.gov to constitute prior publication. In general, though, sponsor companies prefer to publish their data before posting it there, to provide clinical context that assists the reader/practitioner with interpretation of the data, reduce the chance for misinterpretation by the public, and avoid other problems that could arise from posting data that have not been peer-reviewed. Therefore, sponsors are trying to have manuscripts written very soon after the data become available, sometimes even before the clinical study report is complete. All aspects of publication planning now have to be decided much earlier in the clinical program, and many companies now have standard operating procedures in place that dictate the sequence of events that must occur for regulatory compliance. Medical writers who understand these constraints will be invaluable to the companies with which they work.

At the Midwest TIPPA meeting in February 2010, publication planners uniformly indicated that there is a very clear delineation between the science and marketing functions of their companies. Although this distinction may be common practice now, convincing critics is another matter entirely. There is still much to do in raising awareness of the medical writing and publication planning processes and how they function, and in ensuring that all stakeholders follow current guidelines such as GPP2. But we are making strides in the right direction. Working together, medical writers and publication planners have created and are upholding ethical standards and best practices that increase our transparency and credibility. TIPPA and ISMPP are 2 organizations that are helping us to do this.

Author disclosure: The authors note that they have no commercial associations that may pose a conflict of interest in relation to this article.

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References
As you may know, I am seldom speechless. However, I was speechless when Michele Vivirito called to tell me that I had been selected to receive the 2010 Swanberg Distinguished Service Award. When I recovered from the initial shock, I remembered how Michele had ended the conversation. “And you’ll have 25 minutes for the Swanberg Address. Just tell us something about your career.” After a few days of thinking that I’d dreamed the entire conversation, I received the official letter. In it, Michele asked for the title of my talk. What would I say? Why couldn’t I just be handed the award, smile, get my picture taken, and get off the stage? That I could handle. When I thought about what I’d say, I felt my heart skipping a beat. Those palpitations made me decide that I wanted my Swanberg Address to include a few personal vignettes to illustrate how I came to be standing on this stage tonight—especially because the theme of this year’s conference is “Seek, Soar, Succeed.”

One of the more obvious reasons I am here is that I’ve been around long enough to make a name for myself in the profession. Remember, making an impact takes time. I was reminded of that just last week by a sentence from the journal *Stem Cells and Development* that read, “We isolated adult stem cells from 53 elderly patients aged 50 to 75 years who were undergoing elective vascular surgical procedures.” So based on that study, my stem cells and I are not only considered old, but past the group midpoint. I have never considered myself elderly, but that sentence did remind me that I have been at my craft for nearly 35 years. My department’s newest editor isn’t even 35 years old. What I’m trying to say is that being a professional medical editor/writer is a lifelong journey—one that requires constant learning and one that can take you down a number of bumpy roads before you reach your goal.

I hope that you will find my journey of interest. I appreciate having the opportunity to tell you about my demons, my idols … and my blue Corvette.

DEMONS

Everyone here has watched toddlers learn to walk. Have you ever thought about the perseverance they show in the face of fairly consistent failure? What toddlers have is the courage to fail. Soon, though, well-meaning parents and teachers say, “Watch out,” “Be careful,” or “You can do better.” As a result, we often assimilate a fear of failure into our subconscious. If we’re not careful, the “fear-of-failure” demon can adversely affect our lives and our careers.

My father, who died when I was still young, always told me that I should never be afraid to risk failure, because failure often leads to great accomplishment. Although this was hard advice to follow, I have always remembered how he dealt with failure. You see, my father was an inventor for a company called Victor Animatograph, which ultimately became RCA Victor, then RCA. He constantly faced failure, yet successfully pioneered the development of new home movie cameras and projectors. My father advised me to study hard and to pick a career in which I thought I could both succeed and be happy. I decided that career would be science, but I also loved reading and language. I’d never thought about combining the two. However, that’s the way it turned out.

I graduated from the University of Iowa with majors in chemistry and English. I moved to Houston because I wanted to live in a large, vibrant city and because I had a connection there: my aunt was the director of nursing at the MD Anderson Cancer Center. However, after a few years of teaching high school English and chemistry, I wanted a career change.

In the summer of 1976, I heard of a job opening in the Cardiovascular Research Laboratories at the Texas Heart Institute. The Heart Institute was looking for a laboratory coordinator, someone who could manage projects and ensure that all of the appropriate reports were completed. I wasn’t at all qualified to work in a lab that developed artificial heart devices, and I didn’t know anything about the heart. But I wanted something different, and the job description sounded interesting. After a brief flurry of palpitations, I summoned the courage to apply.
doubted I'd get the job but decided that the interview experience would be good for me.

Dr John Norman, a brilliant and eccentric heart surgeon and researcher, was the director of the laboratory. I was told that he went through stacks of résumés and seldom interviewed anyone. I managed to get an interview because my résumé listed mastery of a unique skill: “can run an MT/ST typewriter.” You may remember Norman Grossblatt’s talking about the magnetic tape Selectric typewriter in his Swanberg Address a couple of years ago. Basically, you typed onto a magnetic tape and edited that tape while watching a “screen” that allowed you to see about 6 typed words. The editing was done by using a series of knobs and by counting clicks, which represented the number of characters and spaces on a page. I’d mastered that monster machine during a summer job in college—not an easy feat and not a skill listed on most résumés. But that wasn’t the only reason I got the job at the Heart Institute.

Dr Norman’s pet dog lived in the lab. (Back then, people could do things in a hospital that they can’t do now.) The first thing Dr Norman asked me was to identify the dog’s breed. I knew that she was a Harlequin Great Dane. Apparently, no other applicant had been able to identify the dog’s harlequin spots. That knowledge and the MT/ST typewriter experience were, evidently, all that Dr Norman needed, and I was hired. So, like many of you, I came to my job rather circuitously.

The palpitations started again as I tackled the new job. However, I was working with a small group, and the engineers and physician trainees were extremely nice. Because of my English major, they decided that I was the obvious person to edit and, ultimately, write the lab’s grants, contracts, and manuscripts. We were all about the same age, and I enjoyed our camaraderie. Without them, I could not have succeeded, and I learned an unforgettable lesson in teamwork in that lab. Thus, my work as a medical writer—but not my career—was born, and the fear-of-failure demon went back into hiding.

In 1980, Dr Norman left the Texas Heart Institute, and Dr O. H. Frazier was appointed to run the lab. Dr Frazier was young and easygoing, and he told us to call him “Bud.” At the time, we all knew more than he did about the work, so there wasn’t any reason for the failure demon to reappear. However, one day Dr Denton Cooley stopped by the lab. For those of you who don’t already know, Dr Cooley is the surgeon-in-chief at the Texas Heart Institute and an extremely famous heart surgeon. He performed the first successful heart transplant in the United States, did the first implant of a total artificial heart in the world, and has been involved in nearly every major achievement in the field of heart surgery. At the time, he and his team were doing 30 to 40 open heart operations a day—an unprecedented number, so he was really busy. Dr Frazier brought him by to see me and mentioned that I’d taken over much of the writing and editing in the lab.

If we’re not careful, the “fear-of-failure” demon can adversely affect our lives and our careers.

The next day, Dr Cooley appeared with a stack of printouts 2 feet high and titles for 3 articles that he had been asked to write. He handed me outlines that he had scribbled on the backs of operating room schedules and asked if I could help him draft the manuscripts. Once again, my palpitations began. I didn’t think that I could possibly accomplish such a daunting task. After all, I was just an English and chemistry major from the University of Iowa. I was not qualified to work on surgical papers, especially with the legendary Dr Cooley. Yes, I had done well in college, but I had taken courses that I liked and was building on previously learned material. Yes, I had done well in the lab, but I was part of a team in which the engineers helped explain how the devices worked. What Dr Cooley wanted involved “statistics” and “complex heart surgery” and the almost unthinkable prospect of showing him my work.

After hopelessly staring at my Lanier word processor (an upgrade from the MT/ST) for at least an hour, I found Bud in his office and asked him what he thought I should do. He pulled out his pocket copy of Shakespeare’s Richard II and quoted lines that the Bishop of Carlisle had said to King Richard:

“My lord, wise men ne’er sit and wail their woes, But presently prevent the ways to wail. To fear the foe, since fear oppresseth strength, Gives, in your weakness, strength unto your foe, And so your follies fight against yourself.”

I have never forgotten that quotation because, at that moment, I realized that my fear of failure, my own personal demon, was the foe. I remembered what my father had told me. The worst that could happen would be that I would fail, but I would learn something as a result. I had been successful in the lab. I knew how to do research. I had friends who could explain the intricacies of heart surgery. I just needed to ask. So I drafted the first paper and, with some trepidation, sent it to Dr Cooley.

He returned the draft the next day with a note that said: “Many thanks, some minor revisions.” Much to my surprise, his corrections weren’t in content but in style. Every “it” was circled, and he recommended fewer “to be” verbs. He was right. I had overused both. I didn’t feel stupid, though, because I realized that I’d passed the big test. I had just drafted a paper in a field I knew little about. I realized then that life is just one big learning experi-

Richard:

To the foe, since fear oppresseth strength,
Gives, in your weakness, strength unto your foe,
And so your follies fight against yourself.”
ence, and I knew how to learn and to apply what I had learned. That’s all I needed to do: keep on learning, work hard, accept the challenge, and give the job my very best shot. And the demon went back into hiding.

I saved that note and every other “kudo” I’ve received since then. Whenever I begin to feel the palpitations and to fear that the failure demon might return, I get out my notes, remind myself of my successes, and the demon slinks away.

**IDOLS**

Once I had figured out how to keep the demon at bay, my world took on a new perspective. Sure, I still got occasional palpitations (although they became fewer and farther between), but without the demon, I had time for real learning. The type of work that I was doing was new to me, and I realized that I needed help—just as I did when I asked the engineers in the lab to explain how a heart assist device worked. I had my Texas Heart Institute idols: Dr Norman, Dr Cooley, and Dr Frazier.

I knew that I could understand the science, and I already knew grammar. Furthermore, our grants were being funded, and our papers were being published. But I didn’t really know anything about medical writing or editing. I was following authors’ instructions and examining journal articles, but I had many unanswered questions. Should background material be in the introduction or in the discussion? I had seen it both ways. How should the author order be determined? What was the best way to present tabular data? As a new medical writer in the late 1970s, I was unaware of any medical style manuals, and the Internet did not exist. However, I was not the only medical editor in the world. I knew of Walter Pagel, who was across the street at MD Anderson, so I called him. He told me about AMWA, and I joined immediately.

I consider myself extremely fortunate to have found AMWA at the beginning of my career. AMWA has given me countless opportunities for professional growth. I received the education I needed, but, more importantly, I found professional idols—people I could aspire to emulate.

During my second or third conference, I took the course “Organizing the Biomedical Paper” from Martha Tacker, who was prominent in AMWA. I couldn’t believe that she would be critiquing my homework. Furthermore, I couldn’t believe that I would be attending her workshop and expected to participate in a discussion. Fortunately, this was after I had decided that it was okay to fail, although I really didn’t want to fail in front of Martha. After the workshop, Martha came up to me at a reception and commented about what a good job I’d done on my homework and in the class discussion. Soon thereafter, she became AMWA’s president-elect. One day, I answered the telephone and was flabbergasted to hear her voice. She was looking for someone to teach “Organizing the Biomedical Paper,” remembered that I had done well, and wondered if I would consider teaching it that year. As I worked to control a new wave of palpitations, I said, “yes.” I’ve taught at every AMWA conference since then; this is my 24th year. Yes, I had to chase away the demon, but I knew that I could do it. And I did it with Martha’s help—a situation I otherwise could never have imagined.

What I learned from this and many subsequent experiences in AMWA is that it is important to have professional idols. But more importantly, I learned that all my AMWA idols were quite approachable—just like all of the world-class physicians and researchers at Texas Heart Institute, including Dr Cooley (Figure 1). These are the people who can help you get beyond the demons. These are people like Tom Lang, who has answered every stupid statistics question I’ve ever had; Edie Schwager, who is a hero to all of us; MaryAnn Foote (or the other MaryAnn, as we call each other), who is incredibly talented and funny; and my entire Executive Committee. These are just a few of my early AMWA idols; there were others then, and countless others have followed. The point is that when I joined AMWA, I couldn’t imagine that I’d feel comfortable picking up the phone and calling anyone in this group for help or, even more, that they would become my good friends. Now I look forward to seeing and having fun with them every year (Figure 2).

And then there are my editors in Scientific Publications at the Texas Heart Institute: past and present. Without them, I would not be standing here today. I respect and learn from each one of them. We are a small and
extremely loyal group. In my 30 years of working, I can count their numbers on my fingers. A few have moved to other cities, but they remain loyal AMWA members. I look forward to seeing them every year here at our annual conferences. I am indebted to all of them for making me a better editor and writer. Like the engineers in the lab, they remind me every day of how important teamwork is to building a successful career.

AND A BLUE CORVETTE
For us to be at our best, I believe that it is important to maintain balance in our lives. I learned this from Dr Cooley, who has always believed that everything should be done in moderation— including work.

Our jobs are stressful and physically and mentally exhausting. We sit at our desks for hours at a time and are expected to learn and edit new, complex material in record time to help our authors clarify their points. (Why is nearly every project we receive marked “rush”?) And, most of us are perfectionists, so we don’t really want to do anything in moderation. I have mentioned Dr Cooley a lot in this talk because he taught me some important lessons. One of those lessons was that a big difference exists between being a perfectionist, which can lead to endless torment, and striving for excellence. From him, I learned to work hard and stay focused but to know when to quit, when to “hit the road,” and when to relax with a hobby or with family and friends.

The Daytona blue Corvette (Figure 3) is an important source of my relaxation. I love classic cars: a trait I’m sure I inherited from my dad. This one is a 1963 split-window—the first year of the Sting Ray and the only year in the Sting Ray series in which the back window was split. Everyone hated the split, so Chevrolet replaced it in 1964 with a full window. The company took a huge risk in putting that split in the window, and, at the time, it didn’t work. But with perspective, that Vette has become the icon of the “good ‘ole days”. Chevrolet had courage that year. Maybe that’s why I like my split-window so much. And I like nothing more than to go out to my garage, put on some music, and clean up my blue Corvette. It gives me perspective—maybe because it is so far removed from my workaday world.

My family and friends have also been important to the “in moderation” aspect of my life. My daughter, Lindsay, is here with me tonight. I owe her so much for her support over the years. Lindsay has always loved animals and has ridden horses since she was 7 in a sport called dressage. Getting on a 1,000-pound animal takes courage, but becoming good at dressage takes an incredible amount of persistence— another quality that is important for success in any profession.

CONCLUSION
We all have demons; we all have idols; we all have our own blue Corvettes. Acknowledging and giving each of them the perspective they deserve is the challenge. Be prepared for that one event that is going to throw you off kilter. Be prepared for criticism. That’s what medical writing and editing is all about anyway. Critiques are not personal, and you will recover. You have AMWA friends. Draw on them.

And accept the challenges that go along with your job. It’s a hard job; don’t let anyone tell you otherwise. How many complicated jobs are done by people who don’t have the specific training to do them, and how many jobs have a daily learning curve, often quite unexpected?

My editors will tell you that every year I challenge myself in some way to do something I thought I could never do. I encourage them to do the same, although I’m not sure they are always initially happy about it. That is why I am standing here today. I’ve learned that success often depends on failure, and error is a powerful teacher. How
many of you remember the answers you missed on a test but not the ones you got right? When I think of how important having the courage to fail has been for me, I am reminded of these words from Mark Twain, "Twenty years from now you will be more disappointed by the things that you didn’t do than by the ones you did do."

I cannot say how humbled and honored I am to be receiving the Swanberg Award. The previous recipients of this award have all inspired me. I am looking out at a roomful of people who are my friends and colleagues. I may not have met you personally, but I am in awe of each one of you and your collective wisdom and talent. Thirty-five years ago, I could not have imagined that my journey to becoming a professional medical editor and writer would include this stop tonight in Milwaukee.

For many of you out there, this is your first conference. I know that you may feel hesitant as new members, but consider getting more involved in AMWA. Get involved in your chapter, meet other medical writers who can be your friends and mentors, and continue attending the annual conference to create a network. AMWA will do much to enhance your professional credibility, just as it has mine. Like many former workshop leaders and presidents, I have been invited all over the world to give presentations. Even though I work with famous physicians, my AMWA service provides the opportunities for me to become well-known in my own right. I will always cherish my years of service in AMWA, and I will continue to feel honored whenever someone calls to ask for my help.

In closing, I would like to quote from Dr Cooley’s favorite poem, which is engraved beside the front door of the Texas Heart Institute. It’s called “A Bag of Tools” and was written by R. L. Sharpe. I have typed it what seems like a million times, and each time I appreciate it more.

Isn’t it strange
That princes and kings,
And clowns that caper
In sawdust rings,
And common people
Like you and me
Are builders for eternity?
Each is given a bag of tools,
A shapeless mass
A book of rules;
And each must make
Ere life has flown
A stumbling block
Or a stepping stone.

Thank you,
Dr Cooley, the Texas Heart Institute,
and AMWA.

Author contact: MMallia@heart.thi.tmc.edu

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Tools and Trends in Medical Communication

By Faith Reidenbach, ELS

Caley-Reidenbach Consulting, LLP, Corvallis, OR

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❖ **FDA Basics for Industry** (www.fda.gov/FDABasicsforIndustry) is a new Web site designed to help companies interact efficiently with the US Food and Drug Administration (FDA). The information it gives is so fundamental that the site will also help medical communicators who want to learn more about the US regulatory process. Furthermore, FDA Basics serves as a quasi-portal to the main FDA site because it contains links to FDA databases, guidance documents, e-mail lists, and more.

❖ **Google's Android Market** has finally added a Medical category for smartphone apps. As on iTunes, this makes it easier to distinguish apps of interest to medical communicators and clinicians from, say, the dozens of calorie counters in the Health and Fitness category. In related news, iMedicalApps.com (a site well worth following) recently identified the “Top 20 Free iPhone Medical Apps for Health Care Professionals.”

❖ **Prezi.com** is being hailed (by some) as the next great thing for creating meeting presentations. Unlike PowerPoint and the like, it doesn’t involve creating discrete slides; rather, it’s a Web-based “canvas.” Users can group their images, text, and video in various ways, then zoom back and forth between topics during their talks. Once downloaded, a presentation supposedly works on any computer, even without Internet access. Free accounts are available, but a fee is required to work offline and remove Prezi’s branding. Now available for the iPad.

❖ **PubMed** continues to tweak its user interface. Most changes are cosmetic or readily apparent, but a few updates to the “Limits” feature are worth noting. Under “Type of Article,” it’s now possible to select “Video-Audio Media,” so that your search identifies articles accompanied by online videos and other audiovisual content. Under “Subsets,” two new topics have been added: “Dietary Supplements” and “Veterinary Science.” (Clicking on a “subset” restricts your search to journals in that specialty and certain citations that the PubMed people have identified in other journals.)

❖ “The culture of compliments” in Eastern countries influences ethical conduct in medical publishing, according to Behrooz Astanah, MD of Iran, a visiting editor at BMJ. He notes that people in most Eastern countries give extra respect to elders and teachers, in accordance with traditional religious beliefs. Thus, researchers may consider it ethical to add a senior colleague to the list of authors of an article even if he or she did not contribute, and during peer review they may deem it proper to ignore shortcomings in an article written by a former professor. “It is time to consider this fact when we propose guidelines for suitable ethical behavior,” Dr Astanah writes on a BMJ blog. “And as most such guidelines are released by authorities in western countries who may not have the same concern, this issue may have not been considered appropriately.”

❖ **Internet users in the so-called BRIC countries** (Brazil, Russia, India, China) and Mexico are highly likely to search online for health information, according to a 12,000-person survey supported by the London School of Economics. In these 5 countries, 85% to 95% of Internet users sometimes or often search for health information. The respective figure in 7 higher-income countries ranges from 62% (France and Spain) to 81% (USA). Less than half the population of each emerging economy has Internet access, but still, these countries represent millions of users (eg, an estimated 81 million in India and 115 million in rural China alone). Worldwide, the primary uses of the Internet for health purposes are finding information about medicines (68% of respondents), attempting to make a self-diagnosis (46%), and seeking other patients’ experiences (39%).

Items in “Briefly Noted” appear earlier on selected AMWA listserves.

To subscribe to a listserv, go to www.amwa.org and click on Membership>AMWA Listserves.
Web sites targeted to the public can be useful resources for medical communicators, providing reliable, easy-to-understand information as a starting point when researching a new topic. The Medical Library Association notes that the following Web sites are the most useful resources for health consumers. (The sites are listed in alphabetic order by name of Web site, not in a ranked order.)

1. National Cancer Institute  
   www.cancer.gov

2. Centers for Disease Control and Prevention  
   www.cdc.gov

3. American Academy of Family Physicians  
   www.familydoctor.org

4. US Department of Health and Human Services  
   www.healthfinder.gov

5. University of California San Francisco, HIV InSite  
   http://hivinsite.ucsf.edu

6. Nemours  
   www.kidshealth.org

7. Mayo Clinic  
   www.mayonews.org

8. MedlinePlus  
   www.medlineplus.gov

9. National Institutes of Health, SeniorHealth  
   www.nihseniorhealth.gov

10. New York Online Access to Health (NOAH)  
    www.noah-health.org

From The Medical Library Association  
(www.mlanet.org/resources/medspeak/topten.html).

Submit your idea for a Top Ten list to the editor at  
amwajournal@editorialrx.com.
Tips for Working at Home*

By Janis Ramey, MA  
Ramey Technical Writing, Pittsburgh, PA

Working at home requires discipline, commitment, flexibility, and often long hours. It also means your work schedule, manner of dress, office décor, and even family obligations can fit your lifestyle rather than some corporate requirement. The trick is to project a professional image even though you are working in a home environment. Clients and prospective clients need to feel confident that you are doing a professional job. Their projects need to be done well and on time. This means you need to be available during normal working hours, and your clients should never feel they are interrupting your personal life at home.

Remember that you are not just a writer, you are a business owner. Your business materials (business cards, e-mail address, marketing materials) should have a top-notch professional look. Your accounting, billing, taxes, and other financial affairs must be handled in a business-like manner. Although working from home is no longer the novelty it once was, some people still think of home-based workers as lazy or as people who can’t find a “real” job. Don’t do anything that could support that notion.

Here are some tips for those of you who are just starting out working at home (or thinking about it). If you already work at home, the tips include some important reminders.

**Attitude**

- Conduct yourself in a business-like manner.
- Make it clear that you’re available and ready to work.
- Project a “can do” attitude at all times. People will hire you if you inspire them with confidence that you can do the job well and do it on time. For an article about how attitude can lead to successful freelancing, see [http://www.technical-writing.net/successfulfreelancing.htm](http://www.technical-writing.net/successfulfreelancing.htm).
- Think like a business owner. You not only want to get new clients, you want to keep them coming back for more. How you perform on the first project will largely determine whether you get repeat business.

- When meeting with clients or potential clients, dress as if you are coming from the office—you are! It is better to be overdressed than underdressed.
- When addressing clients, refer to your office as “my office.” Avoid saying things like, “I’ll do that when I get back home.”
- Stand up when you take that important call. You’ll focus more attention on the call and you’ll sound better.
- Learn to ignore household distractions like laundry and pets while working.

**Equipment and workspace**

- Establish an off-limits area—preferably a quiet, private space where you won’t be interrupted by your family.
- Buy the best equipment and software you can afford. Your corporate clients have the latest equipment, the fastest Internet connections, paid society memberships, etc. To project a professional image and do a professional job, your business must have current equipment. Be careful, however, of getting over your head in debt.
- Have a professional answering service and record a professional-sounding business message. Install a dedicated phone line. Disable call waiting (Which client will you put on hold?).
- When you’re out of the office, consider forwarding your calls to your cell phone. Or, check your office message service frequently.
- If your clients are in other cities, change your phone service to accommodate long-distance or international calls. Be alert to time differences.
- Create contingency plans for technical difficulties that may come up (such as, what will you do if your server isn’t working or when—not if—your hard drive crashes). Back up important files every day.
- If your home office isn’t suitable for meeting

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*This article is based on a presentation at the annual conference of the Society for Technical Communication (STC), Philadelphia, 2008. This program was originally presented to STC WorkQuest, a support group for people looking for work sponsored by the Pittsburgh Chapter of the Society for Technical Communication; www.STCWorkQuest.org. The author has worked from home for 30 years.
clients, offer to meet them in their offices, at a coffee shop, or over lunch (and you pay the tab).

Family considerations
- Make sure your family and friends respect your workspace and equipment. Remember that your clients trust you with proprietary information; therefore, no one but you should have access to your computer. They must also recognize that you are not available when you are at work, that is, when you are in your dedicated work space.
- Do not allow family members to answer your business phone unless they can unfailingly do so in a business-like manner.
- Make your home sound like an office by eliminating background noise. For tips on how to make your home sound like an office, see http://www.technical-writing.net/soundlikeoffice.htm.

The joys of working at home
- There are many perks to working at home, including the freedom to work when and where you want, choosing projects you find interesting, escaping office politics, and avoiding long commutes.
- Anything goes, as long as you always satisfy your obligations to your clients. So, get comfortable! Work in your PJs if you like. Eat breakfast at 10:00, take your shower at 1:00, take the dog for a walk at 3:00.

Take care of yourself
- Commit to learning something new every day, whether about your work, the software you use, a piece of equipment, or something outside your work. This will help to keep your mind sharp.
- Be sure to get out of your office every couple of days. You might consider meeting friends or other freelances for lunch.
- Stay active in your professional associations. Attend chapter and national meetings. This is a good idea from a professional perspective, because you need to expand your professional network to get new business. But it is also important from a social perspective as well. You must find ways to counteract the isolation of working at home.
- Try to identify people you can bounce ideas off or serve as an accountability anchor.
- Be careful to not overwork yourself. Cultivate the arts or participate in sports, hobbies, or volunteer activities.
- Keep healthful snacks handy so you aren't tempted to snack on last night's leftover dessert.
- Keep physically fit.

Finances and taxes
- Don't undervalue yourself. Charge double, or if possible, triple, the hourly rate of someone working full-time at your level. (Check the AMWA Salary Survey online.) Remember that your business must cover business expenses, health insurance, and vacation and sick pay just as any other business does. Companies are willing to pay you more per hour than they pay employees precisely because they don't have to pay your benefits— that's your responsibility.
- Keep records of all income, all business expenses, and mileage if you use your personal vehicle for business purposes.
- Report all income scrupulously. You don't want to be on the IRS's radar screen.
- It may be worthwhile to hire a tax accountant, especially if you are incorporated. You want to spend your time working on your clients' projects, not figuring out the tax code.
- You will need to file tax reports at least quarterly. You may have to make monthly tax deposits (both federal and state, depending on your state's tax code), based on how much you earn. You may have to pay sales tax. Check with both the federal and state tax offices. You may also have to pay a local business, unemployment, or earned income tax.

Resources
- Before buying a lot of reference books, check the Internet. You may be surprised at what you can find. However, a copy of the American Medical Association's Manual of Style is a handy reference book to have on your shelf.
- Visit the AMWA Web site (www.amwa.org) and listserves for valuable resources and join relevant online groups.
- Networking sites such as LinkedIn or Facebook can be particularly helpful for making and maintaining contacts.

Acknowledgment
The author thanks John Clark and Seth Beckerman for their contributions to this list.

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We all have sat through countless meetings and conferences where audience members asked long and winding questions and presenters gave even longer and more circuitous answers. We also know that bad—or more precisely, badly phrased—questions and answers impede communication and understanding.

The successful exchange of information relies on asking clear, pointed, and specific questions and giving focused, precise, and accurate answers. Asking the right question in the most effective manner to get the answer you need is an art form unto itself. This article provides some techniques that will help you communicate effectively, whether you are on the giving or the receiving end of the question-and-answer equation.

Before discussing the specifics of effective questions and answers, I will present different types of questions, as a better understanding of the types of questions commonly asked in a meeting can help you formulate the right question.

Understanding the Different Types of Questions
The 20th century French anthropologist Claude Lévi-Strauss said that “the scientific mind does not so much provide the right answers as ask the right questions.” Lévi-Strauss correctly stressed the importance of asking the right question; however, it is equally important that the question be asked in the right format.

Following is a brief overview of the 3 different types of questions one is likely to encounter in a scientific setting.

- **Specific questions.** These questions usually require a categorical answer. One type of specific question can be answered with “yes” or “no” (eg, Did your investigation uncover the index case?). Because the answer is restrictive and limited by the yes/no dichotomy, the information exchange is usually straightforward. The other kind of specific question requires a factual answer that cannot be answered with “yes” or “no” (eg, How many case-patients did you identify?). These questions often start with **wh** words (eg, what, when, where, who[m]).

- **Leading questions.** These are open-ended questions requiring answers that have varying degrees of complexity. Leading questions require conceptual answers that are based on analysis, synthesis, or evaluation (eg, Could you elaborate on the reasons for such a high number of cases?). These questions tend to require answers that involve more in-depth analysis and interpretation.

- **Presupposition questions.** These are questions with an assumption behind them; in fact, they are statements and judgments (often critical in nature) in disguise. In the question, *Weren’t you unable to locate the source of the outbreak?* the person asking the question is actually implying that the investigator was in fact unable to locate the source of the outbreak. Questions that start with **why** (eg, Why were you unable to uncover the index case?) often involve a presupposition (eg, Why did you wait 3 days to start the outbreak investigation?). Because “why” questions can be confrontational, they should be used with caution.

Following are some tips on asking questions and providing answers.

**Asking Effective Questions**

- **Think about the question.** Before you raise your hand or step up to the microphone, decide what type of question you want to ask. Are you after a specific answer or are you looking for a broader answer? Identifying your aim will help you formulate a clear and precise question.

- **Ask a precise question.** Your aim should be to ask the most precise question possible; this does not necessarily mean using the fewest number of words. Although brevity is often requested (and expected) in an oral environment, if you formulate your question in precise, focused terms, it will be clear to the audience and the presenter, and the length of the question will not impede comprehension. It is a good idea to formulate the question in your mind, or even write it down, before asking it instead of ad libbing. Writing down the question first is also a good test; if the question takes too long to write down, it might be too long to ask.

- **Stick to the topic at hand.** Make sure your question is appropriate and related to the discussion at hand. Taking advantage of a question-and-answer session to discuss tangential topics or to comment, rather than inquire, is rude and confusing to the speaker and the audience.

- **Ask 1 question at a time.** Asking multiple questions at once can make it difficult for the presenter to follow all your queries and concentrate on the answers. If you want to ask more than 1 question, you may preface your first
question with something like “Here is my question. I would like to ask a follow-up question, if I may.”

- **Be careful about “why” questions.** Questions that begin with “why” can be inferred as being critical or accusatory, as already noted. This is especially true if the question involves a negative (e.g., “Why didn’t you alert the authorities?”). Asking “what” or “how” questions is often a better method for obtaining information.

- **Ask your question in a nice, polite manner.** Even if you disagree with what the presenter had to say, you don’t want to be rude, confrontational, or argumentative in your line of questioning. This is especially crucial if the presenter gives out incorrect information. As a scientist, you may feel you owe it to the audience to point out the inaccuracies and present the correct data. Resist the temptation to show off your better knowledge.

- **Don’t be overly complimentary.** Typically, etiquette dictates that the first questioner start with a bit of praise about the presentation (e.g., “Thank you for an excellent presentation.”) before moving to the question. However, once is enough; it is not necessary for every person after that to make the same comment.

**Providing Effective Answers**

- **Rehearse answers to obvious questions.** As a presenter, you have a considerable advantage over your audience who hears your presentation for the first time: You know the content of your speech. You can therefore do some preliminary work by anticipating potential questions and preparing and rehearsing answers. Politicians and lawyers do this all the time and so should you.

- **Clarify the rules (if appropriate).** Before you start your talk, clarify how you will deal with questions: Tell the audience whether you are open to taking questions during the presentation or whether they should hold questions until after you have finished your presentation. This rule varies in context: At conferences, you usually have a 10-minute question-and-answer session after the talk.

- **Listen to the question and don’t interrupt.** Listening is key to effective communication; it helps you connect to the person who asks the question. Don’t rehearse your answer in your mind while the person asks the question; you may miss something and deliver a less directed response. In addition, let the person articulate the question fully before you start to answer. Communication is a 2-way dialogue, not a 1-way monologue.

- **Repeat the question.** This is especially important if you are at a conference in a large room. Because voices project forward, people behind the person who asks a question often cannot hear the question. If you are in a small room or if all questions are asked at a microphone, this rule might not apply.

- **Ask for clarification if necessary.** It’s OK to politely ask a person to clarify his or her question. Alternatively, if you think you have a notion about the question, rephrase it in your own terms and ask if that is the intended question.

- **Be honest.** If you don’t know the answer, say so. Don’t fumble trying to come up with an answer. There is nothing wrong with saying you don’t know the answer, but offer to follow-up and to contact the person with the answer.

- **Give short, precise answers.** There is often a time constraint involved in conference or meeting settings, so you don’t want to spend most of your allotted time on a single question. If the person insists, you can always say that you’d be happy to continue the discussion afterward.

- **Don’t be defensive if questions are hostile.** Always remain courteous, no matter how contentious or aggressive the questions might be.

**Author contact: phk4@cdc.gov**

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www.medilingua.com
Q – The quality of much of the health-related writing on the Web is poor. Is there any way freelance medical writers can improve the situation?

A – There is a lot of bad writing out there, especially in the health care field and particularly on the Web. I do believe there are opportunities for freelance medical writers to help correct this problem, but it won’t be easy.

Like the first step in a 12-Step program, I believe the greatest barrier to improving the quality of health-related writing on the Web is getting the culprits (that is, the Web site owners, not the writers) to recognize they have a problem. I define the Web site owners as the culprits because there will always be bad writers, and what we need to do is get the owners of poorly written Web sites to stop hiring bad writers and to reject poorly written content. We need to open the eyes of Web site owners to the problem, teach them that good writing produces better results, and show them that better freelance medical writers (who are more expensive) are more valuable and therefore worth the investment.

So how do we do this? The answer, I believe, is one Web site at a time. I encourage great freelance medical writers who do not currently write for the Web to put Web writing on their radars, and I encourage freelances who already write for the Web to do more of it. We should market ourselves to the medical communications companies and medical advertising agencies who develop Web sites for their clients (although these are not usually the bad ones, they can be), and to the medical associations and societies who are often responsible for developing their own content. When we see a company or organization with a bad Web site, we should take a look at their competitors; and if their competitors have better Web sites, we should use that observation to start a discussion with the owner of the poorly written Web site.

In this way, freelances can improve the quality of health-related writing on the Web and improve their bottom lines, too!

— Brian Bass

A – I’m generally appalled with the quality of content found on the Web. Most Web writing appears dashed off just to fill the page and get the advertising message flashing. The Internet is here to stay, so I suggest as writers we take the time needed to consider my ABCs of Web writing.

Audience. Write only to the defined audience.
Blog. Don’t blog to fill space; include only relevant content.
Cut out plagiarism. Cutting and pasting is not writing.
Direct. Use active writing to be clear and direct.
Edit it out. Avoid useless content.
Fonts. Use eye-friendly fonts such as Arial, Verdana, and Georgia.
Graphics. Spice it up with pictures (but see “I”).
Headings. Use lots of heads and subheads to organize information and to allow for easy scanning.
Images. Keep them to a minimum to avoid distracting from the content/message.
Jargon. Leave it out.
Keywords. Use keywords and phrases and their variations to enhance search engine optimization.
Less !,:;’”” The rules have changed: Avoid overusing punctuation as it often gets lost on a computer screen.
Margins. Leave a lot of white space.
Numbers/bullets. Simplify the format with numbered or bulleted lists.
Objective. Determine what your audience needs to know
Plan. Give thought to what you want to say and the action the reader should take.
Quality control. Print a hard copy of your content and proofread it several hours later in a new setting.
Readability. Write at a low reading level to increase the number of people who can understand.

— Elizabeth Smith

A – As a freelance writer who has been involved in several Web site projects, I can say that the learning curve for many stakeholders is high, especially for projects that must undergo medical/legal approvals. We need to provide clients with samples of good Web-based postings and teach them to recognize the differences. I had one successful project where the Webmaster was able to convince the client and the key opinion leaders that the brief, succinct, bulleted statements that I had written (and referenced) were the most effective way to educate patients about a disease.

The Web should be a learning tool for health care providers and patients. The jazzy, elaborate artwork and graphics that seem to be appearing on many sites today only serve to complicate the site and make learning less effective. Keeping it simple, factual, and to the point makes more sense to me.

— Elizabeth Smith
The quality of writing has gone down dramatically since the advent of e-mail and the Internet. A perfect example is the emergence of the “content mills,” but check out some big companies’ Web sites and you’ll see that not enough attention has been given to writing and editing skills overall. The absence of limits on word count may be one factor contributing to this situation: with print media, you had a word count due to budget constraints; with Web sites, there are no limits. Experienced communicators know that fewer words are better than many, and that it takes far longer to write short than to write long! But not all Web designers and e-publishers understand communication or the importance of good writing and editing. Moreover, many young college graduates need work and are trying to become writers without realizing that training, practice, and experience are necessary. As Malcolm Gladwell said, it takes “10,000 hours” of practice to be excellent in one’s profession. So the naïve hiring managers on a tight budget end up hiring inexperienced people to produce copy and . . . voilà!

Another factor in poor Web writing may be the impersonal nature of the Internet. Even social media sites give “distance” to so-called personal expressions. People seem to have the illusion of being invisible, which may lead to caring less about the quality of written material they post on the Internet.

How can we help turn this around? I certainly don’t have all the answers but here are a few thoughts.

- Clean up our own writing, even in personal e-mails and Facebook postings!
- Begin publishing excellently written articles or postings on Web sites, blog pages, and listserves. People need to see the difference; as experienced professionals, we should exemplify quality.
- Give well researched presentations to professional organizations that are willing to pay for our services to teach/communicate to their members the differences between good and bad copy. Organizations that ask speakers to present without being paid are giving the message that they don’t respect you enough to pay. Essentially, they are saying “We want you to fill our open slot, but we don’t value you enough to pay for what you bring.” Politicians, marketing consultants, and other professional experts do not go around speaking for nothing unless they are hawking their own books, etc. Neither should we!
- Research a random selection of Web sites and critique the good vs the bad writing and communication—then publish the results with clear descriptions of why/how something is good vs poor. (Where to publish something like this is another topic entirely; maybe the results should be sent to the Web sites selected for critique.)
- Create a consortium of advanced professional medical writers with extensive Web experience whose charge would be to address this question with total commitment.
- Volunteer to give presentations at schools in your community about the importance of good communication.

Scannability. Write “scannable” content, or content that readers can understand by just scanning. (No one fully reads Web copy.)

Text blocks. Use short paragraphs to minimize the need for scrolling.

Uniqueness. Write unique content that is useful to the reader; consider that Internet browsers (Google) are looking for unique content.

View. Create a professional look; format your page to approximately 65 characters per line.

Write tight. Say more using fewer words.

X-rated out. Don’t write for shock value.

Yack. Avoid it by not using excessive, wordy, run-on sentences or topics.

Zeal. Write expressively but don’t overuse adjectives.

— Barbara Rinehart

A – Writing good Web content is the key to improving bad Web writing. Good Web content lets users find what they need fast. Otherwise, they move on to another Web site. Good Web content is clear, concise, conversational, and active (voice). It draws users in and facilitates skimming and scanning through the use of

- Short words, sentences, and paragraphs
- Interesting headlines and subheads
- Bulleted and numbered lists

Good Web content puts the most important information first, so that users will want to click for more information.

Educating clients about good Web content is often part of our role. Although clients hire us for our expertise, they often don’t understand how different Web content is from other types of writing or how important it is to get it right. Sharing evidence of how people use the Web and what constitutes good Web content is very helpful. For example, users read about 20%-28% of a typical Web page (Jakob Nielsen’s Web site: www.useit.com), and they skim and scan before they read (Letting Go of the Words, by Janice Redish). It’s important, of course, to educate clients about these issues gently to avoid hurting their feelings and egos.

You probably won’t convince your clients about everything related to writing good Web content. A client may, for example, insist that you use the word “physician” instead of “doctor” on a Web site for patients. Accept these quirks and preferences, and then write the rest of the Web content so well that you still entice users to spend time on the Web site.

— Lori De Milto

A – Given the number of typos and the poor usage my colleagues and I allow to go through the Internet via e-mail and listserv postings, this is truly a challenging question! The quality of writing has gone down dramatically since the
and the benefits of learning good writing and editing skills. This could be piggybacked onto a “Careers Day” at a local high school.

- Write a letter/e-mail to an executive of each Web site where you find amateur writing and poor communication. Point out the poor quality materials and what makes it substandard. This is time consuming, of course, but no doubt would have an impact if enough people did it! (I once wrote a personal card sent by US postal mail to the president of Adobe about a problem I encountered with his software; he answered me promptly and personally, by phone.) The squeaky wheel gets greased, so if more people complained about the garbage, a cleanup crew might be put to work.

— Cathryn Evans

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**Calendar of Meetings**

**APRIL**

International Society for Medical Publication Professionals
April 4-6, 2011
Arlington, VA
E-mail: kgoldin@ismpp.org (Kimberly Goldin)
Web site: [www.ismpp.org](http://www.ismpp.org)

Association of Health Care Journalists
April 14-17, 2011
Philadelphia, PA
E-mail: info@healthjournalism.org
Web site: [www.healthjournalism.org](http://www.healthjournalism.org)

International Association of Scientific, Technical & Medical Publishers
April 26-28, 2011
Washington, DC
Web site: [www.stm-assoc.org](http://www.stm-assoc.org)

Health Academy, Public Relations Society of America
April 27-29, 2011
Washington, DC
E-mail: don.bill@prsa.org (Don Bill)
Web site: [www.healthacademy.prsa.org](http://www.healthacademy.prsa.org)

American Society for Indexing
April 28-30, 2011
Providence, RI
E-mail: info@asindexing.org
Web site: [www.asindexing.org](http://www.asindexing.org)

Council of Science Editors
April 29-May 3, 2011
Baltimore, MD
E-mail: cse@councilscienceeditors.org
Web site: [www.councilscienceeditors.org](http://www.councilscienceeditors.org)

**MAY**

European Medical Writers Association
May 10-14, 2011
Berlin, Germany
E-mail: info@emwa.org
Web site: [www.emwa.org](http://www.emwa.org)

Society for Technical Communication
May 15-18, 2011
Sacramento, CA
Phone: (703) 522-4114
E-mail: stc@stc.org
Web site: [www.stc.org](http://www.stc.org)

**JUNE**

Society for Scholarly Publishing
June 1-3, 2011
Boston, MA
Web site: [www.sssnet.org](http://www.sssnet.org)

Health and Science Communications Association
June 1-4, 2011
Phoenix, AZ
Web site: [www.hesca.org](http://www.hesca.org)

Canadian Science Writers Association
June 9-12, 2011
Calgary, Canada
E-mail: office@sciencewriters.ca
Web site: [www.sciencewriters.ca](http://www.sciencewriters.ca)

Plain Language Association International
June 9-11, 2011
Stockholm, Sweden
Web site: [www.plainlanguagenetwork.org](http://www.plainlanguagenetwork.org)

Drug Information Association
June 19-23, 2011
Chicago, IL
Web site: [www.diahome.org](http://www.diahome.org)

**OCTOBER**

American Association of Dental Editors
October 8-9, 2011
Las Vegas, NV
E-mail: aade@dentaleditors.org
Web site: [www.dentaleditors.org](http://www.dentaleditors.org)

Public Relations Society of America
October 15-18, 2011
Orlando, FL
Web site: [www.prsa.org](http://www.prsa.org)

National Association of Science Writers Workshops/Council for the Advancement of Science Writing New Horizons in Science Conference
October 14-18, 2011
Flagstaff, AZ
E-mail: diane@nasw.org (Diane McGurgan)
Web site: [www.casw.org](http://www.casw.org)

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Pittsburgh, PA
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Web site: [www.accp.com](http://www.accp.com)

Regulatory Affairs Professionals Society
October 23-26, 2011
Indianapolis, IN
E-mail: raps@raps.org
Web site: [www.raps.org](http://www.raps.org)

American Public Health Association
October 29-November 2, 2011
Washington, DC
Web site: [www.apha.org/meetings](http://www.apha.org/meetings)
HOW TO... ARTICLE

How to search and harvest the medical literature: let the citations come to you, and how to proceed when they do

L. Citrome, 1, 2 S. V. Moss, 1 C. Graf 3

SUMMARY

Background: There is a virtual avalanche of medical information available to clinicians and researchers. The traditional ‘search’ can be substantially augmented by proactive ‘harvesting.’ Aims: To describe how to search and harvest the medical literature. Materials & Methods: Survey of selected resources available on the internet. Results: PubMed remains the backbone of the traditional literature search. The availability of automated delivery of electronic tables of contents (eTOCs), electronic feeds of targeted search results, and workflow tools allows relevant articles to find the reader. Electronic storage and retrieval tools make it possible to manage this information and make day-to-day clinical and research activities more efficient. Discussion: Searching and harvesting the medical literature is made easier with the advent of the internet and email. In addition, there are internet resources that screen and filter potential articles of interest. Managing one’s electronic library of PDF documents requires attention to appropriately naming files and the use of indexing programs. Conclusion: In addition to readers searching for relevant citations, these citations themselves can be searching for readers. Clinicians and researchers can take advantage of this and efficiently harvest the medical literature with a modest investment of time.

Harvesting the medical literature, in contrast to simple searching, is the ongoing process of keeping up with the virtual flood of information that comes our way. It involves setting aside a little time each day or each week to download, skim, classify and store articles, preferably electronically, for potential future use. For the individual clinician or researcher, the harvest targets can be idiosyncratic, but the common processes are the same, and a major challenge remains to separate the wheat from the chaff. Popular harvesting tools are the automated delivery of electronic tables of contents (eTOCs) and automated delivery of carefully scripted search-engine-generated mini-lists of articles of interest. A bonus of having a bountiful harvest of stored articles is that it will make searching for answers a more pleasant task when you know you had collected this information earlier and had stored it in a way that is easily retrievable.

As discussed in a prior article (1), journals now almost universally publish materials online, often prior to print publication, and in almost all cases prior to when the printed journal arrives in one’s physical mailbox. This presents a challenge and an opportunity. How does one keep up, and how can one winnow down the torrent into a trickle and still be up-to-date? The ultimate goal is to have the relevant articles find you, rather than the other way around.

Keeping up the traditional way – the ‘search’

Using an online search website such as PubMed (http://pubmed.gov/), it is easy to locate the journal article entry and a link to the publisher’s site. Many journal articles are available for free download for everyone. Clinicians with hospital or university affiliations can get broader access to more journal titles. Physicians in New York State in the US have free access upon registration, to the New York State Library and its full text electronic journal holdings (http://www.nysl.nysed.gov/).

This sounds convenient, but the major problem with this approach is that you have to have a question in mind to do the search. This approach does not help...
you when your goal is simply to keep up in a general sense, with topics that interest you and are critical to your day-to-day work. For clinicians and researchers, this means keeping up on new information about specific disease states and therapeutic modalities. Researchers may want to add topics such as different research methodologies or theoretical constructs.

Additional tips on conducting a search can be found elsewhere (2–4).

### A shotgun approach – eTOCs

Not too long ago medical librarians would spend part of their time making photocopies of tables of contents of relevant journals as they arrived in the mail. These would then get distributed to the members of the staff who made arrangements to receive these sheets and they would then circle the titles of the articles they wanted to obtain copies of. The clinician

#### Table 1 Selected internet resources

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<tr>
<th>Publishing houses</th>
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<tr>
<td>BioMed Central (Springer)</td>
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<td>Nature.com (Nature Publishing Group)</td>
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<td>EBSCOhost</td>
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<td>M.J. Powers</td>
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<td>AHRQ (Agency for Healthcare Research and Quality)</td>
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<td>Bandolier</td>
<td><a href="http://www.medicine.ox.ac.uk/bandolier/">http://www.medicine.ox.ac.uk/bandolier/</a></td>
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<td>The Cochrane Collaboration</td>
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<td>Faculty of 1000 Medicine</td>
<td><a href="http://www.f1000medicine.com/">http://www.f1000medicine.com/</a></td>
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<td>McMaster Online Rating of Evidence</td>
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How to search and harvest the medical literature

Without access to such a service would be restricted to have only those journals he or she has subscribed to, or is receiving as a member benefit from their professional association. Some of these journals entered into reciprocity agreements where they would publish each other’s tables of contents, so that readers would have some idea of what else was available.

In today’s internet world, anyone can now subscribe, for free, for delivery of eTOCs. All of the major publishers and some of the smaller ones as well enable users to register for a free personal account on their websites. Once you have an account, you will be able to sign up for eTOCs. Often, you can sign up for individual journal alerts from a journal’s home page. Alternatively, many publishers provide a place on their website where users can manage all of their alerts. Look for a tab or link labelled ‘Alerts’ or ‘E-Alerts’.

As a result of consolidation in the scholarly publishing industry in recent years, a large proportion of medical journals are now published by a handful of the largest publishers (Elsevier, LWW, Springer, Wiley-Blackwell) (see Table 1). Each of these offers an eTOC service on its website. If you locate a favourite journal’s home page via an internet search, you can often quickly determine whether an alerting option is available.

Another good source of eTOCs is HighWire Press, an online publishing platform which currently hosts 1,245 journals from over 140 scholarly publishers. From the HighWire home page, you can easily browse the journals by topic or by title, and alerts can easily be managed by selecting the Alerts tab.

Note that in addition to email alerts, some content providers also offer an alerting option known as Really Simple Syndication or RSS. RSS is a notification system that alerts you to new web content. These alerts come in the form of RSS ‘feeds’, and your computer must have an RSS feed reader for you to view the updates. A feed reader can easily be installed, if necessary. Recent versions of Microsoft’s email application, Outlook, have a built-in RSS reader, which makes the process very simple. If you use this reader, then the feeds can be treated as email messages. If a publisher or other web provider offers both kinds of alerts, it is just a matter a preference which you choose. You can try out an RSS feed to see how you like it, and then switch to email instead if you prefer. The email/RSS alternative also applies to other kinds of alerts mentioned below.

Intelligent harvesting – the automated targeted search

There is now a way for relevant articles to find the interested reader, rather than the reader searching for the relevant articles. Free online services can be used to formulate a general question and set up an automated search. The subscriber would then receive on a periodic basis in their email inbox a list of relevant articles that matched their specifications. These specifications can be further refined, and the number of new articles can be reduced to a more manageable amount. Abstracts are usually available free by a click of the mouse, and for many, access to the full text is also free. There are many options for setting up this kind of topical alerting. Just a few examples will be discussed here.

One powerful resource to consider is My NCBI – NCBI stands for National Center for Biotechnology Information – which enables you to customise a personal profile so you can best take advantage of PubMed (and other NCBI databases). A link to My NCBI can be found in the left margin of the PubMed front page. With a My NCBI account, you can store keyword searches which will be run against PubMed on a regular basis. Whenever there are new results that match your search specifications, they will be emailed to you automatically. My NCBI also allows you to store and manage bibliographies and other collections of PubMed citations.

Some information service providers have set up an array of subject categories from which you can choose. Once you register with the service, and then select the topic(s) you are interested in, the alerts are automatically sent to you on a regular basis. A good example of this type of service is Amedeo, which also allows you to select which journals will be used to generate your alert results. The Amedeo website is provided by Flying Publisher, which also collects free medical resources at http://www.freemedicaljournals.com/ and at http://www.freebooks4doctors.com/.

BioMed Central is a publisher of online journals, many of which are ‘open access’, or freely available to anyone. If you register with the BioMed Central website, it offers several ways to harvest publications that might be of interest to you. First, you can sign up to be alerted when new articles are published in a particular journal. Second, you can specify one or more areas of interest in medicine and science, and receive topical alerts based on your specifications. Finally, you can store keyword searches which will generate alerts when new matches are found.

Commercial database vendors, such as Ovid and EBSCO, can also be a good harvesting source. If you are affiliated with a hospital or academic institution, you may be able to access a variety of research databases. In general, these systems enable you to create a personal account where you can store customised search strategies. These can be as broad or as specific

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as you want them to be, and you can usually configure the automatic alerts in a variety of ways.

Elsevier is a commercial publisher, but free registration on its ScienceDirect content platform enables anyone to sign up for targeted alerts in a wide range of subjects. As the categories are ready-made, you simply add a Topic Alert to your profile to begin receiving email (or RSS) updates. You can easily manage all of your selections (including subject alerts, new issue alerts and customised search alerts) under the Alerts tab on the ScienceDirect site. The sheer number of journals published by Elsevier makes this a rich source of new content. Free access is provided to article abstracts, when available, but you will normally need a license (i.e. online subscription) to view the full text.

This brings us to the general question of how to obtain the full text of articles that you want to read. Here are several possibilities to consider. (i) First, check whether an article is freely available online. Some journals are entirely open access, and some make selected articles open access. Also, authors sometimes post the manuscript version of their articles on their institutional or personal website. By entering a segment of an article title in quotation marks (“like this”) into Google, you can often quickly determine whether an article can be freely downloaded. (ii) When you cannot obtain a digital copy yourself, you may be able to take advantage of your institutional affiliation and request a copy from a hospital or university medical library. If you are eligible for this service, a librarian should be able to supply requested articles without much delay. Some articles may be available using in-house library resources, while others may be obtained through inter-library exchange. (iii) If you do not have access to a medical library, another option is to contact the corresponding author and request a copy. Success will depend on the responsiveness of the author, but a simple email message often leads to a fast and gratifying result. (iv) When all else fails, you may have the option of purchasing a digital copy of the desired article, either from the publisher or from another vendor. Typically, individual articles are priced in the $10–$25 range, but sometimes they are more expensive than that.

**Separating the wheat from the chaff**

A major challenge that remains is determining what is worth reading beyond the abstract and what is worth saving. On a cautionary note, restricting the choice of journals to what you consider as most worthy works only moderately well, as gems can be found in the most unlikely of places, and publication in a first-tier journal is not always a hallmark of quality (5).

Here is a bit of advice to authors: readers look at titles first. If the title does not contain the relevant words or is otherwise not very enticing, that article is often initially passed over. No abstract can redeem a poorly-crafted title if the reader never clicks on the ‘read abstract’ button.

The next hurdle is the inspection of the abstract. This usually determines whether a report is harvested or not. However, there are also commentaries available that can vet a paper. We do not have a reader rating system (yet) such as seen on amazon.com, but there are websites that purport to list and summarise the top papers of the past month or year. They also make email services available that let you know when a new list is available. One free example is Evidence Updates from the BMJ Group, which will send you personalised alerts based on your settings. All citations are highly rated for quality and clinical relevance. The BMJ Evidence Centre also offers a searchable database of archived information.

On the commercial side, there are several well-known providers that screen a variety of literature and present you with a filtered selection. One is Journal Watch, which is published by the Massachusetts Medical Society (publisher of the New England Journal of Medicine). Journal Watch does offer a variety of free email alerts – a daily, general one and a range of specialty ones (weekly) and topical ones (monthly). However, a subscription fee is charged for full access to the website and more extensive alerting options.

Some current awareness resources are published as newsletters. Good examples of this type of newsletter are The Medical Letter (biweekly) and also Treatment Guidelines from The Medical Letter (monthly). Specialty area newsletters are also available. An example for psychiatry is Psychopharm Review (formerly International Drug Therapy Newsletter). M.J. Powers & Co. publishes several newsletters on drug efficacy and safety. Many newsletters began as print-only publications, but now most can also be downloaded.

The evidence based medicine umbrella provides another option for finding prescreened literature that may be of interest. Journals such as Evidence Based Medicine and Evidence Based Mental Health (both published by BMJ) survey a range of research, and present clinically relevant highlights along with expert commentary.

Another commercial resource designed to guide users to the best publications from the vast body of literature is called Faculty of 1000 Medicine. This service makes use of a large group of experts (clini-
cians and researchers), who select, rate and evaluate the articles they deem to be the most important. These articles are then included in the searchable and browsable online database.

With all of the information that is now freely available online, you may be reluctant to pay for this kind of service. However, keep in mind that the kinds of filtering and organising functions provided by these services can save you a substantial amount of time and effort. Another consideration is that some of these information providers make it possible to obtain Continuing Medical Education (CME) credits in conjunction with their products. If you are affiliated with an institution that provides medical library resources, then you may be able to access one or more of these pay services through an institutional license.

Becoming a rater of articles has some perks. The McMaster Online Rating of Evidence (MORE) programme will send the rater articles that have passed certain criteria for scientific merit, arrange for CME credit and provide the highest rated articles to all raters in a given discipline. MORE’s principal objective is to ‘supply clinicians with a finite, very manageable stream of high-quality, highly relevant medical literature, replacing the ‘infinite’, unmanageable flood of articles that are of lower quality and relevance for clinical care.’

**New ‘workflow’ tools**

A number of new tools enable you to ‘bookmark’ and share links to journal papers and other information as soon as you find it. These tools allow bookmarking while you are reading, in one click, with minimal interruption. They incorporate ‘social networking’-type functions, so you can share bookmarks with colleagues. This means you can also use your colleagues’ bookmarks as a new route to more information. These tools also allow you to ‘tag’ your bookmarks with keywords both for easy retrieval, and so you can create keyword-themed clusters of information.

CiteULike and Connotea offer similar, straightforward online bookmarking and link-sharing tools, with no software to download. Both encourage you to follow a simple process to add a button to your toolbar for one-click bookmarking. A third tool, Mendeley, takes a different approach. Mendeley encourages you to install a free software download that can, if you direct it to, automatically index your existing archive of articles and information. You will have to add your own ‘tags’ to each article, and the
automated indexing works better for journal articles than it does for other types of information. Mendeley can then synchronise your index with your Mendeley account online (that you will have created to download the Mendeley software), and this account gives you online bookmarking and link-sharing similar to that provided by CiteULike and Connotea, but that already incorporates your existing archive.

Some journals incorporate bookmarking with CiteULike, Connotea, Mendeley and other tools (such as Digg, del.icio.us, Facebook and more) into their journal articles online, as do newspapers and other sources of online information, usually with a series of ‘Share this Article’ or ‘Share’ buttons. So if you make discovering an article and bookmarking it routine and second nature, harvesting that information for future retrieval can become a simple, efficient part of your everyday reading.

**What to do with your harvest**

Storage and retrieval has been discussed elsewhere (1), but certain essential components are worth repeating. When downloading a journal article, specify a descriptive name so that it will be easier to retrieve later. One possible naming convention is to name the file by title, first author, journal and year. For example, this article would be named ‘HowToHarvestLiterature CITROME IJCP2009’. An alternative would be to use ‘key words’ instead of the title, such as ‘SearchHarvestMedicalLiterature CITROME IJCP2009’. It would be placed in a file folder possibly named ‘HowToSeriesIJCP’. Whatever naming scheme you use, it is important to be consistent and take care to spell correctly to allow accurate retrieval later. Adding spaces between words and using upper or lower case is optional, but may make it easier when you use, it is important to be consistent and take care to spell correctly to allow accurate retrieval later.

When downloading a journal article, specify a descriptive name so that it will be easier to retrieve later. One possible naming convention is to name the file by title, first author, journal and year. For example, this article would be named ‘HowToHarvestLiterature CITROME IJCP2009’. An alternative would be to use ‘key words’ instead of the title, such as ‘SearchHarvestMedicalLiterature CITROME IJCP2009’. It would be placed in a file folder possibly named ‘HowToSeriesIJCP’. Whatever naming scheme you use, it is important to be consistent and take care to spell correctly to allow accurate retrieval later.

Adding spaces between words and using upper or lower case is optional, but may make it easier when reviewing lists of PDF file names.

Back up the information on a hard drive is essential, and software that exists today makes incremental back-ups quick and easy. The key concept here is ‘synchronizing’ the contents of your file folders across different computers and/or external hard drives. Free programs exist such as ‘SyncToy’ from Microsoft (available at http://www.microsoft.com/downloads/).

Unfortunately, even the best naming scheme for your PDF files and file folders will be less than adequate once you have stored a few hundred files. There are free programs available such as ‘Google Desktop’ (http://desktop.google.com/) and ‘Copernic Desktop Search’ (http://www.copernic.com/) that can index the entire contents of your hard drive. The latter program can search within PDF files (as well as inside Word documents, PowerPoint presentations, Excel spreadsheets, and importantly, emails and their attachments), so that if you do not remember all the details of the file you are seeking, you can still find it by entering into the search program some of the words, dates, or names that you think the file may contain. The search program then provides a list of possible files, sorted anyway you specify, such as by date, name or type of file format. A ‘preview’ is also shown so that you do not have to open the file directly when you are searching.

**Summary**

Harvesting the medical literature is made easier with the advent of the internet and email (see Figure 1). Having the relevant articles find the reader is now possible. This is an ever-evolving area and the examples provided are only samples of what is available. You can leverage the capabilities of automated notification of articles of interest, so that with a modest investment of time you can keep up with the medical literature that is relevant to you and your practice.

**References**


*Paper received July 2009, accepted July 2009*
Sure, you’re a writer—sure, you know grammar.

What about competing with an 1895 eighth-grader? Want to try it?

These questions on grammar were given to eighth-graders in Salina, KS, in 1895. They are taken directly from an original on file at the Smokey Valley Genealogical Society and Library in Salina, as reported in the *Salina Journal*.

The original examination—I repeat, given to eighth-graders—consisted of 5 parts: grammar, arithmetic, US history, and orthography. (How many of you ran to the dictionary on that one? I did.) The total test lasted 5 hours.

Here are some of the questions from the grammar section.

- Give 9 rules for the use of capital letters.
- Name the parts of speech and define those that have no modifications.
- Define verse, stanza, and paragraph.
- What are the principal parts of a verb? Give principal parts of “lie,” “play” and “run.”
- Define case; illustrate each one.
- What is meant by the following: Alphabet, orthography, etymology, syllabication?
- Give 2 rules for spelling words with a final “e.” Name 2 exceptions under each rule.

Another question required the eighth-grader to write a 150-word composition, showing an understanding of the practical use of the rules of grammar.

In case you are gloating about being able to answer some of these grammar questions, let me challenge you with a few of the questions in other subjects.

- Name and define the Fundamental Rules of Arithmetic.
- Write a bank check, a promissory note, and a receipt.
- Find the interest of $512.60 for 8 months and 18 days at 7%.
- Describe 3 of the most prominent battles of the Rebellion.
- Name 3 events connected with the following dates: 1607, 1620, 1899, 1840, 1865.
- What are elementary sounds? How classified?
- Name the republics of Europe and give the capital of each.
- Find the cost of 6,720 lbs of coal at $6 per ton.
- Show the territorial growth of the United States.
- Write 10 words frequently mispronounced and indicate punctuation by use of diacritical marks and by syllabication.
- Describe the movements of the earth. Give the inclination of the earth.

I admit it: I flunked—grossly, badly, terribly.

Remember that this exam was a 5-hour test with 10 questions in each of the 5 areas of knowledge—given to eighth-graders.

When someone said his grandparents or great-grandparents “only had an eighth-grade education,” it was sort of a put-down. It did not imply they were loved any less, but the phrase meant that they were really uneducated or under-educated. Judging by these questions from the turn of the century—actually, 2 centuries ago—those children were certainly not uneducated. Even allowing for the syndrome many, of us endure—learning the rules and understanding them and spending the rest of our lives following all the rules but not being able to verbalize them—the 1895 students had to learn at least as much as today’s generation does. I doubt that all the rules of grammar are being taught universally today. And learned by the students? I’ll bet not.

But for now, I’ll eschew the word “only” and say proudly, “My grandfather had an eighth-grade education—even if he wasn’t a writer.”

And remember that medical school was only 2 years—just after high school—and no pre-med!
DEAR EDIE:

I have a question about comma use. An editor I know who works with nonmedical texts has told me multiple times that I overuse commas. According to Strunk and White, she says, writers should not use commas to separate independent clauses that are linked by coordinating conjunctions if the subject is the same in both clauses. Examples would include sentences such as the following:

“I think you should but I don’t want to lose you.”

“I’m sorry for going on and I won’t mention the problem again.”

“She went to the health care center and later she went to the pharmacy.”

My fingers itch to insert commas before the coordinating conjunctions in these sentences. When I read Strunk and White, all I see is the usual rule (use the comma) plus an example that just seems to remind writers that they shouldn’t break up compound verbs by inserting unnecessary commas into their sentences. The example in Strunk and White:

“He has several years’ experience and is thoroughly competent.”

Now I’m on the spot. A popular science writer has asked me to find out which interpretation is correct—mine or the other editor’s. Can you help?

KIMBERLY KANE
Huddinge, Sweden

DEAR KIMBERLY: I agree with the example that Strunk and White uses; there should not be a comma in this short sentence, since the comma is used as a pause that refreshes.

I thank Kelly Flaherty for her invaluable help in composing my most recent columns.

Edie Schwager, a freelance writer, medical editor, and workshop teacher, lives in Philadelphia. She is the author of Medical English Usage and Abusage and of Better Vocabulary in 30 Minutes a Day.

Questions and comments may be sent to the Journal Editor at amwajournaleditor@editorialrx.com. To avoid back-and-forth notes, please include permission to publish, as well as your city and state, along with your questions or comments.
Managers Appointed: Grateful thanks to the people who are serving as WIT managers or chairs this year: Mary King, chair of the Freelance Directory Publicity subcommittee; Caitlin Rothermel, manager of the listserves; Scott Thompson, chair of the Pocket Trainings subcommittee; Arlene Walters, who is advising me on Web site redesign; Tina Wasson-Blader, manager of the LinkedIn group; and Vicki White, manager of social networking.

Pocket Trainings: AMWA’s newest member benefit is a library of free mini tutorials, developed by AMWA members, on a range of topics useful to medical communicators. Pocket trainings may be PDFs, slide presentations, podcasts, or multimedia presentations.

At press time, 3 pocket trainings had been posted at www.amwa.org: “Editing and Organizing References in EndNote,” “Editing Text and Reviewing Comments in Adobe Acrobat,” and “Making the Most of Your Ad in the AMWA Freelance Directory.” The Pocket Training subcommittee welcomes your contribution! The first step is to complete the proposal form posted on the Web site.

Listserve News: Because of low traffic, the Educators listserve and the Public Relations/Advertising/Marketing listserve were suspended on December 31, 2010. Their archives will remain available on the AMWA Web site indefinitely. If you were a subscriber to one of these listserves and would like to join the Editing-Writing, Freelance, and/or Pharma listserves instead, go to http://www.amwa.org, click Membership>AMWA Listserves, click the button labeled “Manage Subscriptions,” and adjust your settings.

Freelance Directory Upgrades Completed: (1) For the benefit of Mac users, the freelance directory is now fully compatible with Firefox. In theory it’s also compatible with Safari, but Firefox is a safer bet. (2) Following a client’s search, freelancers’ names come up in random order. This has been true for over a year, but some freelancers are still under the false impression that search results are returned in alphabetical order.

Freelance Directory Upgrades Planned: Exciting changes to the freelance directory will take effect in 2011—we don’t know exactly when yet.

The most exciting change, to me, is that the directory will become open access. All clients, not just AMWA members, will be able to search it for free. Accordingly, for non-members there will be no more lag time while payments are processed. To support this change, there will be a modest increase in the fee charged to freelancers for their ads.

The directory will be searchable in 7 new ways: by number of years of freelance experience, by overall number of years of experience in medical communications, by level of experience with different types of documents/media, by level of experience with various services, by level of experience with various therapeutic areas, by availability to work on-site, and by country. Keyword searching will remain available.

Once the directory is reprogrammed, freelancers will fill out a completely new profile. Of course there will be many announcements when it’s time to do this. A trial period will follow during which freelancers can make suggestions about the new search options.

Web resources that can help make your work as a medical communicator easier and more productive.

Policy and Medicine: www.policymed.com

Policy and Medicine is a blog spot and online community for continuing medical education (CME) that was created by Thomas Sullivan, a former political consultant and recognized authority in the changing medical education environment. Launched in 2008 to inform the medical education community of emerging trends, threats, and
changing practices, the Web site contains news, information, and commentary on government regulations and proposed regulatory actions regarding medical education, communications, and marketing and focuses on how these important issues affect CME providers and pharmaceutical, biotech, and medical device companies.

The Web site's navigation bar, located to the left of the screen, takes you to lists for Recent Posts, Categories, and Archives. You can subscribe and have daily posts sent to your e-mail address on areas of interest you specify. Under the Categories list, there are upward of 50 CME-related post topics from which you can choose; these categories include the Accreditation Council for Continuing Medical Education (ACCME), CME, Medical Journals, Medical Societies, National Institutes of Health (NIH), and Risk Evaluation and Mitigation Strategies (REMS). Within ACCME, for instance, viewers can find an understandable explanation of how the new ACCME criteria will affect CME providers. If you are passionate about controversial issues such as transparency and ghostwriting, there are topic area posts aplenty—Conflicts of Interest, Clinical Research, CME Grant Disclosure, Letters from Grassley, and more. Whether you are a seasoned CME professional or a newbie to the field, you will find interesting, and sometimes provocative, topics, as well as useful information that will add to your knowledge base.

Although controversial in nature, Policy and Medicine is a noncommercial Web site. Sullivan discloses he is the founder of and a principal in Rockpointe Corporation, a medical education company in Columbia, MD. The company also has an ACCME-accredited subsidiary, The Potomac Center for Medical Education (PCME).

For those of you involved in health literacy and who write for consumers, the Toolkit for Making Written Material Clear and Effective is an excellent resource provided by the Centers for Medicare and Medicaid Services (CMS). It contains everything you need to know about writing and designing various communications vehicles, including brochures and pamphlets, booklets, flyers, fact sheets, posters, bookmarks, application forms, comparison charts, postcards, instruction sheets, questionnaires, and more. In addition, you will find useful tips, examples of content, and lots of figures.

Divided into 11 parts (see below), the Toolkit can help you create enduring materials (ie, print deliverables) that are easier for people to read, understand, and use. Each part is easily accessible from the navigation bar on the left of the screen. Although the Toolkit is geared to CMS recipients, the suggestions given are suitable for all consumer audiences. Clicking on the Table of Contents will give you detailed information on what topics are presented in each part or chapter.
1. About this Toolkit and how it can help you
2. Using a reader-centered approach to develop and test written material
3. Summary List of the "Toolkit Guidelines for Writing and Design"
4. Understanding and using the "Toolkit Guidelines for Writing"
5. Understanding and using the "Toolkit Guidelines for Graphic Design"
6. How to collect and use feedback from readers
7. Using readability formulas: A cautionary note
8. Will your written material be on a website?
9. Things to know if your written material is for older adults
10. “Before and after” example: Using this Toolkit’s guidelines to revise a brochure
11. Understanding and using the "Toolkit Guidelines for Culturally Appropriate Translation"

What will you find inside the Toolkit? Here is what I found of particular use. Part 1 explains low literacy skills and Part 2 focuses on gearing content to literacy level. Part 4 contains 4 chapters, with guidelines on the content of your written material; organization; writing style; and engaging, motivating, and supporting your readers; Part 5 contains 8 chapters, with tips for learning about design and working with design professionals, as well as guidelines for overall design and page layout; fonts, size of print, and contrast; headings, bulleted lists, and ways to emphasize blocks of text; use of color; use of photographs, illustrations, and clip art; tables, charts, and diagrams; and forms and questionnaires. Part 6 is all about reader feedback; Part 7 gives you “the scoop” on readability formulas; Part 9 addresses writing for seniors; and Part 10 reviews editing and how to “polish the piece.”

The complete set of Toolkit files is downloadable and can be saved, printed, or distributed. To use material other than that in the public domain, please contact the publisher for permission. Some parts contain a sole document; others contain 2 or more chapters. With the Toolkit from CMS at hand, medical communicators should be well prepared to write patient education materials.
Is there a return on investment (ROI) for social media? Good question, and one that every user of social media should be asking. Cynics and skeptics may argue that social media is just another fad without benefits, but consider this: In a 2010 recruiting survey, 83% of companies said they use or plan to use social networks to find employees. LinkedIn (78%), Facebook (55%) and Twitter (45%) were the most popular recruiting platforms [http://recruiting.jobvite.com/news/press-releases/pr/jobvite-social-recruiting-survey-2010.php]. Moreover, among those companies that were actively hiring, 92% used or planned to use social media. These figures suggest that social media is not a gimmick. It represents a shift in the way we are doing business today—and will do business in the future.

How does one measure the ROI for social media? Tools such as Google Analytics and Twitter Search enable you to obtain metrics that will give you an idea of whether your social media networks are growing or stagnating. Some components to consider when calculating ROI include the number of

- Web site hits (traffic counts)
- Blog comments
- LinkedIn connections
- Twitter followers
- Facebook fans

Keep in mind, though, social media is really about engaging in conversations, building relationships, and nurturing goodwill. In that respect, it’s really no different from the monthly Chamber of Commerce meeting or the business lunch. Thus, measuring ROI from strictly a numbers perspective will probably not give you the best idea of whether social media is working for you. Think about it. Having 400 people in your network who are interested in what you have to offer is more important from an ROI standpoint than connecting with 4,000 people who may have no interest in what you’re saying.

A better measure of ROI is to determine where those numbers take you. For example, have your growing connections on LinkedIn led you to potential clients or employers? Did a tweet on Twitter lead to an invitation to speak at a professional conference? Did a headhunter contact you after viewing your profile on Biznik? Did one of your social media connections hire you for a freelance project? These data tell a more complete ROI story.

Before you can begin monitoring and calculating social media ROI, you need to determine what you want to gain through social media. If your goal is to make yourself known to prospective employers because you’re looking for other opportunities, you need to know where you stand now before you can figure out social media ROI. Only after you clarify your social media goals and establish your baseline can you begin to calculate social media ROI.

Measuring Social Media ROI: Quality versus Quantity

By Cynthia L. Kryder, MS, CCC-Sp
Phoenixville, PA

Use good Twitter etiquette by following these 7 common-sense rules:

1. Get rid of useless ReTweets.
2. Don’t be pushy.
3. Be nice.
4. Do not repeat yourself.
5. People have names (use them once in a while).
6. And they have short memory (include an identifying detail).
7. Give credit and share.

Read more about these rules at http://twittertips.org/twitter-etiquette-7-common-sense-rules-for-twitter.html.
Over the past few months, good questions and helpful advice have been posted and shared on the LinkedIn AMWA Group. Louiza Patsis questioned why freelances are often paid 30-45 days after invoicing when other types of service providers would balk at a 30-day IOU. Several AMWA members offered both good reasons for clients’ delay and possible remedies for medical editors/writers. Candice Hughes noted that business-to-consumer services usually get paid more promptly whereas most medical writing is business-to-business. In business, 30-day billing cycles boost accounting efficiency. She added that writers categorized as consultants with set hours on a longer term basis may be paid more frequently if through the company’s payroll provider. Katharine O’Moore-Klopf, a medical editor, suggested establishing a payment schedule for longer-term projects, such as a down payment before beginning work and incremental billing throughout the project. Sometimes freelances can be classified differently than the other vendors to allow accounts payable departments to pay freelances sooner. When faced with a client letter lengthening his payment schedule to 60 days, Mark Vogel was proactive, yet polite. He discussed the new unacceptable terms with his client who was able to shorten the wait to a 30-day schedule.

Another LinkedIn discussion addressed the top characteristics editors/managers look for when hiring medical writers as freelances. Some desired attributes included professionalism, flexibility, experience in writing specific types of documents, and a commitment to teamwork.

Knowledgeable AMWA members boosted colleagues’ productivity with resource recommendations such as the Interactive Cancer Atlas (InCA) developed by the Centers for Disease Control and Prevention (http://apps.nccd.cdc.gov/DCPC_INCA/DCPC_INCA.aspx) or Screengrab, which allows users to capture examples of online work (https://addons.mozilla.org/en-us/firefox/addon/screengrab/).

Duane Brewster, AMWA staff, imparted some valuable philosophy from AMWA founder Harold Swanberg that he discovered while perusing archived AMWA Journals: “Everyone who was ever involved with AMWA believed firmly in continued education. It is always time for new knowledge.”

Until next time, looking forward to connecting with you on LinkedIn!

Blog Log

Blogging about . . . the Brain

By Debra Gordon, MS
Williamsburg, VA

In honor of Arizona Congresswoman Gabrielle Giffords, I’ve compiled the following for this issue’s Blog Log, all of which focus on neurology.

The American Academy of Neurology:
www.aan.com/go/elibrary/blogs

The professional organization for the nation’s neurologists supports numerous blogs. A quick scan shows topics ranging from choosing voice recognition software to whether we own our own genes.

NeuroLogica Blog:
http://theness.com/neurologicaBlog/?p=27

This blog bills itself as “Your daily fix of neuroscience, skepticism, and critical thinking.” It is written by Steven Novella, MD, academic clinical neurologist at Yale University School of Medicine. Novella is also the president and co-founder of the New England Skeptical Society. His blog covers “news and issues in neuroscience, but also general science, scientific skepticism, philosophy of science, critical thinking, and the intersection of science with the media and society.”

The Renegade Neurologist:
http://renegadeneurologist.com

Written by neurologist David Perlmutter, MD, author of Raise a Smarter Child by Kindergarten: Build a Better Brain and Increase IQ up to 30 Points, and Power Up Your Brain: The Neuroscience of Enlightenment, comments on contemporary research here.

Blogging on the Brain: Musings on education, neuroscience, and whatever else happens to be going on:
www.hillaryblakeley.net

Written by soon-to-be postdoc Hillary Blakeley, this blog bills itself as a “neuroscientist’s thoughts on teaching, learning, and education.”

Brain Blogger:
http://brainblogger.com/

Edited by Shaheen Lakhan, MD, Executive Director of the Global Neuroscience Initiative Foundation (GNIF), Brain Blogger covers topics from multidimensional biopsychosocial perspectives. Its writers review the latest news and research related to neuroscience/neurology, psychology/psychiatry, and health/health care.
RPS has created the industry’s first Pharmaceutical Resource Organization (PRO) to provide business process outsourcing solutions for clinical drug development. Pharmaceutical, Biotechnology and Medical Device companies that partner with RPS have experienced:

- Increased integrated control of clinical trials;
- Improved and substantially better on-time delivery of programs; and
- Marked reduction in the overall lifecycle costs compared with traditional outsourcing strategies.

By combining the largest recruitment team with true clinical oversight, RPS has achieved a service level that is well above the capabilities of any CRO or staffing company in this industry.

As a member of our team, you will enjoy the flexibility of contract work with the security and benefits of a permanent industry position. You’ll have the opportunity to work in an area of interest and expertise at the top Sponsors. At RPS you’ll appreciate:

- A team of RPS professionals fully dedicated to the enhancement of your career
- Exciting positions, designated to a project for the life of the project
- Highly competitive salary
- Comprehensive benefits package:
  - Medical and dental insurance
  - Vision care
  - Company sponsored disability and life insurance plans
  - 401(k) plan
  - Generous paid vacation
  - Paid corporate holidays
  - Corporate credit cards and calling cards

Join An Industry Leader!
As many of you dug out of one history-making snowfall after another this winter, I felt rather fortunate to call Florida home, where we traded snowflakes for sun. Indeed, any blizzard in my near future is much more likely to involve an avalanche of work, but I’m happy to say that when it comes to AMWA, I draw energy from my efforts. I hope you feel the same way through your own contributions to the organization and the profession, and I certainly believe we are on track for an exciting year ahead.

The Executive Committee (EC) recently held its winter quarterly meeting in Jacksonville, FL, site of the upcoming conference, and I think we all felt that AMWA members are in for a real treat. The hotel is situated along the beautiful St. Johns River, with spectacular views of the water and a series of bridges. Shopping and dining are in walking distance, and a water taxi will ferry you from one side of the river to the other if you wish to explore. Our meeting was filled with conference planning, and I think you’ll be quite pleased with the strength of the educational program and the caliber of the speakers. Keep an eye out for the AMWA Updates and check our Web site frequently, as the latest conference details will be posted regularly in the weeks and months ahead.

In my President’s Note in the last issue, I mentioned how “all of us, whether we realize it or not, are helping each other in small—and sometimes big—ways, to enhance our education, to expand our professional networks, and even to grow in our careers.” At the EC meeting, we began a conversation that led to plans for a more formal exploration of career mentoring options, focused on short-term arrangements with specific goals. In the next few months, the chapters and membership committee will begin evaluating how best to structure such a program, so stay tuned! I’m excited about the possibilities of enhancing all AMWA already does so well to support networking and professional growth.

I’m not sure who said appreciation is like music … it’s much better to enjoy aloud than to read on a page. But nonetheless I would be remiss if I didn’t pause to acknowledge the heart and soul of our organization—our members. Thank you for giving of your time and your talents. They are very much appreciated. And I hope you’ll take a moment to reflect on what you receive in return. Have you learned something that you didn’t know before? Have you lived in one city, then moved to a new one, transferred chapters, and found an instant network of friends and contacts? Have you attended workshops or other informative sessions at chapter or national meetings, and acquired skills you have used elsewhere? Have you either volunteered for or been asked to do something you weren’t sure you could do—but was an opportunity for you to challenge yourself—and it paid off? Whether you were directly involved or not, have you ever felt a special thrill or pride regarding something AMWA has accomplished? I hope you’re like me and can answer “yes” to many of these questions.

As I reflect on those of you who also volunteer so generously of your time on AMWA’s behalf, I am reminded of a passage I read not too long ago in Shar McBee’s To Lead is to Serve. In her book, McBee reflects on the word “sacrifice,” which literally means “to make sacred.” You might think of sacrifice as having to give something up, she points out. But as we all know, when we do, something even better evolves. McBee says the entire earth runs on this principle. “Everything that is created comes from the sacrifice of something else,” she writes. “The seed sacrifices itself to the soil, the day sacrifices itself to the night, the wood sacrifices itself to the fire.”

I know that you as volunteers innately understand this. You already know that to accomplish anything, you first must be willing to give, and as McBee says, in doing so you are making the world sacred. So as she so aptly puts it, I “acknowledge, applaud, thank, recognize, relish, admire, esteem, treasure, regard, love, honor, respect and appreciate you.” Thank you for what you do, and for your commitment. Our organization is certainly the better for having you, and you do make a difference. We may not always immediately know the outcome of our efforts, but the truth of the matter is that all good work does have its reward.
AMWA is holding its financial position despite a still-recovering economy. However, at the end of the last fiscal year (July 1, 2009, through June 30, 2010), expenses exceeded income by $26,034. Our investments have tracked slightly above the financial indices. We have done fairly well by continuing to sustain membership and reduce expenses wherever possible.

How Should This Report Be Interpreted?
This financial report provides a snapshot of the financial status of a dynamic organization. AMWA's fiscal year begins on July 1, so income from the annual conference, which accounts for about one third of AMWA's total income, is realized in the first half of the fiscal year. Because many sources of income have associated expenses, differences between income and expenses (eg, excess of income over expenses) should be considered as well as variances from the budget and changes from the previous year. When differences between income and expenses are compared with differences from the previous fiscal year, the change is reported as net gain over (or loss from) the previous fiscal year.

What Are AMWA's Sources of Income?
Membership dues and annual conference registrations accounted for 78% of the $1,496,894 income for fiscal year 2009–2010 (Figure 1). Membership was sustained and, after subtracting expenses related to membership, AMWA realized a net gain of $29,479 in membership revenue in 2009-2010 compared with 2008-2009. Education expenses were mainly for onsite workshops and self-study modules. Education also had a net gain in revenue over expenses ($25,345) in 2009-2010 compared with last year. Sales of self-study modules were higher than budgeted, likely due to the release of the module on statistics, but the older modules also continue to sell well. Furthermore, certificate enrollment was right on target ($61,905) with that budgeted for the year ($61,000). There was, however, a net loss of $61,500 from the annual conference, primarily due to fewer registrations and workshops taken and higher food and beverage costs in Dallas compared with Louisville.

What Are AMWA's Expenses?
Staff salaries and associated expenses such as payroll taxes and benefits accounted for 42% of the total expenses of $1,522,932 (Figure 2). This was an increase of $91,572 from last year, primarily due to annual wage increases but also accrued vacation, matching 401(k), payroll taxes, and 403(b) retirement/pension plan as more employees became eligible. As of June 30, 2010, AMWA had a total of 7 full-time employees, in addition to an Executive Director. Staff members work on educational programs, support membership services, maintain the Web site, maintain the Freelance Directory and Jobs Online listings, market AMWA's products and services, coordinate meetings, implement AMWA's awards programs, and perform bookkeeping, among their many responsibilities.

Annual conference expenses were the second-highest expense category (20%). The largest expense was meal functions, which are heavily subsidized by AMWA. These expenses were $32,420 more in Dallas than in Louisville. Other major conference expenses (> $10,000) were (in descending order) nonworkshop audiovisual support, bank charges for credit card use, workshops (audiovisual support, monitors, etc), and printing and design.

Administrative expenses (16%) decreased $25,694 from last year. Rent was the largest subcategory and was $21,978 less than last year. Other administrative expenses exceeding $10,000 were for computer services ($31,806), bank/credit card charges ($26,370), depreciation ($16,567), and telephone/Internet access ($12,079). The remaining expense categories were publications ($92,628) and membership ($20,466).

Other expenses (15%) were (in descending order >1%) insurance, education, and Board of Directors (BOD) and Executive Committee (EC) meetings. Insurance includes health, dental, life, and disability for staff and director and officer's liability for officers. EC/BOD expenses include EC travel and hotel rooms for January, April, and July meetings, plus food for BOD meetings held in April and at the annual conference. Education expenses were mainly for onsite workshops and self-study modules.

What Lies Ahead in the Current Fiscal Year?
AMWA Executive Director Donna Munari, in consultation with then-President Tom Gegeny, incoming President-elect Melanie Fridl Ross, and me, prepared the 2010-2011 AMWA budget in January 2010. Based on experience and information available at that time, we budgeted $1,531,450 in income (Figure 3) and $1,529,602 in expenses (Figure 4) for a projected excess of $1,848. The 2010-2011 budget anticipated lower costs for the 2010 Annual Conference. Afternoon snacks had been eliminated with the Dallas conference (to be continued in Milwaukee) with a projected cost savings of $7,500. Open bar at the closing reception (only offering beer, sodas, punch, and water) had also been eliminated, for a savings of $3,100. Other cost-saving measures were also taken at the Dallas conference and were to be con-
tinued in Milwaukee, such as eliminating print-on-demand ($2,688), the cybercafé ($1,954), and a 4-color promotional brochure for the AC ($8,000). Requests for chapter sponsors for the coffee breaks/hospitality during the Milwaukee Annual Conference were made to further defray costs.

Although it is too early to predict the outcome for the 2010-2011 fiscal year, the data so far in the largest categories of income indicate that it is likely to be better than the past 2 years as the economy slowly recovers. Registrations for the 2010 Annual Conference in Milwaukee were up (902 registrants) from the 2009 Dallas conference (857 registrants). Because we rely heavily on dues income, the major consideration will be our membership numbers for the fiscal year. Membership-related income at the end of fiscal year 2009-2010 ($640,568) was just slightly lower than expected ($641,500 budgeted). We hope that as the current economic conditions recover, so will membership, by our maintaining current members, increasing new memberships, and bringing any lapsed members back to the association during the current year.

What About the Long-Term?
As a general rule, nonprofit organizations should have operating funds of 25% to 33% of annual expenses budgeted (for AMWA, this was $386,878 to $510,679 for fiscal year 2009-2010). This year, due to the sluggish economy and less-than-stellar return on investments, as of June 30, 2010, our operating funds (cash and cash equivalents totaling $362,612; Table 1) were under the target range.

Nonprofit organizations also should have reserves of 6 to 12 months of annual operating expenses (for AMWA, $773,756 to $1,547,511 for fiscal year 2009-2010). AMWA’s reserves are defined as its short-term investments in certificates of deposit (CDs) that mature in 1 to 5 years and long-term investments in mutual funds (60% various stocks and 40% bonds) that are managed by Smith Barney. As of June 30, 2010, our short-term and long-term reserves amounted to $929,498, which was down from
$1,006,814 on June 30, 2009, but still within the target range.

As of June 30, 2010, the Endowment Fund balance was $179,796, the interest of which continues to be used on special projects consistent with the Fund's mission statement and as determined by the BOD.

In summary, AMWA has weathered another year marked by a slow economy and downturn in investments, and continues to experience positive financial health with respect to the current market, as we have observed a slightly favorable upswing. Keeping this in mind, and with continued conservative investing, we are planning and budgeting for a lean year ahead.

Acknowledgments
I thank the members of the current 2010-2011 Budget and Finance Committee—Christine Wogan, Linda Rowse, Laura Wright, Maryalice Ditzler, Kate Casano, Alison Woo, and ex officio members (Melanie Fridl Ross, Barbara Snyder, Donna Munari, and Jane Krauhs) for reviewing this manuscript. I also thank Donna Munari for helping me by answering questions and providing valuable advice.

Table 1. AMWA Balance Sheet as of June 30, 2010

<table>
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<tr>
<th>Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents (operating funds)</td>
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<tr>
<td>Short-term funds (maturity 1 to 5 y)</td>
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<tr>
<td>Accrued interest on short-term investments</td>
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<tr>
<td>Long-term investments</td>
<td>$773,527.95</td>
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<tr>
<td>Accounts receivable</td>
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<td>Prepaid expenses and supplies inventory</td>
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<tr>
<td>Fixed assets (furniture, equipment)</td>
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<tr>
<td>Other assets (McGovern Fund, Endowment Fund, deposits)</td>
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<tr>
<td><strong>Total assets</strong></td>
<td>$1,752,155.19</td>
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</tbody>
</table>

<table>
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<tr>
<th>Liabilities and Net Assets</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable and accrued expenses</td>
<td>$50,290.30</td>
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<tr>
<td>Unearned (deferred) income</td>
<td>$352,033.15</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
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</tr>
<tr>
<td>Net assets</td>
<td>$1,349,831.74</td>
</tr>
<tr>
<td><strong>Total liabilities and net assets</strong></td>
<td>$1,752,155.19</td>
</tr>
</tbody>
</table>

AMWA Executive Director Search

A Search Committee has been established to identify a replacement for AMWA Executive Director Donna Munari, CAE, who has announced that she will retire on October 23, after AMWA's 2011 Annual Conference.

AMWA has been fortunate to have Donna at the helm of our headquarters office for the past 10 years. Our organization has reached new heights during this time, and her business acumen and assistance with our strategic planning process have been extremely valuable. Through her efforts on AMWA's behalf she has helped to further the medical writing profession.

During her tenure, Donna helped to usher in a new era in the organization's history. Membership reached an all-time high of 5,652 and AMWA's online presence was solidified. She also assisted with the implementation of many important new initiatives, including the restructuring and expansion of AMWA's educational program. In addition, attendance at the organization's national annual conference grew, consistently averaging almost 900 attendees and even recently topping 1,000.

A certified association executive, Donna has collaborated with the member volunteers who make up the Executive Committee and the Board of Directors on policy matters, major decisions, and initiatives. In addition, she has worked closely with AMWA officers, department administrators, and other volunteers to implement established goals and has sought to continuously improve AMWA's service to its members, evaluating programs and services on an ongoing basis while promoting and supporting the association.
The Delaware Valley Chapter gathered on a balmy fall evening on October 21, 2010, at the Crowne Plaza in King of Prussia, PA, to get answers to burning questions that are on the minds of most, if not every, freelance medical writer:

- What’s the best way to save for retirement?
- Should I do business as an LLC?
- Do I need liability insurance?
- What’s the best way to save for retirement?

Attendees asked these and many other questions of William C. Hussey, II, Esq, of White and Williams, LLP, of Philadelphia, PA; and Eric Guggenheim, CFP®, ChFC®, of Ameriprise Financial of Marlton, NJ. Hussey and Guggenheim brought their expertise, honesty, and humor to a diverse group of about 40 freelance and nonfreelance medical writers and helped make sense of their world of options.

Hussey began the presentation by explaining the how of doing business as a freelance medical writer. Hussey stated, “Choosing how you do business is an important step. Each of you should have a business plan and know the direction in which you are headed and what works best for you.” He suggested 3 considerations when selecting a business entity: taxes (structured for the type of business), liability, and marital status.

Hussey continued the presentation by describing the types of business entities a freelance medical writer should consider: corporation (C corp vs S corp); limited liability company (LLC) and partnership, and sole proprietor. “Most freelances do business as an LLC or sole proprietor,” explained Hussey. Your marital status may influence your decision. For example, if you are single, you might want to consider forming an LLC to protect your business and assets as you are the only one providing income. If something happens to you, you will be liable for the consequences. Hussey asked the audience this question: “If the FedEx man slips and falls on your property while carrying a package for your business, are you liable for his injury(ies)?” The answer: “Yes, to the tune of up to $100,000 for medical bills in Philadelphia,” replied Hussey. He recommended carrying general commercial liability (for corporations and LLCs) or adding umbrella policies (expanded coverage) to an existing homeowner’s insurance plan. “The more you put on your insurance policy, the better off you will be,” said Hussey.

Switching gears, Guggenheim discussed financial planning and retirement. There are many qualified pension plans for freelances that include, among others, 401(k)s, individual retirement accounts (IRAs), and simplified employee pensions (SEPs). He advised that one should be saving 10% to 15% of his or her annual income toward retirement. As far as how to invest, he recommended diversification and looking at alternative investments, such as hedge funds and real estate. He suggested that freelances determine the most efficient way to get to retirement and to invest in what they know.

Guggenheim continued the presentation with nonliability insurance needs: life, disability, and long-term care (LTC) options. “Two potential costs any employee will face in retirement are medical issues and long-term care,” stated Guggenheim. “Thirty percent of people ages 30 to 64 will become disabled in their lifetime, and 1 year of disability can erode nearly 10 years of savings.” Guggenheim recommended adding an inflation rider to a LTC policy, which is coverage and benefits that will keep pace with rising costs. “It can be expensive, but it will help protect you from being underinsured,” advised Guggenheim. “Buy it as soon as you can afford it, especially after age 40.”

Hussey ended with estate and business succession planning (wills, powers of attorney, and advance planning techniques). “A will is the only way to get your assets where you want them to go after you are gone,” said Hussey. Regarding powers of attorney, he advised that whether it is health care proxies, health care directives, or advanced planning, “One should put it in writing because memories are faulty.”

When planning your financial, retirement, and business future, Hussey and Guggenheim stressed that freelance medical writers should remember this phrase: It’s not just you. “Every professional you bring to the table brings value to your planning—your lawyer, financial advisor, accountant. Take the time to meet with these professionals and come up with a solid plan.” One last key takeaway: “Start now.”

Julie Munden, owner of Blue Ink Communications, is a freelance medical editor and writer in Souderton, PA.
Jane Krauhs sometimes says she found her job through Toastmasters International. But, she admits, AMWA also played a big part.

After she got her PhD in Zoology at Indiana University, Krauhs worked for 7 years as a postdoctoral fellow and research assistant professor doing research on the structure of sensory receptors at the University of Texas Medical Branch (UTMB) in Galveston.


Her husband, Stan, who worked in the chemical industry, was very active in Toastmasters International. Several of his fellow Toastmasters worked at the Johnson Space Center (JSC) and directed Jane to contacts at JSC. At the same time, a notice in the UTMB employee publication announced a meeting of the AMWA Southwest Chapter, which was just reorganizing. She attended the first meeting and 2 subsequent mini conferences, all of which she found very helpful in her job search.

“My subject area really wasn’t something that JSC was interested in, and I thought that being a writer would be more general,” she explains. “I had written papers, including at least one as the sole author. I interviewed with someone in life sciences at JSC who needed a professional to write up results of studies. So I was hired to be a technical writer, and it happened that the only life sciences research done at JSC was in medical sciences. That’s why joining AMWA was very appropriate.”

Twenty-eight years later, Krauhs is still working for a NASA contractor at JSC, now with the title of Senior Scientist. She has worked on a number of projects in space medicine, including a NASA Web site (Life Sciences Data Archive) of space life sciences experiments. Currently she works mainly as an author’s editor of a variety of manuscripts and other documents for professional and public audiences. She has edited material in various scientific disciplines, including cardiovascular and exercise physiology, human factors, immunology, microbiology, neurosciences, nutritional biochemistry, pharmacokinetics, radiation biology, and toxicology.

One of her special interests has been plain language. “I was working with a JSC group who was involved in research with human subjects. Of course, informed consent is required for that, and there are specific rules about informed consent documents. In looking for information about writing these documents, I found the Plain Language Association International and became a member. One of my chief concerns is being both accurate and understandable when communicating scientific information to members of the public.”

Krauhs has been an active member of AMWA, both at the chapter and national level, ever since she joined. On the chapter level, she is now treasurer for the third time, and has held other offices, including newsletter editor (1984-1985) and president (1991-1992).

“I was asked to be on the national Budget & Finance Committee because a major source of its members is chapter treasurers and former AMWA national treasurers. Maybe it’s harder to find members in a writing organization who like to deal with numbers, but I enjoy it. In 1997-1998, I became national Treasurer, serving through the 2002-2003 term. I have been on the national Budget & Finance Committee several times, right up to the present,” she says.

“Ever since I first met Jane in 1983, I have been impressed by her generous and efficient service to AMWA,” says Past President Lynn Alperin. “She is the quintessential treasurer. Give her a set of bylaws or a budget to be fixed and she’s off and running. Having her as my treasurer during my AMWA presidency was a blessing indeed. Although her contributions are made modestly and quietly, her sharp wit always merits close attention.”

“During my years in the Southwest Chapter, 1998-2006, I came to know Jane as a key contributor to chapter activities and development,” says Tom Gegeny. “Jane has always been able to communicate finance and investment principles in plain language—much needed for medical communicators! Besides her fiscal expertise and contributions, she is a delight to converse with, and I have always enjoyed our interactions at various chapter and national functions.”

Krauhs contributed a chapter on “Statistics for Medical Writers and Editors” in Biomedical Communications: Selected AMWA Workshops. She has served as chair or co-chair of 3 Annual Conference Open Sessions, member of the Swanberg Committee, and peer reviewer for the AMWA Journal.

Jane earned a core curriculum certificate (multidisciplinary) and an advanced certificate from AMWA. In 2007, she received a Professional Development Certificate.

“I am thankful that AMWA’s Southwest Chapter reorganized in time to help me reorganize my career,” she concludes. “Talking with experienced writers and editors gave
Lucy Kavaler, 87, A Multitalented Writer and Human Rights Activist

Lucy Kavaler, a published writer for 81 of her 87 years, and a member of the Empire State-Metropolitan New York Chapter since 1988, died of pneumonia this past October in New York City. A familiar presence and participant at many local meetings and conferences, Lucy early on realized the dream of achieving success in both fiction and nonfiction writing and editing. She leaves behind Arthur, her husband of 62 years, a retired publishing executive; a daughter, Andrea, a sales executive at an agribusiness consulting firm, and a son, Roger, a high school English teacher.

A graduate of Oberlin College, magna cum laude, Lucy was the author of 17 books, ranging from biography to historical fiction and nonfiction. Her work and outlook are described on her Web site, www.lucykavaler.com.

Lucy enjoyed cultural pursuits. She loved opera and travel, and often turned casual observations into insightful works of fiction, proving the point that skilled writers can write what they envision and research rather than only what they have experienced personally.

Lucy’s gift for words and ideas were evident early. At age 6, she produced a poem about snow that her mother had published. “Lucy wrote all the time,” says her daughter Andrea. In her own view, Lucy felt her career as an author took off when she wrote a series of articles about debutantes for a Sunday newspaper magazine section that caught the attention of a publisher. That series led to her writing The Private World of High Society. Her 1966 book, The Astors: A Family Chronicle of Pomp and Power, received renewed interest at the time of the recent Astor trial. In fact, she was interviewed many times as an authority on the illustrious Astors.

In Heroes & Lovers: An Antarctic Obsession, a novel with a strong message about the accomplishments and independence of women with a dream, Lucy described a race to the South Pole by an all-women’s expedition. (Some fairly heated love scenes were included.)

Lucy was just as comfortable in writing about scientific subjects and made many fine contributions to the field of biomedical writing for organizations. Her 1965 book, Mushrooms, Molds and Miracles: The Strange Realm of Fungi, has been a resource for other writers. She was a medical editor on Infectious Diseases and the editorial director at PW Communications (including Primary Cardiology). Those of you who recall PW’s publication, The Female Patient, may be aware that it was Lucy’s brain-child.

Andrea speaks of her mother’s great commitment to various causes. “She was a member of [the American Society of Journalists and Authors] (ASJA), an active member of PEN, the international organization of poets, essayists and novelists, and was a major force in PEN’s fight for the rights of writers around the world via the Freedom-to-Write Committee. Just last year, she was part of a group of writers who gained the release of writers imprisoned in China and Uzbekistan.”

How did Lucy do it all and still have time for lunch with friends, many of whom she mentored? Linda Benson, an AMWA Fellow and member of the Michigan Chapter, who took a mentoring session with Lucy at ASJA says, “This slim, fragile looking elegant lady, who managed to juggle so many types of projects was really quite remarkable. She lived the life she tried to help inspire in others.”

“Lucy had it all mastered,” adds Joyce Ayoub, a former colleague of Lucy’s at The Skin Cancer Foundation. Lucy joined The Foundation in 1992 and developed many award-winning publications until her retirement in 2006. “She approached each project with great vigor and had the unique ability to engender a consensus among team members. And let’s not forget her sense of humor.”

Janice Hopkins Tanne, an award-winning member of the Empire State-Metropolitan New York Chapter and a correspondent for the BMJ (British Medical Journal), notes, “I always admired Lucy’s ability to move with the times, her inventiveness, and her kindness to other writers in explaining how she did it. As a speaker on several panels I organized, she described a good economic mix of freelance writing with a part-time staff job. Years before, she had convinced The Skin Cancer Foundation, which had advertised for a full-time staffer, that a good freelance could do the job part-time to their mutual benefit.

“When Lucy and I shared the uptown bus on Madison Avenue, I told her I was awed by her ability to write science and well-reviewed historical fiction simultaneously. Many of us have the remnants of novels in our bottom drawers. Lucy wrote them—with apparently effortless ease. She set an example about how to be the best.”

—Lois A. Gaeta
To the Editor

In the December 2010 issue of the AMWA Journal, the authors of the article, “Use of the Passive Voice in Medical Journal Articles,” claim their research shows that the passive voice is a major problem in medical writing and that using it less would improve writing. I agree that the passive voice is often undesirable and overused in scientific publications, but the authors’ conclusions are not supported by decades of more informed research.

Although most readers (me included) and authorities prefer the active voice, the passive voice is usually as easy to understand as the active voice, and sometimes even easier, a fact acknowledged by the authors. What reduces comprehension is the interaction between the passive voice and nominalizations (verbs turned into nouns). First-person pronouns have also been encouraged in medical journals since at least 1900 and by JAMA since 1925.

The authors compare the percentage of passive sentences in three medical journals with the same percentage in The Wall Street Journal. This comparison is meaningless because the purpose and context of journals and newspapers differ greatly, even if readership does not.

The authors also say that “Excessive use of the passive voice is not the only problem with modern medical writing, but it is a well-defined problem with a simple solution: medical journal editors should make passive voice frequency a standard for publication. A passive voice frequency of 10% is a reasonable upper limit for all types of medical articles.” This recommendation is not supported by any research and is probably counterproductive. The authors state, and I agree, that the passive voice has a place in scientific publications, but identifying an evidence-based maximum percentage of passive sentences is impossible.

The recommendation to “Use passive voice frequency in the overall paper as an endpoint for evaluating the quality of the writing” assumes that the quality of writing is defined by the frequency of passive sentences, which it is not. The quality of writing is traditionally evaluated by determining how well readers understand, recall, find, and use information, not by the countable characteristics of the text.

In fact, arbitrarily specifying textual characteristics, such as sentence length or the average number of polysyllabic words per sentence, has never been successful and is often counterproductive.

The most important question raised by this research is why otherwise competent researchers were willing to attempt it without a more thorough understanding of what is already known about written communication. I think they assumed that their general knowledge of writing is adequate to do what professional medical-technical writers do. Until we can change this assumption, we will not advance the profession of medical writing.

—Tom Lang, MA

The authors declined to respond.

References
In a study of 37 cultures around the world, 16,000 subjects were asked about their most desired traits in a mate.
For both sexes, the first preference was kindness. Since you might end up spending 40 to 60 years of your life
with a mate, that seems reasonable.

But what about desirable traits in the workplace? What are the most desired attributes in a boss or a
colleague?

Only my cat, Oliver, sees more of me than my co-workers. Spending many hours hunched over a computer
screen burning brain cells at an ever-accelerating rate is sufficiently challenging. Doing it in the company of
ogres is my idea of hell.

It turns out that there is a nascent movement for kindness in the workplace largely
spearheaded and practiced by Canadians. Canada One, an organization for small busi-
ness owners, recently touted a “Kindness to Colleagues Program” complete with a
slide deck filled with ideas and tips on how to be kinder to co-workers.

The article suggests simple actions that can make a difference at the office—
everything from limiting gossip to smiling more frequently to walking a fellow
employee to her car after hours. Forget the thousand points of light or continuous qual-
ity improvement. This is no joke. Estimates show that stress and violence in the workplace
cost businesses $300 billion annually in days lost, lowered productivity, employee turnover,
and direct medical and legal costs.

One human resources manager at a company based in British Columbia touts 3 ways to inter-
weave kindness into everyday life: With oneself, which includes self-care and well-being; with col-
leagues, which means focusing on treating each other with mutual care and respect; and within the
wider community, where random acts of kindness have become a movement complete with a Web site, a
Twitter feed, and a Facebook fan page where people can post stories of kindness in action.

One researcher even claims that kindness can cut the risk of heart disease. The reason, says David R.
Hamilton, PhD, lies with oxytocin—the hormone that triggers labor and lactation—and promotes social
bonding. Oxytocin plays a powerful role throughout the cardiovascular system, with positive effects on
coronary arteries and blood flow. According to Hamilton, even small acts of kindness have beneficial physical
and emotional effects.

“Next time you hold a door for someone, or carry that shopping bag, be sure to smile. Even if your act
of kindness only lasts a few seconds, it might be doing some good for both of your hearts,” Hamilton writes.

So let’s take a page from our neighbors to the north and create kinder, gentler workplaces. For more
ideas on how to be kinder to yourself and others, visit www.tinybuddha.com or search on “kindness in the
workplace.”

Eleanor Vincent is the author of the memoir Swimming with Maya: A Mother’s Story (Capital Books, 2004). She lives and
writes in Oakland, CA.

“My religion is very simple. My religion is kindness.”
– the Dalai Lama

Kindness in the Workplace
By Eleanor Vincent
The AMWA Journal encourages the submission of manuscripts and suggestions for content for its recurring sections. Unless otherwise noted, submit contributions and suggestions for content to the Journal Editor at amwajournaleditor@editorialrx.com.

Feature Articles: Original compositions that are timely and relevant for medical writers and editors (approximately 3,000 words).

Science Series: Articles that provide an overview of a specific anatomical or physiologic topic or of a particular disease (approximately 3,000 words). Send manuscripts (and suggestions for content) to the Journal Editor at amwajournaleditor@editorialrx.com.

Practical Matters: Articles that provide advice to medical writers and editors at all levels of experience and in all types of practice settings (approximately 700-1,000 words).

Professional Development: Information on career development issues and opportunities for professional development (educational programs, writing competitions) for medical writers and editors of all levels of experience.

Sounding Board: Forum for members’ opinions on topics relevant to medical writing and editing (approximately 1,000 words).

Chapter Corner: Forum for chapters to share experiences and expertise. Send suggestions for content to Chapter Corner Editor, Tracey Fine, MS, ELS, at finemedpubs@earthlink.net.

Member Musings: Forum for members to share personal essays (related to medical writing and editing) and creative work, as well as news about member achievements.

Freelance Forum: Forum for questions pertaining to freelance medical communication.

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Letters to the Editor: Comment on topics published in the AMWA Journal (approximately 500 words or less). Letters should refer to Journal contents within the past 2 issues.

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- Name, address, phone and fax numbers, and e-mail address of the author to whom correspondence should be sent
- Written permission of author(s) and publisher(s) to use any material published previously (figures, tables, or quotations of more than 100 words)

Hard copies of figures, if necessary, should be sent (with complete documentation of the manuscript they accompany) by postal mail to

Lori Alexander, MTPW, ELS
Editor, AMWA Journal
American Medical Writers Association
30 West Gude Drive #525
Rockville, MD 20850-1161

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<tr>
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<td>$450</td>
</tr>
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DEVELOPING PLAIN LANGUAGE DATABASES TO SUPPORT THE WRITING OF INFORMED CONSENT DOCUMENTS AT AN APPROPRIATE READING LEVEL

Moderator
Kristofer S. Griffith, CIP
Manager, Human Research Regulations, University of Texas MD Anderson Cancer Center, Houston, TX

Speaker
Lisa Shilling-Wright, MA, CIP
Team Leader, Scientific Editing, University of Texas MD Anderson Cancer Center, Houston, TX

By Michelle Eby, PharmD, CCRP

Currently, 38% of adults read at or below the 7th grade reading level and 58% of adults older than 65 read at or below the 7th grade reading level, according to Lisa Shilling-Wright, MA, CIP. She then discussed federal regulations for human subject research (www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcr/CFRSearch.cfm?fr=50.20). According to these regulations, potential subjects must be given the information needed to make informed decisions about participating in clinical studies. Researchers must facilitate the understanding of disclosed information and promote the voluntary nature of the subject’s decision to participate in the research. Given today’s health literacy rates, Shilling-Wright noted the challenge of conveying complete and accurate information consistent with the regulations to research participants at an understandable level. Moreover, several Institutional Review Boards (IRBs or ethics panels), including MD Anderson Cancer Center’s (MDACC) IRB, require Informed Consent Documents (ICDs) to be written at a 6th-8th grade reading level.

Given these challenges, the MDACC hired a group of 9 scientific editors, including Shilling-Wright, to edit all initial ICDs and revisions, facilitating their readability. These editors work collaboratively with the Principal Investigators (PIs), research faculty, and IRBs to develop the ICD. Shilling-Wright outlined the workflow of the ICD development process at MDACC. The PI submits the ICD draft to the scientific editor for review of the appropriate literacy level. The editor makes changes and sends the ICD back to the PI with queries. The PI answers any questions, sometimes with input from the research sponsor, and returns them to the editor. The editor makes any needed changes and submits the revised ICD to the IRB for review.

The Scientific Editing group created several types of glossaries or boilerplates to use in ICD developments. The boilerplates include commonly recurring medical words, phrases, procedures, adverse events, and drug definitions, all of which are written at the 6th–8th grade reading level. Creation of the boilerplate begins when the PI submits a new term to an editor, who researches the new item and revises the technical term into lay language. The new description is sent to the PI for review and ultimately to the IRB for approval. The editor makes any IRB-suggested changes to the description. The description is then added to the boilerplate template, enabling the editors to have IRB-approved language available to support document changes.

Shilling-Wright provided a noteworthy example to underscore the effectiveness of the medical editing (see box).

Before the edit: Drug X is an EGFR inhibitor. The drug follows Drug Y, which was the first drug of this type. X specifically targets the epidermal growth factor receptor (EGFR) tyrosine kinase, which is highly expressed and occasionally mutated in various forms of cancer. It binds in a reversible fashion to the adenosine triphosphate (ATP) binding site of the receptor. For the signal to be transmitted, two members of the EGFR family need to come together to form a homodimer. These then use the molecule of an ATP to autophosphorylate each other, which causes a conformational change in their intracellular structure, exposing a further binding site for binding proteins that cause a signal cascade to the nucleus. By inhibiting the ATP, autophosphorylation is not possible and the signal is stopped.

After the edit: Drug X is designed to block the activity of a protein found on the surface of many tumor cells that may control tumor growth and survival. This may stop tumors from growing.

All new scientific editors at MDACC are required to take AMWA’s Plain Language Workshop to train in the preparation of health information materials for readers with limited literacy skills and learn about writing for this audience (at reading levels for grades 4 through 8).
The Information Technology department at MDACC has further increased the utility of the boilerplates by using a special program that changes technical terms (using the database) to lay terms in Microsoft Word. The program is also able to display a list of side effects in lay terms upon the entry of a drug name, speeding the creation of ICDs for both research staff and the editors.

The boilerplates have increased the clarity of highly complex information and improved the consistency of ICDs across the institution. Research subjects and their families are in a better position to make a voluntary and informed decision about whether they wish to participate in clinical studies.

HIGH-PERFORMANCE FREELANCING: NEGOTIATING

Moderator and Role Player: The Client
Faith E. Reidenbach, ELS
Partner, Caley-Reidenbach Consulting, LLP, Corvallis, OR

Speaker
Beverly A. Caley, JD, CMPP
Partner, Caley-Reidenbach Consulting, LLP, Corvallis, OR

Role Player: The Independent Businesswoman
Elizabeth L. Smith
President, Smith Simon Company, Lyndhurst, VA

By Julie Munden

As freelance medical writers know too well, one of the toughest (and most intimidating) aspects of running a business is negotiating. Three of AMWA’s seasoned freelances presented a role-playing negotiation between a client and a freelance.

Beverly A. Caley, JD, CMPP, a trained, experienced negotiator herself, began the session with 2 key points: “Knowledge is power, so prepare,” and “Be flexible in your thinking.” These 2 strategies help build confidence and improve the ability to negotiate.

Preparation

“When negotiating, you are looking for the best alternative to a negotiated agreement, or BANTA (a widely used acronym),” said Caley. Be prepared by knowing the following:

- Your goals and what is most important to you and where you are willing to give
- The bargaining price range and reservation point to which you will negotiate no further
- Exactly what deliverable is needed and when

Approaches

Next, Caley outlined 5 examples of approaches and responses that freelances and clients can take toward negotiating (Table 1).

Table 1. Negotiating Approaches and Responses

<table>
<thead>
<tr>
<th>Client/Freelance Approach</th>
<th>Client/Freelance Response</th>
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<tbody>
<tr>
<td>Competitive (wants to win)</td>
<td>Don’t give in; use such strong language as “we require” not “we’d like”</td>
</tr>
<tr>
<td>Accommodative (willing to give all there is)</td>
<td>Make sure there is no hidden agenda; don’t make yourself vulnerable to the other side’s mercy</td>
</tr>
<tr>
<td>Avoiding (stays out of it and dislikes conflict)</td>
<td>Stay on the defensive and set clear expectations regarding deadlines</td>
</tr>
<tr>
<td>Compromising (strives for an intermediate point)</td>
<td>Avoid giving concessions in which you lose more value than you gain; counter with your position and remain firm</td>
</tr>
<tr>
<td>Collaborative (wants to find the maximum possible gain for both parties)</td>
<td>Beware of becoming too relaxed and giving up more than you are receiving</td>
</tr>
</tbody>
</table>

Strategies

Caley also detailed several strategies that will help freelances gain confidence in their negotiating skills:

- Identify interests: each person brings his or her own approach to negotiation so be prepared by knowing yours before you begin.
- Use positive delivery linguistics: don’t hesitate (um’s and ah’s), hedge (kind of, sort of), or use intensifiers (really, very), or you will be seen in a less favorable light.
- Think on your feet: sometimes a firm NO must be your response but saying “yes, and…” can be more effective.

Michelle Eby is a Medical Writer IV at the Clinical Research Directorate/CMRP, SAIC-Frederick, Inc., NCI-Frederick in Frederick, MD.

This research was supported [in part] by the National Institute of Allergy and Infectious Diseases. SAIC/Frederick.

Disclaimer: The research has been funded in whole or in part with federal funds from the National Cancer Institute, National Institutes of Health, under Contract No. HHSN261200800001E. The content of this publication does not necessarily reflect the views or policies of the Department of Health and Human Services, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.
• Trust your gut: your intuition may be guiding you in the right direction, but be sure to balance your decision with reasoned analysis (avoid impulsiveness).
• Recognize gender stereotypes, cultural differences, and time pressures: these factors create a power imbalance, so be aware of these dynamics and prepare for them.
• Know when it’s time to walk away: focus on meeting your own interests and don’t take it personally.

Role-play: client and freelance

The session ended with Faith Reidenbach (The Client) and Elizabeth Smith (The Freelance) in a role-play exercise that prompted a lively discussion among the audience. Caley handed Reidenbach a piece of paper with her scenario (a project with a negotiating price) and handed Smith her scenario (her position and negotiating price). To create a real scene, Reidenbach stood in front of Smith, who sat at the stage behind her.

The “call” began with Reidenbach asking Smith to write a manuscript for $5,000 (what her writers normally get and knowing she could increase to $6,000 if she had to). Smith’s business was slow but she also knew she wanted between $7,500 and $10,000 for the project. Smith asked pertinent questions about deliverables, milestones, and timelines; Reidenbach stayed firm with her $5,000 price but began negotiating toward what Smith wanted as the conversation developed. The role-play call ended with a compromise of $6,000.

Next, the floor opened up with questions from the audience. First, “How did Reidenbach remain firm?” “I had a budget and I wanted to stick with it,” responded Reidenbach. When Smith gave her target price, Reidenbach said she knew she had room to negotiate. The next question queried Smith on why she lowered her price. “I knew I didn’t have many projects on my plate at the time and I wanted the work, so I compromised,” she said. Moreover, both parties wanted to work together so they said they continued to negotiate until they agreed.

Other questions included how to avoid “scope creep” and what to do if you can’t come to an agreement. Answers from the panel included setting clear expectations about the project up front, planning ahead with a response, and adding scope changes into the contract. Caley also advised the audience to think flexibly and to not take things personally. “Always approach a new negotiation with the attitude that you are going to find a way to make a deal.”

Julie Munden, owner of Blue Ink Communications, is an independent medical editor and writer in Souderton, PA.

Navigating the Current Medical Publications Environment

Speaker
Heather Haley MS, CMPP
Haley Writing Solutions LLC, Cincinnati, OH

By Kathi L. Whitman, MA

Heather Haley, MS, addressed the overriding principles for navigating medical publications as well as specific information related to the 2010 CONSORT (Consolidated Standards for Reporting Clinical Trials). In addition, she summarized the recommendations for a variety of projects (eg, those involving subgroup analyses, non-inferiority/equivalence, or health economics) as well as the International Society for Medical Publication Professionals (ISMPP) guidelines for Good Publication Practices 2 (GPP2), which were independently peer reviewed and published in BMJ.1

Overriding principles for navigating medical publications
“No matter what situation you’re facing, there’s a guideline out there,” asserted Haley. “In addition, a lot of methodology in medical publications hasn’t changed in 15 years; so older guidelines can also be very useful in writing manuscripts.” The most common publication guidelines (those with accompanying checklists) include the following:

- CONSORT 2010 plus extensions—for randomized controlled trials
- STROBE—for observational studies
- PRISMA (including flow diagram)—for systematic reviews and meta-analysis
- MOOSE—for meta-analysis
- SQUIRE—for quality improvement
- STARD—for diagnostics
- ORION—for infection control interventions
- TREND—for nonrandomized evaluations of behavioral and public health interventions

For articles describing historical controls, guidelines (without checklists) can be found in the article “Setting the Bar in Phase II Trials: The Use of Historical Data for Determining ‘Go/No Go’ Decisions for Definitive Phase II Testing.”2

Haley also mentioned the article “Good Research Practices for Cost-Effectiveness Analysis Alongside Clinical Trials” as a resource for dealing with issues particular to economic studies conducted alongside clinical trials.3 “Health economics is challenging because there
is so much subjectivity; these guidelines should help get these articles better acceptance,” Haley said.

Another navigation challenge centers on the clinical trial results posting requirements. Haley reviewed the latest guidelines for posting results from approved and nonapproved drugs or devices as well as those related to seeking extensions. She also reviewed FDA guidance on distribution of publications with off-label uses. For more information on these requirements, Haley suggested the following Web resources:

- [www.fda.gov/RegulatoryInformation/Guidances/ucm125126.htm](http://www.fda.gov/RegulatoryInformation/Guidances/ucm125126.htm) – for FDA guidance on distribution of publications with off-label uses

### Changes to the CONSORT guidelines

Of the guidelines mentioned, Haley dedicated much of the session to the “nuts and bolts” of the CONSORT guidelines for randomized trials (with 7 official extensions and 4 unofficial extensions), published in April 2010.

Haley discussed changes to the CONSORT requirements, including new requirements related to reporting why a trial was stopped or ended, all-important harms or unintended consequences (CONSORT HARMS), trial registration number, protocol availability, and sources of funding and other support.

One important aspect of the new CONSORT guidelines, according to Haley, is the CONSORT approach to reporting harms. The guideline now uses the term “harms” instead of “safety” since safety can be falsely reassuring. She covered how to address harms in the introduction and reporting sections and listed the following common poor reporting practices to avoid:

- Using generic statements (e.g., drug was generally well tolerated)
- Not providing separate data for each study arm
- Providing sums of adverse events for each study arm without separate data for each type of adverse event
- Providing numbers of events without severity information
- Reporting means or medians without extreme values
- Reporting on adverse events for which P<.05 between arms
- Disregarding the timing of adverse events (early vs late toxicity)
- Not distinguishing between participants with one versus multiple adverse events
- Commenting about statistical significance without giving exact event counts
- Not providing data on all randomly assigned participants
- Reporting only adverse events observed at a certain frequency (e.g., > 3%)

Regarding this last point, Haley remarked, “The lack of a significant difference is very illuminating; it can tell you a lot about the patient population.”

### Good Publication Practices 2 (GPP2)

Haley completed the session with a review of the latest GPP2 recommendations, which include specific language to use, how to identify primary and secondary articles from studies, and recommendations for using checklists, a contributorship model, publication steering committees, and conflict-of-interest disclosures. About this last recommendation, Haley cautioned, “No one gets their name in The Wall Street Journal for reporting too much conflict of interest.”

### References


Kathi Whitman is President of In Credible English®, a full-service medical/technical writing, editing, and desktop publishing company. She specializes in “plain language” information design that supports public health literacy and continuing education for health care practitioners.
He emphasized how soldiers live under such conditions for months at a time. He showed pictures that were taken by a patient he treated in Iraq. The patient was part of a unit sent out to patrol the streets and whose HUM-V was hit by a 500 lb IED. He related that, although all of the soldiers survived the explosion, each was wounded in some way. Some had traumatic brain injuries, many PTSD.

To further portray the gravity and desperation of the circumstances soldiers face, he discussed suicide and the military. He described the military culture as one that embraces and embodies suicide. He stated that shortly after joining the military he was told to “save the last round for himself.” He talked about Suicide Charley, the mascot of the 1st Batillion, 7th Marines; and he mentioned the poem Fiddler’s Green, which ends “and the hostiles come to get your scalp, just empty your canteen, and put your pistol to your head, and go to Fiddler’s Green.”

Dr Lynn, a psychiatrist at Loyola University Chicago Stritch School of Medicine, then gave an overview of PTSD as a medical condition. He described the diagnostic criteria for PTSD: exposure to a traumatic event; symptoms of re-experience, avoidance, and arousal; a duration of symptoms for more than 1 month; and clinically significant distress or impairment caused by the symptoms. He explained how patients experience nightmares that place them back into the scene they lived through, have triggers that can bring on symptoms, and exhibit hypervigilance and heightened startle reactions. He also noted that PTSD is often associated with other difficulties, including alcohol and drug problems, suicidal ideation, distancing, problems at work and with marriage, and homelessness.

Next, Dr Lynn discussed the contributions of many notable psychologists and psychiatrists to the understanding of PTSD. He explained that humans have 2 types of memories: narrative memories, which are factual or textual and accessible at will and that enable learning and communication, and sensory-motor memories, which are precise and detailed, but inaccessible unless triggered. Dr Lynn noted that the hippocampus, a structure in the brain that is thought to be very active in processing narrative memories, shrinks in PTSD, while the amygdala, a structure in the brain that is thought to be active in processing fearful memories, enlarges.

Lastly, Dr Lynn discussed the treatment for PTSD and emphasized that a relationship of trust and empathy is essential and that psychotherapies are at least as important as pharmacotherapies. He stated that patients often derive significant benefits from treatment with selective serotonin reuptake inhibitors, and that prazosin can be beneficial for the nightmares associated with PTSD.

Cathryn Brennan is a freelance medical writer in Chicago, IL.
TALES FROM THE TRENCHES: BEST AND WORST FREELANCE/CLIENT PRACTICES

Moderator
Brian Bass
President, Bass Advertising & Marketing, Inc, Robbinsville, NJ

Speakers
Kevin Flynn, MA
Director, Scientific Communications, Analgesic Solutions, Natick, MA
Debra L. Gordon, MS
Freelance, GordonSquared, Inc, Williamsburg, VA
Barbara R. Snyder, MA
Manager of Medical Writing, Warner Chilcott Pharmaceuticals, Inc, Mason, OH

By Leslie E. Parker

This session was designed as a discussion of best and worst freelance/client practices from the perspective of medical communication companies, freelances, and pharmaceutical companies. After brief presentations from the speakers, the audience was invited to share their own experiences, advice, and questions.

Take a team approach
Kevin Flynn, MA, began his presentation of the medical communication perspective by quoting a coach of the Boston Celtics: “I know you want to win, but you have to win together.” Flynn stressed that a team approach to producing effective medical documents is crucial. He advised that everyone involved in a project—content expert, project manager, editor, writer—should step back from their respective tasks once in a while, think about the larger picture, and ask themselves if they are accomplishing their objectives as effectively as possible. Lower quality results when everyone focuses on chasing deadlines, he added.

Listen to your gut
The biggest lesson Debra Gordon, MS, has learned in 10 years as a freelance medical writer is to listen to her gut. Her worst experiences have taught her that if something about a project or client doesn’t feel quite right, it is best to walk away. She also emphasized that her best experiences result from good communication with the client from the very beginning of a project.

Set clear expectations
Barbara Snyder, MA, exclaimed that she had no horror stories to tell. The most powerful business practice when working with freelances, she said, is to set clear expectations and accept responsibility when due. Her best experiences have been repeat business, because a pattern of communication has already been established and expectations of the client and freelance are consistent.

Highlights from the question-and-answer session

How do new freelances get their foot in the door?
Snyder attributed much of her “charmed life” as a manager to her participation in AMWA. She uses AMWA’s freelance directory and she does look for candidates who have earned AMWA certificates.

New consultants often get hired when an emergency arises, there is a tight deadline, and nobody is available among the client’s pool of freelances.

How do you say no to overly demanding clients without losing the job?
Set boundaries, and do not be afraid to communicate your needs, advised the panel. Gordon said that 9 times of 10, the client will make the necessary adjustments. Flynn’s advice: say no or raise your rates.

What is the best way to ensure getting paid appropriately?
When bidding on a job, consider quoting a range and stating that any work done to accommodate a change in the scope of the project will be billed at an hourly rate. This gives the client an incentive to make things go smoothly. Getting paid for the first project with a new client can take much longer because of all the initial paperwork that has to be processed.

Is it all right to turn down work?
Snyder and Flynn agreed that clients are likely to prefer a writer who sometimes says no to a project but always does good work to one who always says yes and delivers sub-par work. Gordon’s attitude toward turning down work: raise your rates. “If you are too busy, you are not charging enough.”

How do you handle changing timeframes for projects?
The window of time for a project can change for many reasons. Snyder conceded that this is sometimes an unavoidable problem but that it is not likely to happen twice within a company. Some pharmaceutical companies will offer a retainer to guarantee a writer’s availability for a set period of time, and then pay an additional hourly fee if more time is required. One suggestion from the audience was to tell the client upfront what your availability will be after their expected deadline.

How do you ensure effective communication?
Have direct communication with the people directly responsible for a project; do not agree to limit your communication to an intermediary coordinator. In addition, prepare a cheat sheet of things to ask a client or freelance before beginning a project.

Gordon wrapped up the session with a final piece of advice: “Ask yourself what is the worst thing that could happen…And then work to prevent it.”

Leslie Parker specializes in editing biomedical journal articles as a senior editor in the Division of Urology at UC San Diego in San Diego, CA.
UNDERSTANDING CANCER GENETICS

Moderator
Barbara T. Zimmerman, PhD
Owner/Manager, Biomedical Communication & Consulting, Denver, CO

Panelists
Olufunmilayo I. Olopade, MD, FACP
Walter L. Palmer Distinguished Service Professor, Department of Medicine and Human Genetics, Associate Dean for Global Health, University of Chicago, Chicago, IL
Ann Schmidt, MS, CGC
Genetic Counselor, Regional Cancer Center, ProHealth Care, Inc., Waukesha, WI

By Laurie A. MacDougall, MS, CTR

As the Human Genome Project progresses, increasing attention is being paid to the issue of screening for genetic diseases, particularly cancer. Barbara Zimmerman, PhD, author of Understanding Breast Cancer Genetics (University Press of Mississippi, 2004), opened the session with an overview of cancer genetics. Her key points included the following:

• Although many people seem to think of cancer as a single disease, cancer is in fact a catch-all term for many different diseases that share a fundamental defect—the loss of regulation of cell division or differentiation.

• All cancers are genetic in that they occur in dividing cells and involve mutations in genes, but not all cancers are inherited. For a cancer to be inherited, the defective gene must be in the germ line—cells that are passed on to one’s children.

• Cancer is multifactorial, involving an interplay between genes and the environment, so having a gene mutation does not always mean that someone will get cancer.

• The 2 identified breast cancer genes, BRCA1 and BRCA2, are responsible for 5% to 10% of breast cancers. Even within these genes, there are different mutations, some more common in certain ethnic groups, such as Ashkenazi Jews. The remaining cases can be attributed to the catch-all term “BRCA3”—an unidentified gene or constellation of genes.

Dr Zimmerman concluded by noting that much work remains to be done, such as studying specific markers within genes, which can help to identify differences within genes that at first appear alike. It is hoped that this will enable us to develop better, more specific treatments, and more individualized, tailored therapies, she said.

Olufunmilayo Olopade, MD, focused on the role of epigenetics in cancer—what happens to change genes after they are formed—noting, “a lot can happen in nurturing.” She emphasized the need to look beyond genes themselves into the roles of things like socioeconomic factors and environmental exposures, which can make a big difference in health and wellness.

Dr Olopade also addressed some issues of particular interest to health communicators. She noted that health information must be communicated at a basic level, emphasizing that prevention can begin at a young age. She used heart disease as an example of a condition for which identified risk factors, improved technologies and medications, and a focus on prevention and education have led to a decline in death rates. She noted that even children know what they should do to prevent heart disease, relating a time when she tried to serve her son bacon and was asked, “Are you trying to kill me?” She believes that we can do the same thing with educating the public about cancer risk, especially since cancer is multifactorial and develops over time. She issued a call for medical writers who write for a young audience and can talk to children about making lifestyle choices that can prevent adult-onset disease.

Lastly, Dr Olopade discussed racial disparities in breast cancer. Black women are more likely than white women to be diagnosed at a late stage and are more likely to die. Is it because of poorer access to care or are their cancers more aggressive? Part of the answer lies in the biologic makeup of their tumors, with African and African-American women more likely to have a grouping of factors that make their breast cancers more aggressive and ultimately more lethal. Thus, both biologic disparities and socioeconomic disparities have a role.

Ann Schmidt, MS, a genetic counselor, discussed how she uses this information when she meets with patients in the clinic setting, and how it impacts the everyday lives of the women being treated. She noted that people tend to come in and ask for “that genetic test for cancer,” but it is not that simple. The vast majority of cancers are sporadic, not hereditary, so genetic testing is not appropriate for most people. Thus, in a genetic risk program, the first job is to figure out who is at risk. Her task is a complicated one, involving both assessment and communication of risk.

Genetic testing has both benefits and risks. Benefits include the ability to clarify risk, determine the best way to manage that risk (eg, lifestyle changes, early screening, or prophylactic surgery), and help determine the risk of other family members. Risks include psychologic distress, guilt regarding the possibility of passing a mutation on to one’s children, loss of privacy, and fear of insurance discrimination. Regarding the latter, Schmidt discussed the 2008 Genetic Information Nondiscrimination Act (GINA), which provides protection from insurance and employment discrimination on the basis of genetic testing results. She said that this is a huge message to send to the general public, as fear may be preventing some people from learning their risk and taking appropriate steps to manage that risk.

Communicating these risks and benefits has a number of challenges. Schmidt emphasized that the results
of genetic testing indicate the probability of developing cancer—not the certainty. This can be hard for people to understand, she said. Additionally, we have not identified every mutation, so a person who does not carry a known mutation may still be at risk for the development of that cancer due to other factors. The results of testing can have implications for both the person being tested and his or her family. Lastly, genetic counseling is a balancing act, she said, between providing patients with the information they need to make informed decisions and overmanaging them.

Laurie MacDougall is a cancer registrar and freelance editor in Boston, MA.

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**WRITING ABOUT BIOETHICS: AN OVERVIEW FROM A TO Z AND MEDICAL “GHOSTWRITING”**

Moderator
Tamara Ball, MD
Senior Medical Writer, i3 Statprobe, Asheville, NC

Speakers
Arthur R. Derse, MD, JD
Director, Center for Bioethics and Medical Humanities Program, Medical College of Wisconsin, Milwaukee, WI
Ryan Spellecy, PhD
Associate Professor of Bioethics, Medical College of Wisconsin, Milwaukee, WI

By Tamara Ball, MD

This session started with an A-to-Z overview of principal bioethical issues presented by Arthur R. Derse, MD, JD, an emergency medicine physician, lawyer, and bioethicist. He began with autonomy, moved on to beneficence and consent, posed the question of the legal definition of death, and letter-by-letter made his way through to zygote. At each letter, Dr Derse provided definitions, reviewed historical background, touched on controversies or posed provocative questions. The sum effect was to provide older audience members with a walk down a memory lane of bioethical milestones and to provide younger members with an appreciation for the depth of this topic.

Ryan Spellecy, PhD, provided a fresh perspective on what has been a “hot topic” for the profession of medical writing for several years. He first described ghostwriting as the practice of anonymously authoring documents for publication in scientific journals in the name of academic researchers. Spellecy emphasized how this practice corrupted the pure and unbiased search for truth that should be the very essence of legitimate science. He discussed the consequences of this practice, including loss of physician trust in the body of literature they depend on when making patient-care decisions. As a practical example of the harm that can result, he provided an in-depth review of the headline-grabbing ghostwriting incident involving Prempro, a combination of estrogens and a progestin that gained popularity in the mid-1990s for the treatment of menopausal symptoms. Strong messaging suggested Prempro was also effective in preventing cardiovascular disease, osteoporosis, Alzheimer disease, colon cancer, and more. During that time, however, a study from the Women’s Health Initiative provided strong evidence that estrogen was associated with increased rates of cardiovascular disease (22%), breast cancer (26%), heart attacks (29%), stroke (41%), and pulmonary embolus (113%). These concerns had been minimized or negated in the Prempro literature. Confused about what to believe, thousands of physicians continued prescribing hormone-replacement therapy for their patients with menopausal symptoms.

Guest authorship was the topic of the final speaker, Tamara Ball, MD, Principal Medical Writer for i3 Statprobe. Guest authorship is the practice of including a person as an author when he or she did not meet all 3 criteria for authorship set forth by the International Committee for Medical Journal Editor (www.icmje.org). These criteria are substantial contribution to the conception and design, acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; and final approval of the version to be published. Dr Ball noted that anonymized survey studies from the late 1990s suggested that 20% to 40% of articles contained 1 or more guest authors. Guests had been included for many reasons: to repay a kindness, as a quid pro quo, as a means of flattery, as a stamp of authority, to advance a career, or to increase the likelihood of a grant or promotion. For several years after the criteria had been introduced, scientists and physicians were frequently unaware of them. Today, journals frequently ask for documentation of authorship, and so the situation is likely improving. However, Dr Ball warned, as authorship forms fall into the category of “just 1 more piece of paper to fill out,” writers will need to gently remind guest authors that along with the many benefits of authorship comes the responsibility for explaining and defending the work after publication.

Whether it be the alphabet of bioethical issues or concerns around ghost authorship and guest authorship, these 3 speakers made it clear that bioethics is a key element for medical communicators.

Tamara Ball is a Principal Medical Writer for i3 Statprobe in Asheville, NC.
Kirsten Dorans, BSc, and Bridget Murray Law, MA, received 2010 Eric Martin Awards for their articles that were aimed at health care professional and public/health consumer audiences, respectively. The Eric Martin Award honors excellence in medical writing by AMWA members and is presented yearly at the annual conference.

**Kirsten Dorans** received the award for her article “Outpacing Cancer” ([Nature Medicine](https://www.nature.com) 15:718-722, 2009), which she wrote while serving as an editorial intern at the journal. Although she wrote a number of news pieces during her internship, her award-winning article was the only feature article she wrote.

“I’m truly honored to have won this award, and I’m inspired to continue exploring the field of medical writing,” says Kirsten, who joined AMWA in 2009.

 Assigned the topic of cancers evolving resistance to drugs, Kirsten focused on gefitinib and lung cancer as illustrative of this challenge in targeted cancer therapy. “A little more than 10 years ago gefitinib became a new treatment for non-small cell lung cancer, and it initially worked remarkably well in some patients. However, within a year, some of these patients had relapse. In the feature, I told the story of some of the researchers working to uncover how tumors develop resistance to gefitinib and developing strategies to outpace evolving cancer.”

 While writing the piece, Kirsten says, she was “amazed by the tireless dedication of researchers who are working to develop effective personalized treatments for people with cancer.”

 Kirsten herself has a goal of becoming a research scientist, although she’s also had an interest in writing since she was in elementary school. She pursued an honors program in chemistry, earning a bachelor’s degree from McGill University in Montreal, Canada, in 2008. While carrying out chemistry research projects and exploring such subjects as neuroscience and medical anthropology, she also fostered her love of writing by joining a select writing group, composed primarily of graduate students. “We met once a week to discuss and edit our articles about research being done at McGill,” she explains. “I joined the group because I thought it would be a great way to combine my interests in writing and in science and medical research.”

 Kirsten has fulfilled her passions for research and writing through her internship at *Nature Medicine* as well as internships at Brookhaven National Laboratory and the American Chemical Society. Her work at *Nature Medicine* led to a position as Assistant Editor of *Lab Animal*, a Nature Publishing Group journal that focuses on the care of research animals. In addition to writing news pieces, Kirsten now also assesses manuscripts for publication, facilitates the peer-review and publication process, and edits articles.

 Kirsten lives and works in New York and plans to attend graduate school. “I want to pursue a career as an epidemiologist, and I would also like to continue communicating pertinent health-related research to a variety of audiences.” She looks forward to remaining involved in AMWA and enrolling in the certificate programs to enhance her knowledge and skills.

**Bridget Murray Law** received the award for “New Attitude: More Doors Open for HIV Survivors” ([HEMAWARE](https://www.hemaware.org) 14(4):28-34, 2009). Her article is a retrospective piece highlighting the challenges faced by children who grew up with HIV in the 1980s. When the topic was proposed during her work at The Magazine Group (TMG), Bridget had personal reasons for wanting to write the article. “I have small boys, so I was drawn to the story of kids affected with this disease and what they must have experienced.”

 In developing the article, Bridget spoke to 3 young men who had been diagnosed with HIV when they were 4 to 11 years old “Their stories were incredible,” she says. “One boy got kicked out of elementary school, and one grew up with family members who were afraid to hug or kiss him. Their stories were a real lesson in how people overreact, how ignorance creates fear. And that these boys grew up to be young men who are now out educating people about HIV speaks to their character and their bravery. I was honored to write about them and shine some light on how they survived and on what they’re doing.”

 Bridget has been writing about health and
medicine since earning a journalism degree (magazine sequence) from Ohio University. She began as an editorial assistant at Psychology Today magazine and has worked in a variety of settings, writing and editing health content for print and Web publications. Her positions have included Editor of the American Psychological Association’s magazine, Monitor on Psychology, Consulting Editor for the Cleveland Clinic Magazine, and Health Editor/Producer for AARP.org. She now works at the Defense and Veterans Brain Injury Center, in Rockville, MD, where she is involved in the development of a wide range of resources for patients with traumatic brain injuries and their families, as well as health care professionals—from specialists to emergency responders. “The biggest challenge of my job is writing for very different audiences. I’m currently redesigning the newsletter to provide every reader with what he or she needs while not losing the other readers.”

The personal story is at the heart of a good article, says Bridget. “One of the things that I was able to do in the HIV article, and that I think we need to do more of in medical writing, is to really get in there and tell people’s stories. That’s what makes the reader truly understand a patient’s experience of disease and treatment, and the importance of the mind-body connection to recovery. We medical writers need to go in-depth, especially in this digital age, where medical information often gets reduced to sound bites. We need to insist on being given the pages, the time, and the compensation, to tell medical stories as they ought to be told—in ways that will truly make a difference.”

ANNUAL AMWA AWARDS

2010 STUDENT SCHOLARSHIP
Christina Nichols and Emily Johnson

Christina Nichols, a student at the University of Virginia, Charlottesville, VA, and Emily Johnson, a student at Milwaukee School of Engineering, Milwaukee, WI, are the recipients of the 2010 Annual Conference Student Scholarship sponsored by University of the Sciences in Philadelphia College of Graduate Studies. The scholarship provided Christina and Emily funds to cover the costs of attending the annual conference and participating in 3 workshops. The 2 scholarship recipients were honored at the Sablack Dinner at the conference.

Christina is currently a fifth-year PhD candidate in the Biomedical Sciences Graduate Program at the University of Virginia. Her graduate study focuses on Salmonella invasion of intestinal epithelial cells and inflammatory signaling triggered by bacterial products. As a PhD student, Christina is “continually amazed at the intricacies of the human body and its interactions with the outside world.” She says, “I find myself leaving microbial pathogenesis class and wondering how so many people remain healthy. In the same day, after immunology class, I feel like Superwoman.” Although Christina’s formal education has focused on science, extracurricular endeavors have fostered her interest in writing, and she takes great satisfaction in expressing herself on paper. Christina is “particularly passionate about making the latest scientific developments accessible to those who don’t spend time in research labs.”

Christina was pleased when she learned about a professional organization committed to the development of the medical communication profession. She browsed through the AMWA Journal archives and found many articles filled with advice on career development. Many of these articles suggested that attending the annual conference is a great way to network and explore career options. So when she learned about the conference scholarship opportunity on the AMWA Web site, she decided to apply. Christina was happy to learn that she won the scholarship, as she would not have been able to attend the conference otherwise because of financial limitations. “Winning the scholarship gave me an excellent opportunity to interact with successful writers who shared their experience and insights into the field of medical communication,” she says.
Christina participated in 3 workshops at the annual conference: Statistics for Medical Writers and Editors, Elements of Medical Terminology, and Basic Grammar. Christina believes that attending the annual conference was a critical step toward enhancing her skills necessary for success as a medical communicator. “Also, credits from each workshop can be put toward my Essential Skills certification,” she adds. In looking toward future career development, Christina is interested in clinical trial management and regulatory writing.

Emily is in her senior year as a technical communication major at Milwaukee School of Engineering (MSOE). She has been interested in medicine since she was a preschooler, and her “odd” combination of interests—biology, English, journalism, and medicine—in high school led her to the technical communication program at MSOE. She has loved the combination of technology and writing and enjoyed her internship as an instructional designer with an energy company, but she has “dearly missed” anatomy, physiology, and biology. “As fate would have it,” says Emily, “an MSOE alumnus who worked as a medical writer came to talk to one of my technical writing classes, and her presentation inspired me to tell her and my professor that I wanted to do exactly that—medical writing.”

Emily’s professor encouraged her to explore medical writing further and introduced her to the AMWA Journal. “I knew that it was all meant to be,” says Emily when she found out that the 2010 AMWA annual conference would be held in the very city where she lives. “I decided to apply for the scholarship because I know that I have so much to learn and so many skills to develop before I can get into the medical communication field. Attending the AMWA conference would not only help me develop those skills, but it would open an infinite number of doors for me as well.” When she learned that she was chosen as one of the scholarship recipients, she felt tremendously grateful. She looks forward to the opportunity to dive into the medical communication industry and see where this new path takes her.

Pleasantly overwhelmed by the number and variety of workshops offered at the conference, Emily spent days trying to narrow her choices for workshops to 3, but she believes that the workshops she chose give her a great advantage as a newcomer to the industry. She participated in the workshops Introduction to the Medical Device Industry, Organizing the Medical Paper, and Creative Process in Pharmaceutical Advertising and Promotion. In addition, Emily attended as many open sessions and network activities as she could, browsed the poster displays and exhibits, and aggressively searched the job boards. She looks forward to other opportunities to help her determine what she specifically wants in her professional life. “I cannot wait to explore all the different sides of medical communication—medical devices, pharmaceuticals, patient education, etc—and see what interests me the most.” One thing Emily knows for sure is that she would like enjoy a career that allows for traveling to many diverse locations around the world.
Imagine a dark cave, lit solely by a blazing fire along a back wall. Facing the opposite wall are beings chained at their legs and necks so they cannot move or turn their heads. They have been thus since childhood. The fire behind them casts ghostly shadows—their own, and those of others passing behind them. These shadows are their only understanding of reality.

One day, one of the chained souls escapes from the cave and sees the world—and his own being—as they truly are.

* * *

This is the parable of Plato’s Cave, an ancient philosophical reflection that has been brought to vibrant life in our own day by 2 visionary collaborators at The Methodist Hospital in Houston, TX. Dr E. Brian Butler, Chairman of Methodist’s Department of Radiation Oncology and Clinical Professor of Radiology at Weill Cornell Medical College, and Paul Sovelius, Clinical Imaging Simulation Specialist at Methodist, have developed a modern-day Plato’s Cave—an innovative, interactive FDA-cleared medical visualization system that compiles commonly available, 2-dimensional images (such as those produced by computed tomography [CT] and magnetic resonance imaging [MRI]) into larger-than-life 3-dimensional representations of the body. The accuracy, beauty, clarity, and completeness of these images echo the expanded view with which the escapee from Plato’s Cave saw the world. In September, members of AMWA’s Southwest Chapter were treated to a demonstration of this fascinating new method of envisioning the human body.

The Plato’s Cave system uses standard-of-care-acquired 2-dimensional DICOM images derived from existing FDA-approved technologies like CT and MRI, which produce a series of slices that are typically taken a quarter- to a half-millimeter apart. The current approach requires clinicians to review these static black-and-white images one by one; the Plato’s Cave technology takes these same images and, in approximately 5 seconds, constructs a colorful 3-dimensional representation of a patient’s body that can be viewed at any depth from the outside in, at any level of detail, and from any angle. Using Xbox controllers and other cutting-edge user interfaces, clinicians can travel through a patient’s body, rotate the image, and even eliminate peripheral structures to view only the organ of interest, which itself can be rotated for viewing from all angles. On the basis of these multidimensional volumetric views of the patient’s anatomy, doctors can make detailed pretreatment plans that can be reviewed with patients and their treatment team.

AMWA members were mesmerized by the visuals. A chest filled with esophageal varices (swollen blood vessels) looked as though it had been taken over by gnarled tree branches (Figures 1 and 2). Like the scientists in the movie *Fantastic Voyage*, we flew past polyps in a colon and floated down a blood vessel with clearly visible plaque. When zooming out, what had been an undetected aneurysm in the patient’s leg sprang into view.

Such ancillary findings are not uncommon, and they serve to demonstrate both the danger and the power of Plato’s Cave: the pathologic or clinical relevance of the findings is not always obvious, yet collaborative physician consensus is possible. Nonetheless, Dr Butler and Dr Sovelius, along with assistant Nancy Huynh, aim to show that multidimensional advanced clinical visualization increases patient safety and improves clinical decision-making, treatment planning (including patient involvement, where appropriate), patient outcomes, and medical education at all levels.
For now, Plato’s Cave is used primarily as a diagnostic tool for surgical planning and complements diagnostic imaging and radiologist image interpretation. The room has become a patient-driven entity, too, as word of its capabilities spreads to the general public. But developers Butler and Sovelius have cast their creative imaginations toward a future in which this technology could be used in myriad innovative ways. For example, the images can now be deployed to a physician’s desktop PC or mobile device. And soon, perhaps, a patient’s 3-dimensional image could even be projected onto his or her body in real time, guiding surgeons as they operate or tracking the movement of organs as the patient breathes to activate and deactivate the beam during radiation therapy.

Now that really would be a fantastic voyage.

For more information on Plato’s Cave, contact Shirley Clark at shirleyclark@tmhs.org. All images: ©2010 Plato’s Cave (Butler-Sovelius)

**Figure 2.** Figures 2-A and 2-B: Interactive 3-dimensional volumetric front (2-A) and back (2-B) views, illustrating crystal-clear complexity for surgical repair of esophageal varices.