Inside

Feature
Editing and Proofreading Your Own Work

75th Annual Conference Coverage
Retractions, Post-Publication Peer Review, and Fraud: Scientific Publishing’s Wild West

Academic Grant Careers: New Opportunities, New Challenges

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Contents

147  FEATURE | PRACTICAL MATTERS
Editing and Proofreading Your Own Work  › Barbara Gastel

152  75TH ANNUAL CONFERENCE COVERAGE
Alvarez Award Lecture by Jay Ingram—Take Them on a Journey  › Lori De Milto

154  McGovern Award Lecture by Ivan Oransky—Retractions, Post-Publication Peer Review, and Fraud: Scientific Publishing’s Wild West  › Mary K. Stein

156  Open Session Summaries
The Art of the Editor’s Query: Effective Strategies for Seeking Clarity
Editing for Non–Native English Speaking Authors
What’s the Deal With DILI? Reporting Drug-Induced Liver Injury and Signals From Routine Liver Function Tests
A Primer on the Medical Device Industry for Current and Aspiring Medical Device Writers
Medical Writing in the Next 75 Years: The Untold Stories of Animal-to-Human Translational Research
The Budapest Working Group: A 2–Year Collaboration to Develop a Practical User’s Manual for Clinical Study Reports
Bridging the Gap Between Regulatory Approval and Market Access: An Introduction to Health Technology Assessments (HTAs)
Academic Grant Careers: New Opportunities, New Challenges
Using Social Media for Marketing: Harnessing the Power of Twitter, LinkedIn, and Beyond
Basics of Content Writing for Medical Practices and Hospitals
Unlock the Secrets to Freelance Success
Beyond the Box: New and Innovative Moneymaking Strategies for Freelancers
Managing Through the Storm: How to Successfully Handle a Crisis for Your Company or Client
Producing High Quality Documents Within Shrinking Timelines
How to Successfully Host and Effectively Participate in Kick-off Meetings
Contents

178 AMWA NEWS
From the President › Stephen N. Palmer

180 FREELANCE FORUM
› Brian Bass, Melissa L. Bogen, Sherri Bowen, Lori De Milto, Cathryn D. Evans, and Ruwaida Vakil
Do you use social media to market your freelance medical writing business?
Do you work with subcontractors? How do you hire and manage them effectively?
What do you do when you can’t take on a project for a client or prospect?

184 CALENDAR OF MEETINGS

186 BOOK REVIEWS
Caring for the Heart: Mayo Clinic and the Rise of Specialization
› Reviewed by Tara Ann Cartwright
Vital Conversations: Improving Communication Between Doctors and Patients
› Reviewed by David Caldwell

188 IN THE SERVICE OF GOOD WRITING
Passive Voice and Expletive Construction
› Laurie Endicott Thomas

190 AMWA VOICES
Conversation Between Melanie Fridl Ross and Victoria White

Cover: Photographs from AMWA’s 75th Annual Conference, held September 30–October 3, 2015, in San Antonio, Texas.
In the center are past presidents of AMWA: Cindy Hamilton, Barbara Snyder, Brian Bass, Marianne Mallia, Helen Hodgson, Melanie Fridl Ross, Art Gertel, Douglas Haneline, Barbara Good, Jim Yuen, and Lynn Alperin.

AMWA JOURNAL MISSION STATEMENT
The AMWA Journal expresses the interests, concerns, and expertise of members. Its purpose is to inspire, motivate, inform, and educate them. The Journal furthers dialog among all members and communicates the purposes, goals, advantages, and benefits of the American Medical Writers Association as a professional organization.
Editing and Proofreading Benefit the Writing of Even the Most Skillful Medical Communicators. Yet Professional Editors and Proofreaders Are Not Always Available. Even When Such Assistance Exists, First Doing Some Editing and Proofreading Yourself Is Advisable. Providing a Polished Piece Demonstrates Competence and Decreases the Time That Others Must Invest. Also, the Less Editing That Others Do, the Less Likelihood There Is of Introducing Errors or Distorting Meaning.

This Article Therefore Offers Guidance on Editing and Proofreading Your Own Work. In Keeping with Standard Usage, Editing Is Defined as Revising Writing to Increase Its Suitability. Proofreading, Which Comes Later, Is Correction of Typographical and Other Errors in Finished Writing Before Submission, Publication, or Distribution.

First This Article Discusses How to Approach Editing Your Own Writing. Then It Addresses Aspects to Consider in Such Editing; Checklists Are Provided. Next Comes a Section on Proofreading Your Work. The Final Section Identifies Resources for Editing Your Work and for Developing Skills to Do So. The Article Is Large for Early- and Mid-Career Medical Communicators, But Senior Writers May Also Learn of Items to Use or Recommend.

Approaching the Editing
Editing Your Own Work Has Much in Common with Other Editing. A Key Difference, Though, Is That Distance Is Lacking. You May Already Know What You Were Trying to Say; Thus, Problems with Clarity May Be Difficult to Detect. And You May Be Emotionally Invested in the Writing and So Lack Objectivity. Thus, the First Step in Editing Your Work May Consist of Gaining Distance.


If You Have Been Viewing the Writing on a Computer, Print It Out. The Change in Medium May Help You Consider the Writing from a New Perspective. A Printout Also Can Aid in Viewing the Document as a Whole and Help to Spot Problems Such as Starting Many Paragraphs the Same Way.

As Suggested in Ideas into Words: Mastering the Craft of Science Writing, Consider Changing the Look of the Text to Help View It with New Eyes. For Example, Print the Piece on Different-Colored Paper. Change the Typeface, or Change the Margins. Printing the Text with Large Margins Also Can Facilitate Writing Comments and Making Edits.

Similarly, Reading the Writing Aloud May Provide a Fresh Perspective. You May More Easily Notice Where Words Are Omitted or Repeated, and Awkward Phrasing May Become More Apparent.

In Editing Others’ Work, Some Editors Tend to Work First on Large-Scale Aspects, Such as Organization, and Then Small-Scale Aspects, Such as Wording. Others Do Largeley the Reverse or Alternate Between the Two. Some Edit the Piece from Beginning to End. Others Start Elsewhere Than the Beginning—for Example, With the Reference List or Tables and Figures. Some Edit in Several Passes, Focusing on Different Aspects Each Time. Others Integrate Aspects More.

Likewise, in Editing Your Own Work, Different Approaches Can Be Effective. Choose Whatever Works for You or Suits the Current Piece. Realize, Though, That Thorough Editing Usually entails Reviewing the Writing Multiple Times, Including at Least Once From Beginning to End.

Editing Your Own Work
However You Approach Editing Your Draft, Certain Key Aspects Deserve Attention. These Aspects—which Sometimes Are Interwoven—Include Compliance with Instructions, Suitability for the Audience, Content, Structure of the Text, Organization, Mechanics, Clarity, and Conciseness.

Most Medical Writing Must Follow Instructions. Review the Instructions Before Editing Your Work, Keep the Instructions Handy as You Edit, and Check Your Writing Against the Instructions a Final Time Before Submission. If the Journal or Other Recipient Has Provided a Checklist, Use It.

Also Consider Suitability for the Audience. Is a Journal Article for Generalists or Specialists? Will a Proposal Be Reviewed by...
scientists or by a community board? What do prospective readers of a brochure know and care about? What about the native language(s) of the readers? Consider whether to modify aspects of the text to suit your audience. Also consider whether any content should be revised accordingly.

Indeed, evaluating content is crucial to editing your own work. Consider both the audience and the goals of the writing. Does the writing include all the content needed to achieve the goals? Is there superfluous content to delete? Should any implicit assumptions be made explicit? Is the logic sound? And is all the content accurate? Answering this last question can entail checking the writing against the original data or source material.

Also consider the structure of the text. Does the writing follow the standard format for the genre—for example, IMRAD (introduction, methods, results, and discussion) for a journal article or inverted pyramid for a news release? If not, does it differ for a valid reason? Within the format, have good choices been made? For example: If subheadings are allowed, are they used effectively? Are sections and paragraphs of suitable lengths? Should any lists be numbered or bulleted? Would any material in the text be better presented in tables or figures? If tables or figures are present, are they all worth including—and are those worth keeping well designed? Would italics or other typographic devices help anywhere? (Beware, though, of overusing such devices.)

Instructions and convention may determine the overall structure of your writing. However, check aspects of organization that you can control. Within sections of the document, is content logically structured? Where warranted, do overviews precede details, thus orienting readers? Do paragraphs generally begin with strong topic sentences? Do items in lists appear in a logical order?

Of course, check the mechanics of the writing, both for consistency with instructions and for compliance with overall standards. If a specific style (such as American Medical Association style) is required, has it been followed in all regards? Are grammar, spelling, punctuation, and usage correct throughout? Are verb tenses appropriate? Are antecedents of all pronouns clear? Have all abbreviations and acronyms been defined? Are they all worth including? Within lists, do items have parallel structure? Are sentences of appropriate length and structure—or, for example, should some sentences be divided? Are there effective transitions from sentence to sentence? If there are references, are they in proper format?

Check for clarity of wording. Is all the language unambiguous? Does every sentence say what you mean? Is anything still hazy because you remain unsure what you want to convey? Is the wording exact throughout? Is anything likely to be misread or misinterpreted? In medical writing, wording should be so clear as to essentially preclude misunderstanding.

Drafts tend to be wordy. Edit them for conciseness, which can increase readability and save space. In editing for conciseness, substitute short, common words for long ones when appropriate; delete needless words; condense wordy phrases; and replace nouns made from verbs with the verbs themselves (Table 1).

Table 1. Examples of Editing for Conciseness

<table>
<thead>
<tr>
<th></th>
<th>Original</th>
<th>Revised</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Substituting shorter words</strong></td>
<td>attempt</td>
<td>try</td>
</tr>
<tr>
<td></td>
<td>currently</td>
<td>now</td>
</tr>
<tr>
<td></td>
<td>demonstrate</td>
<td>show</td>
</tr>
<tr>
<td></td>
<td>fundamental</td>
<td>basic</td>
</tr>
<tr>
<td></td>
<td>numerous</td>
<td>many</td>
</tr>
<tr>
<td></td>
<td>utilize</td>
<td>use</td>
</tr>
<tr>
<td><strong>Deleting needless words</strong></td>
<td>absolutely essential</td>
<td>essential</td>
</tr>
<tr>
<td></td>
<td>completely destroyed</td>
<td>destroyed</td>
</tr>
<tr>
<td></td>
<td>of an efficient nature</td>
<td>efficient</td>
</tr>
<tr>
<td></td>
<td>on a daily basis</td>
<td>daily</td>
</tr>
<tr>
<td></td>
<td>red in color</td>
<td>red</td>
</tr>
<tr>
<td></td>
<td>whether or not to</td>
<td>whether to</td>
</tr>
<tr>
<td><strong>Condensing wordy phrases</strong></td>
<td>an adequate amount of</td>
<td>enough</td>
</tr>
<tr>
<td></td>
<td>at the present point in time</td>
<td>now</td>
</tr>
<tr>
<td></td>
<td>in light of the fact that</td>
<td>because</td>
</tr>
<tr>
<td></td>
<td>in the event that</td>
<td>if</td>
</tr>
<tr>
<td></td>
<td>is similar to</td>
<td>resembles</td>
</tr>
<tr>
<td></td>
<td>the majority of</td>
<td>most</td>
</tr>
<tr>
<td><strong>Using verbs rather than nouns</strong></td>
<td>conduct an examination of</td>
<td>examine</td>
</tr>
<tr>
<td></td>
<td>have effects on</td>
<td>affect</td>
</tr>
<tr>
<td></td>
<td>make contributions</td>
<td>contribute</td>
</tr>
<tr>
<td></td>
<td>provide help to</td>
<td>help</td>
</tr>
<tr>
<td></td>
<td>supply relief of</td>
<td>relieve</td>
</tr>
<tr>
<td></td>
<td>take into consideration</td>
<td>consider</td>
</tr>
</tbody>
</table>

Consider numbers as well as words. If numbers are present, are they accurate? Are they in the required style (for example, presented in arabic numerals or spelled out)? If units of measure are needed, are they present? Do the choice and presentation of units suit the audience and comply with stated requirements, if any?

Finally, are you comfortable with everything about the draft? Or does anything make you uneasy? For instance, does anything seem inconsistent? Might anything be dehumanizing, disrespectful, or even libelous? Are any copyright or permis-
Checklists can aid in editing your work. Table 2 is a general checklist based on material in this section. Consider using such a checklist plus a checklist for the genre of writing—for example, scientific paper (Table 3), grant proposal (Table 4), or article for general readers (Table 5). You can individualize such checklists to suit the writing task and the pitfalls you tend to face. Using such checklists can aid in thoroughly and efficiently editing your work.

Table 2. Examples of Editing for Conciseness

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is the content complete, or should any content be added?</td>
</tr>
<tr>
<td>2.</td>
<td>Should any content be deleted?</td>
</tr>
<tr>
<td>3.</td>
<td>Is all the content accurate?</td>
</tr>
<tr>
<td>4.</td>
<td>Is all the logic sound?</td>
</tr>
<tr>
<td>5.</td>
<td>Do the content and crafting of the piece suit the audience?</td>
</tr>
<tr>
<td>6.</td>
<td>Does the piece follow appropriate conventions regarding overall format?</td>
</tr>
<tr>
<td>7.</td>
<td>If subheadings are allowed, are they used effectively?</td>
</tr>
<tr>
<td>8.</td>
<td>Are sections and paragraphs of appropriate length?</td>
</tr>
<tr>
<td>9.</td>
<td>Should any tables or figures be added or deleted?</td>
</tr>
<tr>
<td>10.</td>
<td>If tables or figures are included, are they well designed?</td>
</tr>
<tr>
<td>11.</td>
<td>Would typographic devices, such as italics or bullets, be helpful anywhere?</td>
</tr>
<tr>
<td>12.</td>
<td>Is the piece well organized at various levels?</td>
</tr>
<tr>
<td>13.</td>
<td>Are grammar, spelling, punctuation, and usage correct throughout?</td>
</tr>
<tr>
<td>14.</td>
<td>Are verb tenses appropriate?</td>
</tr>
<tr>
<td>15.</td>
<td>Are antecedents of all pronouns clear?</td>
</tr>
<tr>
<td>16.</td>
<td>Have abbreviations and acronyms been defined (and are all of them worth using)?</td>
</tr>
<tr>
<td>17.</td>
<td>Are sentences of appropriate length and structure?</td>
</tr>
<tr>
<td>18.</td>
<td>Are numbers, if any, in the correct style? Are all units of measure suitable?</td>
</tr>
<tr>
<td>19.</td>
<td>If references are cited, are they in the appropriate format? Do all cited references appear in the reference list, and are all listed references cited in the text?</td>
</tr>
<tr>
<td>20.</td>
<td>Is the writing clear, exact, and concise?</td>
</tr>
<tr>
<td>21.</td>
<td>Have all instructions been followed?</td>
</tr>
</tbody>
</table>

**PROOFREADING YOUR OWN WORK**

Your writing now seems ready to submit. A final step is to proofread it to correct any mechanical errors that have gone undetected or that have been introduced. Likewise, if you are asked to review a proof (a copy of the typeset version of your work) before publication, check it carefully against the most recent marked copy.

How to approach proofreading? Whether proofreading a typescript or a proof, reading it aloud can help, because doing so can force you to notice every word. To most thoroughly check a proof, both read it on its own and compare it with the original text. If the text is long, looking back and forth between it and the proof can be tiresome, and errors may be easy to miss. Solutions include having someone read aloud the original text (including punctuation and formatting) as you look at the proof. Alternatively, you can record yourself reading the text and then listen as you check the proof.

What should you check for when proofreading your work? Of course, look for typographical errors. Be especially alert for typos that yield homonyms (such as to for too) or other actual words. (A spellchecker will not help if instead of public you typed public.) Pay extra attention to items prone to computer snafus during typesetting—for example, specialized symbols and Greek letters.

Also be alert for mechanical problems that escaped notice during editing. Such problems may include misspellings, grammatical errors (such as subject-verb disagreement),
punctuation errors, omissions or duplication of words, and deviations from the requested style and format. Among other problems to check for are errors in alphabetical or numerical sequence, incorrect arithmetic, inconsistencies of information, and inaccurate cross-references. When checking typeset proof, change only items that are truly errors; changes at this stage can be costly.

When checking a typeset proof, make sure that all components are present; sometimes a line of text is cut off or a table, figure, or reference is missing. Also make sure that any tables and figures are suitably placed and that figures are properly oriented. (Sometimes, for example, radiographs are placed upside down.) Other problems to look for include incorrect spacing within lines, inclusion of text in the wrong typeface or wrong type size, and failure of a periodical to update its template, resulting in the wrong date on the pages.

Sets of fresh eyes can help spot errors. Consider asking colleagues, friends, or family to look over manuscripts or other items. Ideally, include both someone familiar with the subject and someone outside the field. The former may well spot technical inaccuracies, and the latter, undistracted by content, may more readily notice mechanical errors.

SOME RESOURCES
A variety of resources can aid in editing and proofreading your own work and developing skills to do so. Although intended primarily as instruction in editing others’ work, The Copyeditor’s Handbook, by Amy Einsohn, provides abundant guidance useful in self-editing. Other useful sources of guidance include American Medical Writers Association (AMWA) workshops on topics such as grammar, punctuation, and

---

**Table 4. Sample Supplementary Checklist: Editing a Draft of Your Grant Proposal***

| 1. | Does the title clearly and accurately convey the focus? |
| 2. | Is the abstract informative and clear? Ditto for any other sections serving as summaries? |
| 3. | Are the goals or hypotheses clear? |
| 4. | Is the originality of the work apparent? |
| 5. | Is the proposed work clearly relevant to the mission of the funding source? |
| 6. | Is the importance of the proposed work explained? |
| 7. | Is sufficient context provided? |
| 8. | Is the amount of proposed work realistic? |
| 9. | Is it clear that the personnel are capable of doing the proposed work? |
| 10. | Are sufficient justifications provided for choices of, for example, methods? |
| 11. | Is sufficient supporting evidence included? |
| 12. | Is sufficient justification provided for budgetary items? |
| 13. | If there will be cost sharing, is sufficient information provided? |
| 14. | If preliminary studies are required or advisable, is there enough information about them? |
| 15. | If a timeline would be advisable, is one included? |
| 16. | If evaluation plans are needed, are they sufficient? |
| 17. | If dissemination plans should be included, are they sufficient? |
| 18. | If you are to provide or propose photos or other graphics, have you identified appropriate ones? |

*Such a checklist would be used along with a more general editorial checklist, such as shown in Table 2. It can readily be adapted to suit the requirements of the type of grant proposal that one is writing.

---

**Table 5. Sample Supplementary Checklist: Editing Your Draft of a Medical Feature Article for General Readers***

| 1. | Is the piece the requested length? |
| 2. | If a title or headline was requested, have you provided one that is accurate and engaging? |
| 3. | If a blurb summarizing the article was requested, have you provided it ready? |
| 4. | Does beginning of the article (the lead) draw readers in and establish the focus and tone of the piece? |
| 5. | If a “billboard paragraph” (“nut paragraph”) is needed to orient readers, is one included and effectively written? |
| 6. | Does the article deliver what is promised by the lead (and billboard paragraph, if any)? |
| 7. | Is sufficient human interest included? |
| 8. | Is specialized jargon generally avoided? |
| 9. | When specialized terms would be useful for readers to know, are they included and clearly defined? |
| 10. | If appropriate, are quotes included? Have you quoted an appropriate range of people? |
| 11. | If appropriate, are anecdotes included to support points and enliven the text? Are the anecdotes suitable? |
| 12. | Are numbers and sizes presented in ways meaningful to readers? |
| 13. | Is the pacing appropriate? For example, are difficult concepts sufficiently separated, and are interesting tidbits frequent enough? |
| 14. | Is the reading level suitable? |
| 15. | If appropriate, does the article identify sources of further information? Are these sources suitable for the target audience? |
| 16. | If appropriate, does the article have a strong ending? |
| 17. | If sidebars are required or desirable, have you provided them? |
| 18. | If you are to provide or propose photos or other graphics, have you identified appropriate ones? |
| 19. | If you were asked to provide potential pull quotes, have you supplied appropriate ones? |
| 20. | If you must submit material to use in fact checking, do you have it ready? |

*Such a checklist would be used along with a more general editorial checklist, such as shown in Table 2. It can readily be adapted to suit the requirements of the type of feature article that one is writing.
copyediting; self-study modules\(^4\) based on AMWA workshops; and other workshops and courses on editing.

Using the style manual specified by a journal or other recipient helps ensure that your writing meets requirements. In addition, style manuals commonly include general guidance that can help you edit your writing. Many medical publications use the AMA Manual of Style.\(^5\) Even if writing for other venues, reading this manual’s chapters on grammar, punctuation, capitalization, and usage and taking the associated online quizzes\(^6\) can provide a fine foundation for editing your own work. Other style manuals often useful for medical writers include Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers\(^7\) and the Publication Manual of the American Psychological Association.\(^8\) The Chicago Manual of Style,\(^9\) widely used in book publishing, can be another relevant resource. For editing materials for some lay publications, familiarity with Associated Press style\(^10\) can help.

Most major style manuals are now available online as well as in print. Online-only resources also can be useful when editing your writing. One resource worth bookmarking is OneLook Dictionary Search,\(^11\) which provides access to definitions and associated information from multiple dictionaries. When questions of grammar, punctuation, or usage arise, the Grammar Girl\(^12\) website can be useful. Websites of academic writing centers also offer guidance in such regards; links to many of these websites appear at Writing Centers Online.\(^13\) The blog post “25 Ways to Tighten Your Writing”\(^14\) contains tips for making writing more concise; other resources useful in doing so include Guidelines for Document Designers\(^15\) and the classic guide The Elements of Style.\(^16\) The article “Copyediting for Reporters: How to Get the Basics Right”\(^17\) provides helpful advice on editing pieces for general readers.

Resources helpful in developing proofreading skills include the AMWA workshop on proofreading,\(^3\) a chapter\(^18\) based on an earlier version of this workshop, and an openly accessible presentation\(^19\) on basics of proofreading. This presentation appears in the resource library\(^20\) of AuthorAID, a project mainly to help researchers in developing countries to write about and publish their work. This resource library also has other materials that can assist in editing or proofreading: they include a handout on editing one’s own papers and proposals\(^21\) and a presentation on basics of copyediting and proofreading.\(^22\)

**CLOSING COMMENTS**

Editing and proofreading your own work can help it to meet high standards. It can thus increase acceptance of what you write and minimize the need for editing and proofreading by others. Most important, carefully editing and proofreading your work can aid in communicating with your audience and thereby achieving the goals of your medical writing.

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

**Author contact:** bgastel@cvm.tamu.edu

**References**

Put the audience first and tell stories to enable the public to understand and engage with science and medicine, says Jay Ingram, science broadcaster and author, and winner of AMWA’s 2015 Alvarez Award for excellence in communicating health care developments and concepts to the public. For more than 30 years, Ingram has worked to make complex scientific issues interesting, relevant, and accessible to audiences on radio and television as well as in print.

Understand Your Audience

“Unless you understand where your audience is, you’re likely to be ineffective,” says Ingram. But understanding the audience isn’t easy. Through the 1980s until very recently, just 10% of the American public could read and understand a science article in The New York Times, according to a series of science literacy studies by Jon D. Miller at Northwestern University Medical School. In more recent studies, Miller claims this number has risen to about 25%. That is still not very good, says Ingram, who questions the substantial increase in scientific literacy.

While scientific publications such as general science magazines and professional journals focus on conveying the science, television uses a completely different approach, says Ingram. Driven by profit, producers winnow down story topics to attract a target number of viewers. In the beginning, Ingram loved cohosting the Discovery Channel’s Daily Planet science show. By the sixth year, Ingram and his cohost were told they couldn’t do any more medical stories because they didn’t draw enough viewers. “The only way to do a medical story was to do something on robotics that wasn’t about the condition but about the robotics,” he says.

Rationalization by readers and viewers also makes it tricky to understand an audience. Researchers at the Cultural Cognition Project at Yale Law School say that people’s cultural stances (for example, hierarchal or egalitarian, and individualist or communitarian) subtly and unconsciously influence the lens through which they view data. This allows people to rationalize and see as flawed data that do not agree with their cultural stances. The Yale researchers suggest that people do this because they belong to “tribes”—circles of friends and colleagues. “While most science people would say anybody that doesn’t believe in climate change is irrational, in fact, it might be that they’re being entirely rational because they don’t want to separate themselves from their tribe,” says Ingram. Unfortunately, he has not seen any recommendations to deal with this that he believes would be effective.

Tell Great Stories

Communicating science through stories is controversial because stories build to the conclusion while science puts the conclusion at the beginning. “Rightly, science and storytelling are inverted,” says Ingram. When communicating science to the public, using storytelling language, tension, and plot is more effective than simply listing findings. “Part of that is the emotional reaction. It’s well known that we remember things better if there’s emotion attached,” says Ingram.

As an example, he cited a segment, from the BBC’s Ascent of Man documentary series of 1973, that he called “one of the most brilliant pieces of science communication ever on television.” In one episode, the program showed the host, scientist Jacob Bronowski, walking through Auschwitz, and standing by a pond. “Into this pond were flushed the ashes of some 4 million people,” says Bronowski. Members of his family were among the people killed by the Nazis. “This is what men do when they aspire to the knowledge of gods,” says Bronowski. “Science is a very human form of knowledge. Science is a tribute to what we can know although we are fallible.” Wearing a suit and dress shoes, Bronowski then steps into the pond. “We have to cure ourselves of the itch for absolute knowledge and power,” he says, as he reaches down to cup water from the pond.

Be Aware of the Power of Communicators

People respond to other people. Communicators such as Walter C. Alvarez, MD, Carl Sagan, and Walter Cronkite wrote and spoke in ways that appeal to the public. Alvarez, considered one of the best internal medicine physicians of his time,
Communicating science through stories is controversial because stories build to the conclusion while science puts the conclusion at the beginning.

was a prolific and popular writer. “He wrote for the public in a way that was so accessible that editors would add technical terms to his words,” says Ingram.

But his popularity had a downside. In 1946, Alvarez published an article in *Geriatrics* stating that dementia is the result of the gradual accumulation of small clots in the brain. Alvarez convinced people that Alzheimer’s disease had nothing to do with plaques and tangles in the brain, but was due to stroke. In his book *The End of Memory: A Natural History of Aging and Alzheimer’s*, Ingram suggests that this delayed research on Alzheimer’s disease by 2 or 3 decades. “The expository skills of people can influence in bad ways,” he concluded.

*Lori De Milo is the owner of Lori De Milo Writer for Rent LLC in Sicklerville, New Jersey.*

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**From Science Show Host to Best-Selling Author**

Jay Ingram was co-host of Discovery Channel’s Daily Planet for almost 20 years and has been host of 3 radio shows. He is the author of 13 books, 3 of which have won Canadian Science Writers’ awards and almost all of which have been bestsellers. For a lifetime of service in science communication, Ingram was appointed a member of the Order of Canada. He also received the Queen Elizabeth II Diamond Jubilee Medal and other awards. Ingram is cofounder and chair of Beakerhead, an annual week-long festival of the arts and engineering in Calgary.

Today, Ingram is using innovative methods to communicate science to the public, such as having his band perform during some of his talks, panel discussions, and interviews. “We’re trying to make content and entertainment of equal importance, and to spark imagination,” he says.

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**RESOURCES**


Ingram J. Belief is biased. It’s vital to know how our values trump logic. *Alternatives J.* 2012(38):5:30-31. Available at: www.jayingram.ca/files/alternatives/Alternatives38n5HQIngram.pdf

Cultural Cognition Project’s Evidence-based Science Communication Initiative. www.culturalcognition.net/esci

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Jay Ingram receives the Alvarez Award from AMWA’s 2014–2015 President Karen Potvin-Klein at the AMWA annual conference in October 2015.
McGovern Award Lecture

Retractions, Post-Publication Peer Review, and Fraud: Scientific Publishing’s Wild West

Speaker: Ivan Oransky, MD / Vice President and Global Editorial Director, MedPage; co-founder Retraction Watch and Embargo Watch; Clinical Assistant Professor of Medicine, New York University School of Medicine

By Mary K. Stein

Plagiarism. Fabricated data. Authors who trick their way into serving as their own peer reviewers. Predatory journals that publish articles without any peer review. In his McGovern medal address, “Retractions, Post-Publication Peer Review, and Fraud: Scientific Publishing’s Wild West,” Ivan Oransky, MD, provided many tales from the dark side of today’s scientific publishing environment.

A medical journalist who is cofounder of the pioneering blog Retraction Watch, Oransky has been using the power of the Internet to expose fraudulent practices and to tell the back stories behind the growing number of retracted journal articles. Along with medical editor and writer Adam Marcus and a staff of contributors, Oransky regularly reports on authors, publishers, and publications caught in fraudulent practices. A past executive editor of Reuters Health, Oransky is vice president and global editorial director of MedPage Today as well as clinical assistant professor of medicine at New York University School of Medicine. At the 2015 AMWA conference, he received AMWA’s McGovern Award in recognition of his preeminent contribution to medical communication.

In his address, Oransky took the audience on a tour of recent cases of plagiarism and fraudulent articles and the aftermath. For example, a research article published in the December 2014 issue of Science claimed that short conversations with gay people could result in increased support for same-sex marriage. One of the authors, however, had allegedly faked data for the article, “When contact changes minds: An experiment on transmission of support of gay marriage.” The journal has since retracted the article.

The tremendous pressure to get scientific articles into the literature is one reason that some researchers engage in unethical behavior. One area involves retractions, two-thirds of which are due to misconduct (Proc Natl Acad Sci U S A. 2012;109:17028–17033). As Oransky explained, the problem is compounded because most articles that have been retracted remain available in the literature and are regularly cited despite being discredited. Fewer than 8% of citations acknowledge retractions, and one-third of the time publishers do not alert readers that papers are retracted (Infect Immune. 2011; 79:3855–3859).

Adding to the problem is the typical delay between recognition of the error and actual notices of retraction. The average time that elapses between publication of an article and publication of a retraction is 3 years, he said (the record so far on the Retraction Watch leaderboard is 27 years), and the wording used in retraction notices can also be problematic. Some retraction notices are misleading or do not detail the reasons the article was withdrawn or correct the facts, he said. Sometimes a publication merely mentions that the article has been retracted. Some journals have used euphemisms in retraction notices, such as noting that a retracted paper had “a significant originality issue.”

Common reasons for retractions include duplicate publication of data (self-plagiarism), falsification, publisher error, authorship issues, legal reasons, and results that are not reproducible. The author with the record so far, anesthesiologist Yoshitaka Fujii, (http://retractionwatch.com/category/yoshitaka-fujii/) has had 183 articles retracted. Oransky said that plagiarism is not the worst offense; instead, the more serious problem is that incorrect data remain in the literature.

The journal with the highest number of retractions is The New England Journal of Medicine, followed by JAMA, Oransky
noted, suggesting that highly cited publications may be attractive targets for fraudulent authors. Complicating efforts to crack down on unethical practices is the threat of legal action against medical journals or coauthors who confront colleagues about questionable data. Additionally, some publishers seek to hide the fact and number of retractions because of challenges to their credibility.

There is some good news in all of this, Oransky said. Between 2001 and 2014, retractions are up tenfold, largely because detection is improving through detection software and “more eyes upon the problem,” he said. And some researchers are being punished for their actions, Oransky noted, mentioning the prison term for a scientist in Iowa who fraudulently substituted blood samples to make results seem more promising in animal experiments related to a potential HIV vaccine.

In the rush to publish their research, Oransky noted, some scientists turn to so-called predatory journals, which have extremely high acceptance rates and don’t really engage in peer review. In a parody of journals and conferences that spam researchers for submissions (ad fees), a group of graduate students at MIT's Computer Science and Artificial Intelligence Laboratory created a program called SCiGen (available at https://pdos.csail.mit.edu/archive/scigen/) that generates gibberish science papers that have been accepted for presentation at scientific conferences.

Reproducibility of research findings is also a huge issue, Oransky said. While major cases of fraud and mistakes attract attention, he said that fraud and errors in “garden-variety” scientific publications are much more important because the erroneous information is cited and repeated. He noted, for example, recent reports that a large number of studies cannot be replicated.

Oransky urged medical communicators to examine their sources more carefully and to always ask if the results are reproducible. He urged medical writers to go to the publisher’s website to try to find any retraction notices, to check every fact, and to make sure that the data exist and can be examined.

Another positive step is the new retraction database Oransky and Adams are developing with the support of the John Arnold Foundation and the MacArthur Foundation. The goal is to have the database up and running by the end of next year, which should make it easier to discover when specific articles have been retracted, Oransky said.

Mary K. Stein is the president of MD Communications, a freelance medical editing, writing, and photography company in Albuquerque, New Mexico.

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Resources

Retraction Watch http://retractionwatch.com


THE ART OF THE EDITOR’S QUERY: EFFECTIVE STRATEGIES FOR SEEKING CLARITY

Speaker
June Oshiro, PhD, MS, ELS
Editor, Mayo Clinic, Rochester, MN

By Kristen Hines

When it comes to seeking clarity from authors, querying can rise to the level of art. Effective queries can accomplish so much: They can prompt the author to provide clear answers, foster good working relationships with authors, and help the editor save time while doing the best job possible.

In her session “The Art of the Editor’s Query,” June Oshiro, a manuscript editor at Mayo Clinic, led a conversation that explored querying strategies to overcome common challenges. Her overriding approach to the query is to “be brief and diplomatic.”

The Challenge: Working With Different Types of Authors
Oshiro began by presenting editorial challenges, organized by author type, and suggested querying strategies when working with each, as follows:

The busy author—common among clinicians. They can skip over longer queries. Therefore:
• Limit the length of individual queries, and break a complex query into multiple, shorter queries.
• For a recurring problem, use a single representative query to avoid overwhelming the author (ie, highlight each instance but query only once).

The writer with limited English proficiency—another common type with characteristic language clarity issues. Therefore:
• If feasible, seek clarity through conversation (either face-to-face or over the phone) because their conversational English may be stronger than their written English.
• Avoid vague comments about a passage being unclear; instead, explicitly detail the problem, provide a possible solution, and structure the query to elicit a yes or no answer.
• When a portion of text is truly indecipherable, a “best guess” rephrasing might prompt the author to provide less-ambiguous wording.

The protective or sensitive writer—can be defensive and critical of certain types of edits. This sensitivity might emerge only after feedback, so Oshiro emphasizes the importance of being especially polite when working with new authors.

Therefore:
• Be conscious of the tone of queries (ie, strive for friendliness).
• Convey a sense of supportive team work in interactions.
• Justify changes by citing house style, as appropriate. Do not edit according to editorial preferences alone.
• Remind authors to consider the needs of the target reader or reviewer to justify suggested changes.

The incremental updater—continually makes adjustments to the document as new data become available, challenging deadlines and potentially introducing errors. Therefore:
• Double-check the document for inconsistencies.
• Avoid sending the full document back for review when clarification is needed. Instead, email queries or individual paragraphs, as required.

The Challenge: Rewrites
Oshiro went on to discuss what to do when faced with the need to rewrite part of the text. She advised editors to avoid undertaking complete rewrites, if possible.

Rewriting can change authorial voice and style, so it should be reserved for correcting obvious errors that can be easily fact-checked. Leaving the original text in the document alongside suggested replacement text may be helpful for authors.

Asking an author to rewrite is problematic if the text already represents their best effort. Nevertheless, obvious logic flaws that can’t be deciphered require input from authors.

Querying Strategies and Tips
Oshiro provided a number of time-saving tips, and other strategies came up in the group discussion, such as:
• Use an introductory query to preface multiple queries or provide context for the need for extensive revision.
• View your first review as a copy edit and note potential uncertainties in the text; a subsequent pass for substantive editing may reveal the answers to some initial queries.
• Avoid presenting 2 different wording options with the phrasing, “Do you mean [a] or [b]?” because authors may simply reply “Yes.” Instead, try to structure the query to elicit an unambiguous answer. Ending the query with “Please clarify” often prompts authors to explicitly indicate the correct answer.
• Add prompts, such as highlighting, to flag revisions that should be made throughout multiple sections of the document.
• Maximize the functionality of Microsoft Word by using auto-correct keyboard shortcuts for standard queries and apply styles and macros for formatting. These tools can save time by not having to reinvent common queries or manually reformat text.
The Bottom Line: Who is Responsible?
For those with the luxury of seeing the document at several stages in the review process, the final review represents another opportunity to resolve issues, but it is ultimately the author’s decision to reject or accept input.

According to Oshiro, editors are expected to point out errors and offer suggestions, but if authors disregard the guidance, she advises, “Do your best work and let it go.”

Kristen Hines is writer and editor based in Ottawa, Ontario, Canada.
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EDITORING FOR NON–NATIVE ENGLISH SPEAKING AUTHORS

By Tiffani Wheeler Downing, MA

With the global expansion of medical communication, some AMWA members are looking to expand their careers to include the editing of medical communication written by non–native English speakers, whom the presenter also referred to as English as a second language (ESL) authors. In an open session on this topic, William Brown, MD, director of International Medical Editing Service, gave advice for aspiring editors of ESL authors and shared his experience from his years as a highly published gastroenterologist and ESL editor.

Behavior Expected of Editors
Editors have specific behaviors or practices they follow when editing texts. Editing texts written by ESL authors is similar. Brown stressed that the editor must be “respectful of the author’s grammatical style and content” but nonetheless “be rigorous in making necessary corrections, revisions.” He noted that editors can also show respect for ESL authors by carefully crafting the content of the queries they write. Using diplomatic questions such as “Do you agree with this wording?” and “Does this convey your intent?” show respect to the author, while the edits work to improve the writing.

Finding ESL Clients
There are many ways to find ESL clients, Brown said. Advertise in places such as the AMWA Freelance Directory, LinkedIn, and overseas journals. Consider starting out as an ESL editor by editing for one of many international editing companies, which can give the beginning editor experience while requiring minimal administrative efforts. Editors may also find clients by making their business website translatable, thereby making services accessible to a wider audience. But in searching for new clients, Brown advised editors to not forget existing ones. “Nurture the clients you have,” he stressed. “Write to them, contact them, thank them. Write and ask, ‘Has your paper been accepted?’”

Responding to Clients
Give clients honest feedback. “Be objective and honest but polite,” Brown said. Offering honest suggestions to an ESL colleague can be difficult, but it doesn’t help them to withhold honest feedback. In his experience, clients “really want your help, and they’re not really offended by your rewriting portions or saying ‘This is incorrect and needs to be changed.’”

He emphasized, however, that it is also important to compliment authors when compliments are due. “I’ll often say, ‘Your paper is good, you did good research. Let’s work together to try to get it published, to try to get it written better’ so they have some confidence that their work is good.”

Tips on Editing Manuscripts
Brown packed this segment of the session with practical advice on editing manuscripts from the title to the references. Much of this advice was applicable to editing all authors’ work. He suggested that editors omit all acronyms or abbreviations used fewer than 4 times. And finally, in his list titled, “Special attention needed,” Brown gave some tips he developed specifically for editing work by ESL authors; these tips also summarize the advice he shared in the last segment of the session:

• Synchronize objectives, methods, results, discussion, and conclusions.
• State conclusions positively, concisely, unequivocally.
• Shorten! Shorten! Tighten! Tighten! Focus! Focus!
• And, in an apparent nod to Strunk and White, “Omit all unnecessary words.”

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AMWA Online Resources
Handouts from many annual conference open sessions are available at: www.amwa.org/annual_conference_2015
Drug-induced liver injury (DILI) is the most frequent cause of safety-related withdrawal of drugs from the market. This open session provided an overview of the routine liver function test results used to gauge a drug’s potential for causing DILI and reviewed the Food and Drug Administration (FDA) guidance on premarketing clinical evaluation of potential DILI cases (www.fda.gov/downloads/Drugs/.../Guidances/UCM174090.pdf). Presenter Jude Richard emphasized the information that regulatory writers and other medical communicators need to interpret DILI-related safety data obtained in the premarket phase.

Why is the FDA Concerned with DILI?
According to the FDA, DILI is the “most frequent single cause of safety-related drug marketing withdrawals for the past 50 years,” and hepatotoxicity continues to be a concern for patients. No one particular class of drugs or mechanism of action is specifically associated with DILI, and many liver diseases are known to cause increased liver function levels (eg, viral hepatitis, acute cholestasis, biliary tract disorders, and liver cirrhosis), making DILI challenging to detect (Figure 1). For these reasons, a firm diagnosis of DILI can be difficult. Examples of drugs that have been withdrawn due to DILI include Oraflex, Duract, Marsilid, Serzone, Diflurex, and Rezulin. Mild to moderate DILI cases are treatable; however, severe DILI cases may result in irreversible liver failure that is fatal or requires liver transplantation.

Relationship between DILI and Hy’s Law
Almost 4 decades ago, Hyman Zimmerman observed that patients who experienced drug-induced hepatocellular injury in combination with jaundice had a poor prognosis, with 10% to 50% mortality due to acute liver failure. This led to the recognition that a decreased bilirubin level could be a potential indicator of liver injury. What is now known informally as Hy’s Law is defined by the FDA with 3 criteria (Box 1). The most recent FDA guidance on this topic states that “pure hepatocellular injury sufficient to cause hyperbilirubinemia is an ominous indicator of the potential for a drug to cause serious liver injury.” It continues:

Finding one Hy’s Law case in the clinical trial database is worrisome; finding two is considered highly predictive (of a drug’s) potential to cause severe DILI when given to a larger population.

Identifying Hy’s Law Cases and Monitoring DILI
Several liver panel tests are used to identify Hy’s Law cases (Table 1). Guidance recommendations from the FDA on monitoring DILI during clinical trials include:
• Test ALT, AST, ALP, and total bilirubin levels every 2 to 4 weeks for several months.
• Follow up increases in ALT ≥ 3x ULN (upper limit of normal) by repeat testing within 48 to 72 hours.
• Repeat often the tests for ALT, AST, ALP, and total bilirubin to confirm and determine whether their levels are increasing or decreasing.
• Inquire about symptoms.
If there are no signs of liver injury after about 3 months, liver panel (sometimes referred to as serum chemistry) monitoring intervals in longer clinical trials can be increased to once every 2 to 3 months. In clinical development programs where no signs of hepatotoxicity have been identified in early trials, less frequent liver panel monitoring intervals can be used in later clinical trials as well.

**Evaluating Potential DILI Cases: eDISH**

The FDA created a tool to help FDA reviewers identify potential cases of DILI. The Evaluation of Drug-Induced Serious Hepatotoxicity (eDISH) tool can be used to review laboratory data from large clinical trials. With eDISH, users can generate scatter plots of total bilirubin/ULN over ALT/ULN (Figure 2); rapidly identify individuals with laboratory findings that meet Hy’s Law criteria; and find cases that might be DILI. Graphical information that can be obtained using eDISH is presented in Figure 2. The scatter plot is of real-life clinical study data and an example published by the FDA to illustrate the eDISH tool (www.wuss.org/proceedings09/09WUSSProceedings/papers/cdi/CDI-Guo.pdf).

Richard noted that the FDA and the American Association for the Study of Liver Diseases (AASLD) sponsor an annual DILI conference and directed attendees to the AASLD website, where proceedings of all previous DILI conferences are archived or linked www.aasld.org/events-professional-development/drug-induced-liver-injury-2015-program). This is a resource regulatory writers can use in the future to stay up-to-date on the most recent information available on DILI.

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**Table 1. Liver Panel Tests Used to Identify Hy’s Law Cases**

<table>
<thead>
<tr>
<th>Liver Panel Test</th>
<th>Function</th>
<th>Normal Range</th>
<th>Hy’s Law Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alanine aminotransferase (ALT)</td>
<td>Enzyme for energy metabolism; involved in gluconeogenesis and amino acid degradation</td>
<td>10 to 40 IU/L</td>
<td>≥ 3x ULN</td>
</tr>
<tr>
<td>Aspartate aminotransferase (AST)</td>
<td>Enzyme for energy metabolism; involved in gluconeogenesis and amino acid degradation</td>
<td>10 to 34 IU/L</td>
<td>≥ 3x ULN</td>
</tr>
<tr>
<td>Bilirubin (total)</td>
<td>Product of normal heme catalysis</td>
<td>0.3 to 1.9 mg/dL</td>
<td>≥ 2x ULN</td>
</tr>
<tr>
<td>Alkaline phosphatase (ALP)</td>
<td>Enzyme for protein regulation; involved in dephosphorylation</td>
<td>20 to 140 IU/L</td>
<td>If &gt; 140 IU/L, not likely a Hy’s Law case</td>
</tr>
</tbody>
</table>

*ULN=upper limit of normal*
The goal of this session was to provide an overview of the basic medical device regulatory structure and tips for working within the medical device industry. Tim Peoples hoped this presentation would get medical writers interested in learning and exploring opportunities in the medical device industry.

Regulatory Structure
As with pharmaceuticals, the Food and Drug Administration (FDA) regulates medical devices. Felicia Cochran described the basic regulatory structure of the medical device industry. A medical device is defined as an instrument, a machine, a contrivance, implant or in vitro reagent that is intended to treat, cure, prevent, or diagnose disease in humans. Each device is assigned to 1 of 3 classes based on risk. The risk classification drives the regulatory controls (Table 1).

Table 1. Classes of Medical Devices

<table>
<thead>
<tr>
<th>Device Class</th>
<th>Risk Designation</th>
<th>Estimated Number of Devices on the Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>Low</td>
<td>780</td>
</tr>
<tr>
<td>Class II</td>
<td>Medium</td>
<td>800</td>
</tr>
<tr>
<td>Class III</td>
<td>High</td>
<td>120</td>
</tr>
</tbody>
</table>


Device classification likewise depends on intended use. The term intended use describes the general purpose of the device or its function and encompasses the indications specified in the device labeling. The term indications for use describes the disease or condition the device will diagnose, treat, prevent, cure or mitigate, and includes a description of the patient population for which the device is intended.

Regulatory Pathway for Market Authorization
The intended use is one criterion that determines whether a device must be evaluated for marketing through the premarket notification 510(k) pathway,* through the premarket approval (PMA) pathway, or if appropriate, a de novo request. For example, a 510(k) submission must demonstrate that a device is substantially equivalent to a predicate device legally marketed in the United States: (1) before 1976; or, (2) previously cleared by FDA. Substantially equivalent means that the new device has the same intended use as the predicate device and the same technological characteristics, or has different technological characteristics that do not raise concerns about safety and effectiveness relative to the predicate device. Through this pathway, medical devices are “cleared” for marketing, not “approved.”

Products requiring PMAs include class III, high-risk medical devices with the potential to cause illness or injury, or products found not to be substantially equivalent via the 510(k) pathway. Approval is based on sufficient, valid scientific evidence demonstrating that the device is safe and effective under conditions of intended use.

Clinical Trials for Medical Devices
The clinical evidence needed for marketing authorization and labeling of medical devices is different compared with drugs. Feasibility studies allow for early clinical testing of devices to evaluate “proof of principal” as well as to generate initial safety data. These studies are limited clinical investigations (approximately 40 to 60 patients) with the aim of confirming the device design and operating specifications before conducting a pivotal clinical trial. Pivotal clinical studies are large (approximately 100 to 200 patients) and, in the case of significant-risk devices, may be performed under an FDA-approved investigational device exemption (IDE).

Best Practices and Tips for Writing
Even without experience writing about devices, a medical writer, particularly with pharmaceutical experience, has significant expertise to offer. A medical writer’s ability to effectively communicate a message is essential to successful regulatory writing. Karen Bannick offered the following tips:

- Consider the reviewers: Use the FDA website to find the names of likely reviewers, information regarding recent recalls, and recommendations for similar devices.
- Consider your goal: Is the goal to establish safety and substantial equivalence or prove safety and efficacy?
- Remember the audience: Regulatory environments vary around the world. The FDA uses “substantial equivalence”

* 510(k) refers to a section of the Food, Drug, and Cosmetic Act.
and “safe and effective,” while the European Union uses “safety and performance.”

- Evaluate documents carefully: Look for misunderstandings and inconsistencies in the documents.
- Monitor the timeline for submissions: Use a spreadsheet to track the timeline, educate the team about the timeline and be specific with what you need from each team member to avoid redundancy.
- Stick to the facts: Avoid unsubstantiated claims and ensure the documents do not present information in a biased manner.
- Remember the “story”: Ask, “What am I trying to get the reviewer to do? Is the device equivalent or is it better?” The documents need to consistently state the same message.

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MEDICAL WRITING IN THE NEXT 75 YEARS:
THE UNTOLD STORIES OF ANIMAL-TO-HUMAN TRANSLATIONAL RESEARCH

Speakers
Charu Chandrasekera, PhD
Director of Laboratory Science, Physicians Committee for Responsible Medicine, Washington, DC

Thomas Hartung, MD, PhD
Professor and Director, The Johns Hopkins Center for Alternatives to Animal Testing, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD

By Katelyn Werner

“Over the last 75 years, we’ve had a lot to write about in medicine,” Charu Chandrasekera opened, and she explained how many of those topics have involved translating findings from animal models to human applications.

The system of basing drug development on animal models has seen many more failures than successes, Chandrasekera said, noting that a 2006 FDA news release indicated there had been 9 failures for every 10 drugs in clinical studies. Referencing many articles (Box 1), Chandrasekera showed that researchers and regulators have raised concerns about these methods for most major diseases, including cancer, heart failure, stroke, diabetes, and neurological disorders such as Alzheimer’s disease and amyotrophic lateral sclerosis, commonly called as Lou Gehrig’s disease. She said the current overreliance on animals ignores genetic differences between species, variability within species (for example, age, sex, and strain), and differences in how animals are housed and raised. As Chandrasekera said, “A mouse is not a mouse, is not a mouse—so how can we accurately extrapolate that data to humans?”

Historically, many writers have struggled with reporting translational research, for example, by sensationalizing findings, omitting the model, or not contextualizing the study. Writers might assume that drug response mechanisms and complications in animals mirror those in humans and therefore overlook experimental and biological limitations of the research.

Responsibility for poor reporting is shared among researchers, regulatory agencies, writers, and all parts of the system, Chandrasekera said. However, writers can play a pivotal role in illuminating the limitations of the current system by asking whether research has been or can be conducted in more reliable, human-relevant methods.

The State of the Field: Modern Advances from Toxicology

Thomas Hartung says we are ready to move beyond animal models. In his field of toxicology and in drug development, he already sees promising advances toward more reproducible, human-relevant research. To spread these advances to other preclinical fields, Hartung suggests that researchers should work to:

- Increase agreement that animal tests are not sufficiently reproducible or accurate for translation to humans.
- Increase understanding that some animal tests lead to costly wrong decisions. (As Hartung mathematically described: \( f(trash) = trash \).)

Box 1. References on the Problems of Translational Research


Pound P, Bracken MB. Is animal research sufficiently evidence based to be a cornerstone of biomedical research? BMJ. 2014;348:g3387.

• Understand and overcome limitations of alternative methods such as in vitro testing, many of which he said have as many limitations as animal testing.
• Improve capabilities of human-relevant models like organotypic cell culture and organs-on-a-chip. (Hartung’s research at Johns Hopkins focuses on making a 3-dimensional cell model of the human brain.)
• Develop approaches such as automated cell cultures, computer models, and combined cell and computer methods.
• Generate big data and mine it with bioinformatics to make “big sense” of results.
• Practice evidence-based medicine in preclinical research by systematically and objectively evaluating whether results are consistent among studies.
• Find pragmatic, early ways to test targets in human-relevant models, as is currently being done with green toxicology and “read across” approaches.
  Hartung acknowledges that many scientific discoveries have come from animal studies, but they are in many cases not the best method to answer our questions. “All models are wrong” in some manner, he said. “Some are useful.” (For further information on alternative testing methods, see the references in Box 2.)

Medical Writers Addressing Translational Relevance
Medical writers are an important part of these solutions, Chandrasekera said. They can deeply inform stakeholders and move research standards toward human-relevant methods. She offered some general advice for thoughtful medical writing:
• Minimize hope and hype.
• Handle “hot” findings with care and place them in context of the study’s limitations.
• Do not mistake association for causation.
• Do not regurgitate institution news releases.

More specifically, she offered tips for writers to help them promote human-relevant methods:
• Question the human relevance of animal or alternative methods.
• Watch for contradictory findings among animal models.
• Ask researchers about their plans for more human-relevant testing, such as with human cells or tissues.
• Use “triple dose caution” when discussing translation, and be clear about the inherent unreliability and extended time-frames of many methods.
• Explain any caveats readers need to properly interpret findings.
• Do not distort the severity of the limitations of translational research.

Chandrasekera closed by framing this advice in the context of the AMWA Code of Ethics, which calls on medical communicators to communicate objectively, accurately, rigorously, completely, and with fair balance.

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The goals of the Budapest Working Group have received broad support from a variety of stakeholders, including Health Canada, the DIA Medical Writing Community, the Clinical Data Interchange Standards Consortium (CDISC), patient advocates, principal investigators, and research quality associations. These stakeholders have been involved at key points in the review process. The alliance of end users have shared mutually agreed upon terminology that facilitates clear and concise reporting of research data and best ensures disclosure within the many facets of the medical writing process.

AMWA and EMWA will be collaborating to simultaneously publish the resulting CORE Reference online, as well to publish a manuscript in multiple professional journals with the intent to optimize dissemination across a broad swath of end users. The practical user's manual will be constructed as a living document with an open comment period following the upcoming publication of the CORE Reference.

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**Resources**


Kristina Wasson-Blader, Kathy Spiegel, and Catherine Magill (not pictured) were named fellows of AMWA in recognition of their history of contributions to the organization. Their biographies are available in an online exclusive.
Uncertainty continues for US health care reform and market access to new drugs and biologics. As costs of health care continue to increase, reimbursement for health care expenses continues to decrease. Therefore, there is a need to demonstrate a drug’s value in terms of efficacy (or effectiveness) and safety as well as cost in relation to that of existing competitors.

A health technology assessment (HTA) reports key information about not only the safety and efficacy of a drug or biologic but also its economic effects. Using this information, payers and policymakers decide whether to grant patients access to these compounds and provide reimbursement for them. In this session, Marcia Reinhart and Eleni Allen discussed HTAs and their roles in decision making regarding drug formularies in the United States and the rest of the world.

Basic Concepts of Health Economics and Outcomes Research

Before delving into HTAs, Reinhart discussed basic HEOR concepts essential to understanding HTAs and their use. Multiple types of health economic analyses compare cost differences between treatments: cost-consequence analysis, cost-minimization analysis, cost-benefit analysis, budget impact analysis, cost-effectiveness analysis, and cost-utility analysis. Three types of analyses were discussed by Reinhart in greater detail.

- Budget impact analysis provides the estimate of a product’s effect on the overall cost to a group or health plan. Typically the net cumulative cost of a particular product for a specific number of patients in a given population (eg, that covered by an insurance plan) is generated by the budget impact model.
- Cost-effectiveness analysis compares a new therapy with an existing one in terms of their effects on costs and therapeutic outcomes. Results are usually reported as a ratio between costs and outcomes.
- Cost-utility analysis is similar to a cost-effectiveness analysis, but measures effectiveness specifically with quality-adjusted life years (QALYs), which includes the change in both the quantity and quality of life that result from an intervention.

Also crucial to understanding HTAs is outcomes research. This broad category includes comparative effectiveness and studies of patient-reported outcomes (PROs). Comparative effectiveness research is designed to answer the question “If two treatments are available, which one is more effective?” Evaluation of PROs addresses the effects of treatment on how a patient feels and how well a patient can function. Standardized instruments (eg, questionnaires) are often used to assess PROs such as physical function and health-related quality of life.

Overview of HTAs

HTAs are documents used to decide whether an intervention will be placed on the drug formulary of a hospital or pharmacy benefits manager, whether the cost of an intervention will be covered by an insurance provider or governmental agency, and, in foreign countries, whether the cost-effectiveness of the intervention is sufficient to recommend its use when it is compared with the standard of care or no treatment. Each country that uses HTAs has a different procedure through which new technologies gain access to the market. Broadly, in many health care systems an HTA-like document is created by the
product’s manufacturer and submitted to an HTA agency. This agency reviews the submission and sometimes hires a third party to provide an independent analysis. A report from the agency is then provided to the payer, which decides whether to make a drug available to patients and reimburse for its costs.

The American Managed Care Pharmacy (AMCP) has issued guidance on the format of an HTA used in the United States, ie, the AMCP dossier. As described by Allen, this guidance provides a standardized format by which clinical and economic information about a product is provided by drug manufacturers upon an unsolicited request to US payers and decision makers for use in developing drug formularies. In the dossier, details regarding the product’s effectiveness, safety, and economic value are provided. Comparisons between the product and competitors in these areas are of particular importance.

The AMCP does not require a systematic review as part of the AMCP dossier; however, a systematic review is a key component of several other types of HTAs. As part of this review, data often are evaluated in a meta-analysis to generate a summary or pooled estimate of its effect. If a product has not been directly compared with any competitors, a network meta-analysis (or indirect treatment comparison) can be performed to infer comparative effectiveness of the treatments.

In addition to the difference in use of systematic reviews, the AMCP dossier and international HTAs differ in various characteristics summarized in Table 1.

Reinhart and Allen concluded their presentation by directing the audience to sources of additional information about HTAs: the International Society for Pharmacoeconomics and Outcomes Research (www.ispor.org), the Academy of Managed Care Pharmacy (www.amcp.org), Health Technology Assessment International (www.htai.org), and the National Institute for Health and Care Excellence (www.nice.org.uk).

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Table 1. Comparison of Health Technology Assessments: Academy of Managed Care Pharmacy Dossier vs International Health Technology Assessments

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>AMCP Dossier</th>
<th>International HTAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region in which document is used</td>
<td>USA</td>
<td>Outside the USA</td>
</tr>
<tr>
<td>Format and template</td>
<td>Guidance provided by AMCP</td>
<td>Standards vary among countries</td>
</tr>
<tr>
<td>Audiences</td>
<td>Payers and hospitals</td>
<td>HTA advisory bodies and government agencies</td>
</tr>
<tr>
<td>Common length of document</td>
<td>Approximately 100 pages</td>
<td>Varies from 3 to more than 1000 pages</td>
</tr>
<tr>
<td>Common duration required for development</td>
<td>Often 6-10 months</td>
<td>Often 3-9 months</td>
</tr>
<tr>
<td>Content of document</td>
<td>• Section 1.0 Executive summary</td>
<td>• Executive summary</td>
</tr>
<tr>
<td></td>
<td>• Section 2.0 Product information and disease description</td>
<td>• Disease background</td>
</tr>
<tr>
<td></td>
<td>• Section 3.0 Supporting clinical evidence</td>
<td>• Treatment options and guidelines</td>
</tr>
<tr>
<td></td>
<td>• Section 4.0 Economic value and modeling report</td>
<td>• Unmet medical need</td>
</tr>
<tr>
<td></td>
<td>• Section 5.0 Other supporting evidence</td>
<td>• Product information</td>
</tr>
<tr>
<td></td>
<td>• Section 6.0 Supporting information</td>
<td>• Clinical value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Economic value</td>
</tr>
</tbody>
</table>

Ann Winter-Vann, PhD, AMWA’s awards administrator for 2014–2015, presents Helen Hodgson, PhD, with the Harold Swanberg Distinguished Service Award.
Zach Bohannan and Michelle Sauer took turns sharing their enthusiasm for the work they do and the challenges they experience as grant professionals in an academic setting. They think new opportunities are on the rise because of the highly competitive funding environment that exists today. Universities are realizing that faculty members need support to create more competitive grant proposals, and medical writers have the skills and knowledge to be successful grant professionals.

What roles do grant professionals play in an academic setting?

According to Bohannan and Sauer, a grant professional brings expertise and focus to the process of obtaining funding by acting as part researcher, part coordinator, and part writer (Figure 1).

In the role of researcher, you should be conversant in the subject matter, able to critically review experimental design and statistics, and understand the conclusions that can be drawn from available data. A good understanding of how your group’s work fits into the broader research landscape is also important.

The coordinator role is all about project management. It entails keeping track of internal and external deadlines, knowing how your team’s work is progressing, identifying new collaborators or facilities for future proposals, and interfacing with people outside your immediate group. You should like talking to people, and you also should be detail-oriented.

And, last but not least, as a writer, you are a huge asset when it comes to pulling together a solid grant proposal. Scientists rarely have formal training in written communications; therefore, you can contribute to developing the narrative and ensuring there is a clear flow of information throughout the proposal. You can use persuasive writing skills to convey a sense of excitement about the research, while keeping the audience of grant reviewers in mind as you develop a proposal.

How do you find work?

Networking is going to be key, said Sauer. Connections with people who are already doing this work will make the difference in your ability to transition to this career. In addition to AMWA, there are 2 other professional organizations for grant professionals: the National Organization of Research Development Professionals (NORDP) and the National Council of Research Administrators (NCURA). NORDP, founded in 2010, is dedicated to this rapidly evolving profession.

Grant professional positions may exist at the institution or department level or they may be a hybrid. Department-level work can be a good place to start, and there may be greater freedom to define your role. Sauer recommends that you broaden your search criteria beyond “writer” when looking for grant professional positions because a variety of titles may be used, such as program professionals, directors, administrators, and officers.

Sauer suggested that medical writers consider pitching the creation of a new position to a department at an academic institute or research center. They need you because you can bridge the gap between administration and researchers. With a medical writer’s skills, you can improve the number and quality of submissions by providing editing, keeping submissions on track with schedule reminders, and streamlining the process with templates and checklists. If you have enough time, you may be able to offer resubmission mentoring, which involves reading between the lines of the reviewers’ comments and helping the researchers rework the proposal. You may also add value by holding targeted educational seminars about grant writing within the department. You could offer a series of seminars on a specific aspect of the process to a subgroup such as junior faculty.
What are the challenges?
Grant proposals are large and complicated and require teamwork. Research often does not proceed as planned, and other investigators may publish results from a similar study, which may require a change in grant strategy. Bohannan says it is important to be able to stay calm when others are not and find creative solutions. He recommends finishing all of your personal deliverables as early as possible so that you can help others on the team as the deadline approaches. The week before a submission deadline will be intense no matter how well prepared you are.

Sauer says “a grant professional is a cat wrangler.” Keeping everyone on task and on time in an academic research environment is challenging, but the potential for making a positive impact is great.

Suzanne Pratt is a veterinary pathologist transitioning to a freelance career in medical and scientific writing and editing based in Portland, Oregon.

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**USING SOCIAL MEDIA FOR MARKETING: HARNESSING THE POWER OF TWITTER, LINKEDIN, AND BEYOND**

**Speakers**
Ruwaida Vakil, MS
Principal, ProMed Write LLC, Somerset, NJ
Jennifer Minarcik, MS
Freelance Science and Medical Writer, Moorestown, NJ

By Lori De Milto, MJ

Social media is a powerful tool that medical communicators can use to build awareness of their freelance or professional brand and connect and build relationships with colleagues, clients, and employers. In their open session, Ruwaida Vakil and Jennifer Minarcik highlighted how to get started using social media and 3 key social media platforms for medical communicators.

**Getting Started in Social Media**
Developing your strategy is the first step to using social media (Box 1). “Pick the social media platforms where your clients and potential employers are. Start off slow so you don’t get overwhelmed, but be consistent,” says Vakil. LinkedIn, Twitter, and YouTube are the best social media platforms for medical writers; Vakil and Minarcik suggest that you choose 2 of these. Set goals, define your audience, and learn what works by following “influencers”—people who are active in social media in your field and who have active and engaged followers.

Use social media to engage people by sharing, endorsing, and commenting. “How to” blogs are a favorite on social media. Share resources from others with your network (called content curation), and share content marketing products you create, such as digital newsletters, ebooks, and white papers. Always be professional. “Social media is a digital footprint that will be there forever,” says Vakil.

Sauer says “a grant professional is a cat wrangler.” Keeping everyone on task and on time in an academic research environment is challenging, but the potential for making a positive impact is great.

Suzanne Pratt is a veterinary pathologist transitioning to a freelance career in medical and scientific writing and editing based in Portland, Oregon.

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**Box 1. Getting Started in Social Media**

1. Develop a strategy
   - Be consistent and stay focused
2. Focus on engagement
   - Know where people are connecting
3. Use the right tools
   - Be efficient with your time
4. Measure your efforts
   - How well is your strategy working?

Content with visuals gets much more engagement than content without visuals, according to the Social Media Examiner website. “Visual content makes you stand out from the crowd,” says Minarcik. Use images, including infographics, and videos in social media posts and updates, blogs, and websites.

The success of your strategy can be measured with social analytic tools and by looking directly at your retweets, reposts, increases in followers, and traffic to your website. Boost efficiency by using the right tools (Box 2).

**Key Social Media Platforms**

**Twitter**
“Twitter is a great way to build your business and your brand,” says Minarcik, who has attracted clients though Twitter. Medical communicators can use Twitter to build relationships with key influencers, share content of interest to the target market, and engage in real-time discussions.

“Don’t be obsessed with growth,” says Minarcik. Instead, follow influencers, your ideal clients or employers, colleagues, and industry leaders. Be strategic about increasing your followers and tweeting. According to Social Media Examiner and
Social Boom, there is more traffic on Twitter from Monday to Friday. Noon is the most active time for sharing content and 5:00 PM is the best time for retweets. Use this information to your advantage.

Create and follow Twitter lists; these lists are organized by themes, such as medical writers, medical journals, or continuing medical education. When you put someone on a list, Twitter sends the person a notification, which may result in new followers for you. Follow the 4-1-1 rule: for every 4 tweets with news or information, do 1 retweet and 1 promotional tweet. Box 3 highlights tools for using Twitter strategically.

LinkedIn

“If you’re not on LinkedIn you almost don’t exist,” says Vakil. Clients, recruiters, and employers look for people on LinkedIn, which helps medical communicators develop their network, find opportunities, and engage with others in their industries. Clients have found Vakil through LinkedIn.

To improve productivity on LinkedIn, customize invitations to connect, answer common questions posted to groups to develop your reputation as an expert, publish on LinkedIn Pulse, and post slides on LinkedIn’s SlideShare. Pulse, a recent feature available in LinkedIn, enables members of LinkedIn to publish longer blog-style posts rather than just short status updates. Pulse is “more effective than a personal blog,” says Vakil; all of your connections are notified when you publish a post. SlideShare is one of the most visited websites in the world and a great opportunity to show your network samples of what you do.

YouTube

Each month people view more than 4 billion hours of video on YouTube, which, after Google, is the second-largest search engine. “YouTube is a great way for people to get to know you. They tend to trust you if they can put a face to you,” says Minarcik. YouTube enables people to provide great content and engage people.

Harnessing the Power of Social Media

By developing a clear strategy, staying focused, and using the right tools, medical communicators can harness the power of social media. LinkedIn, Twitter, and YouTube all enable medical communicators to build professional awareness and relationships.

Lori De Milto is the owner of Lori De Milto Writer for Rent LLC in Sicklerville, New Jersey.

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Box 2. Social Media Tools

- Scheduling and listening tools:
  - Hootsuite to monitor topics and people: [https://hootsuite.com](https://hootsuite.com)
  - Social Oomph provides suggestions on people to follow: [www.socialoomph.com](http://www.socialoomph.com)
- Image design:
  - Canva: [www.canva.com](http://www.canva.com) (Canva for Work resizes designs for all social media platforms)
  - PowerPoint
- Photo editing: PicMonkey: [www.picmonkey.com](http://www.picmonkey.com/)

Box 3. Twitter Tools

- Create targeted hashtags:
  - RiteTag: [ritetag.com](http://ritetag.com)
  - Hashtagify: [http://hashtagify.me](http://hashtagify.me)
- Write messages others can easily share with Click to Tweet: [http://clicktotweet.com](http://clicktotweet.com)
- Customize a call to action with Sniply: [http://snip.ly](http://snip.ly)

RESOURCES


Social Media Examiner: Free resources on using social media: [www.socialmediaexaminer.com](http://www.socialmediaexaminer.com)

LinkedIn Makeover: Free and paid resources on using LinkedIn: [www.linkedin-makeover.com](http://www.linkedin-makeover.com)
BASICS OF CONTENT WRITING FOR MEDICAL PRACTICES AND HOSPITALS

Speakers
Amy Rogers, MD
Medical Writer and Editor; Cofounder, Coffee Break Medical Marketing, McKinney, TX
Bliss Mishler, MS, PT
Freelance Medical Writer and Editor; Cofounder, Coffee Break Medical Marketing, Volcano, HI

By Katelyn Werner

People are increasingly shopping the Web for health care and health information—and they’re not looking for advertisements. Content marketing is a strategy to promote a business by providing information that readers will find useful and relevant. If crafted properly, the content can recruit clients to a service or product, build a business’s credibility in the public eye, and promote reliable health information to Internet users. Amy Rogers and Bliss Mishler presented strategies for the burgeoning field of Web content marketing for health care services, including private practices and hospitals.

Marketing Strategy
Many forms of content (Box 1) can help promote medical practices, hospitals, and other health care teams as “likable experts” to potential customers. Web content should be designed to attract attention, get people to listen, incite them to action, and inspire them to recruit others. Ideally, Web content should engage people from all 4 of these stages and encourage them to progress from one stage to the next. Rogers stressed, however, “It’s not always about money. We want to change health behaviors.”

Essential Skills for Creating Content
Copywriting is persuasive writing to sell your business or services. Rogers and Mishler explained that it takes 3 skills: knowing how to sell but without overselling like in an advertisement, finding a way to provide benefits by being useful (or “at the very least, entertaining,” Mishler said), and knowing how to engage in “journalism-ish,” as Mishler called it. You may be researching and writing somewhat like a journalist, she said, but you are not coming at the task from an unbiased perspective.

Tips From Guest Speaker Brie Magar
Rogers and Mishler invited Brie Magar of MokaMedia to share experiences of hiring content writers. The key to content marketing, Magar said, is to stay relevant. Freshness is essential to an effective campaign; readers won’t return to old content.

Magar warns that writers sometimes must sell the value of content marketing to physicians. But she said they can be wooed. Even in a niche like a neurosurgery department website, Magar said a recent redesign and marketing campaign increased their monthly viewers from about 400 to 1,000 within a month of the campaign. That was in 2009; as of 2014, they had over 100,000 users per month.

The ethical issues of health care content marketing include paying attention to patient privacy laws and client vulnerability and avoiding overpromising or sensational language. Content marketing is a great way to “battle junk on the Internet,” Rogers said, so promote reliable, evidence-based research in your content.

Content ideas can come from many sources:
• news of a company or practice
• recent headlines
• new research
• timely reminders (like for flu shots)
• health events (like Breast Cancer Awareness Month)
• patient stories (with permission or anonymously, with proper protections against identifying individuals)
• common patient questions

Levels of review before publication vary. In some practices, physicians approve materials before they are posted online; in other cases, fact checking is left to the writers.

Writing for the Internet can be difficult because few readers (1 in 5, some sources say) read past the headline. Rogers and Mishler recommend journalistic style with a catchy headline, an attention-grabbing lead, and a “nut paragraph” early in an article to summarize what will be said. To reach skimming readers, use bullets, indents, short paragraphs, and accessible language (usually at a 4th to 8th grade level).

Search engine optimization (SEO) is important to consider, Rogers said, but she noted: “We write for human beings!” Don’t overfill your text with key words just to appear first in search results. Do use on-page SEO tools (like Yoast SEO for WordPress) to evaluate whether your article is competitive. Rogers and Mishler recommended a variety of Web tools (Box 2) useful in customizing marketing strategies to match a company’s budget and a content writer’s skill level.

Use images strategically, Rogers said. Avoid the stereotypical “guy in a suit at a whiteboard.” Use illustrations to highlight colorful ideas or metaphors. Pay attention to copyright laws and make sure you can legally use the images you find.

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Use images strategically, Rogers said. Avoid the stereotypical “guy in a suit at a whiteboard.” Use illustrations to highlight colorful ideas or metaphors. Pay attention to copyright laws and make sure you can legally use the images you find.
Just because something is online doesn’t make it fair use, and even images listed as “public domain” often have some restrictions on use. When you do use images, be sure to credit image sources.

Content writers should know how to use social media to distribute content but recognize that social media management can be a full-time job. Don’t publish your content directly on social media sites; rather use social media to direct readers back to your own website, Rogers said, so that you have control of your content and your clients’ access to it. Mishler noted that many managers of health blogs disable page-commenting features if they don’t have a manager to respond to posts that have a negative tone or incorrect information. Social media etiquette guidelines are available from a variety of online sources, including the American Medical Association and the American Congress of Obstetricians and Gynecologists. Also look for guidelines from the company or organization for which you are writing.

Content writing won’t make you famous, Mishler said, but this young career field gives rewarding job opportunities to writers who want to work with health care providers and connect the public to accurate, reliable health information.

Katelyn Werner is a master’s degree student in science and technology journalism at Texas A&M University.

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**UNLOCK THE SECRETS TO FREELANCE SUCCESS**

**Speakers**

**Brian Bass**  
President, Bass Global Inc, Robbinsville, NJ

**Lori De Milto, MJ**  
Owner, Lori De Milto Writer for Rent LLC, Sicklerville, NJ

**Cynthia L. Kryder, MS, CCC-Sp**  
Owner, Kryder Ink, Phoenixville, PA

By Thomas A. Burns Jr.

Three AMWA members with years of freelance medical writing experience provided a whirlwind overview of establishing a freelance business, marketing freelance services to keep the money rolling in, and avoiding bad behaviors that can sabotage your business.

**Getting Established**

Brian Bass, a veteran freelance writer, AMWA’s immediate past president, and coauthor of *The Accidental Medical Writer*, covered the basics of setting up a business in the context of the 4 S’s: structure, separation, support, and security.

**Structure**

He discussed the advantages and disadvantages of 3 common business structures: sole proprietorship, traditional corporation (in particular, the S corporation), and limited liability corporation (LLC). The primary considerations in deciding which business structure to choose should be your overall goals for the business (eg, full-time versus part-time work), the value of your personal assets (how much you have to lose if you get sued), and how your clients will perceive you (eg, professionalism, permanence).

Sole proprietorships are the most common freelance business structure because of their simplicity and because business can be conducted immediately under a person’s Social Security number or federal identification number. All income is treated as personal and little paperwork is required. However, the business is not a separate legal entity from the individual, which results in considerable exposure of personal assets in the event of a lawsuit.

It is more complicated to establish an S corporation, Bass noted, but an S corp is a recognized business entity, which can provide protection of personal assets. The freelance becomes an employee of his or her own company. One tax advantage of an S corp in comparison with a sole proprietorship and an LLC is that an S corp can pass some income to the owner without being charged payroll taxes (Social Security and Medicare taxes). Disadvantages include that an S corp can be more complicated to manage than a sole proprietorship because it is a business entity. For most freelances, an S corp will be preferred over a C corporation. Although C corporations do allow health
insurance costs to be deducted pre-tax, a disadvantage is that they are subject to corporate taxes.

An LLC is probably the best type of business entity for most freelances, according to Bass. Because it is a recognized business entity, an LLC provides personal asset protection similar to an S corp. In some states, certain business taxes may be lower for an LLC versus an S corp, so it may be less expensive to own an LLC than an S corp. However, a freelance with an LLC will pay more in income taxes than a freelance with an S corp, because an LLC cannot avail itself of an S corp’s income tax advantages.

**Separation**

Whether an LLC or an S corp is chosen, Bass said that to avoid potential exposure of personal assets, the business should be kept completely separate from the employees’ personal life, especially finances, but also phone and Internet services, and working space when possible. He highly recommends every freelance consult their account (and all freelances should have an accountant) for help in selecting the business structure that will be best for them.

**Support**

When choosing professionals to support your freelance business, such as accountants, insurance brokers, and attorneys, it is most important that they know the freelance business, understand that writing is considered to be a service (i.e., not subject to sales tax), and understand how their business serves your business’ needs.

**Security**

Security can be provided by maintaining various forms of insurance, including professional liability (to cover errors and omissions), general liability (accidents), and workers’ compensation. Although lawsuits against freelance medical writer are rare, having such insurance can provide peace of mind.

**Marketing Your Services**

Many freelances find it challenging to market their services and land new clients, said Lori De Milto, citing her 2015 survey of 77 medical writers and editors.* De Milto, an AMWA member since 1998 and author of *The Mighty Marketer: Your Guide to Making More Money as a Freelance Medical Writer*, listed 8 essential ingredients in a marketing strategy for freelance medical writers and editors:

- An “elevator pitch” to quickly explain what you do
- A well-constructed email signature that includes important details such as your logo, Website, and LinkedIn profile URL
- A great business card
- A persuasive LinkedIn profile
- An AMWA Freelance Directory listing, which can include most of the same material as your LinkedIn profile
- A strong network of professional colleagues
- Direct email to reach prospects quickly
- A well-designed business website with compelling content.

According to De Milto’s survey, the Number 1 way freelances get new clients is word of mouth, with LinkedIn and the AMWA Freelance Directory following closely.

“One of the best ways to reach potential customers is to speak to them about what concerns them instead of you,” De Milto said, noting that she had learned that advice from Cyndy Kryder and Brian Bass. Creating “top of the mind awareness” so that prospects think of you first when they need to hire a freelance is also crucial, she said.

**Sabotaging Your Business**

Cyndy Kryder, a freelance medical communications specialist and coauthor of *The Accidental Medical Writer*, capped off the session with her Top 10 list of bad behaviors that can prevent freelances from achieving business success:

1. Missing deadlines
2. Invoicing for more than the agreed-upon price
3. Charging too little
4. Avoiding clients’ emails and telephone calls
5. Missing the key message and target audience
6. Turning in projects riddled with typos and grammatical errors
7. Making excuses for inferior work
8. Being inflexible
9. Using poor judgment on social media
10. Complaining about making revisions

She stressed that one of the keys to success as a freelance is keeping your clients satisfied, since satisfied customers can become repeat customers. Keep in mind that from a marketing perspective, it takes less time and fewer resources to market to existing clients than it does to acquire new clients. Thus, you should do all you can to ensure that current clients are satisfied and will regularly approach you with new projects.

She said that customer satisfaction relies on 3 components: high quality and reliability of services, outstanding value for the cost, and quick response. That means you need to consistently produce high-quality deliverables at a reasonable cost and deliver them on time every time. In the final analysis, a great reputation is the most important asset that a freelance can have.


Thomas Burns is a scientist, writer, and editor in Wendell, North Carolina.

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*AMWA Journal V30 N4 / 2015 / amwa.org 171*
Many freelance writers are eager to learn new ways to earn income. In this session, the presenters shared their experiences and provided practical tips to aid freelances in pursuing new moneymaking strategies.

Book Writing
Lori De Milto, author of *The Mighty Marketer: Your Guide to Making More Money as a Freelance Medical Writer*, emphasized that writing a book is not likely to make you rich. The benefit of writing a book is that it can position you as an expert on the topic, enhance your visibility, and lead to many other opportunities.

Writing a book may actually come easily to many writers. De Milto shared her top 3 tips:

1. Write something you are passionate about.
2. Set your goals, such as the length of your book and the timeline.
3. Focus on what book buyers care about (title, front, and back covers, and table of contents).

Book Publishing
Now that the writing is done, it is time to get the book published. This is more challenging. Self-publishing is the most practical and economical way to publish a book, says De Milto, who highly recommended her publisher, BookLocker. Publish both an eBook and a print book. Print books will be very helpful to give to reviewers or as a promotion, and to sell, but don’t print too many. Most people will buy eBooks, and most sales will come from Amazon.

Book Promotion
This is the most challenging step and is never ending. There are many ways to promote your book. The key is to find a strategy you can live with and stick to it. You should have a dedicated website for your book or, at a minimum, a dedicated Web page through your business.

Webinars
Debra Gordon, president of GordonSquared Inc, presented her experience with creating webinars. She recommended brainstorming to develop webinar topics. She listed her 5 steps to delivering a successful webinar.

1. Find the right webinar provider. There are many webinar companies and while many are similar, there are important differences in the services provided and cost. Ask, “Is the program is mobile device ready? How accessible is the technical support? How is the training to utilize the program?”
2. Choose the right format. Should you create a single webinar or a series of webinars? Gordon recommended aiming for a single webinar or a small series of no more than 4. A 60-minute webinar with 45 minutes for the presentation and 15 minutes for questions is a good place to start. Should you charge? It depends on the expertise being shared and the ultimate goal.
3. Justify it to the consumer. This applies particularly if there is a fee for the webinar. Consider creating a promotional document including a series of questions with the answer “then you need this course” or explaining the benefit of the course. Consider offering a 100% money-back guarantee.
4. Market it. Promote your webinar using mailing lists, professional organizations, newsletters, blogs, and press releases. LinkedIn groups can also be a great place for marketing. You can market through affiliates, such as colleagues and professional organizations, and use specific discount codes to track the source of referrals.
5. Engage the audience. This is the most important step to a successful webinar. Have anonymous pre- and post-surveys to get to know your audience and tailor the webinar. Include live polls and questions to allow for interaction during the webinar. Consider letting the audience see you as you present.

Public Speaking
You can also increase your income with public speaking. Approach your local rotary or Chamber of Commerce with a presentation in which you have expertise. Use each speaking experience to refine your presentation. From there you can branch out to national organizations. Tell your clients you are available to speak. The key is to promote yourself.

Rebecca Dahlberg is a freelance medical writer in Saint Paul, Minnesota.

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MANAGING THROUGH THE STORM: HOW TO SUCCESSFULLY HANDLE A CRISIS FOR YOUR COMPANY OR CLIENT

Speaker
Julie A. Johnson
Principal, ZW Consulting, McMinnville, OR

By Christina B. Sumners, MS

Julie A. Johnson began the presentation by calling the Tylenol poisoning case of 1982 the perfect example of a crisis handled well. However, she also noted that we live in a very different world now, a world with social media and instant reactions, in which organizations have less time to respond than Tylenol manufacturer Johnson & Johnson did 33 years ago.

The goal of a public relations professional handling a crisis needs to be to “just shut it down,” Johnson said, adding that rarely does a company come out of a crisis better off than before it started.

Johnson listed 3 tiers of crises: high, medium, and low, each requiring a different type of response. High-level crises involve the organization itself and can damage the company’s business or reputation. Medium crises have the potential to turn into something bigger quickly and need careful monitoring. Low-level crises are generally happening elsewhere in the industry, but could become an issue for one’s own organization.

Writers are needed in a time of crisis, Johnson said. “There are a lot of materials that have to be developed in a very short time frame” during each stage of the crisis. These may include key messages, press releases, social media statements, and more.

Regardless of the scale, managing the crisis requires 3 steps: prepare, monitor, and respond.

Preparing
The first step, preparing, involves answering questions about one’s organization—and doing so before a crisis hits:
• Who are the members of the crisis team? Do they understand their roles and responsibilities?
• What is the approval process for the response plan?
• Are there third-party groups you can leverage in a crisis? Do you have friends in the industry or elsewhere who would be willing to speak on your behalf?

Table 1. Making Sure Everyone is on the Same Page

<table>
<thead>
<tr>
<th>Situation</th>
<th>Threat Level</th>
<th>Rapid Response Team</th>
<th>Approval Process</th>
<th>Sample Core Messaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide of a patient</td>
<td>Red</td>
<td>• CEO</td>
<td>One-step approval of all team members</td>
<td>Include 2-3 bullet points for each situation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Legal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accusations of improprieties by healthcare worker</td>
<td>Red</td>
<td>• CEO</td>
<td>One-step approval of all team members</td>
<td>Leverage company mission and vision</td>
</tr>
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<td></td>
<td></td>
<td>• Legal</td>
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<td></td>
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<td>• Communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accusation of improprieties by investor</td>
<td>Yellow</td>
<td>• CEO</td>
<td>Three-step approval process</td>
<td></td>
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<td></td>
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<td>• CFO</td>
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<td>• Communications</td>
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</tbody>
</table>

• What kinds of issues constitute a crisis? How might they involve your organization?
• What kinds of media or other communication channels are available to get your message across?
• What general key messages or position will you use to help develop your response?

Once you have answers to these questions, Johnson recommended making a simple chart that lays out the response team, the approval process, and possible messaging for the most likely scenarios. It is also advisable to prepare a “standby statement” to give to the press in each of the likely crises that may arise (Figure 1). This statement should be short and simple while still conveying the message that your organization is trying to get across in each situation. Two sentences is probably the ideal length because something too long tends to make the media wonder what you’re hiding behind flowery or technical language.

Monitoring
Once you’re prepared, you must know what is going on; that’s where monitoring comes into play. “No one will tell you when a crisis is coming,” Johnson said, so you need to be constantly on the lookout for stories about events that might affect your organization.

When you see relevant news articles, dig deep, and find the story behind the story. Analyze the situation and determine both the key messages and what is being left out. Missing elements in news reports might indicate that reporters don’t understand something.
Responding
Finally, when a crisis hits, you have to respond, and quickly, but don’t panic, Johnson said. Trust your gut. “If a statement feels bad, don’t say it,” she said.”

“Do not lie,” Johnson cautioned. Focus on the facts and on the issue, and “you can build your story from there.”

“Be willing to apologize and be humble,” Johnson continued. “Apologies go a long way, especially in the United States.” In the United States, people tend to be more emotion-based than fact-based in these situations, so apologizing sincerely for actions taken (or not taken) and demonstrating that you care about people involved in the situation and how they are affected can be powerful.

“Ensure you have 1 spokesperson, maybe 2,” Johnson said—because although you do want to have a consistent message, everyone needs to sleep. The spokespeople should be up-to-date on key messages and have extensive media training.

Prepare everyone in the organization for possible questions from friends, a media ambush on the way to their home or car, or simply the unexpected phone call. “People forget that other employees might get questions,” Johnson said, “and they have to be prepared for those.”

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Tenets of Crisis Communications
1. Whenever possible, keep it simple.
2. Often, the biggest hurdle to overcome is your own staff—specifically the legal team.
3. Always dig deep. Find the story behind the story.
4. Don’t lie; focus on the facts.
5. Don’t become defensive or angry; be willing to apologize and be humble.
6. Don’t blame or finger-point, but do address your company’s actions—you can only speak for your organization (not anyone else involved).
7. Don’t allow everyone to talk about the issue; ensure you have one spokesperson.
8. Don’t ignore the issue; act swiftly and communicate, when appropriate.
9. Care.
10. Sometimes, the best response is to say nothing at all.
PRODUCING HIGH QUALITY DOCUMENTS WITHIN SHRINKING TIMELINES

Speakers
Ann M. Winter-Vann, PhD
Senior Medical Writer and Consultant, Whitsell Innovations, Inc, Chapel Hill, NC
Rhea Grill
Associate Manager, QC, Medical Writing and Submission Planning, Celgene Corporation, Summit, NJ

By Kimberly Koon, Pharm D, MS

The demand for quality seems to grow, while the time to prepare documents seems to shrink. Ann Winter-Vann and Rhea Grill offered a variety of tips for handling this common situation for medical writers.

Winter-Vann began by advising attendees to always follow best practices for writing quality regulatory documents. One important concept is to think first and write second. This extends to preparation of your documents: take time to set the document style settings and use the correct templates. She suggests always keeping an eye on the big picture throughout the drafting and review process so that documents do not drift off-topic and end up derailing.

Kick-off Meeting
Creating a regulatory document often follows a standard process: kick-off meeting, drafting, review, and quality control of the final draft. Winter-Vann offered tips for kick-off meetings to ensure the team starts off on the same track. Get the team to agree on goals and the timeline. Provide reasons for tight deadlines and ask the team to be respectful of everyone’s time and not delay the process.

Drafting
Winter-Vann suggests that during the drafting process, teams can use their time wisely while waiting for essential data by finalizing text that’s not dependent on data. She also described the process of creating shell tables for data and then reviewing them with the team; shell tables can later be quickly populated with data. Remember to limit the number of tables in the document; this will avoid diluting the impact of the most important data. Often, similar endpoints can be combined into a single in-text table. Although shell tables are helpful, she suggests that shell text be avoided. The process of populating shell text with data and verbiage can be error-prone and require tedious editing. Once data are available, create the data-sensitive text and make the document as clean as possible.

Schedule data review meetings with key team members and make sure the data are represented accurately. The quality of the document often lies with the data. During data review, speak up! As the writer, you have a different perspective from other team members and may find something the statisticians or scientists did not see or consider. Also, the team should consider and agree on the interpretation of the data. This will help to prevent unnecessary writing or a shift in messaging during the document review phase.

Review
The review process and individual expectations need to be understood by the entire team. Ideally, the team should know or learn how to use review software. Review software of any type is helpful and saves time but only if all reviewers agree to use it. Keep review meetings short; prepare by sending an agenda that includes comments up for discussion and follow the meeting by sending minutes and action items to the team. Send a clean finished document to quality control (QC) for review.

Quality Control
Grill, who works as a QC reviewer for Celgene Corporation, advises writers to not take the QC review personally. Keep in mind that document preparation is a collaborative effort. She explained that the QC review is an important final step because of the nature of human perception. Humans compensate for missing or erroneous text and a QC review brings fresh eyes and a new perspective.

Grill recommends that before sending a document for QC review, prepare your schedule so that you will be available to answer questions. Provide the reviewer with advanced notice of the coming review so that he or she will have time to prepare. Also discuss complex study designs or data presentations with the QC reviewer. Preparation will help minimize QC comments as well as the QC review time. To reduce the number of comments, know your style guide and keep language consistent throughout your document.

When submitting the document, only provide the final draft. Even a small change in a table can have a ripple effect through the document, and the QC review will need repeating. Grill recommends providing the location of all source documents and letting the reviewer know the scope of review expected; do you want all of it QC’d? If not, specify which text, sections, figures, and/or tables. Do you want a review for grammar, style, and consistency? Details are important and very helpful with QC submissions.

Do not let tight deadlines affect document quality. Map out a strategy to face them head-on and maintain your high standards. Having a plan in place is in itself a stress reliever.

Kimberly Koon is a freelance medical writer and pharmacist in Seattle, Washington.

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Kickoff meetings are universally important for medical communication projects. They provide writers with an opportunity to make a good first impression of themselves and the company they represent. Kelly Kilibarda, PhD, a medical writer and consultant with Whitsell Innovations, and Jenilyn Virrey, PhD, CMPP, medical writing senior manager at Amgen Inc, co-taught the open session, sharing their knowledge and experience about successfully planning and hosting kickoff meetings.

Kilibarda crafted her presentation to meet the needs of medical communicators new to the field who are working with a project team. She emphasized that successful kickoff meetings can “foster rapport, trust, and open/transparent communication between team members” and also align participants’ goals and expectations and clarify who is responsible for which task. At such meetings, participants can also identify appropriate project milestones and timetables and define the project deliverables.

Kilibarda identified the stages of a typical kickoff meeting and explained what to accomplish at each stage.

**Introductions.** Learn each participant’s name, contact information, and team responsibility. Take notes on team dynamics and hierarchy, as well as each individual’s commitment, flexibility, and helpfulness. This information will help in planning deadlines and making assignments.

**Project Background.** Learn about the project background in order to understand its context and how it might relate to other projects.

**Setting Goals.** Kilibarda advised session attendees to ask, “What does successful completion of the document actually look like?” Making sure everyone is in agreement on the project goals gives each team member a clearer vision of the end product.

**Defining Scope.** Determine the scope of the project and the scope of team member responsibilities. In many cases, the project scope will be driven by timelines. Kilibarda reminded attendees of the threat of “scope creep,” which can occur when a well-meaning person takes on more tasks than were originally agreed upon, potentially derailing project schedules. To combat scope creep when working on the project, Kilibarda suggested referring often to the statement of work, adhering to it, and reminding clients of the tasks negotiated therein to prevent delayed project deadlines and strained budgets.

**Discussing Client Processes and Workflow, as well as Setting Milestones and Timelines.** “You want timelines and milestones to make sure the process is progressing,” Kilibarda advised. Discuss potential delays and be sure to “build a cushion into the timeline” to accommodate delays, long review cycles, and conflicting deadlines.

**Defining Deliverables.** Find out what will be provided to you, including drafts and drop-in content, but also learn when you will be receiving those items. In addition, define what will be provided to your client, including drop-in content, multiple sections, and when they will receive those deliverables.

To close her segment of the session, Kilibarda offered final suggestions for achieving a successful kickoff meeting: 1) Aim for clarity of information and make sure everyone understands the consensus decisions, action items, tentative timelines, and deliverables. 2) Follow-up on these points with your primary contact in a detailed email.

**Publication Kickoff Meetings With Authors**

Virrey focused on publication kickoff meetings, which are meetings between a medical writer and members of a team who are drafting a manuscript for publication. These meetings take place before any writing is done. The kickoff meeting “sets a clear direction and a path forward for you so you know what your responsibilities will be and so that the authors know what they can expect from you,” Virrey said.

Virrey presented possible topics for discussion at the publication kickoff meeting while noting that not all stages may be needed.

**Content.** With all the authors around you, use the meeting to pinpoint what is to be included in the manuscript. In discussing the possible content, the publications team would benefit from discussing the following questions: What are our objectives? What data will go into the paper? And, do we have enough data?
Sharing of data. Virrey recommended talking to the project manager before the meeting and asking how familiar the authors are with the data. If they are not familiar with the data, then it may be helpful to discuss it at the meeting. For medical writers who do not feel they have the level of expertise to present the data, Virrey suggested asking the biostatistician or another colleague to share it with the authors.

Authorship. It is important to cover authorship issues, including criteria for authorship and the proposed author list and order of authors. Investigators may not be familiar with guidelines for authorship (such as International Committee of Medical Journal Editors guidelines and Good Publication Practice updates [GPP3]) and distinctions between naming individuals as authors or in the acknowledgments. Before the kickoff meeting, discuss with the project manager or someone who knows the investigators well to determine whether there might be conflicts among the authors regarding the order of author listing.

Medical writing support. If the authors want medical writing support, define at the beginning what the medical writer’s responsibilities are. Writing? Editing? Help with figures? Outlining and drafting? Involvement at all stages? Finding and gathering references? Do the authors want quality control services, and, if so, to what degree? Who will submit the manuscript? Who will revise?

Target journal. Author teams do not always know to which journal they should submit their manuscripts. Virrey suggests that medical writers come to the kickoff meeting with a list of 4 to 6 journals, with detailed information on each, such as journal audience, rejection rate, Impact Factor, and limits on the number of permitted words, tables, and figures. “When authors do see something granular and concrete like that, they’re more open for discussion and hopefully they’ll make a more informed decision in terms of what their target journal would be,” she said.

Publication policies and processes. Educate the authors on any publication policies or procedures the company or organization has, emphasizing that the policies exist to “ensure the highest standards in medical publication” (for example, by requiring that all authors must approve the manuscript before it is submitted and prohibiting the practice of ghostwriting).

Timelines. Consider setting both soft and hard deadlines. In doing so, honestly evaluate how much time is needed to revise and review. Also be sure to discuss schedules; designate delegates to provide coverage if an author must be out of the office or if other work conflicts arise during the authoring/review process.

Virrey suggested that following up with participants after the kickoff meeting is essential. Keep meeting minutes and send them to all team members within 5 days. Include the names of all participants, meeting date and time, meeting objective, key decisions made, action items, and outstanding items and their due dates. This serves as an excellent resource to those who missed the meeting, but also is a great resource for company documentation.

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I often like to say that medical writers are like superheroes, in that we each have a unique origin story. And a lot of them begin with a lab accident.

My own lab accident happened in 2002, when I was a postdoctoral fellow with the Pain Research Group at the MD Anderson Cancer Center in Houston, and I was realizing that I might not be cut out for academic life. Then I heard about medical writing through a friend of a friend, who also told me about Marianne Mallia, the president of AMWA at the time. Marianne encouraged me to join AMWA and to come to the chapter events in the area. There, I met a lot of interesting and friendly folks and learned more about the field.

And later, after Marianne hired me to work at the Section of Scientific Publications at the Texas Heart Institute, AMWA became my primary source of education about the craft of medical writing.

And I suspect this is true for most of us. When each of us was of single-digit age, and an adult asked us what we wanted to be when we grew up, none of us said “a medical writer.” When we were high school students applying to colleges, very few of us made our choices on the basis of which one offered the education we would need for a future in medical communications. And when we chose our college majors and even graduate schools, many of us had no idea that this was the future we were preparing for.

Well, the future is now. Because here we are, learning and teaching, benefiting from one another’s expertise in our chosen field of medical communications. I can’t imagine a more exciting time to be in this field, or to be a member of AMWA. And for me, it’s certainly an exciting time to become president.

As of this meeting—and I don’t think this is news to any of you—AMWA is 75 years old. In those years, it has evolved from a small organization of physician-writers into a thousands-strong association of professional medical communicators. In becoming what we are today, we went through a lot of changes, trying to adapt to the ever-evolving environments in which we do our work and the increasingly numerous and sophisticated tools with which we do it.

As you may know, at this year’s annual conference, the very first examination was given for certification in medical writing. Developing this exam took years of hard work from a great many dedicated people, not least founding Certification Commission Chair Tom Gegeny, subsequent chairs Karen Klein and Marianne Mallia, Exam Development Committee Chair Bart Harvey, and many others who contributed their substantial energy and expertise to identifying subject-matter experts, writing exam items, developing the requirements for certification and recertification, and taking other essential steps toward making certification a reality.

For those who earn it, this credential will be a way of providing prospective employers and clients with evidence that they have the knowledge that experts in their own field consider essential to their work. It is my hope that this credential will not only aid those who have it in finding employment, but that it will also create new opportunities among potential employers who previously might have needed the services of a professional medical communicator but who were concerned about not knowing what to look for in one.

Like all professional organizations, AMWA has had to keep up—and sometimes catch up—with the demands of our increasingly technological world. And keeping up inevitably involves a few missteps. Our online forums, hard as we tried to make them work and to educate ourselves in their use, did not turn out to be everything we had hoped. Which is why we are in the process of implementing a new online community. This community, called Engage, should enable members to converse with one another by several routes, including email, thereby facilitating the sharing of...
expertise that, for many of us, is among the chief reasons we joined AMWA.

It may seem slightly ironic that at this face-to-face meeting—the oldest form of communication there is—some of the biggest changes we are talking about are being made in cyberspace. But with fewer employers funding travel or supporting in-person educational activities, developing our online resources is vital to AMWA fulfilling its role as the premier resource for medical communicators. Many live and recorded webinars, pocket trainings, software demos, and other valuable informative materials are in development, and our new learning management system will help members make use of them. Also, as a benefit for members, a curated-content e-newsletter will soon begin appearing in your inboxes, bringing you links to articles on important and emerging topics of interest and relevance to medical communicators across our profession.

With fewer employers funding travel or supporting in-person educational activities, developing our online resources is vital to AMWA fulfilling its role as the premier resource for medical communicators.

Our evolution continues, but not without information and guidance. The Strategic Planning Initiative, headed by Lori Alexander, has collected huge amounts of input from members and nonmembers about where AMWA’s focus should be in the coming years. This information will be used to evaluate every aspect of AMWA, from structure and governance to activities and services, to determine how they fit in with what members want and how they can be changed to better meet members’ needs, whether those members are new to the field or experienced veterans.

I will confess that when people say that they’re excited about something that their association is doing, I tend to take their claim of excitement with a grain of salt. Maybe that’s because I’m not very easily excited myself. But I am genuinely excited about this year and about the steps that we as AMWA’s members are taking to adapt to the present and plan as best we can for the future. Such plans aren’t always easy to make because, as they say, the future is not yet written.

Good thing we’re a bunch of writers.

Visit amwa.org/journal for an online exclusive report from Past President Karen Potvin Klein
I use LinkedIn and Twitter. LinkedIn is an absolute must for freelance medical writers. It’s the best way for us to network online, build our network, identify prospective clients, and occasionally connect with and land new clients. I spent a lot of time developing a persuasive profile, the first step in making LinkedIn a great marketing tool. Then I began to focus on making connections with other freelancers and attracting the right type of attention through updates, starting and commenting on discussions, and writing posts for LinkedIn Pulse.

LinkedIn is also a great place to research prospective clients, especially to find the right person or people within an organization for my marketing. I’ve landed new clients that I’ve found through research on LinkedIn (but I marketed to them through a regular email and direct mail, rather than using LinkedIn to send the message).

Through my participation in LinkedIn and Twitter, I also learn things about freelancing, marketing, health and medicine, and medical writing that make me more valuable to my clients. Twitter is a lot less important to me than LinkedIn, and I’m careful about limiting my time there, since it’s easy to waste a lot of time there. But I definitely learn a lot and have made some connections with colleagues through Twitter.

—Lori De Milto

I love starting interesting discussions in LinkedIn groups and contributing what I hope are helpful insights and tips in response to other group members’ posts. That’s where the true value of LinkedIn, and of social media in general, lies. Nothing will kill your reputation in social media faster than blatantly selling yourself and asking people for work. When you demonstrate through thoughtful conversations that you’re smart, experienced, and professional, people will check out your profile. So your profile had better be complete!

In your LinkedIn profile, people will see your background, experience, and skills, and hopefully what other people—including clients—are saying about you in endorsements and recommendations. I pay for a premium account subscription, so when someone I don’t know checks out my profile, I can see who they are and decide whether it would be good for me to take the initiative and reach out to them to connect. The search functions are also more powerful with a paid account.

I especially love to use Twitter when I’m engaged in a professional activity I want others to know about. For example, at the AMWA annual conference I tweeted often about the sessions I was taking and all the great things I was learning. People who follow me see that I’m committed to excellence and continuing development, and that reinforces my professional image. Jen Minarcik and Ruwaida Vakil presented an outstanding session on social media at the conference, and I picked up a great tip about always including a photo when you tweet to increase your visibility.

I mentioned Facebook as a social media tool I use to market my freelance medical writing business, but I must admit I’m an unwilling participant. I’m a big believer in separating my personal life (Facebook) from my professional life (LinkedIn). But over the years that line has blurred. It’s not that I worry about what I might say on Facebook. The Internet is forever and you should never put anything out there that might come back to haunt you, so I don’t. But
Facebook is a place where I can be a dad, a husband, and a friend, without necessarily being a freelance medical writer. The very few clients who are Facebook friends are also friends in real life.

—Brian Bass

I strongly believe that social media is an essential part of marketing for medical writers and, as Brian mentioned, I led an open session with Jennifer Minarcik at the annual conference on the topic. With social media, you can:

• increase awareness of your brand
• connect and build relationships with colleagues and clients
• increase inbound traffic to your website
• engage in “social listening” to be informed about industry news
• market successfully at low cost

For more pointers on social media marketing, please read the report about our session on page 167. You can also subscribe to our YouTube channel at http://tinyurl.com/medwriters for regular updates on social media and medical writing.

—Ruwaida Vakil

Do you work with subcontractors? How do you hire and manage them effectively?

Yes, but less frequently today than in the prior years. For many years I had a viable medical communications agency (as opposed to operating as a solo freelance); in that capacity I hired many subcontractors for writing, editing, word processing, data checking, graphic design and layout, and accounting, and for medical, legal and regulatory consultation.

Hiring freelance writers was by far the most difficult! Many claimed skill and abilities in medical writing that they did not really possess. Perhaps they were innocent in that they actually believed they were competent medical writers, either because they had earned a PhD or master’s in science, or because they had worked on papers in the past for a company or university. In several instances, however, the amount of work I had to redo, often at my own expense, was seriously time-consuming. However this effort was essential, since I never submit a deliverable to a client without reviewing/rewriting beforehand.

Essentially, over a period of 20 years, I managed to find 3 experienced and highly skilled writers I would call “good,” so I used them as much as possible until one retired and another took a full-time job. The third was a colleague of mine in a pharmaceutical company and continues to be highly successful with her own freelance clients. Eventually I hired and trained a number of others who went on to become full-time employees.

If you are in business, it can be profitable to leverage your business by subcontracting the work and marking it up. However, keep in mind that you are ultimately responsible—not only for a detailed contract with them but for supervision, payment, and revision of the deliverables. In some cases, you may have to rewrite extensively; this takes time and dedication. Unless you have worked with a person and can totally rely on him or her, you should not simply subcontract a paper, clinical study report, monograph, or other projects to a subcontractor and expect it to be handled well. Nor can you rely on samples from strangers. It is essential to gain experience with interviewing, to acquire the skill of “hearing between the lines,” and to check references.

I do not recommend subcontracting to strangers if you are on a deadline; try it for a project that is not a rush. If you can, pay them out of your own pocket to write a paper, or part of one, that has already been finished and submitted; this way you can assess their abilities on a real project. I have done this and found it to be worth the expense. I do not agree with giving writing tests to experienced writers; to me, a writing test is an insult to the professional, may not be particularly relevant to the project, and may be vulnerable to cheating. If you listen well, you can intuit whether a candidate is being truthful about work experience, you can discern a great deal about his or her knowledge and understanding of the project under discussion, and you can also learn whether the person’s knowledge comes from hands-on experience.

I have found subcontracting work in editing, word processing, formatting, and graphic design, to be less problematic, though not without its own glitches.

—Cathryn D. Evans
Yes! I have worked with subcontractors for many years. I have a core group now, and they are amazing! I would be 1) dead from stress or 2) unable to take on multiple projects if I didn’t use subcontractors. In all my proposals for potential clients, I include a statement that the work may be performed with the assistance of subcontractors (and that they would be under the same confidentiality agreements and delivery specifics as I would be). Some clients do not allow subcontractors, however, and in such cases, I abide by that stipulation.

To answer the initial question about hiring, I typically subcontract with people I have worked with before and know well and trust. But I also subcontract with people new to medical writing whom I am interested in mentoring. How I choose projects for and manage subcontractors completely depends on those two categories of people (experienced or new).

Communicating project expectations, specific instructions, and timing (both due dates and expected number of hours for the work) is also important when dealing with either experienced or new subcontractors. More effort in this regard is usually required for newer writers, as you would expect, and I recommend assigning projects to new writers that are not too complicated and that have a more generous timeline so that there’s plenty of time to review their work and have them correct it. You should always review the work of subcontractors before sending it to your client, regardless of their experience.

I led a roundtable discussion on working with subcontractors at the recent AMWA conference in San Antonio, and I had a wonderful group of people who generated some great ideas. In the interest of column space, I will just list some of the other important considerations, when working with subcontractors:

- establishing formal contracts, with language making it clear that subcontractors are not employees and are responsible for their own taxes and reciprocal indemnification
- setting fees (hourly rate, by-project rate, your “markup” amount/percentage)
- training before and during project
- checkpoints and milestones (especially for people with less experience—you want to review their work early on to make sure they’re on the right track)
- invoicing and payment (subcontractors must be paid, even if your client doesn’t pay you)
- postproject evaluations and follow-up

Since 2003, I have been working with fantastic and successful freelances to whom I subcontract work, so I have quite a bit of experience in this area. First off, I want to set the record straight. If you thought it was a big and scary step to leave your last staff job and start freelancing, deciding to subcontract work to other freelances makes that pale in comparison.

My team isn’t very big and doesn’t grow very often, because being a fantastic medical writer isn’t part of how I decide to work with someone. It’s a given that they’re a fantastic medical writer or I wouldn’t even be considering them. The deciding factor for me is business savvy. Do they embrace as deeply as me how important it is to deliver on time, on target, and on budget every time? Do they charge by the project rather than by the hour (do they understand their value)? And do they “get it”—that is, do they understand and possess the intangible yet fundamental characteristics that simply make some freelances incredibly successful?

Because I only work with freelances who are at the top of their game, I don’t have to worry about managing them. Any project is at least as safe in their hands as it is in mine. This frees me up to manage the process, the client, my own writing projects, and getting more work. Because of the fantastic job we do, that last part—getting more work—is actually surprisingly simple. I think anyone on my team would agree I reach out to them several times a month, if not sometimes several times a week, to gauge their expertise and availability for a new opportunity that’s come along.

There’s nothing easy about subcontracting. It’s possible to work harder than you’ve ever worked before and make less money than you’ve made in years. So there are tricks and pitfalls along with the many opportunities. Still, I love the camaraderie, the professional give and take, and the synergy that results from great people working together toward a common goal.

—Brian Bass

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—Brian Bass
What do you do when you can’t take on a project for a client or prospect?

Part of my value to clients is solving their problems and making their jobs easier. If I can’t do the work, I propose an alternate solution: I suggest a short list of trusted colleagues whose work I can vouch for. My clients appreciate that I produce high-quality, reliable work or can recommend another excellent freelance.

I maintain a Microsoft Word file so I can copy and paste my colleagues’ contact information into my reply to the client. I often blind copy my colleagues so they have advance notice that a potential client might contact them.

Referring work to colleagues is a good practice, because they return the favor and we all keep busy that way. And the clients benefit because they know I would recommend only the best freelances to get their work done.

—Melissa L. Bogen

It depends upon the prospect or client. If it is a staffing agency (“temp employment agency”), I will refer them to local or national members of AMWA. If it is a contract research organization (CRO)—and they are sincere and need help—I will give them my time at no cost to discuss their project and help them assess what kind of writer/editor they actually need; if possible, I suggest other writers. If it is a direct company or a current client, I may try to accommodate him or her by hiring a subcontractor to help with the nonwriting activities (for example, typing tables, checking data, copyediting, organizing SAS files, cross-checking text with tables, verifying appendices and references, etc). If it’s quite clear that I simply cannot help right now, I may refer them to a good writer I know and have worked with personally. Yes, you take the risk that they will like her/him better and you may lose some work—but good will is worth a lot.

—Cathryn D. Evans

I always offer to help find a great freelance for the project. Clients and prospects almost always take me up on this. Then I think about colleagues who would be right for the project—and who I can count on to do a great job for the client. I only refer work to people I know fairly well, usually people I’ve done volunteer work with through AMWA.

Making a referral lets me help both the client and another freelance. This also positions me as someone they want to work with and/or refer work to in the future. It’s a triple-win situation—for the client, freelance, and me.

—Lori De Milto

2015 FREELANCE FORUM QUESTIONS

Check the AMWA Journal archives (www.amwa.org/journal) for answers to the following questions:

Spring 2015

What are the most effective marketing tactics you have recently used to market your business?
How do you bill a client that expects you to obtain references needed for a project?
What are some of the strategies you use to balance multiple clients and projects at once?

Summer 2015

Do you always use a written contract when you are working with clients? Is an email message sufficient? Do you have a lawyer review your contract?
Besides AMWA, what other organizations do you recommend a new freelance medical writer explore?
I have business cards, a brochure, and a website. Now how do I attract clients? I do not like cold calling.

Fall 2015

When you attend the AMWA conference or other conferences, what strategies do you use to get the most out of the experience?
What are the advantages of incorporating a business? Why can’t I work as a sole proprietor?
Calendar of Meetings

Alliance for Continuing Education in the Health Professions
January 13–16, 2016
National Harbor, MD
www.acehp.org

International Society for Medical Publication Professionals (ISMPP)
European Meeting
January 19–20, 2016
London, UK
www.ismpp.org/european-meeting

American Association for the Advancement of Science
February 11–15, 2016
Washington, DC
http://meetings.aaas.org

American Pharmacists Association
March 4–7, 2016
Baltimore, MD
http://aphameeting.pharmacist.com/

DIA Medical and Scientific Communication Annual Forum
March 21–23, 2016
Kissimmee, FL
www.diaglobal.org

American Copy Editors Society
March 31–April 2, 2016
Portland, OR
www.copydesk.org/national-conference/

Association of Health Care Journalists
April 7–10, 2016
Cleveland, OH
http://healthjournalism.org/index.php

International Society for Medical Publication Professionals (ISMPP)
April 11–13, 2016
National Harbor, MD
www.ismpp.org/annual-meeting

European Medical Writers Association
May 10–14, 2016
Munich, Germany
www.emwa.org

Council of Science Editors
May 14–17, 2016
Denver, CO
www.councilscienceeditors.org

National Organization of Research Development Professionals
May 23–25, 2016
Orlando, FL
www.nordp.org/annual-conference

Society for Technical Communication
June 1–3, 2016
Vancouver, British Columbia
http://summit.stc.org

Canadian Science Writers Association
June 2–5, 2016
Guelph, Ontario
http://sciencewriters.ca/

DIA
June 26–30, 2016
Philadelphia, PA
www.diaglobal.org

AMWA CHAPTER CONFERENCES

Mid-Atlantic Chapter Conference
March 4, 2016
Gaithersburg, MD

Southwest Chapter Conference
March 12, 2016
Houston, TX

The Delaware Valley Chapter presents: The 20th Annual Princeton Conference
April 16, 2016
Princeton, NJ

Carolinias Chapter Conference
May 6, 2016
Chapel Hill, NC

Indiana Chapter Conference
June 10–11, 2016
Indianapolis, IN
The Eighth International Congress on Peer Review and Biomedical Publication will feature 3 days of original research. If you haven’t already done so, start your research now!

Suggested research topics include the following:

- Bias
- Editorial and Peer Review Decision Making and Responsibilities
- Research and Publication Policies and Ethics
- Evaluations of and Mechanisms for Improving the Quality of Reporting
- Models for Peer Review and Scientific Publication
- Dissemination of Scientific and Scholarly Information

For a complete list of topics and more information, see the Call for Research announcement at www.peerreviewcongress.org

Contact: jama-peer@jamanetwork.org

Abstracts will be due February 1, 2017.

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In his latest book, *Caring for the Heart: Mayo Clinic and the Rise of Specialization*, W. Bruce Fye, MD, describes the expansion of the Mayo Clinic from a family practice to a prominent medical center, the rise of cardiac specialization among physicians and surgeons, and the development of new diagnostic and therapeutic techniques in heart disease. Fye, who is medical director of the Mayo Clinic Center for the History of Medicine, also depicts the major contributions the Mayo Clinic has made to the development of postgraduate specialty training.

This historical book is written for the general public, health care professionals, historians, and policy makers alike. Patient stories, included throughout the text, offer a unique perspective and human element from individuals diagnosed with various types of heart disease. For the general reader, the book contains brief and understandable explanations of key medical concepts, terminology, and complex scientific developments. For individuals seeking additional information on a specific subject, a wealth of carefully chosen endnotes are provided as a guide.

Amidst the introductory chapters on the Mayo Clinic’s origins and subsequent chapters explaining the transformation in patient care for heart disease during the 20th century, lies intense intrigue. For example, in the chapter on President Franklin Roosevelt’s secret cardiovascular disease, Fye provides evidence of attempts by several White House insiders to conceal Roosevelt’s hypertensive heart disease from the American public, before and after the 1944 election.

The concluding chapter addresses a range of present-day issues: the development of new diagnostic and treatment technologies and how they have transformed patients’ lives, the evaluation of risk-benefit ratio of surgical intervention, and the continuous rise of health care costs. The rapid development of social media (Facebook, Twitter, and YouTube) has also revolutionized patient care by promoting heart health. The Internet has enabled patients to gain access to the newest and most advanced heart treatment technologies and procedures. As a result, a patient may inquire as to whether a technology or procedure may benefit his or her specific heart condition.

Thanks to the dedicated work of scientists, clinical investigators, inventors, practitioners and research institutions, a diagnosis of heart disease is no longer an automatic death sentence. Impressive diagnostic and treatment technologies have extended the lives of patients with heart disease, enabling them to cheat an early death.

According to Fye, the key to maintaining a healthy heart is prevention, thereby eliminating the need for surgical repair or replacement. The heart is a vital organ that must remain strong. We must listen to and care for our hearts.

—Tara Ann Cartwright, PhD

*Tara Ann is a medical writer and editor in Research Triangle Park, North Carolina.*

Interested in reviewing books for the *AMWA Journal*? Contact JournalEditor@amwa.org
Health care in the United States is expensive and wasteful and disappoints physicians and patients alike. Desirable health outcomes are less frequent than in other developed nations. A large portion of the solution to this problem, as other readers of Vital Conversations: Improving Communication Between Doctors and Patients might agree, may be simply practicing the maxim “measure twice, cut once.”

In his book, Dennis Rosen, MD, argues that physicians can heal the health care system by taking the time, and by making the effort, to understand patients’ needs before prescribing treatment. His argument, along with advice on how to achieve this understanding through physician patient communication, is useful to all participants in the health care system (patients, physicians and other health care providers, public policy and opinion makers, and third-party payers and providers).

Rosen (a pediatric pulmonologist and sleep specialist at Boston Children’s Hospital and assistant professor of pediatrics at Harvard University Medical School) stresses the importance of understanding and treating the needs of the whole patient. He identifies and gives examples of 3 independent yet interactive unhealthy conditions—disease, illness, and sickness. Disease (eg, a urinary tract infection) is a measurable physiological state of a patient. Illness (eg, pain or suffering) is a patient’s behavioral response to a disease. Sickness (eg, blaming a patient for having cancer), which affects both patient and physician, is a society’s definition of an unhealthy person and of that person’s roles.

Citing the recommendation of William Osler, a founder of modern medicine, to “listen to the patient, and he will tell you the diagnosis,” Rosen urges physicians to take responsibility for establishing effective physician-patient communication based on trust. Trust is gained, he argues, as physicians build strong physician-patient teams.

Rosen asks physicians to build trust and teams by eliminating barriers to communication with the patient. Barriers include:
• a physician’s personal bias and irrelevant heuristics (eg, refusing a patient’s request for a computed tomography [CT] scan of a head injury that presents slightly differently than the usual presentation, which doesn’t require a CT scan);
• medical visits too brief to allow a physician the time needed to fully understand the patient’s condition;
• a patient’s denial or shame; and
• third-party payers’ and providers’ undue influence.

Physicians also build trust and teams by providing the patient with medical information and a meaningful context for discussing disease and treatment options and by getting buy-in from the patient to follow through on mutually agreeable patient-specific treatments and preventive behaviors. Significantly, building trust and teams also relies on giving the patient compassion, empathy, encouragement, integrity, and respect.

Rosen asks patients, too, to contribute to building trust and physician-patient teams by controlling the agenda of medical visits, communicating with candor, and owning their health care. He provides helpful checklists of responsibilities for both physicians and patients.

To emphasize the importance of trust-based communication, Rosen cites a passage from Plato that calls it “the great error of our day in the treatment of the human body, that physicians separate the soul from the body.”

Rosen points out that even though a physician can influence the outcome of treatment with a medically neutral placebo—when accompanied by communication of good intent, it can heal or, accompanied by bad intent, it can harm—the outcome also depends on the patient:

Empathy and compassion alone on the part of the physician aren’t enough: necessary, too, are hope and belief on the part of the patient that the treatment will successfully treat the disease as intended.

The expected result is a system that is less expensive, more efficient in producing desirable health outcomes, and more appealing to physicians and patients than the system we have now. That is something we all deserve.

—David Caldwell, PhD

David is a freelance writer in Indianapolis, Indiana.
George Orwell's essay "Politics and the English Language" and Strunk and White's book *The Elements of Style* urge writers to avoid using the passive voice. Yet Orwell's essay shows us by example that the passive voice is sometimes appropriate. Also, some of the sentences that Strunk and White criticize in their discussion of the active voice were not in the passive voice. One was an expletive construction. The use of the passive voice or an expletive construction is not bad grammar, nor is it always bad writing. In this article, I'll explain how and when to use them.

The Passive Voice

Grammatical voice describes the relationship between a subject and its verb. If the subject is the agent of the verb (i.e., the verb expresses something the subject is doing or being), then the verb is in the active voice:

- I ate the chocolate.

In that example, *I* is the subject, *ate* is the verb, and *chocolate* is the direct object. If I want to rewrite the sentence so that the chocolate becomes the subject, I have to put the verb in the passive voice. A verb in the passive voice expresses something that is done to the subject. The agent of the verb may then be put into an adverbial prepositional phrase that modifies the verb, or it may disappear altogether:

- The chocolate was eaten by me.
- The chocolate was eaten.

In English, we use the past participle of the verb, along with an auxiliary verb, to express the passive voice. (Note that other languages have completely different ways of expressing the passive voice). The past participle of an English verb typically has an *-ed* ending, but there are many exceptions (for example, paid, kept, drunk, forgotten). The auxiliary verb used to express the passive voice in English is always some version of *to be* (is, are, was, were, has been, etc). The timing of the action is expressed by the tense and aspect of the auxiliary verb, which may thus have one or more auxiliary verbs of its own:

- The chocolate is being eaten.
- The chocolate will have been eaten.

Notice that we say "I ate the chocolate," but "The chocolate was eaten by me." When a pronoun is the subject of a verb, it is in the nominative case (I, you, he, she, it, we, they, who, whoever). When the pronoun is a direct or indirect object of a verb or the object of a preposition, it is in the objective case (me, you, him, her, it, us, them, whom, whomever). So the direct object of a verb is in the objective case in English, but when the direct object of an active-voice verb becomes the subject of a passive-voice verb, it goes into the nominative case:

- She loved him.
- He was loved by her.

The passive voice enables you to say what was done to someone or something but without specifying who did it. That's useful if the identity of the agent is unknown or unimportant or if you want to draw attention away from the agent. For example, someone might say "mistakes were made" instead of admitting "I made mistakes."

Because the passive voice indicates that a direct object is being treated as a subject, only transitive verbs can be used in the passive voice. If a sentence has no direct object, it cannot be rewritten in the passive voice:

- He sleeps. (There is no direct object to turn into the subject of a sentence.)

If an English verb is really in the passive voice, there will be some form of the verb to be and a past participle. If either...
is missing, the verb isn't in the passive voice. Here are some examples of uses of the active voice that some people might mistake for passive voice.

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<table>
<thead>
<tr>
<th>She has to eat.</th>
<th>Modal verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>He had been waiting</td>
<td>Past perfect progressive tense of intransitive verb</td>
</tr>
<tr>
<td>I am thinking.</td>
<td>Present progressive tense of intransitive verb</td>
</tr>
<tr>
<td>They feel sick.</td>
<td>Linking verb; mental verb with experiencer subject</td>
</tr>
<tr>
<td>He looks tired.</td>
<td>Linking verb; mental verb</td>
</tr>
<tr>
<td>We became friends.</td>
<td>State of being verb</td>
</tr>
<tr>
<td>It is raining.</td>
<td>Expletive construction</td>
</tr>
<tr>
<td>There is work to be done.</td>
<td>Expletive construction</td>
</tr>
</tbody>
</table>

It's ironic that Orwell insisted, "Never use the passive where you can use the active." In that same essay, he showed how emotionally powerful the correct use of the passive voice could be. (Note that you don't necessarily have to repeat the auxiliary [eg. is or are] if it applies to all of the verbs in a series):

Defenceless villages are bombarded from the air, the inhabitants driven out into the countryside, the cattle machine-gunned, the huts set on fire with incendiary bullets: this is called pacification. Millions of peasants are robbed of their farms and sent trudging along the roads with no more than they can carry: this is called transfer of population or rectification of frontiers. People are imprisoned for years without trial, or shot in the back of the neck or sent to die of scurvy in Arctic lumber camps: this is called elimination of unreliable elements.

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In Strunk and White’s discussion of their recommendation to use the active voice, they give the following example of a bad sentence:

- There were a great number of dead leaves lying on the ground.

Instead, they recommended the following:

- Dead leaves covered the ground.

I do like the latter sentence better, but the former wasn’t an example of the passive voice. It was a needlessly long sentence that began with an expletive construction. Expletive constructions are grammatical, but they do often represent an opportunity to omit needless words.

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References

Mr: I’m Melanie Fridl Ross. I’m a past president of AMWA, and I’m currently the chief communications officer at UF Health, which is the University of Florida’s academic health center.

VW: And I’m Vicki White. I’m the editor of the AMWA Journal. I’m also managing editor of a medical journal, Psychosomatic Medicine, and I’m building a managing editor peer review management company called Review Without Peer.

Melanie, you and I go way back. I knew your husband first. I knew Jim when I was a newspaper reporter and Jim and I were both reporters in the Citrus County Bureau at the St. Petersburg Times.

MR: That’s right. That was, I guess, our first connection was actually through Jim and then from there, I think you in the past have called me your headhunter or executive search firm.

VW: It seems to me you haven’t done much for me lately. I’ve been meaning to get on you for that.

MR: I’m sorry about that. Or maybe not since you seem to be doing a great job with the AMWA Journal, so I wouldn’t want to detract from that. I also was a newspaper reporter, working for the Tampa Tribune, the competition, for a time before I took a position as a science writer at the University of Florida back in 1992.

VW: I’ve never quite known how you landed in that position because at that point, I was off in Washington, DC.

MR: I was working at the Tribune as a reporter. I had started out in the New Port Richey Bureau in Pasco County, Florida, and had been transferred up to Ocala north of there to work on the local zone section for Marion and Alachua counties. At that time, the Tribune kept opening bureaus far from Tampa Bay. After a while, they decided to pull back a little bit, so I was going to be transferred south again, but since Jim was working in Citrus County for the Times, life was logistically about to get complicated.

So I took that time to look around for other opportunities and saw that there was a science writer position posted at the university. I had always had an interest in health and medicine. At one point, I actually was pre-med as an undergrad, and I’d spent time in grad school covering health for Northwestern’s news service in DC.
for papers that are too small to have their own Washington correspondents, so I always thought that someday I’d find my way into health writing or health reporting. The position at the university seemed like a great fit because they were focused on sharing news about faculty advances and improvements in clinical care and discovery. It was exciting. It was technically a public relations office, but I felt like it still functioned like a news entity. They even used AP style.

VW: And then strangely enough, several years after that, you suddenly contacted me and said “Oh, hey, we have an opening at the University of Florida.”

MR: That’s right. So I thought you know, we needed great writers and editors and I thought of you. And I’m so glad when you decided to jump ship.

VW: I did and you know, in thinking back on that interview, I don’t think I would have hired me because I was so interested in political science at that point. I didn’t have a connection to health and medicine, so I’m glad that the hiring committee looked past that. With each passing week and month and year, I found it more and more interesting to learn about health and medical research. So I’m glad that worked out.

You do many things right now. You have moved onward and upward in that office and you also teach as an adjunct. Do you want to tell a little bit about that?

MR: Sure. And maybe even prior to that—just to share my path—I was working initially half-time in this office as a science writer and eventually editor. Around 1997 or so, Dr Carl Pepine, who was chief of cardiovascular medicine at our college of medicine, approached me and said he needed help getting through his backlog of papers to get things moving in the publication pipeline. Would I want to edit papers for him and for other faculty members?

I said, “I’m intrigued, but my editing and writing has focused on a lay audience, so if I’m going to do this, I’d like to find a mentor and make sure that I have some educational opportunities to ensure that I know what I need to know to do it well.” He said that in 2 months, it’ll be cookbook.

So that’s actually how I got involved in AMWA was because I was taking that other half-time position here at the university and was interested in AMWA’s educational program, to take workshops, to make sure I had a good foundation so that when I went to edit his papers, I would know what I was doing. I did that for about 7 years and then I went full time in my communications office, moved my way up into the management ranks. Then, a few years back, I was approached about taking our 3 communications offices here and consolidating them into 1 communications operation.

We had a separate office that I directed for the Health Science Center—the university’s 6 health-related colleges and a number of research centers and institutes. There was a separate office for marketing and public relations for the hospital system that’s affiliated with the university. It’s a private not-for-profit under the university’s governance. And then we had a separate office for our Jacksonville campus. We took all 3 groups of people and combined them into 1 happy communications family. It’s really worked well.

My day to day is pretty hectic, but we have a group that focuses on everything from marketing to news and publications, advancement communications, strategic communications and public affairs, internal communications. We have a creative services team that includes designers, photographers and videographers, and Web animation. We have a web services team that supports our externally facing website and our intranet. And then we have our Jacksonville group.

VW: That sounds like it’s not boring.

MR: It isn’t. It’s literally every day is something new, whether it’s functioning as the “PR ER” (public relations emergency room) or just some interesting news. There’s always something happening.

Do you miss the academic environment? I mean, you’re involved in it in a different way now.

VW: I do. I remember when I was leaving the office that we worked in together to move to the managing editor position, you had wondered if I was going to miss writing. I don’t write nearly enough. I still think writing is the best way to really learn a topic because you start putting sentences together and realize how little you know. It forces you to learn more and more. I do some writing here and there but do miss the opportunity to really quiz researchers about what it is they’re doing.

I wanted to ask you about how you had found AMWA in the beginning. Also, I’m curious, you have had this huge evolution in your career, and I’m wondering what role AMWA played in that.

MR: Yeah. If I recall correctly, when I was speaking with Dr Pepine back in 1997, I was seeking mentors and he sent me up to the Duke Clinical Research Institute to meet with some folks. I think it might have been there that somebody first mentioned AMWA. My first conference was in Boston and things just took off from there. I really owe a lot to AMWA—the experience of taking many of the workshops and also just
the graciousness of the members who have gone before me, who are so willing to help out and answer questions and share their knowledge.

**VW:** And then I followed you into AMWA. I saw that you enjoyed the organization.

**MR:** I think also as far as AMWA’s contribution to my own professional development, having been able to get involved in committee work and then to work in an officer position at the state level as president of the Florida chapter and then from there, national level committees and the Executive Committee and then eventually, assuming the role of president. Those leadership skills that you learn along the way carry over to the workplace.

**VW:** I certainly feel that by working with you I became a much better writer and editor because you certainly had a great way of keeping me on my toes. And certainly the things I’ve learned at AMWA have helped me through the years. One of the things that really has always stuck with me was a class I took with Guy Whitehead, who besides having a great name, taught a great class (on sentence structure). I remember him posing a question: “How do you know when you’re done editing a sentence?” Then he said something like, “You only know you’re done when there’s nothing more you can do to improve it, when every piece locks into place.” That’s a pretty high standard, but it’s kept with me as I have gone along and looked at sentences. Once you dive in and go sentence by sentence, you kind of recognize that most of the pieces aren’t really falling into place yet. But it’s something to strive for.

**MR:** Oh, yes. I think of Guy Whitehead fondly every time I encounter a problem with parallel structure. I think also my experience at AMWA really motivated me to take on my role as adjunct at the College of Journalism here at the university. I teach a course in reporting, and this is sort of my way of giving back, as well. I benefited from my professors at Northwestern, where I studied journalism in graduate school, and also all the great AMWA instructors along the way. So it was just very rewarding to feel like I could also begin to give back and do some teaching. And then eventually, from time to time, I’ve taught a little bit at AMWA, as well, so I guess everything comes full circle.
In 2016, the American Medical Writers Association (AMWA) presents the Medical Writing & Communication Conference. Keeping with AMWA’s long-standing tradition of educational excellence, this conference, formerly the AMWA Annual Conference, offers an innovative and dynamic approach to ensuring you are prepared for the road ahead while sparking your creativity, engaging you in live interactive learning, and connecting you with your colleagues and the industry.

www.amwa.org/conference
Now, Education is Closer Than You Think

As a medical communicator, you are respected for your ability to accurately and ethically translate information about medicine and health. With AMWA Online Learning, you will have access to the latest training, education, and resources available to help you continue to meet the demanding needs of the industry—at any time.
As we open this year’s annual conference, like other presidents, I want to begin with a state of the association address.

A major activity this year has been strategic planning. Beginning with the January 2015 meeting, the Executive Committee voted to carry out a strategic planning initiative to shape a vision for AMWA and determine its mission and goals for the next 3 to 5 years. Lori Alexander, the 2015–2016 president-elect, is the chair of this initiative, working closely with Executive Director Susan Krug. We also engaged strategic planning consultants to help guide us.

We used the SOAR model, which consists of strengths—What do we do well that we can we build on? Opportunities—What are our stakeholders asking for? Aspirations—What do we care most deeply about? And results—How do we know we are succeeding? You won’t be surprised to learn which 2 benefits of AMWA membership rose to the top: AMWA’s welcoming and diverse community and its broad range of high-quality educational offerings.

We continued these discussions, with a larger group of members, during the April Board of Directors meeting. Thereafter, volunteers conducted telephone interviews with former and current AMWA members, employers of medical writers, and other relevant nonmembers. Then the Executive Committee used these data to draft the strategic plan (vision statement, core values, and strategic goals). We presented this plan for approval by the Board of Directors.

AMWA’s core values are professionalism, expertise, continuous learning, and connection. Our strategic goals are to enhance resources and educational opportunities, connect and engage medical communicators, and increase awareness of AMWA.

So as you can see, although the new AMWA strategic plan is simple, it is the product of a multistep process. We sought out—and used—feedback from many different stakeholders to set priorities, focus energy and resources, strengthen operations, and ensure that AMWA leaders and staff are working toward common goals.

So the “deliverables” (as they say in my line of work) will be how the planning process will come to life, where the rubber meets the road. These new products and services will be developed and rolled out to our members under Lori’s leadership and during the presidency of Steve Palmer. Please weigh in on what new things AMWA should offer members and consider how this critically important dialogue we’ve been conducting can continue to engage members and others in the medical writing community—in other words, how, together, we will shape the AMWA of the future.

But strategic planning isn’t all we’ve worked on this year. We also logged these accomplishments:

• We unveiled our online educational program with a robust group of webinars.
• We continue to develop our online education program, and a learning management system is being integrated with our website. New online education offerings, such as interactive learning and on-demand recordings, will be available through this new online learning portal.
• We developed a new platform for online community to support member connections and professional networking. The new tool integrates the best of online networking functionality you need with an ease of use and email integration that you want.
• We offered the first Medical Writing Certification exam at the annual conference.
• We are rolling out a members-only electronic newsletter called Medical Communication News, which summarizes “news you can use” about biomedical research, industry trends, and trends for the AMWA community.
• We conducted an expanded salary survey to measure compensation of medical communicators. Full results will be published in the *AMWA Journal* next year.

• We broadened our volunteer opportunities to include short-term and ad hoc activities. As AMWA develops and expands its programs, there are even more opportunities to provide your input and expertise. The new call for volunteers is designed to connect you with opportunities that meet your interests and your availability.

• And have you noticed how the *AMWA Journal* keeps getting better and better? New columns like Your Stats Refresher, the enhanced book reviews, and innovative pieces like the AMWA Voices project increase the value of the journal and continue to illustrate the breadth and depth of our field. The Journal continues to provide members with a great opportunity to contribute pieces, provide peer review of manuscripts, and help share their knowledge and insights with colleagues.

Finally, Brian Bass and his Communications Committee have rebranded the AMWA annual conference and developed a striking new logo for it. You will start noticing, as we begin to start promoting next year’s meeting, that it will be called the Medical Writing and Communication Conference.

It’s been a big year!

*This is an edited version of the address that was delivered at AMWA’s 75th Annual Conference in San Antonio, Texas.*
President: Stephen N. Palmer, PhD, ELS, is manager of the Section of Scientific Publications and a senior scientific medical writer at the Texas Heart Institute in Houston. He earned a PhD in social and health psychology at the State University of New York at Stony Brook, where he also earned his master's degree. He holds a BA from Wesleyan University. Steve joined AMWA in 2002 and become a fellow in 2011. In addition to serving during the past year as president-elect, his previous AMWA service includes the following: administrator of awards, administrator of the annual conference, administrator of chapters and membership; annual conference roundtable and klatch leader; open session leader and speaker; member of many committees, including Medical Book Awards and Constitution and Bylaws; and, for the Southwest Chapter, program chair, president, immediate past president, and board delegate.

President-Elect: Lori Alexander, MTPW, ELS, served this past year as secretary and was the annual conference administrator for 2 consecutive stints. As secretary, Lori led the work on 2 important AMWA initiatives: the 2015 Salary Survey and the recent Strategic Planning Initiative. In the 10 years preceding her time on the EC, Lori was the editor of the AMWA Journal. She is president of Editorial Rx, Inc, an independent medical writing and publishing company. Lori has 30 years of experience in medical communication, first as a medical editor at Lahey Clinic and at the Journal of Bone and Joint Surgery, and then as a writer and editor in the Publications Department at the American Society of Clinical Oncology. A member of AMWA since 1998, she is a past president of the Florida Chapter, has served on numerous AMWA committees, has worked with the Certification Commission, and has led workshops and open sessions at the annual conference. She was recognized with the AMWA President’s Award in 2009, was made a fellow of AMWA in 2010, and received a special award for her service to the AMWA Journal in 2012. She graduated from the University of New Hampshire with a degree in English (concentration in journalism) and earned a master's degree in technical and professional writing at Northeastern University in Boston. Earlier this year, she moved across the state of Florida to Fort Myers, hoping to slow down her work pace, but she's still waiting for that to happen. Still, life in the Sunshine State is good, and she enjoys spending time in the pool, entertaining, and seasonal decorating.

Immediate Past President: Karen Klein, MA, ELS, GPC, an AMWA member since 1989 and fellow since 2006, is the director of grant development and medical editing in the Biomedical Research Services and Administration unit, Wake Forest University Health Sciences, Winston-Salem, North Carolina. Karen spent the first part of her career at 3 different medical journals, then transitioned to grant and manuscript editing in 1991. She was AMWA secretary in 2011–2012 and has previously served on the Executive Committee (EC) as administrator of special projects/communications, annual conference workshops, publications, and public relations. She chaired the Certification Commission from 2012 to 2013. Karen earned the Editor in Life Sciences designation from BELS in 1991 and the designation of Certified Grant Professional in 2008 (successfully recertified in 2011 and 2014). She is proud that AMWA created the Medical Writing Certified examination, pleased that AMWA is adding online education to its resources, and delighted to continue working with Steve and his top-notch Executive Committee.

Secretary: Katharyn (Kathy) Spiegel, PhD, an AMWA member since 2006, has served on the Constitution and Bylaws Committee since 2012. She was the EC chapter relations administrator in 2012–2013. She also served on AMWA's
EC as the chapters and membership administrator and the Michigan Chapter’s delegate to the Board of Directors. At the chapter level, she has served as president, past president, vice president, and board member. Her annual conference activities have included roundtable leader, special interest session coordinator, open session moderator, open session panelist, and workshop leader. In 2015, Kathy was made a fellow of AMWA. Kathy received her BS in chemistry from Duke University and her PhD in pharmacology from Cornell University Medical College. She is a regulatory writing senior manager at Amgen, working remotely from Sharon Township, Michigan.

Treasurer: Christine F. Wogan, MS, ELS, is entering her third consecutive year as AMWA treasurer. Chris is a publications program manager at MD Anderson Cancer Center in Houston, Texas, where she provides editorial services for clinicians, scientists, and trainees in radiation oncology, physics, and biology. Previously, she ran a freelance grant-preparation business in Massachusetts and worked at NASA’s Johnson Space Center as an experiment support scientist and, later, as a senior scientific editor. She holds a BA in biology from Swarthmore College and an MS in human physiology from the University of Houston at Clear Lake. An AMWA member since 1989, Chris received the President’s Award in 2010 and was named a fellow in 2012. She was AMWA’s administrator of awards in 2010–2011 and has served on the Budget and Finance Committee. For the Southwest Chapter, she has been director-at-large, treasurer, president, and immediate past president. Chris earned the Editor in the Life Sciences designation from BELS in 1991.

Annual Conference Administrator: Yeshi Mikyas, PhD, ELS, CMPP, is new to the AMWA EC but has served on several AMWA committees for most of the 10 years she has been an AMWA member; this service includes fulfilling several different roles on the Annual Conference Committee. She works in the pharmaceutical industry in medical writing, with the responsibilities of delivering publications and regulatory documents. Yeshi received her undergraduate degree in biology and
Administrator of Awards: Theresa King-Hunter has been a member of AMWA since 1990 and has served in multiple positions in AMWA’s Southwest (director at large) and North Central (president) chapters. She is the Program Committee chair for the North Central Chapter, is a past member of AMWA’s Publications Committee, and is a current member of AMWA’s Budget and Finance Committee. Theresa has been a medical writer since 1988, focusing her work in the areas of toxicology, carcinogenesis, neuromodulation, and cardiac rhythm management. She has worked with the National Institutes of Health, Humana Health Insurance, 3M, and various medical device companies. She is a senior technical writer with St. Jude Medical, where she authors manuals related to cardiac resynchronization therapy, implantable cardioverter defibrillators, and pacemakers, in support of submissions to the US Food and Drug Administration and international notified bodies. Theresa has a BS in medical technology.

Administrator of Chapter Relations: Hilary Graham, who is entering her second year in this role, has been an active AMWA member and volunteer since 2009, serving at both the local and national levels. Hilary holds a BS in biochemistry from the University of California, Davis, and a masters in cell and molecular biology from the University of Texas, Austin, and she is working toward a PhD in technical communications from Texas Tech University (with an emphasis on intercultural communication in the biomedical research community). She began her career at the UT MD Anderson Cancer Center in Houston, Texas, where she helped basic science researchers write grants and manuscripts. She later worked for a drug development institute, where she crafted public relations and philanthropic communications. Wanting to return to Austin, she accepted a medical writer position at INC Research and was soon offered the opportunity to transition into a business development director role. Hilary has lived in Austin since 2005 with her husband and 3 poodles.

Administrator of Education: Kristina Wasson-Blader, PhD. ELS, has served on the EC as the administrator of online communities and web and information technology; she is repeating her 2014–2015 role as education administrator. Tina has been a member of AMWA since 2002 and became a fellow in 2015. Tina’s company, Clearly Communicating Science LLC, provides writing and editing services to medical education and communication companies, as well as principal investigators. She is a past president of the Southwest Chapter. At the national level, she was on the Publications Committee and contributed to the AMWA Journal as an editor of the Professional Development section and editor of reports on annual conference open sessions.

Administrator of Member Resources: Cyndy Kryder, MS, CCC-Sp, is returning for a second year in this role. An AMWA member since 1993, Cyndy also serves as Social Media section editor of the AMWA Journal. She is a past president of the Delaware Valley Chapter, has been an open session and roundtable presenter, and chaired the nonphysician book awards committee in 2012 and 2013. Cyndy has worked in the health care field in some way ever since she earned her master’s degree in communication disorders and launched her first career as a speech-language pathologist, working primarily in pediatric rehabilitation. Cyndy transitioned to full-time freelance medical writing in 1992, thanks to her mentor, Donna Miceli, an AMWA fellow. Cyndy currently writes promotional, educational, and scientific pieces for professionals and lay audiences in several different therapeutic areas and for a wide range of media. She also assists companies in their publication planning efforts. Coauthor of The Accidental Medical Writer and author of Nude Mice and Other Medical Writing Terms You Need to Know, Cyndy enjoys developing resources for both new and experienced medical writers. Cyndy, an avid reader of fiction and nonfiction, is an active member of 2 book clubs. In her rare spare moments, she shops for shoes with her 2, twenty-something daughters, weeds her large perennial garden, and teaches quilting to beginning quilters at a local studio.

Administrator of Publications: Ann Winter-Vann, PhD, is in her second year on the EC, having served as administrator of awards in 2014–2015. Ann is a medical writer and consultant at Whitsell Innovations in Chapel Hill, North Carolina. She has a bachelor's degree in biology from Duke University. After earning a PhD in molecular cancer biology from Duke, Ann was a postdoctoral researcher in the Department of Pharmacology at the University of North Carolina at Chapel Hill. An AMWA member since 2007, Ann has served in numerous positions in the Carolinas Chapter, including president and chapter delegate to the AMWA Board of Directors. Ann was involved in organizing the Carolinas Chapter’s annual conference for several years, and she has presented roundtables at that conference and open sessions at AMWA annual conferences.
Each year, AMWA presents up to 3 fellowships to members who have made significant contributions to the goals and activities of the association. Awardees of active fellowships must have been consistently active in AMWA during at least the previous 5 years and must be currently active.

In the spring, the Board of Directors accepted the recommendations of the 2015 Fellowship Committee to bestow the fellowship designation on Catherine Magill (Northern California Chapter), Kathy Spiegel (Michigan Chapter), and Kristina Wasson-Blader (Empire State–Metro New York Chapter). The fellowships were officially awarded at the annual conference in San Antonio.

Catherine Magill, PhD
Since joining AMWA in 2006, Catherine has made her mark on the association through noteworthy contributions in the areas of chapter leadership, developing and offering workshops, membership on the Board of Directors, and the Executive Committee. Specific activities and highlights from Catherine’s service to AMWA include the following:

- 2006–07 Northern California Chapter president-elect and acting programs chair
- 2007–08 Northern California chapter president
- 2008–09 Northern California Chapter immediate past president, Spring BOD meeting delegate, events director; AC workshop leader; AMWA Education Committee member
- 2009–10 AMWA Executive Committee—annual conference workshops coordinator; AC workshop leader
- 2010–11 AC workshop leader; chapter delegate
- 2011–12 Northern California Chapter immediate past president and programs chair, chapter delegate; AC workshop leader; AMWA Endowment Fund Subcommittee; Pacific Coast conference chair
- 2012–13 AC workshop leader; Pacific Coast conference chair
Kristina Wasson-Blader, PhD
An AMWA member since 2002, Tina was active in the Southwest Chapter for 7 years until her recent relocation to the territory of the Empire State–Metro New York Chapter. At the national level, Tina has been a board delegate, a committee member and chair, and an Executive Committee administrator. She has also been active on the AMWA Journal, both as an editor and an author. In 2015–2016, she is continuing in the role of education administrator on the Executive Committee.

Specific activities and highlights from Tina’s service to AMWA include:

2006–07 Southwest Chapter—Oklahoma area director;
2007–08 Southwest Chapter—Oklahoma area director; assistant program chair
2008–09 Southwest Chapter—Oklahoma area director and chapter president; AMWA Journal contributor and section editor
2009–10 Southwest Chapter—Oklahoma area director; BOD chapter delegate; WIT Committee Member; AMWA Journal contributor and section editor
2010–11 Southwest Chapter—Oklahoma area director; Executive Committee—WIT Administrator; AMWA Journal contributor and section editor
2011–12 Executive Committee—Online Community Administrator; WIT Committee Member and LinkedIn manager
2012–13 Executive Committee—Online Community administrator; chair—Online Community Development Committee and Social Media Committee
2013–14 Executive Committee—Online Community Administrator
2014–15 Executive Committee—Education Administrator

Kathy Spiegel, PhD
Kathy has been an active member since joining AMWA in 2006, both in her home chapter of Michigan, where she’s served in numerous leadership roles, and at the national level as a board delegate, a committee member and chair, and as an EC administrator. She is AMWA’s 2015–2016 secretary.

Activities and highlights from Kathy’s participation in and service to AMWA include:

2007–08 BOD chapter delegate; Michigan Chapter vice president
2008–09 BOD chapter delegate
2009–10 BOD chapter delegate; Michigan Chapter president
2010–11 BOD chapter delegate
2011–12 AC workshop leader; AC special interest sessions coordinator; AMWA Executive Committee—chapters/membership administrator; Michigan Chapter immediate past president; BOD chapter delegate
2012–13 AMWA Executive Committee—chapter relations administrator and committee chair; member—Constitution and Bylaws Committee; Michigan Chapter immediate past president
2013–14 Member—AMWA Education Committee, Constitution and Bylaws Committee; chair—Regulatory Workgroup Subcommittee