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# SCIENCE EDITOR



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MODEL TEXT RECYCLING POLICY FOR PUBLISHERS  
STANDARDS FOR PLAIN LANGUAGE SUMMARIES  
ANNUAL MEETING REPORTS





Detail from 1802 caricature depicting concerns of the "Anti-Vaccine Society" to Edward Jenner's smallpox vaccine derived from cowpox. As Jenner prepares to vaccinate a young woman, mayhem ensues as several former patients demonstrate supposed effects of the vaccine with cows sprouting from various parts of their bodies. To date, no actual cow-human chimera have been discovered. Get vaccinated! [Artist: J. Gillray. Source: National Library of Medicine Digital Collections]



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**On the cover:** DNA replicates, or copies, itself completely each time a cell divides. On rare occasions, however, a misreplication error will occur that collapses the entire cell, as shown on the cover of this issue of *Science Editor*. This image of recycling gone wrong is a "super-resolution optical micrograph of DNA stain in a human foetal lung fibroblast nucleus acquired with a 3D structured illumination microscope." The image shows how "if a single chromosome becomes caught and pulled between the two new cells, it can lead to the presence of small chromatin threads/bridges joining adjacent nuclei. This leads to clearly demarcated chromatin fibres visible throughout the interior of the nucleus, and as the new cells move apart the tension distributed by the cable-like chromatin has deformed the entire nuclear envelope." Credit: Misreplication of DNA in a human fibroblast nucleus. Miron, Ezequiel (2016). Wellcome Collection (CC BY 4.0). <https://wellcomecollection.org/works/w7pvhxsu>



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# A Model Text Recycling Policy for Publishers

Cary Moskowitz, Susanne Hall, and Michael Pemberton

*Because science advances incrementally, scientists often need to repeat material included in their prior work when composing new texts. Such “text recycling” is a common but complex writing practice, so authors and editors need clear and consistent guidance about what constitutes appropriate practice. Unfortunately, publishers’ policies on text recycling to date have been incomplete, unclear, and sometimes internally inconsistent. Building on 4 years of research on text recycling in scientific writing, the Text Recycling Research Project has developed a model text recycling policy that should be widely applicable for research publications in scientific fields. This article lays out the challenges text recycling poses for editors and authors, describes key factors that were addressed in developing the policy, and explains the policy’s main features.*

## Introduction

While scientists’ new publications are generally expected to make substantive contributions distinct from their earlier papers, the close relationship among papers often requires authors to repeat some content. Such recycled material typically consists of methodological details but may also include background material such as definitions or exposition that describes prior research.

In many fields of science, “text recycling” (sometimes inaccurately called “self-plagiarism”) is not an aberration but a common writing practice.<sup>1</sup> Deciding whether any instance of text recycling is ethical, legal, and appropriate—and possibly even desirable—depends on factors such as the amount and nature of the recycled material as well as copyright laws and any limitations on reuse that are part of

an author–publisher agreement.<sup>2</sup> Thus, there is a need for clear and consistent guidelines on text recycling.

Publishers’ policies on text recycling to date, however, have been unclear, as many scholars and journal editors have noted. As one part of their study of text recycling, Horbach and Halfman<sup>3</sup> investigated how often journal policies addressed text recycling. They found that, “[S]tatements on text recycling are rather uncommon in journals’ policy guidelines,” and that for those journals in which they identified cases of text recycling in their corpus, these “almost uniformly lack statements on text recycling.” Others have commented on the challenges faced by editors and authors resulting from incomplete and inconsistent guidelines.<sup>2,4–6</sup>

The Text Recycling Research Project (TRRP) defines text recycling as the reuse of textual material (prose, visuals, or equations) in a new document where (1) the material in the new document is identical to that of the source (or substantively equivalent in both form and content), (2) the material is not presented in the new document as a quotation (via quotation marks or block indentation), and (3) at least one author of the new document is also an author of the prior document. Under this definition, text recycling can be ethical or unethical, appropriate or inappropriate, depending on the details of each case. It may encompass any amount of text, from a single recognizable phrase to an entire manuscript, and it includes both verbatim replication and reused material that has been disguised via superficial alterations in appearance without changing its substance. Text recycling may or may not include citation of the source; whether a citation is appropriate for any instance of text recycling depends on both ethics and attribution practices in the field. Like the Committee on Publication Ethics (COPE), we avoid the term “self-plagiarism” because of its inherently derogatory connotation.

Drawing on our research to date,<sup>7</sup> the TRRP has already produced a number of documents<sup>8</sup> to help the research community better understand text recycling and practice it ethically and appropriately:

- TRRP Best Practices for Researchers<sup>9</sup>
- Understanding Text Recycling: A Guide for Researchers<sup>10</sup>
- Understanding Text Recycling: A Guide for Editors<sup>11</sup>

This viewpoint presents our new TRRP Policy on Text Recycling,<sup>12</sup> a model text recycling policy developed from our prior work.

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## The Challenges of Text Recycling

Researchers face a number of challenges when deciding whether to recycle text. The most significant may be the inability to distinguish between different types of recycling and the consequent uncertainty about what is appropriate: Is recycling text from a grant proposal different—ethically or legally—from recycling material from a published article? Is it equally appropriate to recycle text from methodology sections and results sections?

Most researchers and editors seem to agree there are important differences between instances of recycling, but they may have difficulty describing these differences in concrete terms.<sup>13–15</sup> This difficulty is exacerbated by inconsistencies in the vocabulary used in discussions of text recycling. Professional organizations sometimes use the same terms to describe different recycling practices, making it difficult for authors to compare publishers' expectations.<sup>2</sup> Furthermore, publisher policies that address different types of text recycling are not always available in a single location. Instead, they are often sprinkled across multiple sections of policy documents or ignored altogether.

Publisher policies have also tended to ignore a crucial aspect of authorship in scientific settings. By definition, recycling involves reuse of "the author's own" material, but what should be considered "one's own" work? Scientists rarely write as solo authors, and as our research has shown, papers from research groups often have overlapping but not identical authors. In fact, in our analysis of pairs of papers produced under the same U.S. National Science Foundation grant, less than 7% had identical authors.<sup>1</sup> To date, no existing policies on text recycling have addressed this common situation.

Incomplete knowledge combined with inadequate guidance has left many editors in a difficult position: They recognize the absurdity and inefficiency of asking authors to reword recycled material merely to make it appear different, but they are also reluctant to leave recycled material in place for fear of violating vague ethical norms or copyright laws.

To address these challenges, the TRRP embarked on a series of studies to understand current beliefs and practices with regards to text recycling, the extent to which text recycling occurs in scientific publications, and the relevant legal issues of copyright and contract law. Our findings include the following:

1. A majority of journal editors and editorial board members are willing to accept limited text recycling, particularly when the recycled material consists of methods or background material.<sup>13,15</sup>
2. Editors are often uncertain as to whether text recycling infringes on copyright and sometimes direct authors to "reword" recycled text, masking the recycling by

rearranging phrases and using synonyms.<sup>13,15</sup> Such rewording, however, does not satisfactorily resolve concerns about text recycling.<sup>16</sup>

3. Both expert and novice researchers are confused about the ethics of text recycling, sometimes resulting in substantial disagreements about appropriate practice.<sup>14</sup>
4. Text recycling is common across linked studies in a publication chain, often spanning multiple documents with varying authorial teams across several years. In spite of the negative connotations that have often been associated with text recycling, limited recycling is standard practice in much research writing.<sup>1</sup>

In the course of this work, we recognized the need for terminology that could adequately distinguish between different types of recycling. The taxonomy we developed (see Moskovitz<sup>17</sup>) is discussed below.

## The TRRP Policy

The TRRP now offers to the scientific publishing community the first comprehensive and research-based model text recycling policy, the TRRP Policy on Text Recycling.<sup>12</sup> This policy is intended to provide clear, straightforward guidance to authors in diverse publishing contexts. It has been thoroughly vetted by the TRRP Advisory Board,<sup>18</sup> whose members include officers of COPE and the Council of Science Editors (CSE) as well as representatives from for-profit and nonprofit publishers, government research agencies, and research integrity organizations.

The two major issues that apply to most instances of text recycling—authorship and transparency—are addressed first. For authorship, the policy indicates that when any authors of the prior document are not authors of the new document, their permission should be sought when practical. For transparency, the policy states that when authors have included recycled material in a manuscript, that recycling should be disclosed during the submission process; editors can then provide guidance on whether it is appropriate and how authors should notify readers within the manuscript (if needed). These two policies alone will likely reduce much of the ambiguity and confusion caused by text recycling in the publication process.

The remainder of the policy is organized according to the type of text recycling using the TRRP terminology we developed. This terminology, as explained in more detail in our *Understanding Text Recycling: A Guide for Editors*,<sup>11</sup> is as follows:

- *developmental recycling*: reusing material from one's unpublished documents
- *generative recycling*: reusing portions of one's previously published documents in a new work that makes an original intellectual contribution



## CONTINUED

- *adaptive publication*: republishing an entire document or its central part(s), modified to fit a new context (e.g., new audience, new genre)
- *duplicate publication*: republishing a work having the same genre, content, and target audience as the previously published work

The policy addresses recycling limits qualitatively rather than setting specific numeric thresholds such as word counts or percentages. Publishers can then establish their own quantitative limits for internal use if desired.

The last section alerts readers to recycling practices that will be journal or publisher specific. Because publishers' positions will differ as to the acceptability of recycling from preprints and conference proceedings or whether they publish translations, readers are directed to locate journal-specific policies for these cases.

Our policy should serve the needs of many publishers of original research, and we encourage adoption of the TRRP policy without modification when possible. While every detail may not be precisely what any editorial board would prefer, we encourage careful consideration regarding how significant any minor differences in preference might be in practice. We expect that many publishers will find the greater benefit in consistency—both for their authors and the workloads of their editors. That said, recognizing that the TRRP policy will not suit some publishers without modification, we also offer an accompanying TRRP Guide to Developing Text Recycling Policies.<sup>19</sup> This guide maps out the issues that we feel every text recycling policy should address, explains what is at stake for each issue, and offers discussion questions to facilitate policy making.

## Legal Issues and Their Resolution

The policy guidelines we offer here are intended to promote ethical text recycling practices based on disciplinary norms and findings from our research. Though the policy does not explicitly address the legal aspects of text recycling, analyzing the relevant aspects of copyright and contracts has been one major dimension of our research, and these have proven to be quite complex and sometimes challenging to navigate. One complication is due to the wide variety of text recycling practices—from the clearly trivial, such as reusing a single clause in a description of methods, to the clearly problematic, such as surreptitiously republishing one's entire paper. Another complication is copyright law itself: Not only do copyright laws differ by country, but there are no laws or precedent cases in any jurisdiction that directly address text recycling in scholarly writing.

Additional complications come from the author–publisher agreements that authors usually sign in order to have their work published. Almost all such agreements include

contractual language that impacts authors' text recycling rights—explicitly, implicitly, or both. To know whether recycling an author's previously-published material would be contractually allowed, editors would need to be familiar with each of the publishing agreements previously signed by the author(s) and be able to interpret the legal implications for recycling—clearly an unreasonable expectation.

Given the challenges in evaluating whether any given instance of text recycling would be legal, it is unsurprising that some editors take a risk-averse approach, directing authors to avoid text recycling altogether even in cases where the legal risks are actually negligible. In our research, we have been unable to locate even a single legal case brought to trial for text recycling in research papers, even though it has long been common practice in STEM research writing. And because the practice is so common, even those publishers with the resources to bring legal action would be reluctant to do so since they almost certainly have many similar instances of recycling within their own publications. Nevertheless, journals which adopt the TRRP policy may still have concerns about the legality of recycling in specific manuscripts; for those cases, editors can ask authors to follow the same process they use for obtaining permission for the reuse of figures, long prose passages, or other previously published materials.

While the practice of asking authors to obtain permissions is legally sound, it is more cumbersome than necessary for the majority of cases in which authors are reusing portions of their own previously published work ethically and responsibly. In our view, publishing agreements should explicitly allow authors to recycle from their published work in future publications when they do so within the bounds of ethical guidelines (such as the TRRP Best Practices for Researchers<sup>9</sup>). Thus, we are currently formulating language that publishers can use in their publishing agreements to make the legal situation simpler and more transparent. For authors, this modification would clarify in advance what they will be allowed to recycle; for editors, it would eliminate the work of managing a permissions process for the most common instances of text recycling.

## Final Thoughts

The text recycling policy we announce here is the culmination of 5 years of focused work. While no single policy can be perfect, we firmly believe that widespread adoption (or, at the least, adaptation) of this policy would be a major step in addressing this thorny problem of publication ethics. We recognize that this will involve a nontrivial amount of work on the part of publishers. However, we believe that the long-term benefits—greater clarity for all stakeholders and reduced work and frustration for editors—will make the effort worthwhile.



## CONTINUED

## Competing Interests

The authors have no competing interests to declare.

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# Working Toward Standards for Plain Language Summaries

**Adeline Rosenberg**

*Scientific publishing is evolving, and if the spike in interest about plain language summaries over the past several years is any sign of the appetite for adding open science principles to our publishing practices, then the future of accessible research is looking bright.*

## What Are Plain Language Summaries?

Plain language summaries (PLS) are typically short synopses of peer-reviewed journal publications that simplify the complex. PLS concisely summarize technical content in simple, jargon-free language for ease of reading and improved understanding. These summaries are intended for a broad and inclusive audience that encompasses anyone who may wish to engage with a piece of published research. This may include researchers from other specialties or of other native languages, science communicators, educators, policymakers, and the media, as well as the general public. This multistakeholder audience is essentially anyone seeking an accessible route to the scientific literature. In biomedical research, this list expands to include the likes of patients, patient advocates, caregivers, and healthcare professionals.

As a practice that is still growing and maturing, standardization is limited, and PLS currently come in many different formats (including multimedia) depending on individual journal requirements and author preferences.<sup>1</sup> The location in which PLS can be found also varies, with journals hosting these within the main manuscript PDF and web page, in supplementary materials, or on third-party websites such as figshare.com. Some authors and research sponsors are opting to host PLS themselves if journals do not offer sufficient options; the publisher Future Science Group is even offering standalone PLS publication manuscripts (known as PLSps). Increasingly, we are seeing PLS that are brief, text-based summaries embedded within the core manuscript alongside the technical abstract.<sup>2</sup> Within the

biomedical sphere, PLS that are formatted in this way, and tagged accordingly, can be indexed on PubMed to optimize discoverability.

## The Argument for PLS

Information equity is enabled by openness and discoverability. As the scientific publishing community moves toward acknowledging our social responsibility and embracing open science as the norm, accessibility and transparency are proving to be core principles. Applying these principles by providing timely access to information has demonstrably saved lives during the COVID-19 pandemic.<sup>3</sup> Furthermore, the public are interested in, and want access to, research information;<sup>4</sup> the opportunity to freely share in scientific advancements is, in fact, an enshrined human right.<sup>5</sup> The research community and academia are usually well-respected institutions, but when it comes to the communication of science, public trust in scientists working for the private sector (including pharmaceutical companies) and science media is low.<sup>6</sup> The COVID-19 pandemic has also shown that even academia may not benefit from the public trust they thought they once had. As scientific professionals, it is quite simply our ethical duty to communicate in a way that engenders trust and confidence.

With this in mind, we must put health literacy, “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions,”<sup>7</sup> at the forefront of medical communication. As scientific professionals, it may be hard for us to grasp how prevalent low health literacy really is, but in the United States, up to 90% of adults may struggle to effectively use health information that is readily available in the community,<sup>8</sup> and only 12% have proficient health literacy.<sup>9</sup> In the United Kingdom, over 60% of adults are unable to understand and apply basic health information,<sup>10</sup> and elsewhere in Europe, nearly 50% of adults have insufficient or problematic health literacy.<sup>11</sup> The implications of this knowledge gap are significant since low health literacy is the strongest correlate of ill health.<sup>12</sup>

In the clinical setting, accessible and easily understandable information is vital for informed consent and shared decision-making. Owing to the speed at which medical knowledge evolves, keeping up to date

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with current thinking is a major undertaking but one necessary for making informed healthcare decisions; PLS may be especially beneficial to time-poor or nonspecialist healthcare professionals such as pharmacists, nurses, and family practitioners. This is also of particular importance for the rare disease community, in which clinicians outside of the relevant specialty may not be knowledgeable on the nuances of a specific disease area. PLS of peer-reviewed journal publications are often a gateway into the literature for these patient communities who frequently find themselves needing to become experts in their own diseases. PLS can also function as communication tools, providing appropriate language to facilitate effective dialogue and are of value to both clinicians and patients.<sup>13</sup> In one survey-based study, PLS were found to be the third most valued source of online health-related information for patients with chronic illness and considered valuable for informing patient dialogue by 60% of clinician respondents.<sup>14</sup> This offers an opportunity for patients to actively participate in healthcare decisions and strengthen their agency and autonomy, ultimately contributing to improved clinical outcomes.<sup>15</sup>

Improving the accessibility of our research through the inclusion of PLS is clearly a significant step towards bridging this knowledge gap and enhancing information equity by allowing different stakeholders to engage on an equal platform. In this way, the scientific community can demonstrate transparency and accountability and further build trustworthiness.<sup>16</sup>

Looking at PLS from another angle, providing accessible routes to the literature through the inclusion of PLS allows a broader audience to engage with research. This expands the readership and reach and improves the discoverability of scientific research and findings. Enabling readers to process information faster in turn speeds up dissemination and uptake of research, allowing media and communications stakeholders to engage with novel findings more readily,<sup>17</sup> getting publications into the hands of target readers faster. PLS may also satisfy certain funding requirements or count toward patient and public involvement activities for researchers. In a recent analysis, publications that included a PLS were, in fact, downloaded more and accessed at greater rates than publications without a PLS.<sup>18</sup> The evidence base for the value of PLS to authors and researchers is only growing, but it is already more than clear that PLS are simply the right thing to do.

## Standards for PLS

Standards and codes of practice are standard for the publishing industry, and maintaining these is a critical component of quality assurance. Standards help to ensure consistency, safety, and functionality. In the pharmaceutical industry, which funds a great deal of biomedical research,

they are also key for compliance and credibility. For example, following the introduction of the Consolidated Standards of Reporting Trials (CONSORT) guidelines for the reporting of randomized controlled trials in 2001, the published literature that then adhered to these standards was found to be improved in both completeness and quality.<sup>19</sup> Knowing that a publication is compliant with relevant standards builds confidence in its credibility. In an era characterized by misinformation and miscommunication, ensuring that timely and accurate information is not only accessible but also reliable and trustworthy is more important than ever.

There are currently many cross-industry collaborations and existing initiatives working to build consensus on possible PLS standards. These efforts include ongoing, synergistic research and thought leadership from different stakeholders looking to gain insights into many different aspects of PLS. Research has so far ranged from journal policies and indexing functionality to end user perspectives and readership demands.<sup>20–23</sup> Notable groups working in this area include the PLS Perspectives Working Group of the International Society for Medical Publication Professionals, the Patient Focused Medicines Development (PFMD) initiative, and the team at Future Science Group with their dedicated plainlanguagesummaries.com website, to name just a few.

Comprehensive guidance specifically on incorporating patient engagement practices into PLS development and cocreation is already available from PFMD,<sup>24</sup> and a well-established toolkit including templates and checklists for infographic PLS, developed by Envision the Patient, has been in use for several years.<sup>25</sup>

In addition, several publishers have introduced policies and requirements for PLS that are included in submissions to their respective journals as part of their author guidelines to inform content development. This includes publisher-wide author guidelines from the likes of Adis (part of Springer Nature),<sup>26</sup> Dove Press,<sup>27</sup> Future Science Group<sup>28</sup> and Taylor & Francis.<sup>29</sup> There are also many other journal-level author guidelines that have been introduced by other publishers for use on an individual journal basis.

In September 2021, Open Pharma launched our recommendations for PLS.<sup>30</sup> These recommendations advocate a minimum standard for PLS of peer-reviewed journal publications that are of high value, achievable, and cost and resource efficient for both journals and authors. In short, PLS for a broad, nonspecialist audience, in the style of an abstract, understandable and readable, free of technical jargon, unbiased, nonpromotional, peer reviewed, and easily accessed. With these baseline requirements met, we then very much encourage the inclusion of additional multimedia enhancements such as infographic or video PLS, or those intended for a more specific target audience (e.g.,



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patients). Building upon standard PLS in this way can help further expand the reach and accessibility of a publication.

Lastly, the fourth iteration of the Good Publication Practice (GPP4) is expected to be published later in 2022 and, given the popularity of the topic, is likely to provide further guidance and outline best practices on publication-associated PLS.

With so many considerable, complementing efforts underway, it is clear that there is unlikely to be a one-size-fits-all solution for all publications. Rather, what is emerging is a portfolio of standards and guidelines for different types of PLS and plain language enhancements that support variety while also standardizing the practice; clear directions for the appropriateness and utility of different guidelines for different situations will be needed.

## The Open Pharma Recommendations for PLS

Open Pharma is a multisponsor collaboration of pharmaceutical companies, nonpharmaceutical funders, publishers, patients, academics, regulators, editors, and

societies seeking to identify and drive positive change in the publishing of pharmaceutical company-funded research. Our recommendations for PLS were initially developed by the Open Pharma Accessibility Workstream and were extensively reviewed and refined during an expert roundtable and a focused, public consultation throughout the first half of 2021. Our recommendations outline what we believe to be the minimum standard, providing concise guidance on PLS for authors, editors, and other stakeholders involved in PLS development (Figure).

As a minimum standard, we recommend that PLS are:

- Targeted toward a broad, inclusive, and nontechnical, nonspecialist, or time-challenged audience
- Written in easily understandable, unbiased language that is free of expert or technical jargon and accessible to readers who may have a different first language to that of the summary
- Text based and concise (of 250 words or fewer)—this allows for indexing in directories such as PubMed and facilitates straightforward translation

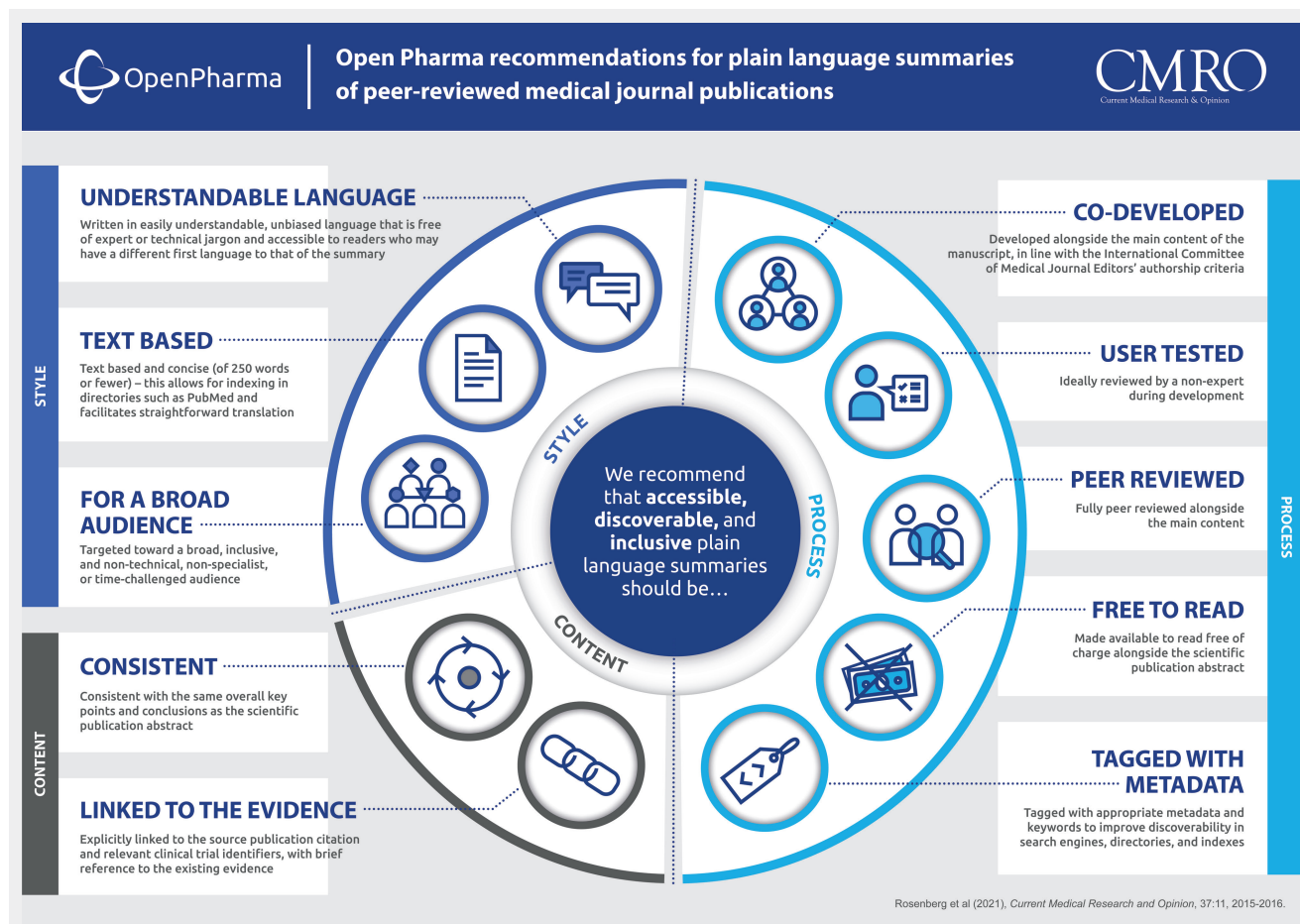


Figure. Infographic summary of the Open Pharma plain language summary recommendations.<sup>31</sup>

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- Explicitly linked to the source publication citation and relevant clinical trial identifiers, with brief reference to the existing evidence
- Consistent with the same overall key points and conclusions as the scientific publication abstract
- Developed alongside the main content of the manuscript, in line with the International Committee of Medical Journal Editors' authorship criteria
- Ideally reviewed by a nonexpert during development
- Fully peer reviewed alongside the main content
- Made available to read free of charge alongside the scientific publication abstract
- Tagged with appropriate metadata and keywords to improve discoverability in search engines, directories, and indexes

Since the publication of the recommendations, Open Pharma continues to perform research and provide thought leadership on various aspects of PLS, most recently on indexing practices and journal policies and attitudes.

## What Could Be Next for Editors and Publishers?

We hope that the Open Pharma recommendations will encourage editors and publishers to include PLS in more biomedical publications, with at least a text-based PLS included as the norm. We strongly believe all journals—but particularly biomedical journals—should be offering PLS options for all manuscripts and ensuring that they are correctly indexed on PubMed. Journals could even require PLS in the same way as technical abstracts are a given requirement. While many journals may be willing to accept PLS if directly queried, these policies need to be explicitly provided in author guidelines, including formatting details such as word count, to guide drafting.

We acknowledge that there are very reasonable hesitations and practical barriers to rolling out PLS offerings. We therefore encourage those with questions, concerns, comments, and ideas to join in the conversation and contribute to the evolving practice. Reach out and get involved with existing PLS initiatives, use the hashtag #PlainLanguageSummaries on Twitter and LinkedIn, talk to colleagues with PLS experience to get their perspectives, and talk to colleagues without PLS experience to bring them into the discussion. Join in.

## Acknowledgments

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# Empowering with Evidence: Some Communication Highlights of the 2022 AAAS Meeting

**Christina B Sumners, Kayla Barnes, Amanda Hohlt, Madison Semro, Duanduan Han, Abigail Chartier and Barbara Gastel**

In keeping with its theme, “Empower with Evidence,” the 2022 American Association for the Advancement of Science (AAAS) annual meeting, held online February 17–20, addressed topics in both science and its communication. Subjects of sessions on the latter ranged from peer review of journal submissions, to use of humor in popularizing science, to design of posters presenting research. The following are some highlights.

## A Fireside Chat with Alan Alda

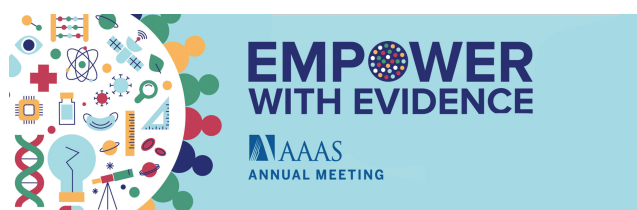
### By Christina B Sumners

In conjunction with the AAAS annual meeting, AAAS Section Y (General Interest in Science and Engineering) held a business meeting, at which newly elected AAAS fellows associated with the section were recognized. These fellows included actor Alan Alda. Alda, who is also a visiting professor at the Alda Center for Communicating Science at Stony Brook University, answered questions in a “fireside chat” at the end of the business meeting.

When asked how he became interested in science communication, Alda said he was always interested in science, even if he didn’t know it at the time. Not until his 20s, though, did he begin to read science avidly. Later, when he became host of the television show *Scientific American Frontiers*, he had the chance to speak to scientists one on one. “The scientists and I in each segment were having a genuine conversation,” he said. “They wouldn’t launch into lecture mode. ... What I realized is that we were improvising together.” Alda would later use improvisation to formally train scientists to better communicate.

CHRISTINA B SUMNERS, KAYLA BARNES, AMANDA HOHLT, MADISON SEMRO, DUANDUAN HAN, and ABAGAIL CHARTIER are current or recent graduate students, and BARBARA GASTEL is a professor at Texas A&M University.

*Opinions expressed are those of the authors and do not necessarily reflect the opinions or policies of the Council of Science Editors or the Editorial Board of Science Editor.*



When he began these training sessions, Alda said, he thought they would help scientists communicate with the public and possibly with policymakers. What he had not expected was that they would help bridge the gap between specialties. “Scientists told me they were understanding each other better across disciplines,” Alda said. Another thing that surprised him: Scientists said they understood their own work better after being encouraged to step back and look at the bigger picture and how their research fit.

When asked what he hoped to achieve through his work in science communication, Alda mentioned the beating that science has taken throughout the coronavirus pandemic. “Lack of communication is costing us lives,” he said. “And that is a communication problem that would be nice to overcome.” There’s no magic bullet for doing so, he said, but listening must be paramount.

“I am so honored to be named a fellow. It’s an honor to be present and listen to my fellow fellows tonight,” Alda said. “I’m delighted that [Section Y] exists, and I’m delighted to be a part of it.”

## Being an Effective Reviewer or How to Avoid Being “Reviewer 2”

### By Kayla Barnes

This workshop was intended as a comprehensive guide to help participants develop their skills as reviewers. The speaker, Diana Marshall of the Taylor & Francis reviewer training team, began by establishing the importance of reviewers and describing their role relative to editors, authors, and readers.

After introductory comments, Marshall explained that it is acceptable to reject an invitation to review. She then noted the steps a reviewer should take when beginning



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a review. It is best, she said, to get a general overview of the piece and then read from beginning to end before starting detailed work. An extensive peer review checklist was provided to guide reviewers through the process for research and nonresearch articles. Marshall presented next on comment structure; she included examples of summaries plus defined the difference between major and minor comments. A rereview, she said, should be considered as part of the commitment and should focus on evaluating how your comments were addressed; it should not raise any new concerns unless they relate to the author's revisions.

Midway through the workshop, participants were separated into breakout rooms, where they practiced evaluating the strengths and weaknesses of real reviewer reports of articles in *F1000Research*. The breakout rooms served as a way to network with others while immediately applying the presented information. Many participants could not return to the main session from the breakout rooms, as apparently a technical issue had arisen. Marshall would go on to wrap up the presentation by touching on the tone of reviewer reports and saying how to be polite yet objective and constructive. Marshall pointed participants to further resources from Taylor & Francis (<https://editorresources.taylorandfrancis.com/reviewer-guidelines/>) to round out this advice-packed session.

## How to Make Basic Science Come Alive

### By Amanda Hohlt

This session tackled challenges regarding audience engagement: How do you make a presentation more than just words on a screen? How can you interact with your audience? Dennis Meredith, an independent science communicator and author, answered these questions, among many others, and provided resources to help scientists enhance their communication skills.

Meredith began by stating the importance of an engaging title slide—if it's boring, you've already lost your audience. Next, he presented a scientific explanation: Humans are primates and therefore, do not learn only by listening.

If there's one thing to take away from this session, it's this, he said: "You have to engage in order to educate."

Much of Meredith's presentation consisted of examples. For instance, he used many pictures of cows—in costumes, artificially generated, and so forth. Doing so helped not only to keep his audience interested, but also to visually display the possibilities of whichever tool was being discussed. Meredith also provided links to visual resources. These included images, GIFs, molecular modeling technologies, screen capture tools, illustrations, and more. A list appears at <http://dennismeredith.com/files/Explaining-Research-References-and-Resources.pdf>. Meredith also noted additional techniques that presenters can employ: fiction techniques, metaphors and similes, humor, a

professional appearance, pausing for emphasis, and perhaps the invention of a new term to help illustrate your point.

Meredith ended with a final word of advice—practice!

## Are You JOKING???: Humor in Science Communication Practice and Research

### By Madison Semro

"Using humor is a great way to bring people in," said Chelsea Parlett-Pelleriti, a statistics-focused content creator, professor at Chapman University, and panelist at this session. But, humor can be subjective and difficult to study, said Michael Cacciatore, a science communication researcher at the University of Georgia and another panelist at the session. Other panelists were science communication researcher Sarah Yeo (University of Utah) and Jason McDermott, comic artist and scientist (Pacific Northwest National Laboratory).

Humor can effectively engage your audience—as long as the joke is accessible enough for your audience to reasonably understand it, the panelists indicated. If you have to explain your joke too much, Cacciatore said, you can isolate parts of your audience. However, explaining the joke can also satisfy your audience's curiosity if the joke caught their interest, Parlett-Pelleriti noted.

Types of humor range from the lighter puns and anthropomorphisms to the more complex sarcasm and satire. Deciding what kind of humor to use requires careful consideration of your audience, panelists said. Lighter humor is best used when introducing your audience to new, nonpolarized topics, such as artificial intelligence or the human microbiome. In these cases, humor can help positively frame the topic and inspire your audience to learn more, Cacciatore and Yeo said.

However, darker humor such as sarcasm and satire can attract a wider audience and lead to more engagement, McDermott and Parlett-Pelleriti noted. Sarcasm can be effective in politically charged topics such as climate change; however, sarcasm also risks alienating sections of the audience. Parlett-Pelleriti recommended "punching up" to avoid this issue—for example, sarcastic humor about climate change should target large corporations rather than members of the public who eat meat.

The panelists advised "starting small" when incorporating humor into your science communication efforts. From there, you can identify kinds of humor your audience likes that also suit your voice.

## Design Tips for Creating an Effective Scientific Poster: Easy Tips from Experts!

### By Duanduan Han

In this workshop, Shiz Aoki from BioRender, a scientific illustration software company, provided advice on designing scientific posters.

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Aoki first discussed principles of poster layout. These included the following: The title should stand out from the rest of the poster to capture viewers' attention and keep viewers from walking away; white text on a black block is a safe choice. If an institution or company brand color is preferred, use the color pick tool (available in common graphics software) to copy the color and apply it consistently throughout the poster. Sections should be arranged from top to bottom and left to right, so readers can follow them intuitively. The margins and padding between sections should be consistent. Using a grid can help in aligning sections properly.

Among other points from Aoki: In poster sections, short abstracts can save viewers from "too long; didn't read" fatigue. Because the results are the most important part of a poster, adding a lightly shaded background to highlight this section can be worthwhile. Justified text alignment is recommended to create an organized look. Text hierarchy should be applied to the poster—from the title, to the section titles, to figure captions. Test-printing the poster at full size and displaying it on an easel is the best way to check text legibility and figure color. If printing cost is a concern, select a portion of the poster with various font sizes and print it on letter-size paper. Projecting the poster on a wall or large screen also can allow one to check text legibility. Aoki also noted several outdated features to avoid: rounded corners, drop shadows, gradients, word art, and fancy bullet points (such as arrows or hands).

At the end, Aoki demonstrated using the Poster Builder feature in BioRender to create a poster by employing built-in templates and prepared text and figures.

## Does Science Communication Still Work?

### By Abigail Chartier

At a conference full of specifics, the final panel (moderated by Holden Thorp, editor-in-chief, *Science* family of journals) addressed a broader question: Is science communication effectively reaching the public?

Environmental scientist Jane Lubchenco, of the White House Office of Science and Technology Policy, considered the past 25 years of science policy from a political standpoint. She noted that environmentally, two-way engagement with the public has increased, and

emphasis has shifted from stating problems to becoming solution-driven.

Theoretical cosmologist Katie Mack, of North Carolina State University, observed that skillsets of scientists and science communicators generally differ. Scientists with both skillsets, she said, are "incredibly valuable" and should be utilized more often.

Joelle Simpson, medical director for emergency preparedness at Children's National Hospital, focused on the COVID pandemic and communicating with families in a crisis. The information, she said, must be understandable, reliable, and relatable so you can "meet each patient where they are" and help inform medical decisions.

Kathleen Hall Jamieson, director of the Annenberg Public Policy Center at the University of Pennsylvania, also focused on the COVID era. Jamieson emphasized successes—high turnout for vaccinations, continued confidence in scientists—and recommended identifying areas to improve on, such as minimizing susceptibility to misinformation and framing comparisons better.

Topics of discussion that followed included use of statistics, visualization, and humor. The main advice? Make it relevant to people's lives. Simpson emphasized putting statistics in context. Lubchenco discussed using analogies, metaphors, and visualization to improve climate change discussions. Mack and Lubchenco noted that knowing what can and cannot be joked about is needed, especially as humor tends to be shared on social media.

When asked about science communicators to keep an eye on, panelists mentioned climate scientist Katharine Hayhoe (professor at Texas Tech University and chief scientist at The Nature Conservancy), Randall Munroe (engineer-author-cartoonist creating *xkcd*), Lee Beers (medical director for community health and advocacy at Children's National Hospital), and Marshall Shepherd (meteorologist and professor at the University of Georgia).

Jamieson had the last word. Her message: "We don't have to be scientists to be science communicators. Everyone should be part of the scientific defense system."

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The 2023 AAAS annual meeting, themed "Science for Humanity," is to be held March 2–5. Epidemiologic conditions permitting, it will include in-person components in Washington, DC, as well as online components. For more information, please see <https://meetings.aaas.org/>.



# The CSE Mentorship Program: Opportunities for Giving Back or Benefitting from Experiences of Others

**Patricia K Baskin on Behalf of the CSE Mentorship Committee**

Do you have expertise in particular facets of editing and publishing that may be valuable to others? Do you need an outside perspective on your career path or a sounding board for ideas and challenges you have in your current position? Navigating a career in scientific editing and publishing can be tough, so the CSE Mentorship Program is designed to help make that path a little easier by connecting interested mentees with a veteran member of CSE. This article provides an overview for those unfamiliar with the program, focusing on how it works, what materials are used to kick-start a mentoring dyad relationship, and some feedback we have received from those who have participated in the program. It will highlight comments from mentors who are giving back by sharing their expertise with others and comments from mentees who describe the key benefits they derive from the mentoring partnerships.

## Developing the Program

While serving as CSE President in 2017, I read an article advocating that professional organizations like ours should offer the opportunity for networked members with expertise in their careers to mentor more junior members who are actively building their careers. During this period, I was also working with other senior leaders at my own organization to set up a similar mentoring program for our in-house staff. I also reviewed mentoring programs that were being implemented by similar organizations and developed a mentorship proposal for the CSE board. Emphasizing that such a mentoring program would add value and opportunities to CSE membership, I obtained the Board's approval for a mentorship committee and proceeded to

invite all CSE past presidents and other interested seasoned volunteers to join.

The mentorship program debuted that spring with special help from Tim Cross and Ken Heideman, who chaired the committee while I finished my presidential rotation, after which Leslie Neistadt and I assumed the chair duties. We now have an enthusiastic committee, some of whom (Heather Goodell, Angela Cochran, Rhea Williams, and Diane Sullenberger) have served for several years, looks along with a cadre of active and dedicated mentoring volunteers. We strive to match those who apply to be mentors with those who want mentoring—we call these pairs “dyads”—by looking at the expertise of the mentor and the needs of the mentee. During the first year, we formed 10 dyads; we have 27 dyads so far this year. Most participants—both mentors and mentees—have reported positive experiences, citing the benefits of enhancing their networks, gaining knowledge about publishing or editing, and gaining new friends.

## How the Program Works

As described on the CSE Mentorship Program web page,<sup>1</sup> the program “offers the opportunity to gain insights into the dynamic scholarly publishing field through a one-on-one relationship with a veteran member of CSE.” The specifics of that relationship can vary based on the participant's needs: some mentees want to learn more nuts-and-bolts skills, while others are interested in less tangible skills such as handling interpersonal workplace dynamics, working with management, self-advocating, or just having thoughts about changing the direction of their careers. Mentors can help find resources for learning, help mentees network by providing contacts, or just be available to discuss difficult issues in publication, for example, publication ethics issues or addressing management of journal workflow or other people.

## Participating in the Program

If you are interested in requesting a mentor, membership in CSE is required, and we have a formal application that can

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be found on the CSE website along with basic information about the program. Currently, we do not have a mentor application; if you are interested in becoming a mentor, please contact the CSE headquarters.

In the past year, the Mentorship Committee has established a collaboration with the Scholarship Program to arrange mentors for the scholarship winners and also with the Certificate Program subcommittee to arrange mentoring for those candidates working on their projects.

### Activities: What Are You Committing to?

The mentor/mentee relationship was designed for 1 year, from one CSE Annual Meeting to the next; however, the program is flexible and we welcome applications at any time of the year to maximize benefits to CSE members. Some dyads continue informally well beyond this “term” as both members often find the relationship to be beneficial. Activities usually include monthly phone calls or personal meetings during the annual meeting or locally if this is practical.

The Mentorship Committee provides oversight and planning, develops and maintains lists of interested mentors and mentees, and screens the applications, matching mentees and mentors. We provide basic training materials for both the mentor and mentee, with a 3-month plan that helps orient the first few months’ meetings and establish goals for follow-up discussions (Figures 1 and 2). Participants have related that the materials (e.g., lists of topics suggested for the first 3 meetings) were especially helpful at the beginning to help the conversations get started.

### Benefits of the Program

As a new program, we felt it was essential to solicit feedback whenever possible to ensure the program was meeting the needs of both mentees and mentors. We have received feedback in several different ways: annual meeting roundtables

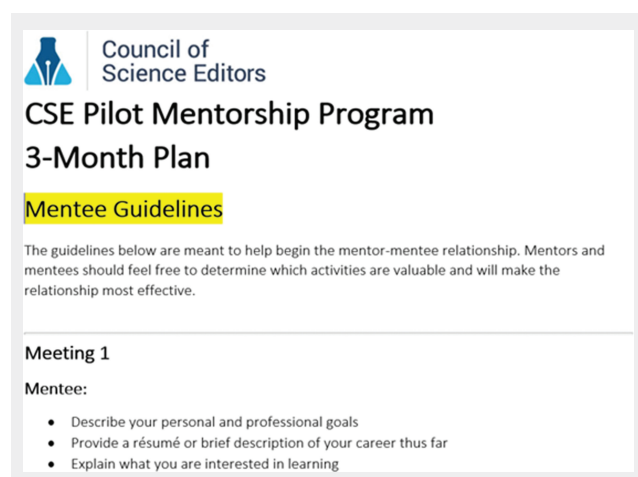


Figure 1. 3-month plan, mentee guidelines.



Figure 2. 3-month plan, mentor guidelines.

and breakfast groups, survey responses, two CSE Connect sessions in 2021, and by word-of-mouth. The Committee has sent two surveys—to both members of each dyad—to help us to continually evaluate the effectiveness of the program.

In our recent survey for mentors and another for mentees, we asked the dyad pairs to make comments about participating in the program and received the following list of perceived benefits:

- Introduction to others who could help them in job searches
- Having an objective sounding board to further develop their thoughts and ideas relating to their work and careers
- An outside perspective on career questions and support in considering their career path
- Someone outside their organization to provide perspective and general idea generation
- Being able to discuss concerns/challenges with someone who has been in their shoes
- Notification of potentially relevant early career opportunities
- Advice specific to their situation, friendship, and encouragement
- Having someone to talk to about professional topics that are difficult to discuss when no local colleagues are available or might have a conflict
- More confidence in their abilities and knowledge
- Encouragement for getting involved in career-development opportunities

During the two 2021 CSE Connect sessions, both members of the mentorship dyads shared their experiences while participating in the Mentorship Program. They carry



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the same themes as the comments from the surveys but were more detailed in their descriptions. Their comments have been edited for clarity and concision and to preserve participants' anonymity.

*Mentors on how they were able to help:*

- Some of my mentees have had definite goals with questions and objectives they work on over a year's time; others have wanted informal conversations to discuss day-to-day issues or long-range work or career planning. Others want to improve leadership skills, time management skills, or skills at giving constructive feedback to their staff. I helped connect someone who felt socially isolated as a writer in a research institution with someone in journal management who could help her transition to a new career. Another mentee was an early-career professional with a publishing vendor who requested advice about counseling staff and increasing productivity on her team. I encouraged another industry professional who wanted to change careers and explore opportunities in journal management to visit an editorial office and explore writing for a pharmaceutical company.
- I was surprised to discover that I could be very helpful early on as a mentor for a mentee early in their career. My mentee was looking for opportunities to build a career in areas in which I did not have experience. However, having a larger network and years of experience working in society publishing and networking at CSE, I was able to refer the mentee to outside resources in those areas.
- Even if you have a different background or you find out a mentee needs advice about something that's not your area of expertise, you can probably find someone, drawing from your contacts, for whatever question you may not be sure about yourself.
- I've had several mentees and many have had different needs, so I was working on different things with different people. I realized I had skills and experience in many different areas.
- I was assigned an undergraduate student in a technical writing program and when we talked the first time, he mentioned that he also had a great deal of interest in marine biology. It turns out I have a friend who owns an editorial services company and who has a PhD in oceanography. This was sheer coincidence, but I put them in touch and the undergraduate is now a doctoral student working toward a career in which he can combine both interests. I happened to know somebody in his area of interest who was helpful.
- My mentee's goal was to get noticed at their job, where they were in a sea of people and didn't know how to

stand out to possibly be promoted. It was great to brainstorm some ideas together about what projects she could initiate or participate in that would emphasize her skills to her supervisor. It was an awesome experience.

*Mentors on how the experience benefited them:*

- I was able to open doors to connect a mentee to people in the field for informational interviewing and found a tremendous sense of satisfaction in helping the mentee explore new career opportunities. It affirmed my own sense of professionalism and breadth of experience in publishing and editing.
- I realized during mentoring that I had reached a level at which I could offer valuable help to newcomers and those wanting to change careers by providing them with resources or connecting them with other people who could help them.
- Acting as a mentor has immensely improved my own communication skills and confidence in working with other professionals.
- Mentoring has given me opportunities to share what I have learned and it has increased my ability to actively listen and understand the challenges that other people are facing in our field today.
- With each partnership I've had, I just enjoyed meeting with the mentee. I feel like I have made another friend with this connection, and I've learned as much from them as they learned from me.
- When the formal part of our mentorship ended after a year, we said "why don't we keep meeting": Both of us were benefitting from the relationship. The help goes both ways, and we share what we're working on and brainstorm together, so I've really enjoyed the relationship and am grateful to CSE for making it possible.
- I have a mentee who works at another society, and we have similar concerns to discuss. Especially in this past year with the pandemic, we've had numerous conversations about how the other society is addressing various issues. It's definitely a 2-way street, and it's certainly been rewarding on both sides. Although I was the more experienced person, my mentee brought things to the table I haven't thought about. I have another mentee from another society who is less experienced, but I'm happy to share what I've learned from "being around for a while."

*Mentors on why they mentor:*

- What drew me to the mentoring program was that I had gotten to a point where I realized I could give back, and I could potentially guide someone; truthfully,

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I never thought I would get to that point. I really love mentoring the team members at my job so I thought I could be helpful here. As an introvert, I used to avoid networking, but I find this a good opportunity for a one-on-one relationship that's easier for an introvert. In my early career, this type of opportunity would have been a good fit for me. It's a good way to develop a network. The relationship was surprisingly mutually beneficial as I learned much from my mentee about her experience at her society and journals that I brought back to my own. Despite being in different disciplines, we all face common issues, and it's great to be able to talk through those with someone and brainstorm solutions. Also, it's beneficial to talk about other topics such as strategy and leadership and even politics of the office. It's been an incredibly enjoyable and rewarding experience.

- Serving as a mentor is interesting from a lot of standpoints. I was honored and a bit scared wondering if I had the necessary experience for this. The training documentation was helpful in having some guidelines to start the process, but you can personalize it as well. I'm delighted to be matched with someone who is working in the same industry, and I look forward to continuing.
- I've had great relationships with the mentees I've worked with, and I definitely encourage people who are thinking about being a mentor to do so. At first, you feel you have a bit of imposter syndrome as the supposed expert and wonder if you really know enough to be a mentor, but we all have different experiences and at different levels, and it's fulfilling to share experiences and resources. I'm a big fan of the program and I encourage people to get involved.

*Mentees on how the experience benefited them:*

- Mentoring has been a wonderful experience for me. My background is in science, and editing is a whole different world. I had stayed home for several years to care for children and wanted to get into a new field rather than return to a research area that had changed radically while I was away. I heard my mentor speak at a CSE conference on editing and thought it would be great to have a mentor to talk with about how I could advance my career. My mentor was wonderful in giving me feedback, helping me gain confidence, and sharing her experiences. She familiarized me with resources I didn't know were available and recommended BELS (Board of Editors in the Life Sciences), which I hadn't heard about. I've been able to pass on the mentoring to others and this experience has been invaluable to me. I hope my experience will inspire some of you to accept a mentoring position.

- I met my first mentor through email, on Teams, and in person a few times. It was great to talk face-to-face with her. She connected me to other people in the field and after our year ended, I still reach out to her time-to-time with questions. During my second mentorship, we met only through Teams and we focused on open access (OA). She helped me gain a much better understanding of OA. I suggest providing questions for each other ahead of time and have open conversations to open possibilities for discussion topics.
- I joined CSE to learn more about the editing and publishing industry and was not completely clear on what to expect when I was assigned to two mentors because I had some different needs. I could not have asked for a better mentoring experience all around, and the journey since has been a pleasant and inspiring one. Both my mentors were communicative and open to questions in a wide range of fields, and they always took the time to follow up with me and connect me with folks who have been very beneficial for my career. I truly appreciate the time and effort they put into mentoring me and encouraging me to ask relevant questions regarding different career paths. The combination of structured topics to discuss and freeform discussion was particularly helpful to me to gain a better idea of the publishing industry. They always took the initiative to connect me with others in the industry, which gave me the benefit of hearing multiple viewpoints. These fulfilling collaborations continue to this day, and I can't say enough positive things about the CSE mentorship program.
- I think the program is great because it really molds to the mentee's needs. Before I was paired with my mentor, I did have some editing and publishing experience, but I was still rather new to the field, and I just wanted somebody to talk to that could give me guidance. We met regularly and our mentorship was interesting because she just kind of let me talk. We had a few talking points the first couple of meetings, but after that, I would just talk with her about what was going on in my world and my concerns about my job. She was really great, almost like a college friend, someone to talk with and encourage me and put me in contact with a few of her colleagues that I did reach out to, and I found it very rewarding. I really appreciated the fact that there is flexibility about how you and your mentor can follow in the direction that works well for you individually.
- At the time I was paired with my mentor, I was a new member of the CSE and also a new medical editor who was looking to find my way in the field. I entered the program hoping to learn more about the process a

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manuscript undergoes to become a published paper and how this process works from the perspective of the journal. I was also interested in understanding the different types of editing roles that were involved along the way, with the goal of learning how to focus my efforts to develop more specialized skills. I benefited greatly from my mentor's insight into the management of a journal, and the different roles editors play. Through her coaching questions and advice, we talked through my interests and strengths. Her guidance helped me realize that manuscript editing was my editing passion and that I should focus my education on the technical aspects of this type of editing. She directed me toward some resources, which were helpful learning tools and also sought to connect me with other journal editors. Being involved with the program provided me with the opportunity to connect with a very accomplished member of CSE, and her support and interest in my growth as an editor were encouraging and very much appreciated. I highly recommend the Mentorship Program.

It was exciting and gratifying to receive feedback from dyad members, and we look forward to integrating some new features in the future. For example, we plan to set up group meetings of the mentors and separate group meetings with the mentees. Both groups would like to

hear from the others about how they navigated the dyad relationship and suggest ways they can enrich their own mentor-mentee discussions and make them more effective. We are also looking for ways to create some CSE webinars on relevant topics to further enhance the training materials. One suggestion that came from a CSE Connect session was to create a "mentor bookshelf" of resources for mentors to recommend to their mentees.

**Future mentees:** Those of us who have experienced formal or informal positive mentoring relationships that influenced our careers understand that having an individual interested in you and your career development can make an immense difference navigating your professional development. The committee welcomes your participation in this mentorship program and look forward to reviewing your mentee applications.

**Future mentors:** With the requests for mentors increasing rapidly over the past 2 years, we are calling for mentors with a wide range of skills; please consider contacting one of us or the CSE staff and describing your expertise to help us match you to a mentee seeking guidance. You'll gain the satisfaction of guiding the career success of others in your profession by sharing your career insights and savvy for their benefit.

And, finally, consider joining the Mentorship Committee and sharing your ideas to help make the Program even better!



# CSE's 2021 Awards and Honors

Each year, CSE recognizes excellence by leaders in the field of science communication and acknowledges the exceptional accomplishments and contributions of its members by presenting a series of awards to recipients selected by its Awards and Honors Committee.

On May 3, 2020, Carissa Gilman, CSE past president (2020–2021), on behalf of the Awards and Honors Committee Chair and CSE past president (2019–2020), will announce the awardees during a celebratory luncheon at the 2022 Annual Meeting in Phoenix. The Awards and Honors luncheon is a longstanding CSE tradition that sadly had to be transitioned to a virtual awards presentation in 2020 and 2021 due to the ongoing COVID-19 pandemic. CSE is delighted to rekindle this tradition in 2022!

## Certificates of Appreciation

The Certificate of Appreciation is given to CSE members who have made a laudable contribution to CSE. This year we honor two deserving recipients.

### *Patty Baskin and Leslie Neistadt, Mentorship Committee Co-Chairs*

Patty has been a devoted CSE volunteer for many years and has served in many capacities, including as the 2016–2017 President. One of her notable contributions to CSE during that time was a proposal to launch the CSE Mentorship



*Patty Baskin*



*Leslie Neistadt*

Program. Patty's vision codified CSE's long history of informal networking and peer-to-peer learning into a structured career development resource for members. According to Patty:

"At the same time that I was serving as CSE President in 2017, I was helping to set up a mentorship program in my own organization where I saw the value in helping earlier career professionals build their expertise and for more experienced staff to contribute and stay engaged. Both mentor and mentee benefitted and made new friends. I suggested to the board that a mentorship program of pairing our long-time members with those looking for guidance in their careers would be a way to add value to their CSE memberships. Thanks to devoted, enthusiastic committee members and volunteers, we've seen wonderful growth in careers and confidence for both members of the mentorship dyads, along with the creation of treasured friendships! I look forward to my own meetings with mentees as a highlight of my month."

Leslie Neistadt has served as Mentorship Committee Co-Chair alongside Patty Baskin since its inception and has been instrumental in its growth and success. The mentorship committee screens applications and does a remarkable job of pairing mentees in one-on-one relationships with veteran members of CSE. Leslie describes how a successful mentor/mentee pairing results in rewarding relationships:

"When I first learned of Patty's idea for a CSE mentorship program, I was intrigued. I've been fortunate to have



Amanda Ferguson

great mentors throughout my career, so I know how valuable they are and saw this as an effective way of giving back to the profession. To potential mentors who aren't sure you have anything to offer, I ask you to consider that you likely know far more than you realize. Also, the learning goes both ways. We find that the mentees are not the only ones who benefit from these relationships; the mentors enjoy them, too!"

### Distinguished Service Award

CSE's Distinguished Service Award recognizes excellence in the performance of specific tasks by CSE members.

#### Amanda Ferguson, Web Editor

Amanda has served CSE as Web Editor for many years. As Web Editor, Amanda plays a vital role in developing and maintaining the public face of CSE. During her tenure, she shepherded the main CSE website through an upgrade and redesign, and played an instrumental role in the creation of the *Science Editor* website, among many other achievements. Amanda's eye for detail, aesthetic sensibilities, and skilled project management have been a true boon to CSE. In recognition of this award, Amanda says:

"I am honored to receive CSE's Distinguished Service award! Volunteering with CSE has helped me grow in my career and practice skills that are beyond the scope of my normal job. The most valuable aspect of serving as Web Editor, besides gaining a deeper knowledge of the excellent editorial office guidance that CSE offers on its website, has been working with many other passionate CSE volunteers. As an introvert, networking has never been my strongest suit; getting involved in a committee



provides easy opportunities to meet, work with, and learn from peers across the scholarly publishing field."

### Award for Meritorious Achievement

This is CSE's highest honor. It is awarded to an individual or an organization that has made significant contributions to advancing the broad goal of CSE: to improve scientific communication through the pursuit of high standards in all activities connected with editing.

#### C4DISC

The Coalition for Diversity and Inclusion in Scholarly Communications (C4DISC) embraces an essential mission to work with organizations and individuals to build equity, inclusion, diversity, and accessibility (DEIA) in scholarly communications. With the Award for Meritorious Achievement, CSE applauds C4DISC's commitment to DEIA as a moral imperative and to advancing its principles for the long-term sustainability and success of our industry.

C4DISC was founded by 10 trade and professional associations that represent organizations and individuals working in scholarly communications. CSE is proud to be one of these 10 founding members. Today, more than 100 organizations have adopted the C4DISC Joint Statement of Principles. C4DISC has also developed the Toolkits for Equity, a series of groundbreaking training guides to aid in transforming our workplaces and organizational cultures.

C4DISC's convener, Melanie Dolecheck, will accept the CSE Award for Meritorious Achievement on behalf of the organization. Melanie commented,

"As the convener and a founding member of C4DISC I am proud of how far C4DISC has come in a few short years and the work that we've accomplished so far. The response and support from the scholarly communications community has been inspiring to say the least. The passion that our community has for doing this work is reflected in the countless volunteer hours that have already been dedicated to developing community resources.

The Coalition was built for our community, by our community. It exists because we've collectively acknowledged that to ensure sustainability, equity, growth, and access, our industry must commit to long-term efforts to curb the deeply ingrained patterns of exclusion and inequity in our practices, policies, and frameworks."

# Exploring Paths to OA Sustainability: Society Publishers Weigh In

## MODERATOR:

### Heather Staines

Director of Community  
Engagement and Senior  
Consultant  
Delta Think  
Trumbull, Connecticut

## SPEAKERS:

### Christopher Straub

Chief Operating Officer  
GeoScienceWorld  
Washington, DC

### Jennifer Regala

Director of Publications/  
Executive Editor  
American Urological Association  
Washington, DC

## Jeff Lewandowski

Director of Publishing & Acting  
Publisher  
American Physical Society (APS  
Physics)  
Ellicott City, Maryland

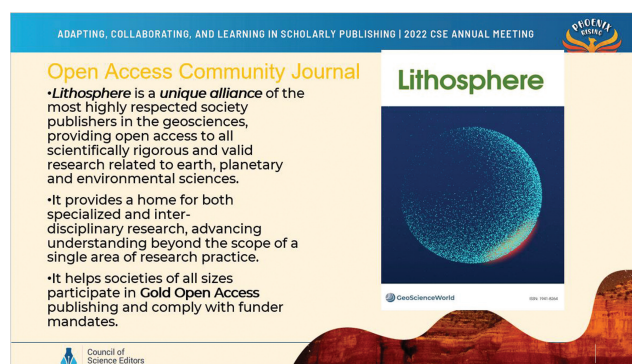
## REPORTER:

### Shari Leventhal

Executive Editor  
American Society of Nephrology  
Washington, DC

After a brief introduction from Heather Staines, Christopher Straub made some general statements about Open Access (OA) and then discussed his own experience launching an OA journal. Straub explained that the OA movement aims to make scholarly publishing more sustainable and pushes us to think about options to move the field forward and help people arrive where they want to be in the future. Straub discussed the acquisition and success of GeoScienceWorld's *Lithosphere*, a collaboration of the most highly respected society publishers in the geosciences, "providing open access to all scientifically rigorous and valid research related to earth, planetary, and environmental sciences" (Figure 1). The *Lithosphere* author publishing charge (APC) is \$2,100 for all research and review articles, and members of the society collaborators receive a 10% discount. Straub attributed some of *Lithosphere*'s success to the partnership with Hindawi. *Lithosphere* is Gold OA and a collaboration between the following societies as of January 2020: American Association of Petroleum Geologists (AAPG), The Geological Society of America (GSA), Geological Society of London (GSL), Mineralogical Society of America (MSA), SEPM Society for Sedimentary Geology, Society of Exploration Geophysicists (SEG), and Society of Economic Geologists (SEG).

Jennifer Regala spoke next and provided a broad overview of the American Urological Association (AUA) publications. AUA's current publications materials include *The Journal of*



*Urology*®, *Urology Practice*®, *AUANews*, annual meeting publications, CME product, and assorted membership communications. An option for authors to opt-in to author choice/OA was established in the summer of 2020, laying the groundwork for OA. A manuscript cascade process was also established in the summer of 2020. This move towards OA was driven by funding mandates, an emphasis on accessibility, and a feeling that it was the right thing to do (Figure 2). *JU Open Plus* is a Gold OA journal that will begin accepting submissions in 2022, with the inaugural issue in January 2023.

Jeff Lewandowski spoke last and discussed the growth of OA at the American Physical Society (APS). He explained that OA is important to APS given its mission statement to "advance scientific discovery and research dissemination." In 2018, they started a partnership with SCOAP3, "a global consortium of more than 3,000 libraries, research institutions in 44 countries, and 3 intergovernmental organizations, convened and managed by CERN, based in Geneva,

## Ingredients for Success

- Do your homework
- Educate your community, starting at the top and within
- Blessings of Editors-in-Chief – involve them in the process
- Editorial Board buy-in
- Understand the scopes/aims of your journals and how they all fit together (the "Voice of Urology")
- Start small (OA for subscription journals, JU-to-UPJ transfer)
- OA is based on three premises: funding mandates, accessibility/impact, and IT'S THE RIGHT THING TO DO!
- Enlist other departments to ensure your success



THE JOURNAL  
OF UROLOGY

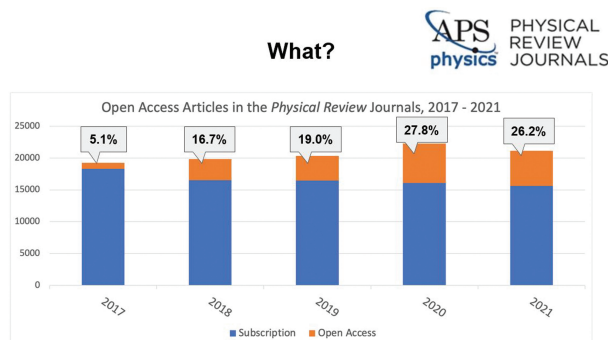
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PRACTICE

AUANews

JUOpen Plus



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Switzerland.”<sup>1</sup> *PRX Quantum* is a fully OA journal with an acceptance rate around 10%. *PRX Quantum* authors pay an APC to make their articles available under a Creative Commons CC-BY<sup>2</sup> license. OA articles increased from 5.1% in 2017 to 26.2% in 2021 (Figure 3).

The following are key takeaways from the session:

- Education of authors and the entire community is key.

- Launching (or acquiring) a new journal (OA or otherwise) requires everyone, including editors of existing journals, to pitch in.
- The publisher should listen to the society and industry.
- Indexing and obtaining a Journal Impact Factor (JIF) might take some time and require author/community support and buy-in, so consider acquisition as an option.
- If the society journals are owned by a commercial publisher, they must work together to manage their relationship. Regala likened the relationship between a commercial publisher and society to a marriage/relationship. In the relationship, you must divide and conquer; one half does a, b, c and the other half does x, y, and z.
- There was discussion about having a future CSE session focused on how to have a strong society/commercial publisher partnership.

## References and Links

1. <https://www.aps.org/publications/apsnews/201706/scoap3.cfm>
2. <https://creativecommons.org/licenses/by/4.0/>



# Council of Science Editors

## Become a Member of CSE Today!

### Who should join CSE?

**You should join if you are interested in scholarly publishing. Members of CSE serve the scholarly publishing community in their roles as:**

*Editor-in-Chief – Associate Editor – Section Editor – Managing Editor – Copyeditor – Production Editor – Technical Editor – Publisher – Author – Author’s Editor – Freelancer – Science Writer – Indexer – Abstractor – Information Specialist – Librarian – Graphic Designer – Marketing Specialist – Publishing Systems Operator – Typesetter – Printer – Web/Social Media Editor*

### Why should you join CSE?

**You should join CSE to be a part of a dynamic community of editorial professionals dedicated to the responsible and effective communication of science.**

**Learn more at [councilscienceeditors.org](https://councilscienceeditors.org)**



# The Role of the Editor in Making Science Accessible

## MODERATOR:

### Bill Kasdorf

Kasdorf & Associates, LLC  
Ann Arbor, Michigan  
@billkasdorf

## SPEAKERS:

### Bill Kasdorf

### Jon McGlone

University of Michigan Press  
Ann Arbor, Michigan

## Caroline Desrosiers

Scribely  
San Francisco, California  
@scribelytribe

## REPORTER:

### Heather DiAngelis

Transportation Research Board  
at the National Academies of  
Sciences, Engineering, and  
Medicine  
Washington, DC  
@hdiangelis

Bill Kasdorf of Kasdorf & Associates, LLC, kicked off the session by noting that accessibility makes publications better, easier to read and navigate, and even easier to understand. "Making content and systems accessible," he said, "is no longer considered to be a special case for a very few people." Accessibility should be ingrained in publications from the start so publishers can maintain efficiencies in workflows and provide universal accessibility.

Kasdorf described the advantages of EPUB 3's accessibility, including its reflowability across platforms and technologies; ability to change fonts, font sizes, and colors; and text and audio synchronization (Figure). To successfully achieve this, it is essential for heading levels and tables of contents to be correct for later EPUB tagging. Proper identification of cross-referenced links is also essential for later identification by screen readers. Kasdorf noted that another common problem with accessibility comes from tables—proper layout of tables ensures proper rendering by accessibility devices, while an improperly laid-out table can cause great confusion for readers. The editor should also assist accessibility by editing and refining the alt text image descriptions provided by the author.

Jon McGlone, Digital Product Design Engineer and Accessibility Specialist at the University of Michigan Press, spoke second. He advised that publishers should do what they can for accessibility by starting small and iterating often; this can help lead to new workflows and open doors to making content more accessible. He noted that accessibility is ongoing, and that it is most effective when built into everyday tasks. Editorial staff, McGlone said, are the "accessibility frontline"—it is up to them to promote, review materials, flag accessibility issues, and communicate to the production team. They should aim to see how visible elements (such as

**The key: EPUB 3 is designed to be accessible.  
That makes it better for everybody.**

*It's reflowable.*

*You can change fonts & font size.*

*You can change line spacing.*

*You can change colors.*

*Your phone can speak it.*

*It can synch text and audio.*

*AT can understand the structure.*

*It offers great navigation.*

KASDORF & ASSOCIATES, LLC

Figure. Advantages of EPUB 3. Credit: Bill Kasdorf.

figures and text) work together with hidden elements (such as alt text) within the context of a product.

Image selection by an editor also provides an important role in accessibility, as editors should ask themselves whether an image is 1) essential to publication, 2) well chosen, and 3) well placed. The use of color should also be considered; while color can enhance an image, color alone should not be used to convey information. Reviewing alt text for consistency, point of view, intention, completeness and concision, and order efficiency is crucial for ensuring high quality. McGlone reminded the audience that in order to provide value, alt text should be unique for each figure and unique from the figure caption. Tables and equations also present difficulties for assistive technologies, so editors should be aware of ways to simplify them when possible, such as converting a table to an in-text list and using Unicode fonts or MathML—not images—for equations. Finally, he remarked that it is important for a publication to have a good accessibility statement that is updated regularly, identifies standards and best practices followed, and provides contact information.

The third speaker was Caroline Desrosiers, CEO and Founder of Scribely, who focused on how to make images accessible through both alt text and extended descriptions. When it comes to ensuring a high-quality digital content experience, it is essential to provide image descriptions as early as possible in the process. To implement this, a publication should have or gain 1) knowledge of Web Content Accessibility Guidelines, 2) subject and industry knowledge and expertise, 3) writing proficiency and effective communication skills, 4) the ability to make informed

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decisions about subjective content, and 5) the ability to put oneself in another's shoes.

Per Desrosiers, an editor can greatly improve the quality of alt text by thinking about context and purpose, describing all relevant details, being concise, and considering whether the alt text allows readers to visualize the image on the page. To provide relevant and useful extended descriptions, the editor should review surrounding context, continue—not repeat—information provided in alt text, elaborate on context and purpose, start general before getting more specific, and once again ask whether the extended descriptions allow readers to visualize the image. Finally, alt text and extended descriptions should undergo

quality assurance and user testing. Desrosiers ended by describing ways to establish a workflow, such as creating an input channel for all image assets, adding or updating International Press Telecommunications Council (IPTC) metadata properties, synergizing with other systems, and sharing and distributing assets. In conclusion, she reminded the audience that “content is not complete until it is accessible to everyone.”

The session ended with a question-and-answer period about alt text vendors, complexity and advantages of rendering equations from MathML, challenges with getting authors to write image description drafts, and key differences between figure captions and alt text.



## Call for Diversity, Equity, and Inclusion Scholarly Resources

**CSE has launched a repository of journal and organizational statements related to diversity, equity, and inclusion.**

Many journals have begun working to improve editorial board diversity, evaluate peer review processes for implicit bias, revise guidelines for authors, or develop training opportunities, while others are struggling with where to start.

**Has your journal or organization issued a statement about policies and practices related to diversity, equity, and inclusion? Please consider sharing your efforts with our community by completing the [DEI Resources Submission Form](#) on the CSE homepage under “Resource Library.”**

Submitted resources will be publicly available on the CSE website.





# Trusting in Science: Automating Quality Checks in Publishing and Beyond

## MODERATOR:

**Heather Staines**

Delta Think  
Trumbull, Connecticut

**Leslie McIntosh**

Ripeta  
St. Louis, Missouri

## SPEAKERS:

**Cynthia Hudson Vitale**

Association of Research Libraries  
Washington, DC  
and  
Ripeta  
St. Louis, Missouri

**Chris Graf**

SpringerNature  
London, England

**Gerardo Machnicki**

Independent Professional  
Buenos Aires, Argentina

**Leslie McIntosh**

## REPORTER:

**Ruth Isaacson**

Genetics Society of America  
Rockville, Maryland

Discussions around open science and reproducibility have taken center stage these past years with more focus on the importance of trust in science. This session offered an opportunity to look at initiatives involved in upholding and supporting our trust in science.

Leslie McIntosh, CEO of Ripeta, moderated and spoke at the CSE session on Trusting in Science and shared how Ripeta is using a combination of automated and manual quality checks of submitted manuscripts.

Ripeta focuses on indicators of “Trust” to evaluate research articles along axes of professionalism, integrity, and reproducibility.

Professionalism and integrity checks examine the structure of the research article itself. Is the research article in a standard format (clear hypothesis, sections, etc.)? Does it contain the content and declarations you would expect to see in a valid research article (data availability statement, citations, data availability, declarations of conflicts, etc.)?

Automated checks also focus on authors of scholarly work, with an eye toward verifying identity and qualifications. The natural assumption about a peer-reviewed publication is that the author is a scientist who possesses knowledge beyond that of a lay person and is qualified via their education, training, or experience.<sup>1</sup> Among many items, the system looks to see if the author has an ORCID ID, legitimate affiliations, or has used an institutional email address. If Ripeta flags the submission, then manual investigation

takes place to confirm if the flags are warranted. McIntosh emphasized the need for manual verification as incorrect flags and subsequent rejections or institutional reporting could lead to serious consequences for the author.

Checks also focus on the reproducibility of the research paper—a topic that has been in the forefront for the past decade. Reproducibility allows other researchers to replicate the original study and achieve the same results. Automated checks look for indicators of trust, such as:

- Analysis software
- Software citations
- Statistical analysis methods
- Availability of biological materials, code, and data
- Code and data availability statements with data location clearly identified

Why should these checks occur prior to publication? McIntosh mined the RetractionWatch database on April 11, 2021, and looked at data for a 10-year span (2010–2019). She found there were a total of 2,772 retractions, with an average of 277 and a median of 266 retracted manuscripts per year. These retractions were for various reasons, including authorship concerns, ethical violations, fake peer review, paper mills, and rogue editors. Preventing the publication of papers that go on to be retracted is just one step in preventing further erosion of the public’s trust in science.

Following McIntosh’s presentation about automating checks, Gerardo Machnicki spoke about reproducibility and trust in science as it relates to researchers in Latin America.

For Machnicki, the topic of trust in science falls under the umbrella of open science. Trust is important for scientists to have confidence in their findings, which in turn are grounded on reliability and trust in the scientific process. However, in many areas of the world, democratic and ethical principles need to be considered first, with trust being the end goal.

Machnicki explained that among researchers in the south, questions are often raised about who benefits from the open sharing of data. Reservations about data misuse, patient privacy, exploitation concerns, or fear of undermining research careers are just some of the challenges to overcome before FAIR (Findable, Accessible, Interoperable, Reusable) principles are met.

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An overall reticence to share data has led to research being siloed and data/outcomes provided in nonuniversal formats and models. Machnicki advocates for tools to facilitate science at scale, including repositories that allow researchers to access data and information in a standardized format. Collaborations and knowledge bases result in shared analysis, reporting, etc., which generate reproducible and transparent content.

Machnicki shared examples of initiatives that have been successful, including the WorldWide Antimalarial Resistance Network (WWARN).<sup>2</sup> This research alliance of more than 250 researchers is linked to many recognized institutions and is working to promote data sharing and data reuse around clinical trials for malaria. Machnicki is engaged in a community seeking to expand the growth and use of the Observational Health Data Sciences and Informatics (OHDSI)<sup>3</sup> program within Latin America. Since its founding in 2014, OHDSI has provided large-scale analytics using health data. Worldwide, the program has over 2,000 collaborations from 74 countries and contains health records for around 810 million global patients.

Next, Chris Graf, SpringerNature's Research Integrity Director, shared 5 bite-sized insights about trust.

**Insight 1:** Net trust by the public in scientists and professors is higher than that of business leaders<sup>4</sup>; it's a good job that we put scientists and scholars in charge of what research is published.

**Insight 2:** Peer review is not perfect, and researchers have subtle and sophisticated ways in which they work out trust. Their weighing of indicators and decision making is analog and personal; this works for individual researchers, but may not scale-up well in our digital world.

**Insight 3:** There remains a collective skepticism in the research communities. Decades of concerns have resulted in questions of research reliability and reproducibility.<sup>5</sup>

**Insight 4:** There are reasons to be optimistic. In a 2019 article,<sup>6</sup> Dorothy Bishop, an experimental psychologist at the University of Oxford, shared her view that threats to trust in science may be brought under control through innovations such as meta-science, social media, registered report formats, and funder requirements for open science.

**Insight 5:** Collective action and collaboration across the publishing sector is underway! Launched in 2022, STM Integrity Hub<sup>7</sup> is a cloud-based environment for publishers to check submissions for research integrity issues. This safe and confidential hub respects privacy and competition/

antitrust laws and allows publishers to collaborate with each other while identifying, for example, simultaneous submissions and paper mill publications.

Finally, Cynthia Hudson Vitale, Director of Scholars and Scholarship with the Association of Research Libraries and cofounder of Ripeta, spoke about trust in science from an institutional/library perspective.

The framework for research integrity within institutions and higher education associations requires not just trust in science but also community engagement (listening/learning) and open science.

Institutions and libraries have 3 primary challenges to consider when it comes to research integrity:

1. Instead of looking at peer-reviewed, published articles as the primary source of trust in science, institutions and libraries should start to focus upstream. A culture shift is needed and could occur via innovations including workshops or materials about data literacy, research conduct, ethics, and compliance.
2. The burden on researchers and institutional units needs to be balanced against what is necessary for quality research and publishing.
3. Scalability and equitable access to solutions and services is a must. Institutions have many competing demands; thus, solutions ideally should meet multiple needs.

Institutions should ask how they can best support research integrity to increase trust in science, and how, with their decentralized setup, they can best collaborate. Organizations and campus units need to use policies, infrastructure, and services to lower the burden on researchers while continuing to advance quality and trustworthy research.

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# Calling all Experts: Broadening the Definition of Expert Peer Review

## MODERATOR:

**Jonathan Schultz**  
Director of Journal Operations  
American Heart Association

## SPEAKERS:

**Jonathan Schultz**

**Patricia Baskin**

Executive Editor  
Neurology Journals, American  
Academy of Neurology

**H.E. Hinson, MD**

Associate Professor at Oregon  
Health and Science University

**Ashwini Sehgal, MD**

Professor at Case Western  
Reserve University

## REPORTER:

**Tony Alves**

Highwire Press

For the session “Calling all Experts: Broadening the Definition of Expert Peer Review,” moderator Jonathan Schultz kicked off the session by noting that, although the traditional model of peer review is that an editor will send a manuscript to 2 or 3 reviewers who are experts on the topic of the manuscript, there is a growing recognition that sometimes a more specialized reviewer may need to be involved. In a presentation entitled “Technical/Methods/Reproducibility Review,” different forms of technical review were discussed. Because science articles are more complex, the American Heart Association (AHA) contracted with a team of technical editors who look at manuscripts at the revision stage and focus on the technical aspects of the manuscript like the abstract, methods, figures, and data—all elements that you need to understand reproducibility of the research.

Three of the AHA’s technical reviewers answered questions posed by Schultz. They discussed that their role as a technical reviewer is to look at the content of the article to be sure that authors are providing necessary key components such as background and methods details. The best way to do that is to look at the reporting guidelines and to use standard reporting guideline checklists. It’s also important to look at the abstract, make sure there are clear objective statements, look at the methods, and to take a close look at the data. Key things in the methods section are to be sure the researchers followed the appropriate guidelines, such as the ARRIVE Guidelines<sup>1</sup> and the AHA’s Major Resource Table.<sup>2</sup> Other key items include a detailed description of biological materials, how the experiment

was performed, the source of cell lines, characteristics of antibodies, animal baseline characteristics, as well as data collection methods including the equipment. When reviewing figures, the reviewer needs to examine the quality of the materials used to derive the figures, and when possible, look at unedited figures. Overall, a technical reviewer is tasked with a detailed examination to be sure all the information is there for reproducibility, and to be sure there is enough detail to reproduce the experiment in their own laboratory. Schultz also pointed out that the technical reviewers at the AHA often serve as advisors on questions about figures, or new policies that are being considered.

Patty Baskin was the second speaker with a presentation called “Peer Reviewing to Promote Equity, Diversity, and Inclusion at a Journal.” She first discussed an incident in which a personal-reflection piece published in American Academy of Neurology’s (AAN) flagship journal *Neurology* was perceived as culturally insensitive, prompting numerous complaints. The journal retracted the article and removed it from their online site. The incident resulted in the journal’s reevaluating their editorial processes. They took the following steps: appointed editors to review the “physician experiences” section, established a website on diversity topics, provided sensitivity training for editors and staff, updated their style guide to include nonbiased language, increased representation of women and international members on their editorial boards, and appointed Diversity Associate Editors to review for diversity in submitted articles.

The role of the journal’s Diversity Associate Editors is to review papers for appropriate perspectives when particular groups are being described, including papers that touched on sex and gender, race and ethnicity, and people from marginalized categories. They are asked to review titles and abstracts of all papers at the revision stage to be sure there is no biasing language and to review other material, such as podcasts, blogs, etc., as requested by editors or staff.

Baskin interviewed one of AAN’s Diversity Associate Editors, Dr H.E. Hinson, who talked about the logistics of the review process. The review happens at the revision stage. The editors screen the titles looking for human subjects research that examines different groups based



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on characteristics such as sex, gender, ethnicity, and race. The intent is to support authors who may not think about diversity, equity, and inclusion (DEI) rather than to censor their work.

Hinson noted that race and ethnicity and sex and gender are the most common and frequent issues. There are straightforward issues such as outdated terminology, antiquated terms, and improper capitalization of terms. However, there are also more conceptual issues such as using gender and sex interchangeably and ascribing racial differences to genetics. Sometimes authors don't acknowledge limitations in their studies, such as unmeasured social determinants that might undergird racial differences, and the Diversity Editors help authors recognize these issues. Papers are seldom rejected for DEI issues; rather, the editors work with authors to correct biases and limitations, and authors are usually grateful for the help in improving their papers.

The final presentation, "Community Members as Reviewers of Medical Journal Manuscripts," by Dr Ashwini Sehgal, discussed a National Institutes of Health-funded project that examined the use of community members and lay people as reviewers. Manuscripts are generally reviewed by subject matter experts like physicians, researchers, and scientists. However, it is thought that community members might provide useful perspectives as patients and caregivers. There was concern that community members often lack research knowledge, lack an understanding of the scientific process and statistical analysis, and might lack objectivity or have unrealistic expectations. The study examined if it was possible to train and guide community members to provide reviews that are complementary to those provided by scientists.

The objectives of the randomized controlled trial were to determine the usefulness of community reviews, to see what common themes arose, and whether the comments were integrated into the published articles. *Annals of Internal Medicine* and *Annals of Family Medicine* participated in the study from June 2018 to November 2021. The intervention group consisted of one trained community reviewer and multiple scientific reviewers, the control group was multiple scientific reviewers, and all reviews were used by the editors in the decision-making process. Training for 28

community reviewers consisted of a six 90-minute sessions covering study design, inclusion/exclusion criteria, subject recruitment, human subject protections, methods of data collection and analysis, parts of a manuscript, understanding of tables, figures, funding, conflict of interest, the roles of editors vs. reviewers, and writing effective reviews. The study coordinator provided feedback on the reviews—they did not rewrite reviews—and revised reviews were then submitted to the journal.

The study results showed that the usefulness of the community reviews were rated 3.1 by the editors on a scale of 1–5, with 5 being the most useful. This compares to scientific reviews that were rated 3.3 by the editors. Editors were asked open-ended questions on the usefulness of the reviews. Most helpful were community perspectives like consideration of socioeconomic factors, and less helpful was the lack of specificity of changes. Qualitative analyses looking for common themes were conducted on the reviews and four community themes stood out: diversity of study participants (i.e., why was there so little diversity); relevance to patients and communities (i.e., scheduling appointments as a barrier); cultural considerations and social context (i.e., understanding people's social and environmental settings); and implementation of research by patients and communities (i.e., limited time and budgets in schools). There were 55 accepted articles with 138 community comments integrated by the authors in those published articles. Also measured were the appearance of the 4 community themes in the published article. In the intervention group, there were 2.8 themes present, compared with 1.7 themes found in the control group.

Overall, the study concluded that the community reviews were useful because they addressed topics that are relevant to patients and communities, and that community comments are integrated into the published articles. Of course, there are limits and challenges to adoption of this approach, such as training and supervision of community reviewers that require compensation that is generally not available to most publishers and journals.

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# Ask Athena: Editorial Disclosures and Editor Authors

Athena was the Greek goddess of wisdom. Ancient Greeks would visit her temple in Athens to seek answers to their most troubling issues. Modern times are no less complicated, and lacking pilgrimage to a temple as an option, we turn to other sources for advice. This may mean a friend, a therapist, or perhaps... an advice column.

Ask Athena is Science Editor's advice column where you can bring your most challenging questions. Have a problem managing staff? Ask Athena! Struggling with your own performance rut? Ask Athena! Need ideas to make your publication the best it can be? Athena can help with that too. This column will address all questions related to publishing, whether they be about internal office issues or external journal wide challenges.

Submit your questions to [scienceeditor@councilscienceeditors.org](mailto:scienceeditor@councilscienceeditors.org). All questions can remain anonymous, so you need not reveal your identity for sensitive issues. We will attempt to answer them as quickly as we can, and post answers online ahead of print so that time sensitive questions are not delayed.

## Ask Athena: Should disclosures be listed for editorials?

Dear Athena,  
For guest editorials, what language do you use/suggest for a disclosure statement, or is a disclosure not necessary? Would the following be appropriate (as an example) or does some of the wording not apply to opinion pieces (funding, etc.)?

*The authors have no conflicts of interest to disclose.  
None of the authors received outside funding for the production of this original manuscript and no part of this article has been previously published elsewhere.*

Cordially,  
Confused about Conflicts

Dear Confused about Conflicts,  
Thank you for asking this important question. I appreciate you wanting to be sure that disclosures and funding are handled appropriately in your editorials. I recommend erring on the side of caution and including a disclosure statement on every article your journal publishes, regardless of article

Answers to Ask Athena questions are a group effort by members of the CSE Education Committee.



type. If your journal does not have a disclosure policy, I encourage you to review the International Committee of Medical Journal Editors (ICMJE) policy and consider using their form, which can also be adapted to fields beyond the biomedical realm: (<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/author-responsibilities-conflicts-of-interest.html>). The form will help guide authors through determining relevancy for each article.

Likewise, if your author received funding to write the editorial, you should include the funding information. Funders usually require authors to include a statement acknowledging their funding support, and it is important for you to help with author compliance. Most submission systems include an integrated option for authors to easily provide their funder name as it relates to each article they write.

## Ask Athena: How can I avoid editor conflicts of interest with double-anonymous review?

Dear Athena,  
At our journal, we conduct double-anonymous reviews, so the identity of the authors is unknown to the reviewers and vice-versa. However, our editor in chief is still an active

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author in the field, and sometimes submits articles to our journal. What process do you recommend when the editor in chief is a coauthor of a submitted manuscript? Our editor in chief also approves all final decisions, so if an article is recommended for publication by the reviewers, who would approve that decision?

Sincerely yours,  
*Struggling with a Peer Review Question*

Dear Struggling,  
Double anonymous peer review definitely has its benefits, but it doesn't solve every problem, as your question demonstrates. In this case, you are wise to consider how to ensure it is clear to readers that conflict of interest was avoided, and the editor in chief (EIC) did not have a role in the evaluation and acceptance of his own paper.

First, if you are using any of the major manuscript submission systems, you probably have the option to block editors from viewing particular papers. Make sure you are utilizing that feature, so that the editor can't see his paper in the submission system.

Next, as is recommended regardless of the type of peer review, appoint a different editor to oversee any papers where the EIC may have a conflict. That person will oversee the review process, but more importantly, will have the final decision-making power for any paper on which the EIC is an author. If you have a deputy editor or another editor with similar expertise, that person would be a good choice for this role. Again, if you are using one of the common submission systems, this should be a fairly simple matter.

Finally, make sure you make it clear to readers that you have this policy in place. Some journals explain their policy on their website, usually with the instructions to authors. I also recommend coming up with a standard disclaimer to include with any published paper that includes an editor or editorial board member in the author list. It can be a fairly simple statement along the lines of, "Dr. Jones is Editor in Chief of Journal of Important Research. Journal policy recused the author from having any role in the peer review of this manuscript."

These simple steps can help you avoid conflict of interest for the EIC and also assure your readers that the journal has a policy in place to minimize an opportunity for bias in peer review.

### **Ask Athena: How Do I Correctly Apply British vs. American Spelling?**

Dear Athena,  
I have two questions, the answers for which I can't locate in the *AMA Manual of Style*. Should we use the spelling *Programme* or *Program* in the following?

UN Joint Global Programme on Cervical Cancer Prevention and Control

Likewise, should we use *Centres* or *Centers* in the name Directory of Radiotherapy Centres?

—*Looking Across the Pond*

Dear Looking Across the Pond,  
When it comes to English-language spellings of institution names, a widely accepted rule of thumb is to follow the official spelling of that institution rather than impose house style on the spelling. The quickest and most accurate means of determining the official spelling is to consult the institution's website. For the two institutions in question, an online search confirms that the British spellings *Programme* and *Centres* are used in the official names of these institutions—so these spellings should be applied whenever either institution is mentioned, even if your house style is to apply U.S. spelling.

Similar exceptions should be made for published material, both in text and in an end reference. For example, if *The Lancet* article "Study of Mirtazapine for Agitated Behaviours in Dementia (SYMBAD): A Randomised, Double-Blind, Placebo-Controlled Trial"<sup>1</sup> were to be cited in a journal that prefers U.S. spelling, the British spellings *Behaviours* and *Randomised* would need to be retained in the citation nonetheless to preserve the accuracy of content that was formally published in a UK-based journal. Similarly, a citation of the article "The Development of a Standardized Neighborhood Deprivation Index" in *The Lancet* would mandate the U.S. spellings of the words *Standardized* and *Neighborhood* (as opposed to the British spellings *Standardised* and *Neighbourhood*) given that these were the spellings used in the article's original publication in the U.S.-based *Journal of Urban Health*.<sup>2</sup>

Note, however, that the aforementioned exceptions should generally be limited to titles and institutional names within a given article—meaning if your house style requires that you enforce U.S. spelling, you should continue to apply those rules elsewhere rather than apply nonstandard spellings globally to achieve consistency. For example:

This year's *program* will include a presentation by a representative from the UN Joint Global *Programme* on Cervical Cancer Prevention and Control.

The Directory of Radiotherapy *Centres* is at the *center* of a collaborative effort to advance radiotherapy techniques.

Finally, be mindful that the same principle applies to other grammar rules. For example, the *AMA Manual of Style* cites a preference for the nonpossessive form of eponymous diseases and disorders, which means that *Alzheimer disease*



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(rather than *Alzheimer's disease*) would be the appropriate form in a document that adheres to AMA style; however, because the Alzheimer's Association uses the possessive form in its official name, any references to it in that same document should retain the possessive form.<sup>3</sup> Similarly, hyphenation should not be altered in institution names or titles if doing so alters the official name or title. For example, when referencing the AIDS Education & Training Center Program's Non-occupational Post-exposure Prophylaxis (nPEP) Toolkit, *Merriam-Webster* disciples may be tempted to uncouple the prefixes "Non-" and "Post-" from their hyphens; however, the hyphens must be retained to reflect the official name of the toolkit,<sup>4</sup> regardless of whether the unhyphenated forms *nonoccupational* and *postexposure* appear in different contexts elsewhere the same document.

In short: When in doubt about the proper spelling of an entity's name, look to the entity itself.

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# The Story of the JU Fanny Pack

Jennifer Regala

***Once upon a time, in a land far, far away, a magical fanny pack captured the fancy of all the urologists at the most epic medical conference of all time... Join me as I recount how we at the AUA created a strategic marketing plan and leveraged our social media platforms to make our publications shine at our first in-person annual meeting since 2019.***

Since the very first day I started my dream role as the Director of Publications/Executive Editor at the American Urological Association (AUA), I have been looking forward to the day when we could showcase our scholarly publications at the AUA's annual meeting for the entire urological community to see. And how would we get this job done? A combination of a carefully coordinated marketing plan and the tremendous reach of our well-established social media presence.

Because I started in June 2020 during the COVID-19 lockdown, I had the time to get our plan "right and tight," in the famous and beloved words of my boss, Patricia Banks. Our meeting was entirely virtual in 2020 and again in 2021, but in May 2022, I found myself on a Southwest flight to New Orleans to represent *The Journal of Urology*®, *Urology Practice*®, *JU Open Plus*, and *AUANews* at AUA2022. And phew! The wait was absolutely worth it.

Before my tenure at the AUA, our publications did not have a dedicated space at our annual meeting. I set out to change that knowing that our community needed to experience our published research and the individuals behind those articles up close and in person. My first task was to come up with a thoughtful proposal for what a Publications Booth (intentional capitalization) would actually look like and the purpose that it would serve. Based on past experience, I knew I could make our publications shine at the biggest urology meeting of the year. During my tenure at the American Society of Plant Biologists (ASPB), it was clear that publications should have dedicated booth space on the meeting floor. A fond memory from my time with ASPB is dressing like a plant and running around the Welcome Reception posing for Twitter photos. This goofy

behavior, coupled with serious presentation of our content, was instrumental in relationship building with all of our major constituencies. In my opinion, the purpose of a publications presence at any organization's annual meeting is to provide a "warm human touch" to the peer review and production processes. It's important for our communities to understand the humans who make the publications magic happen!

At the AUA, I am fortunate to have a strong executive team and an extremely supportive and trusting boss. They all understand the value of our publications and their integral importance to the AUA and the urological community. To obtain approval for my proposal, though, I needed to explain the "why" of what I wanted to accomplish. The goals were very clear in my mind:

1. To educate meeting attendees about our publications
2. To build on our marketing efforts that our publications are "The Voice of Urology"
3. To make a big splash about our new Gold Open Access journal, *JU Open Plus*
4. To strengthen long-lasting relationships with our community, especially our editors, reviewers, authors, and readers

After coming up with this vision of a Publications Booth that would position our publications as "The Voice of Urology" and getting a green light from leadership, I had access to premiere resources to make planning become reality. It was time to work on the "how"!

The first step was to sit down with our Marketing team to lay out what a Publications Booth would look like physically. I am tragic when it comes to graphics and conceptualization of spaces, so I am fortunate that my work spouse and marketing colleague, Heather Corkin, worked with our designer, Jennifer Kennedy, to create an aesthetically beautiful and engaging space for us in what we call the AUA "Square." Every meeting attendee walks through this space frequently, and we had a prominent location. Heather and Jenn made a beautiful wall highlighting "The Voice of Urology" with a round table for swag and stools placed in front of it. Another wall of our display honored our top peer reviewers. And of course my favorite wall was the selfie station, where life-sized journal covers allowed meeting attendees to capture snapshots of themselves and live tweet/Instagram/TikTok during the meeting using our meeting hashtag #AUA22. Our meetings team worked closely with us on placement and details of what we needed to execute this look.

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*Opinions expressed are those of the authors and do not necessarily reflect the opinions or policies of their employers, the Council of Science Editors, or the Editorial Board of Science Editor.*

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Here's where we get to the good part of the story. THE FANNY PACK. What's a good Publications Booth without some legit swag? I wanted all of our publications to be represented, so I budgeted for cool *Urology Practice*® magnets, *AUANews* laptop stickers, and *JU Open Plus* string backpacks. We had posters of journal covers to give away and free journals and newsletters. The pièce de résistance, though, was for our flagship journal, *The Journal of Urology*®: THE JU FANNY PACK. Even though I'm old, I like to think I still live on the fringe of relevance, and I know fanny packs, once in style, spent some time as the epitome of nerdiness. However, fanny packs have been enjoying a comeback, and I suspected they'd be a hit at the meeting. I started putting out feelers on the fanny pack idea with a poll on my personal Twitter page asking my followers whether we should offer them as a giveaway. This poll was unexpectedly polarizing, with a 50/50 response rate in favor of vs. against the fanny pack. People had FEELINGS—very strong ones—about whether to give fanny packs away or not. Some condemned fanny packs as embarrassing and outdated. Others were excited to get one, with one of our members even saying he'd love one for rounds to use for storage of supplies and snacks. The big response told me I was onto something, so I hit "buy" on a bulk order of fanny packs with JU branding and crossed my fingers.

It was time for more internal AUA collaboration. Cara Freibaum, our legendary AUA Social Media Coordinator and a founding member of the Say Yes to the JU Fanny Pack Club, worked with me leading up to the meeting to come up with a plan to capture all the publications events at AUA2022. The fanny pack was an integral part of that planning. When we arrived at the meeting, though, all expectations were exceeded. The fanny packs were a massive hit. We stored them under the counter and relied on social media to spread the word. They became an #IYKYK (if you know you know) phenomenon. Photos on social media carried the message that the fanny packs were out there, and we had countless visitors to our booth asking for one. *And that's where the cost of the fanny packs paid off.* Every visitor stopping by the booth for a fanny pack got to know us and learn more about our publications before we'd hand one over, and we made so many connections. We learned that some of our fanny pack wearers could sport them on the diagonal, whereas others (like me) had to stick with the traditional waist look. And the fanny packs worked with AUA blues, business wear, and dressed-up gala outfits. We also enlisted our Online Content Editors and other Editorial Board members to amplify the excitement on Twitter. And you know I couldn't resist that fun, tweeting and retweeting throughout each day of the meeting (Figures 1–3).

I know the fanny pack sounds silly, and I promise you we had a lot of serious business to attend to at the meeting,



**Figure 1.** (left to right) Dr Christina Ching, Editorial Board member, *The Journal of Urology*®; Betty VanDaniker, Publications Administrative Manager, American Urological Association; Dr Stacy Tanaka, Editorial Board member, *The Journal of Urology*®; and Jennifer Regala.

too (think two Editorial Board meetings, one Publications Committee meeting, a reception honoring our top reviewers, and more). But that fanny pack unified our target audience and were invaluable conversation starters.



**Figure 2.** The first ever American Urological Association (AUA) Publications Booth took on a life of its own! Editorial Board members, authors, and reviewers brought *The Voice of Urology* campaign alive with their enthusiasm for the world-class research published by the AUA.



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**Figure 3.** Dr Rena Malik, Editorial Board member of *Urology Practice*<sup>®</sup> and Online Content Editor for the American Urological Association's scholarly publications, shows off her diagonal wearing of the legendary JU fanny pack.

What made this AUA2022 publications presence work was a mixture of careful preparation and an organic, fluid vibe that built a buzz around our journals and connected back to the larger meeting. I even put together a goodbye TikTok that played on the AUA main Twitter because it was so hard to leave the meeting and the wonderful connections we made within the community. (Note to self: write my next column, "I Made a Scholarly Publishing TikTok So You Didn't Have To" and send it to Jonathan Schultz on time so he doesn't fire me...)

The fun will not stop with AUA2022, though. We are already back at AUA HQ in Linthicum, MD, collaborating on next steps and how to capture and even accelerate the energy and excitement we built around the publications at the meeting. We have so much passion and momentum internally and externally, and we are already planning for next year.

*How Can You Make Your Journals Stand Out at Your Organization's Annual Meeting?*

1. Have a plan! Whether your publications have a presence at your meeting already, or you're looking to make your

case, don't show up if you haven't planned your goals and what your presence will be well in advance. Ideally, you need to begin planning at least 6 months before show time.

2. Earn the buy-in of your peers. It's not good enough to say, "Our publications need to be at this meeting." Build your case. Think about what you're trying to accomplish and why the presence of your publications will be additive to meeting attendees and to the overall mission of your portfolio.
3. Be ready to work hard. Should you have fun doing it? Yes. Should you be passionate about it? Yes. Will it be easy? No. You have to be ready to dazzle-dazzle to make your publications sparkle like the stars they are.
4. Go with the flow. Administrative details need to be well-considered, but you won't know what the meeting and the crowd will be like until you get there. Be ready to change plans and add/subtract from your programming as necessary.

*How Will I Improve How Our Publications Show up for AUA2023 in Chicago?*

1. Involve our editors. Our Editorial Board members want to be a bigger part of our presence, and I plan to take them up on it. We will have "Office Hours" where Editorial Board members will sign up to work the booth with me and get to know folks stopping by plus reunite with those we already know well.
2. Don't overcommit. A big mistake I made this year was trying to do too much for the staff we had available to help us in New Orleans. I plan to be much more realistic about this aspect next year.
3. Do a better job of cross-promoting other AUA programming with the publications. I plan to begin collaborating on this improvement with my colleagues ASAP.
4. Find the next fanny pack. I am already on the hunt for the perfect buzzworthy swag and am looking to bring different fanny packs next year in addition to some new, fun finds.

*If you have success stories from your own experiences at meetings, especially if you have great ideas for swag we can use next year, reach out to me! You can reach me on Twitter, @JenniferAREgala, and by email, JRegala@AUANet.org. Let's crowdsource solutions as much as we are able!*

# Steering Clear of Providers

**Stacy L Christiansen**

Person-first language is a hallmark of conscientious, professional writing. Most writers and editors of scientific content (especially in medicine and related fields) are familiar with terms that empower patients or do not trivialize or label them. Instead of “asthmatics” we write “patients with asthma”; instead of “the aged” we write “elderly patients” or “older people.” The recent update to inclusive language in the *AMA Manual of Style* also notes this approach for racial and ethnic terms: instead of “Blacks and Whites” we write “Black and White individuals” (after clarifying the categories used in the study and if people were able to self-identify their race and ethnicity).<sup>1</sup>

Yet this approach to using terms of respect is not limited to patients or study participants: terms applied to health care workers should also be chosen with the same care. For example, the terms “orthopod” (orthopedic surgeon) and “osteopath” (osteopathic physician) are considered jargon.<sup>2</sup> One term in particular has engendered a vigorous response: “provider.”

## What’s Wrong With “Provider”?

At first blush, one might think there’s nothing inherently bad about the word “provider.” According to Merriam-Webster, a provider is someone who provides; in other words, supplies something or makes it available.<sup>3</sup> Seems accurate enough, no? We’ve all seen documents that discuss our “primary care provider (PCP)” and “preferred provider organization (PPO).” In the cases of insurance documentation, billing codes, and the like, “provider” is a standard term with a very specific, sometimes even legal, definition. In the Health Insurance Portability and Accountability Act (HIPAA), for example, a provider is a “person or organization that furnishes, bills, or is paid for health care.”<sup>3</sup>

In clinical or research content, however, it is not specific enough. “Provider” can mean a health care professional, a medical institution or organization, or a third-party payer. It can be confusing especially in content that discusses a number of “providers,” including both individual clinicians and entities such as hospitals.

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*Opinions expressed are those of the authors and do not necessarily reflect the opinions or policies of the Council of Science Editors or the Editorial Board of Science Editor.*

Another argument for avoiding “provider” is its distance from the inherently professional nature of health care. Because provider is derived from the business side of things, such as insurance and billing, it is often viewed more as a commercial term, not one to describe someone who cares for patients. As noted in an editorial by West and colleagues, “provider has never been an occupation or job title in medicine” so it is not proper to use it to describe health care professionals. Additionally, these authors note that the term provider applied to clinicians “communicates lack of respect for the individual, their training, and their expertise.”<sup>4</sup> And if health care professionals are considered providers of medicine, that must mean patients are receivers, or consumers. Those labels do not speak to the trust inherent in a healthy patient–clinician relationship, especially as patients have taken greater roles in shared decision-making.

“Provider” as a generic term is troubling to some clinicians, even demoralizing. As noted in a Viewpoint by Beasley and colleagues, the use of “provider” is “especially problematic in the increasing number of specialties that make use of team-based care, in which each member serves a special role and makes a much-valued and often unique contribution to care.”<sup>5</sup> It can lead to confusion and distrust, especially when it is unclear what each individual’s responsibilities and competencies are.

## Policies and Recommendations in Practice

A number of organizations support the avoidance of “provider” applied to health care professionals. The American Medical Association (AMA) adopted an official policy that considers the “generic terms ‘health care providers’ or ‘providers’ as inadequate to describe the extensive education and qualifications of physicians licensed to practice medicine in all its branches”<sup>6</sup> and prohibits the use of the term in official AMA publications. Other groups that align with this position include the American Academy of Family Physicians<sup>7</sup> and the American College of Physicians.<sup>8</sup>

This may seem like much effort to avoid a small, even handy, word. But as writers and editors, we know the value of even a single word, how much it can clarify and elucidate, or how much it can damage. What names people are called matters a great deal to them, especially where their professional identities are concerned (e.g., no writer wants to be a “hack”).

So if “provider” is out, what terms are acceptable? As noted in the *AMA Manual*, it is better to specify the type

## CONTINUED

of professional (e.g., physician, nurse, pharmacist, dentist).<sup>2</sup> If there are many types of individuals included, “health care professionals” or “clinicians” are acceptable terms. Just as patients deserve person-first language, health care professionals should receive the same respect in the words used to describe them.

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