Setting the Record Straight: Publishing Errata in the Print and Online World

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To err is human, but to really foul things up you need a computer.

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Many readers of the scientific literature still prefer looking at a printed journal. There is something comforting and calming about thumbing through the pages. The print journal is portable and is easy to throw into a briefcase to read while traveling or waiting at the doctor’s office. It is concrete and tactile. It arrives in the mail on a regular schedule. It is a medium with which everyone, regardless of age, is familiar. The printed journal is not going away. (At least, not yet.)

Having an online presence is required in today’s marketplace, and there are certainly many benefits of online publications too. Articles can be published more quickly in the online environment (although not as quickly as some might think; peer review and editing are still required). Finding other articles on the same topic is made easier through searching online databases, such as MEDLINE. Videos can be presented online. Readers can provide immediate feedback through online comment boards and discussion pages. Interactive features, such as quizzes and continuing medical education, can be produced online. And with the advent of portable readers such as the iPad and Kindle, online delivery is no longer saddled to your desktop or laptop computer.

There are benefits to print, and there are benefits to online, and as long as both versions exist, we must address the special challenges of simultaneously publishing print and online versions of the same journal.

Print Moves Online

Putting a print journal online is an ever-changing process. It brings new conundrums on a weekly, often daily, basis. The environment is changing to be more Web focused, but it is a difficult transition to make after publishing on the printed page—in the case of some journals—for more than 100 years. Our brains are mostly hard wired for “print mode.” And sometimes it feels as though the technology changes so rapidly that we tread water just to stay afloat. We try to plan ahead and consider every ramification of editorial decisions, but it is impossible to anticipate all the challenges that come with putting on the Web features that have traditionally been handled in print. There is probably no journal out there that has not experienced these growing pains. (Some journals are already published online only with no print version at all; I imagine that those journals have their own special growing pains to deal with.)

One feature that uniquely exemplifies the challenges of publishing in print and online is the correction notice, or erratum. Figuring out how to handle errata online is like trying to hit a moving target. In our efforts to keep up with the online world, the corrections process can become muddled. I spoke with Lou Knecht, deputy chief of the Bibliographic Services Division of the National Library of Medicine (NLM), and she made an excellent point about corrections: “There hasn’t been a collegial discussion where we ask ourselves, ‘Are we doing the best thing?’”

I contacted Knecht to see whether we could be doing a better job of handling errata in our own publications department. I knew I had called the right person when she opened the conversation by telling me that she “love[s] this topic.” Corrections are something that librarians and indexers think about. (I admit, I think about them too.) Librarians cite literature, and indexers index it. Making sure that the record of the literature is correct is important to them, as it should be to all of us.

I should mention that some types of publishing violations are more serious than errata, such as errors in financial disclosure, duplicate publication, or a retraction. Those types of errors are typically best handled by being published either as comments or in a journal’s correspondence section and listed in the table of contents. A journal editor can seize such violations as opportunities to educate authors about what constitutes serious infractions, how they might occur, and how to avoid them. In other words, they warrant more emphasis than a correction notice provides.

How MEDLINE Works

The first thing I needed to find out from Knecht was specifically what MEDLINE needs to index a correction. (MEDLINE is NLM’s bibliographic database.) A correction notice needs to be published in a manner that is citable, for instance, with year, volume and issue numbers, and a page number (traditional pagination) or document number (electronic pagination). A document number could be an electronic page number or page range, which is helpful because it gives the reader an idea about article length (for example, e1-e3). It could be a DOI (digital object identifier); these should never change once registered, but in some instances (such as mergers or acquisitions of publishers), DOIs have been changed and, thus, in rare cases are not reliable. An article identifier could also serve as the document number. According to the National Federation of Advanced Information Services “Best Practices for Publishing Journal Articles” (http://www.nfais.org/page/35-best-practices), an article identifier should contain at least six alpha and/or numeric characters and no punctuation, should not be surrounded by parentheses, and can be either random or
constructed to have meaning. The Best Practices nicely sums up (on page 16) the differences between a DOI and an article identifier: “Some might question why a new identifier is needed when a DOI is assigned to the article. The DOI stands alone; its function is to serve as a persistent link to the article. An article identifier, on the other hand, cannot stand alone; its only function is to serve as a proxy for pagination. Consequently, it can be mapped to the table of contents to provide context for the article.”

If publishers choose, they can use a numbering sequence for errata only. As long as corrections are presented with a citable format and are listed in some fashion as part of a journal’s table of contents, they will be noticed by the NLM quality control staff and will be processed.

“Every publisher has a creative way of doing the same thing,” Knecht said, making it clear that a consensus has not been reached on best practices for publishing errata.

NLM indexes more than 5400 journals for MEDLINE, which is housed within PubMed, and some additional citations, such as ahead-of-print articles, are available there. Many of the journals are what they call hybrids—they exist in both print and online worlds. Of the 5400 journals indexed, 3600 are indexed from the online version. Knecht described indexers’ physical workstations. They have dual monitors, one screen for their online indexing system and one for the online text of a journal. If a journal is not indexed from the online version, the indexer has a print copy to flip through. There is an idea that the print or online version of a journal is indexed, search the journals database at http://www.ncbi.nlm.nih.gov/journals and type in the name of the journal; click on the full title and look at the Version Currently Indexed.

To summarize, to become a part of the permanent MEDLINE record, a correction notice needs to catch the eye of the NLM quality control staff, who work with the indexers—all busily clicking away at their dual-monitor workstations.

What to Include in Correction Notices

We went on to discuss specifically what should be included in a correction notice. Knecht stated that practices used in the print environment must translate to online. A clear, detailed description of the error should be provided; otherwise a reader is left wondering what has been corrected. The error can usually be summed up in a sentence—even if it’s a typographical error, knowing what error occurred is helpful to readers, librarians, and indexers. If a table or figure needs to be replaced, what’s different in the new table or figure should be explained. In some instances, however, an error is so pervasive (for example, incorrect data points that do not affect the outcome of a study) that it is too cumbersome for description and the entire article must be replaced with a correct version of the article. Again, the reader—and indexer—must be made aware that the version of the article that they are looking at differs from the original article and how (or why). In addition to a description, the online version of the article should include the exact date on which the correction was made.

Article Versions

An important difference between the traditional print journal and the online journal (or the online version of a print journal) is that an article can have more than one version online. Typically, an article will be available as both full-text HTML and a PDF showing the traditional print layout. If an erratum is published, both versions should be corrected for errors; otherwise multiple versions of the same article exist—a nightmare scenario for librarians and readers. An acceptable practice used by some journals is to intentionally post several versions of an article online, managed by a content management system that provides links to earlier versions; this is OK as long as the latest version is the one always displayed for readers. NLM tries hard not to delete citations from MEDLINE. If more than one citation exists for the same article, there is a chance that the wrong (incorrect) version of the article will continue to be found, and this is not desirable. (NB: This type of “versioning” differs from publications of the Cochrane Library, which continuously publishes updated systematic reviews on specific topics that are indexed and linked on MEDLINE.)

Ahead of Print

It is common practice to publish articles online before they are published in the print journal; this is referred to as ahead of print (AOP). There are several reasons for this shift. One reason, perhaps surprisingly, has to do with a journal’s impact factor. If an article is published online AOP, citations to it can begin accruing immediately. Thomson Reuters, the company that publishes journal impact factors in its annual Journal Citation Reports, does not count an article as published (that is, it does not appear in the denominator of the equation used to calculate impact factor) until it appears in print. So there is a period, typically of several months, for an article to be digested by authors and readers; by the time the article appears in print, it’s already being cited. That potentially can help a journal’s impact factor. Another reason for online publication AOP is to provide a faster turnaround time for authors and to establish primacy of their research, which they appreciate. And if the technology is available for express publication online AOP, a journal publisher has the option of moving a “hot” topic more quickly to press. NLM has a citation available in PubMed for AOP articles as soon as they are published, and a citation is submitted to NLM by the publisher with a link to the full text. Once the article is printed, the citation is updated with a replacement record that includes the volume and issue numbers and the pagination.
Knecht mentioned that NLM has noticed enough AOP errors, including retractions, to be concerned. Quality control and peer review must not be sacrificed in the rush to quickly publish an article online, nor should journal reporting policies be compromised. To demonstrate how more errors and compromised reporting of these errors seem to be occurring in connection with AOP articles, we can look at PubMed data on retractions. A PubMed search for retractions of AOP articles (withdrawn [ti] OR retract [ti] OR retracted [ti] OR retraction [ti] pubstatusaheadofprint) revealed 489 articles since June 2002, or roughly 59 per year. (That number also includes “false drops”, articles with some version of the word retraction in the title used in a different context, such as “retraction of acute retinal detachment”.) Compare that with 39 AOP retraction notices published in fiscal year 2009 (October 1, 2008–September 30, 2009), representing only retrievals of AOP citations that were followed by retraction notices. If a publisher has updated an AOP citation in PubMed without publishing a retraction notice, the retraction has not been captured. Given the search result of 489 articles, how many more articles and their citations are simply disappearing because publishers are not following NLM policy for retaining the articles and hence the citations? (The Ahead of Print Withdrawn Policy can be found on the NLM Web site at http://tinyurl.com/2czaxzl.)

**Best Practices**

In thinking about all the variables in online and print publication, I wondered whether a printed correction notice—the kind that’s been published for over 100 years—is still necessary. If the goal is to correct the record and the record is online, why put it on paper? What does a reader do with a printed correction notice? Is print still the most useful medium for correcting the record? Maybe not, but the print-only reader must be considered, of course.

Newspapers have had to adapt more urgently to the online world, and their model for corrections is rather straightforward. A good example is The New York Times. At NYTimes.com, a correction notice appears on the page with the (corrected) article, and an index of corrections resides elsewhere on the Web site (http://www.nytimes.com/ref/pageoneplus/corrections.html). Newspapers do not have tables of contents, however, so correction notices in scientific literature would still need to be listed in journals’ tables of contents to be processed by NLM.

Knecht is a member of the National Information Standards Organization working group for best practices for e-journal publishing, and she plans to discuss at an upcoming meeting subjects that deserve guidance, such as how to document corrections in the online environment. In the meantime, I will continue to think about corrections and the best, most useful way to present them to readers. I would love to hear from Science Editor readers and find out how your journals handle errata. Please watch the Science Editor blog for a posting on this topic and feel free to contribute to the discussion.

For a brief overview of how different types of corrections can be handled, I invite you to visit the AMA Manual of Style Web site and read the Editor’s Tip, “Corrections in Print and Online” (www.amamanualofstyle.com). But I should add that our corrections procedures are being revised . . . again.