Harnessing the power of Web 2.0 for medical writers

by Juliet Roberts

Even if Web 2.0 has crept up on you almost unknowingly, it is probably changing the way you work. Although Web 2.0 sounds like a spanking new second-generation Internet (like a second-generation drug), it is really a catch-all term for various concepts and trends that are changing the way we use the Internet. There are a variety of definitions for Web 2.0 but, essentially, it means that the Internet may not have changed so much as the way we use it—we have moved from 'passive' browsing to 'active' participation through collaboration and engagement with user-generated content on the web platform. Emergent uses include: social networking, image-sharing, production of Wikis, Podcasts, blogs, and the practices of tagging and commenting.

This is not intended to be a definitive article on how Web 2.0 affects medical writers—we will all use it differently and the medical communications/PR writers will probably access a different range of Web 2.0 services and applications than regulatory or grant writers. My background is in medical communications so this article will cover appropriate Web 2.0 services for this area but I hope it sparks further articles on how other writers are using Web 2.0. It is a rapidly moving area with tremendous potential so, with much to cover, this article will, necessarily, run at a gallop and provide only a fleeting overview of some potentially useful services.

From Web 1.0 to Web 2.0

The Web is becoming a more collaborative animal, where information is shared and distributed, and where views, comments and opinion are on the ascent. The informational content remains—so e-mail, PubMed and similar on-line information resources remain valuable web stalwarts for medical writers. But now you can post your bibliographies on social bibliographic sharing sites, like Connotea (from the Nature Publishing Group) and CiteULike (see box). Some sites even allow you to import and export via your own bibliographic software like EndNote. The advantage of such sites is that you see what others are reading and learn what they know about the studies/references via their tag notes of shared references. These tags provide a way of bookmarking (and tracking popularity) of websites and blogs. Some publishers include icons at the end of articles so you can bookmark very easily. Another way tagging is being used is by on-line patient communities (like patient support groups found at www.patientslikeme.com) to provide their own ranking of the quality of on-line health information.

Examples of social bookmarking sites/social citation sites:

Research	**Images**
www.CiteULike.org	www.Flickr.com
www.Connotea.org	**General**
www.bibsonomy.org	www.StumbleUpon.com
Business	Faves.com
www.Connectbeam.com	Delicious.com
	(formerly del.icio.us)
News	Simpy.com
www.Reddit.com	
Digg.com	**Patient information**
www.Newsvine.com	Patientslikeme.com

Web 2.0 helps with working from home

As medical writers begin to work from home more often, useful Web 2.0 services include on-line classrooms for training purposes or on-line web conferencing, which allows simultaneous reviewing of documents from remote locations. Although most writers within companies have been used to remote server access for some time, now freelancers can take advantage of affordable, secure remote access with services like GoToMyPC and Back to My Mac or Apple Remote Desktop. The alternative is to store all your office work online, on a secure server free of charge, with a service like www.Zoho.com. When working remotely and without access to a dedicated ftp site, files too large for email can now be sent by trusted commercial sites like www.yousendit.com or http://goaruna.com/.

Health services and Web 2.0

Health services are also beginning to embrace Web 2.0. On-line medical record services like Google™ Health (https://www.google.com/health) or Microsoft® Healthvault™ >>>

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(www.healthvault.com) are being touted as a way of improving health through empowering patients by helping them make informed decisions, and this is one of the options President Obama is looking at to update the USA's paper-based system. Another example of the applications of Web 2.0 is a virtual clinic in SecondLife, set up and staffed by real Spanish clinicians, for shy young Iberians who would rather discuss emotional and sexual issues in a Web 2.0 environment (for more information, see http://www.guardian.co.uk/technology/2008/may/10/secondlife.spain).

The value of online communities

Social networking (online communities of people with shared interests) is being used to promote healthcare in inventive ways. For instance, in the US, Johnson & Johnson/McNeil has launched a group called 'ADHD Moms' on Facebook so that they can listen directly to patients (and their guardians) who use their products. Of course, similar sites could be used to create disease awareness by mobilising patients, as demonstrated by Gardasil's Facebook page (Take a step against cervical cancer), which has over 100K members. In the UK, social networking sites used by teenage girls (www.habbo.co.uk and www.lolasland.com) were used to place Government advertisements for HPV vaccination.

Well-organised professional networking sites for the healthcare community, including the UK sites www.doctors.net.uk, www.pronurse.co.uk, the international http://doc2doc.bmj.com/ and the popular German site www.dooox.de, which was established by specialists, are also appearing. With the latter, as well as on-line chats, medical doctors and other professionals can access on-line tutorials, films and Podcasts.

What next for these professional networking sites? Well, one scenario is expansion with pharmaceutical industry funding, as happened in the US with www.sermo.com. After 2 years of independence, Sermo hooked up with Pfizer. Of course the direct access to doctors and potential for building professional relations is valuable for Pfizer.

Blogging and Tweeting

If you want to tap into the medical and scientific zeitgeist, another way is to subscribe to relevant blogs (originally 'weblogs' were personal commentary and opinion sites, similar to on-line newspaper columns). Examples include Ben Goldacre's www.badscience.net and Hungarian medical student Bertalan Meskó's http://scienceroll.com (which focuses heavily on Web 2.0 and medicine). The reciprocal arrangement may also be productive—your own (or your client's) blog could inform others and be used to disseminate chosen tidbits of information. The useful blog statistics provide instant readership data for measuring the efficacy of your blog campaign.

Blogging is being complemented by microblogging services (limited to posts of 140 characters), like Twitter.com, which can be done to or from computers or mobile phones. For a summary of some of the health applications for Twitter try this link (http://tinyurl.com/6rutq2). An example of where the immediacy of Twitter can be important includes the almost instant support for patient compliance programmes (such as, giving up cigarette smoking).

Marketeers have been quick to leap onto the Twitter bandwagon (some potential marketing applications of Twitter are outlined at: http://tinyurl.com/5vxyax), including syndicating news stories, publicising events, and canvassing followers for their ideas/experiences. Maybe writers can now hop on Twitter too, 'follow' each other and swap tips (useful websites or breaking news, such as on the experimental Twitter at: http://twitter.com/Renshaw01).

I did a quick test to gauge how easy it was to start a blog, feel free to join up at http://medicalcommunicators.ning.com/

For the purposes of this article, I carried out a quick and dirty test to gauge how easy it was to start a blog (http://renshaw01.wordpress.com/) and a linked networking site (complete with forum, feel free to join up at http://medicalcommunicators.ning.com/) with the aim of seeing what would ensue. Well, although no technical genius, I managed to set up the sites and the combination with Twitter helps drive traffic to the blog.

Youtube and patients

The direct-to-consumer advertising permissible in the US means that pharmaceutical companies can use Youtube channels to directly target patients. AstraZeneca's asthma channel and the companion website myasthmastory.com is directly calling for patient testimonial videos and SanofiAventis's diabetes channel (with the website goinsulin.com) also features testimonial videos. Johnson & Johnson take a more generic approach: http://www.youtube.com/user/JNJhealth. Outside the US, Pfizer's UK channel appears relatively inactive http://www.youtube.com/user/PfizerUK.

Using news aggregators and rss feeds

So alongside 'traditional' sources (like journal articles), social networking, Twitters, blogs and other Web 2.0 services carry potential value for monitoring 'noise' around par-

ticular areas of interest, such as drugs, medical devices and therapy areas. To avoid visiting multiple websites, several times a day to keep tabs on new developments, newshounds use a news feed aggregator to instantaneously download, in one location, a range of media, including news feeds (subscribe by clicking on the orange rss button), current contents of journals, regular PubMed searches, and new blog or Twitter postings from various sources. There are several aggregators available to download free on the Internet. Your choice of aggregator will depend on your computer's operating system, browser and preferred format, among other factors; visit www.aggcompare.com for an overview.

To get up to speed quickly on rss and news aggregators, try reading the www.journalism.co.uk website's 'How to' articles, such as 'How to: use rss and social media for news gathering' and 'How to: tame your rss sources using feed rinse'. The feed rinse is important because, with a few key words you can filter out extraneous information. That said, no doubt some agencies and allied companies are already producing bespoke news feed aggregators for clients to monitor noise surrounding particular drugs, devices and therapy areas, or the efficacy of particular campaigns. If, on the other hand, you would like a ready-made medical news aggregator, try www.medicalcavity.com or www.webicina.com (you have the option of personalising the journals from which you receive feeds on Webicina).

For a retrospective view of your area of interest, www.medworm.com searches out past and archived rss feeds. MedWorm is also useful for disseminating information or advertising events through rss feeds (there are some restrictions on what information they will accept).

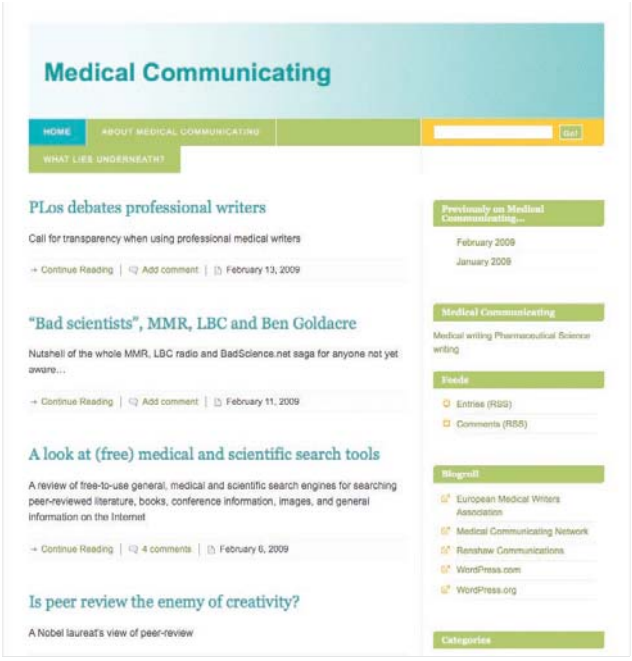
Podcasts

Keeping up-to-date can be eased with Podcasts and videocasts. For instance, you can subscribe and download *The Lancet* and *New England Journal of Medicine*'s Podcasts to your ipod or mp3 player and listen while you are at the gym, in the car or on the train. The uses and potential uses of Podcasts are many; other examples include Podcasts of interviews with the movers and shakers in the US Pharmaceutical sector in Pharma Marketing Talk, www.pharmavoice.com and www.futurepharmaus.com.

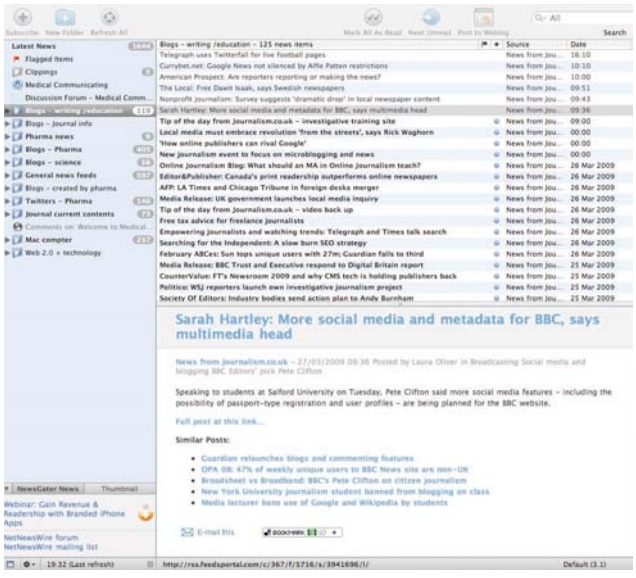
Educational applications of Web 2.0

Undoubtedly, e-learning has added another dimension to distance learning and Continuing Medical Education courses, with websites offering downloadable course material and on-line quizzes, for instance. Web 2.0 steps the game up a notch, enabling a host more services like CME Podcasts, webcasting/video streaming and virtual dynamic patients. Writers in the CME environment will know more about the changes to their way of working brought about by Web 2.0. I look forward to reading about their experiences.

Higher education is already using a mixture of traditional lectures, seminars and practical work with collaborative learning in Web 2.0 social network-type forums and, perhaps soon, in second life, virtual worlds (for an overview of how this might work for medical students, visit http://tinyurl.com/bjzgkg). As medical education changes so, inevitably, will the way medicine is practiced and this is bound to have an impact on medical writers. The scienceroll blog provides a slide show suggesting how medicine may change as Web 2.0 becomes more entrenched—he calls it medicine 2.0 (http://scienceroll.com/2008/02/17/medicine-20-at-home-again/).



Whether medical Wikis (Wikis are collaboratively produced web pages that allow users to contribute and modify content, exemplified by the collaborative encyclopaedia Wikipedia) will contribute to medical education remains to be seen. Examples of this type of Wiki include Dr Wiki (www.askdrwiki.com), www.ganfyd.org and the newly launched Medpedia.



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Browse more efficiently...

With the increasing importance of online resources, medical writers could spend more time on-line and therefore tools that make searching easier and faster are likely to be a bonus. Rather than staying with PubMed, experimenting with different search strategies and engines could pay dividends by improving your search capabilities and efficiency; Emerging Technologies Librarian, Patricia Anderson has some tips in a slide show at: http://tinyurl.com/65exac. For a list of useful search engines, visit http://renshaw01.wordpress.com/2009/02/06/a-look-at-free-medical-and-scientific-search-tools/.

Most search engines will allow you to set the preferences so that results are opened in a new window. This saves having to click back to see your original search (and the danger of losing track of it if you've clicked through several screens).

Are you using the fastest browser for your operating system? An eye-opening comparison of the speed of different browsers, including Internet Explorer, Safari, Firefox and Opera, is available at: http://tinyurl.com/63tw7 but be aware that this comparison is no longer updated. Unless you get very seasick, plugins like Cool Iris (www.cooliris.com) can speed up browsing by adopting a cinematic method of scanning through images. Cool Previews (www.coolpreviews.com) is probably of greater use to writers. With this plugin, hovering your cursor over a link provides a quick preview of its content, which avoids clicking through unnecessarily.

You could also try making your own personalised home page with all your web favourites as 'flakes' (small, movable versions of the webpages), which can be shared with a community. This could be useful within companies or departments to share useful websites. An example is the collection of pharmaceutical industry news and blogs at: www.pageflakes.com/pharmacentral.

A health warning

Although Web 2.0 offers exciting possibilities and a more personable relationship with the Internet, it should come with health warnings. Compared with the pre-Web 2.0 Internet, it is more about people (after all, the term 'social media' was coined to encapsulate some of the Web 2.0 and mobile-based tools that allows the sharing of information and its subsequent discussion among groups of people). As a result, much of the new information disseminated through Web 2.0 services is opinion and comment, and could be biased.

Obviously, many blogs and Tweets are opinion, nevertheless, they can be useful for sharing information about new studies and sources of information. However, for most copy produced by medical writers, the underlying sources need to be tracked down and verified. In addition, although it is simple to drag or grab images and tables of data from a website or blog and drop them into new copy or a web page, writers need to be aware of the danger of infringing the copyright of the original publisher.

And what about complying with guidelines, like ABPI and PhRMA? Would feeding RSS links for a medical educational website into Twitterfeed or a Friendfeed account be considered as educational dissemination or promotion? The regulations are likely to lag well behind developments in Web 2.0, so no wonder pharmaceutical companies are cautious. However, if you think Web 2.0 is too dangerous for pharma, ask a Pfizer employee about Pfizerpedia. This is Pfizer's internal, company-wide, user-generated Wiki of R&D information, directories, discussions groups and databases. It enables communication and sharing of information in a global company between people who might never have got together and who may never meet in person. As a result of its success, Pfizer is now apparently considering a Pfacebook social network.

Endline

I am aware that this article has merely flirted with Web 2.0 services. Innovative medical writers are probably already devising wonderful ways of using Web 2.0 to research and communicate about medicine and science, which are at the far reaches of my imagination. I admit to being a Web 2.0 amateur who is still studying—for me the best way to get to grips with Web 2.0 is to use it and adapt it to my needs (if you want to learn more, try following some of the links in this article). Finally, my challenge to other, more informed medical writers is for you to provide your take on Web 2.0 so that we can learn from each other too.

Juliet Roberts
Medical writer & editorial consultant (Freelance), London, UK.
juliet.roberts@renshawcomms.com

Medical writing tips: Tables, Results and the Discussion

Tips on presenting data in tables, and writing the results and discussion sections manuscripts can be found in recent articles published by the *CHEST* journal in its Medical Writing Tip of the Month section. Access to the section is free. See http://www.chestjournal.org/cgi/collection/mwt