

© The Authors. This article is provided under the following license:  
Attribution-NonCommercial-NoDerivs 3.0 Unported (CC BY-NC-ND 3.0),  
<http://creativecommons.org/licenses/by-nc-nd/3.0/>

Submitted: 2 January 2011, accepted: 9 September 2011, published: 10 December 2011

## **Online medical content curation and personal time management with Web 2.0: an exciting era**

**Bertalan Mesko, MD**

Managing director of Webicina.com

Correspondence: Bertalan Mesko, MD; Managing director of Webicina.com, E-mail: [berci.mesko@gmail.com](mailto:berci.mesko@gmail.com)

### **Abstract**

The recent increase in the number of online medical resources has raised important questions about content curation on the World Wide Web and the importance of time management tools and applications used in medicine and healthcare. Content curation is crucial at a time when patients and their doctors are searching more online but the majority of health resources are considered medically unreliable. The value of crowdsourcing and time management tools that can save time and effort for professionals is demonstrated.

**Keywords:** Internet, content curation, time management, Web 2.0

### **Introduction**

The number of users seeking medical websites and health information online has been growing rapidly in the last few years [1]. Over 60% of Americans alone have searched for diseases, symptoms, or treatments [2]. Alongside this, the web usage of medical professionals is also growing [3]. With new web tools and applications, it is not only communication between patients that has gone through significant changes (e.g. Patientslikeme.com), but communication between medical professionals has become faster and more efficient, too, providing different opportunities depending on the particular medical specialty [4].

This article discusses the importance and the forms of online medical content curation as well as some time management tools and the advantages of crowdsourcing, which can save time and effort.

Although these opportunities seem to be obvious [5], judging the quality of medical online resources is still a crucial issue. Basically, it has two options: 1) learning the process of assessment, which takes years and a lot of effort; or 2) using online aggregators that feature resources selected by professionals and highlight the reason for inclusion. Currently, there is one free service worldwide curating social media by covering

over 80 medical topics in over 17 languages, Webicina.com (Figure 1).

Other solutions that aggregate medical content online but not social media include Faculty of 1000, a post publication peer-review platform where Faculty Members can evaluate and rank particular papers published in the biomedical field; Medpedia, the medical alternative to Wikipedia; Health on the Net Foundation, a non-profit organization, and Medworm.com, among others (Table 1).

### **Online medical content curation**

Before 2008, whenever I tried to find a good diabetes blog or quality cardiology resources, it took a lot of time to find them — not because I did not know how to search properly, but because it really takes time to learn how to assess the quality of medical websites. In this respect, the fields of politics and sports are totally different from medicine and healthcare. So I thought there should be a service that curates medical resources for patients and doctors — for free — and by using professionals and not algorithms or search engines. Webicina was launched in 2008 and now has over 3000 curated resources, from blogs and podcasts to wikis and mobile apps, focu-



**Figure 2.** A new era in the relationship between medicine and the Internetg HCT is improved with bone marrow as the sole source of allogeneic hematopoietic cells

Although not all patients and not all doctors are going to be web-savvy, today's trend seems to point in the direction of more and more patients becoming so-called e-patients who strategically use the Internet in their health management. But in my experience, the number of web-savvy doctors is not growing so quickly, so there is a huge gap that should be filled somehow. I try to help this process in 2 ways: 1) Webicina offers free services to professionals about using the Internet more effectively and efficiently, and 2) I teach medical, dentistry, pharmacy, and public health students at my uni-

versity about using social media in medicine. This is the first accredited course of its kind in the world.

versity about using social media in medicine. This is the first accredited course of its kind in the world.

Webicina has thousands of collaborators from around the world, and these are medical professionals as well as empowered patients. Anyone can join this project. Usually, we come up with a selection of social media resources focusing on a medical specialty or condition, and as there are several simple ways to contribute to these databases, users send us hundreds of suggestions weekly, which we try to process as quickly as possible. Each resource that is included in Webicina goes through a rigorous evaluation and review process that is based on the quality of health information in the resource, whether the authors are identifiable, whether a description, privacy policy, disclaimer and contact information are available, and several other factors. That is how we can make sure all resources are curated and relevant.

### Efficient time management with Web 2.0

I first became active in Web 2.0/social media back in 2005 when I realized whenever I did a search for any terms, I ended up on Wikipedia, where I could edit the entries, especially the genetics-related ones. So I became a Wikipedia editor, and later in 2006, an administrator. A few months later, I came across Wordpress.com and launched my medical blog, Scienceroll.com, which received a special mention in Medgadget's Weblog Awards a few months later; giving me the idea that I should keep on blogging and take it very seriously. At the time, I was a 3rd year medical student.

Name	URL	When was it founded?	Who curates it?	What is curated?
Faculty of 1000	<a href="http://f1000.com/">http://f1000.com/</a>	2002	Faculty Members	Papers in medical journals
Health on the Net Foundation	<a href="http://www.hon.ch/">http://www.hon.ch/</a>	1995	Group of medical professionals	Medical websites and Blogs
Healthcare Bloggers Code of Ethics	<a href="http://medbloggercode.com/">http://medbloggercode.com/</a>	Unknown	Group of medical bloggers	Medical blogs
Medpedia	<a href="http://www.medpedia.com/">http://www.medpedia.com/</a>	2009	Group of medical professionals	Medical content
Medworm	<a href="http://medworm.com/">http://medworm.com/</a>		Frankie Dolan	Websites and journals
Webicina	<a href="http://www.webicina.com/">http://www.webicina.com/</a>	2008	Group of medical professionals	Medical resources including Social media

*Cell Ther Transplant. 2011;3:e.000093.01. doi:10.3205/ctt-2011-en-000093-table1*

**Table 1.** List of online medical services focusing on content or resource curation

What would I do if	In 2000	Now
I need clinical answer	Try to find a colleague who knows it	Post a question on Twitter
I want to hear a patient's story about a specific condition	Try to find a patient in my town	Read blogs, watch YouTube
I want to be up-to-date	Go to the library once a week	Use RSS and follow hundreds of journals
I want to work on a manuscript with my team	We gather around the table	Use Google Docs without geographical limits

*Cell Ther Transplant. 2011;3:e.000093.01. doi:10.3205/ctt-2011-en-000093-table2*

**Table 2.** Differences in my online activities between 2000 and today

These tools and resources now play a huge role in my life: they connect me to people, colleagues from around the world, they let me see what's happening in the world in my fields of interest; they help me collaborate and discover new aspects of my work. Obviously, Wikipedia is still close to my heart, and I also liked Google Mail from the first moments. At the time, there was no YouTube, Twitter, Facebook, or Friendfeed, so generally I visited the websites of medical journals such as NEJM, BMJ, and Nature quite regularly. Years ago, open access journals were not as widespread in my field as they are now. It is enough to mention PLoS and BMC.

As it strikes me, we have moved from websites to resources or services such as Twitter or Facebook. While all of these can be individualized, I believe these are now centered around cloud computing. The reason I manage accounts on many services is that after building medical communities on Twitter, Friendfeed or Facebook for years, I can now get quite a clear picture of what's happening in genomics and in medicine 2.0 day by day without actively searching for information. My communities, my clouds, filter the huge amount of incoming medical information for me without even knowing it. That is why it is really worth keeping all of these active. Although it is true that I might miss newcomers in this way, in my opinion it is the crowd that is crucial, not the individual.

I use web 2.0 very actively both because of my PhD studies in genomics, and also my online activities related to blogging and Webicina.com.

I have several blogs on Wordpress.com, I use Twitter.com every day as a filter that collects the most interesting news for me, Friendfeed.com for science-related discussions, and Google Reader for keeping myself up-to-date by following the RSS feeds of over 300 medical journals and blogs. I consider Gmail the center of my online activities. It is here that I store to-do lists and notes to myself. I created medical/genetic Facebook groups so I can see what kind of articles they share day by day and I do all collaborative projects in Google Docs.

### Staying up-to-date in one of the most emerging scientific fields

Crowdsourcing is crucial today. I check the best-of-the-day feature on Friendfeed, because I have hundreds of scientific contacts there who select the most important scientific news

and discussions every day. On Twitter I do the same but for medicine, and Facebook for me is more about keeping up with what is happening with my colleagues from around the world and what kind of projects they are launching. Google Reader is for news sites and blogs, and I use Webicina's PeRSSonized Medicine to see the latest improvements in genomics.

I graduated from medical school in 2009 and immediately started a PhD in the field of personal genomics. It was an important change because 1) I had wanted to become a geneticist since my childhood, and 2) I had more time now than in medical school. It means these days I can focus on genomics research from morning until the afternoon, while at night I have time to update my blog, check the updates of my online accounts and work on my projects related to medicine in social media. The biggest issue in my career was to find the best resources/tools for different purposes.

If you want to communicate with people, start browsing Twitter, if you want to collaborate online, take a look at Google Docs, Dropbox, etc. Obviously, not all doctors and patients can and should use all the services I use, but this may be a way to find the resources and services they really need — and only those that can facilitate their online activities.

Of course, despite that fact that web 2.0 can provide numerous opportunities for collaboration, reputation management, and communication, it has plenty of dangers. More and more patients want to friend their doctors on Facebook, which is inappropriate in my view. Medical students share party photos online while they are not really aware of their privacy settings. Medical bloggers are sued because of their blogs, and there are many other examples. I believe the only solution here is to educate the medical community about these dangers and also publish guides for patients about how to use the Internet in their health management safely and efficiently. That is what we try to do on Webicina.com.

Web 2.0 activities and also the open access approach are seriously changing medical research. If the scientific community is open to these new tools and resources, it will significantly change communication, ways of collaboration, and possibly publication too. Scientists can now find each other easily through, e.g., ResearchGATE, share scientific news on, e.g., Friendfeed, and assess the importance of publications by categories on, e.g., BioWizard. During my PhD training,

I do a lot of things online: keep myself up-to-date, collaborate, write papers, find papers, find colleagues, publish reports, get feedback through my blog for my research projects, ask specific questions on Twitter, and more. A paper on using Wikipedia as a global public health promotion tool was just published by our team of medical Wikipedia editors in an open access journal and this was really an international online collaboration. Web 2.0 totally formed the way I do my research.

There are strict guidelines for citing blogs in medical journals, and I myself come across cited medical blog entries in peer-reviewed journals more and more often. As a Wikipedia admin and long-time editor, I'm totally sure that what matters online is the quality of information instead of credentials and platforms. If you think that everything you read in medical papers is perfect, take a look at the blog called Retraction Watch. I think both patients and professionals should learn how to assess the quality of online medical information, or at least they should use free services that help them do so.

## Conclusions

Content curation is a key element in the future of Internet technologies from the medical perspective. As the number of online medical resources and people seeking medical information is constantly growing, there is a clear need for a free service providing selected resources both for medical professionals and patients.

In order to be able to handle this huge amount of online medical information, time management tools combined with crowdsourcing are becoming crucial parts of the lives of medical professionals. Becoming active in the web 2.0 world takes only a few minutes if we find the resources that can help us the most.

## Acknowledgements

The author is the managing director of Webicina.com.

## References

1. Mesko B, and Dubecz A. New possibilities provided by the internet in medicine. *Orv Hetil* 148. 2007:2095-2099.
2. Susannah Fox SJ. *The Social Life of Health Information*. Pew Internet Project. 2009.
3. Eysenbach G. Medicine 2.0: social networking, collaboration, participation, apomediation, and openness. *J Med Internet Res* 10. 2008:e22. doi: 10.2196/jmir.1030.
4. Chou WY, et al. Social media use in the United States: implications for health communication. *J Med Internet Res* 11. 2009:e48.
5. Giustini D. How Web 2.0 is changing medicine. *BMJ* 333. 2006:1283-1284. doi: 10.1136/bmj.39062.555405.80.
6. Heilman et al. Wikipedia: A Key Tool for Global Public Health Promotion. *J Med Internet Res*. 2011;13(1):e14. doi:10.2196/jmir.1589.

## Recommended further reading

1. Sara Kjellberg. I am a blogging researcher: Motivations for blogging in a scholarly context. *First Monday*, Volume 15, Number 8, 2 August 2010.
2. Catherine Gray. If you build it, will they come? How researchers perceive and use web 2.0, 06 July 2010.
3. Bertalan Mesko. *Internet in Medicine: 2000 vs 2010*.
4. Richard Gordon and Bryan J. Poulin. There is but one journal: the scientific literature. Comment on: Young NS, Ioannidis JPA, Al-Ubaydli O, 2008. Why Current Publication Practices May Distort Science. *PLoS Med* 5(10):e201. doi:10.1371/journal.pmed.0050201.
5. Abigail De Kosnik. Teaching with Google Docs, or, How to Teach in a Digital Media Lab without Losing Students' Attention. In: *Learning through Digital Media, Essays on Technology and Pedagogy* (in open peer review phase).

© The Authors. This article is provided under the following license: Creative Commons Attribution 3.0 Unported License, <http://creativecommons.org/licenses/by/3.0/>

**Please cite this article as follows:** Mesko B. Online medical content curation and personal time management with Web 2.0: an exciting era. *Cell Ther Transplant*. 2011;2:e.000093.01. doi:10.3205/ctt-2011-en-000093.01