When to trust health information posted on the Internet

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Case scenario

A young overweight female patient comes to your pharmacy, asking your opinion about a new product called the “fat magnet pill.” She read on the Internet that this product will help her lose weight without having to change her food habits. It seems to be a “revolutionary discovery.” She shows you the article she retrieved from the website, which seems to be pretty convincing. How do you, as a health professional, evaluate the validity of the information found and therefore advise your patient? This article aims to provide pharmacists with tools that will help them decide whether to trust health information posted on the Internet.

Introduction

Internet use is now part of our daily routine, with nearly 3 billion people around the world having access in 2014, according to the International Telecommunications Union.¹ In Canada, 83% of Canadians used the Internet in 2012, and searching for medical and health-related information was an activity recorded by 70% of Canadians in 2010.^{2,3} As a result, accessing health information has never been easier, and not surprisingly, with the information found on the Internet, many patients challenge their health professionals on matters related to the patients’ medical conditions and drugs they are taking.

However, as anyone can easily set up a website, there are many biased and nonvalidated electronic information sources that may not properly inform patients or caregivers.⁴ Recognizing trustworthy sites of information becomes crucial for an evidence-based approach to health care.

General principles

Checking different sources of information is recommended to help cover all aspects (pros and

cons) of a health-related matter. Another key is to examine each source of information with a critical eye. Staying away from websites that display a very emotional tone and provide “miracle cures” is also sound advice.⁴

In an effort to promote the quality and reliability of health information posted on the Internet, the Health on the Net (HON) Foundation developed a code of ethics for the certification of health-related websites. The “HONcode” provides site managers with principles to disseminate quality, objective and transparent medical information tailored to the readers. Sites can apply to be certified by this organization and once approved may display the HONcode logo. While the HON certification is not a guarantee of accuracy and completeness of the information, it certainly reflects the authors’ efforts to provide quality and transparent information.⁵

When accessing a website, there are 4 criteria to evaluate to ensure quality and accuracy of the content: 1) authors, 2) financial support, 3) quality of content and 4) privacy. This crucial information is usually displayed on the website home page and in the section “About us” or “About this website.”⁶ Before you read the material from a website, spending a few minutes to investigate these 4 criteria is well worth the effort.

Authors

It is of utmost importance to find the authors of the document as one of the first steps; authors should be clearly identified on the website.⁴ Do these authors have credentials related to the topic discussed, making them qualified to provide accurate information? Or, in the case of a health organization responsible for operating the website, is it reputable?⁶ As a quick check, the URL (website Internet address) can also give information about authors’ affiliations. Good sources of

information often have a URL ending with “gov” or “gc.ca” (sites sponsored by government, e.g., FDA, Health Canada), “edu” (sites run by universities, pharmacy or medical schools, health care facilities) and “org” (nonprofit organizations, such as the Institute for Safe Medication Practices).⁷

We should also inquire about the intention of the website, that is, its mission. Is the website clearly intended to inform patients and/or their caregivers about health-related issues, or is it from a consortium of health business people trying to promote and sell their products?^{6,7} A trustworthy website should indicate how to contact the authors, should you need to discuss some matters, share opinions or point out some discrepancies.^{4,6} The site should not provide only a webmaster address but rather should offer contact information with an e-mail address, a geographical location and a phone number.⁶

Financial support

We should always question where the funding of a website originates.⁶ Is it funded by a governmental organization, a health foundation, a group of health professionals or a private company? The real question behind this financial support is the matter of objectivity and neutrality of the content displayed.

These days, most websites will display some advertising to finance their web operations. So the question is no longer whether advertisements are displayed but more how they are displayed. On a trustworthy website, advertisements will be clearly separated from the scientific text and will be labeled as such. You should be concerned if advertisements are embedded within the scientific text and provide a link to order some promotional material or products.⁶ Ideally, advertising should not be directly related to the content discussed.⁴

Quality of content

Another important step in the assessment of a website is to inquire about the origin of the information. Sources and references should be quoted and retrievable, should you decide to pursue your reading. Just saying “A study found that . . .” is not enough; a scientific publication should be

cited with its source (e.g., “A study published in *JAMA* on August 5, 2012, found that . . .”).⁶ A link to the original article or its abstract can also add credibility as it will allow the reader to verify statements.

Also, how content of the website is selected and processed is an important point to evaluate. Is there a systematic process in place that explains how literature is screened? Content retrieved should be reviewed and discussed among experts (e.g., an editorial board) before being displayed on the website.^{6,7}

A last point to check is the frequency of updates to the content. The website should be reviewed and updated on a regular basis. The last date when content was updated should be clearly displayed.^{6,7} Checking a few links may help; multiple broken links may reflect poor maintenance of the website.⁷

Privacy

In this era of protection of privacy, we should approach with caution websites that request personal information in order to consult the content. Does the website request that you sign up or become a member of an organization? Do you feel comfortable releasing the requested information?⁶ If the site has a privacy policy, it should explain how your information will be used. For example, will your personal information be used to send you a newsletter from the organization or some promotional material?^{6,7} You should also find out whether your personal information will be shared with third parties.⁶

Conclusion

The Internet is an incredible and endless source of health information. However, we must use our skills of critical appraisal when searching for information on the Internet to avoid using material that could be outdated or of questionable quality. After examining a new website for the 4 criteria discussed above (authors, financial support, quality of content and privacy), we can confidently use the content to guide our therapeutic decisions. Applying the same process, we should be able to evaluate the health information found on the Internet by our patients and, if needed, guide them to better sources of health information. ■

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