

## Quality Control of Information on Health-Related Content Websites Goes Further on the Internet

### *El control de la calidad de la información de webs de salud va más allá en internet*

To the Editor,

We read with interest the editorial entitled “Health and the Internet: beyond the quality of information,” which discussed the changes and challenges facing society in the move to eHealth. With reference to the statement “any measure of quality control would be destined to fail,” we think it important to reflect on the usefulness of having mechanisms for controlling the quality of information on the Internet.<sup>1</sup>

The concept of quality control and associated processes emerged in line with industrial development. In recent years, large changes have made quality control a prominent feature of organizations. We should also mention that there are many different levels and definitions of quality. For example, when applied to health care, the World Health Organization defines quality as “the most appropriate set of diagnostic and therapeutic services for achieving optimal health care, taking into account factors and knowledge of patients and healthcare professionals, and for achieving the best outcome with the lowest possible iatrogenic effects and maximum patient satisfaction with the process.”<sup>2</sup> This means that physicians and indeed all healthcare professionals should offer—regardless of the form or type of health care, and therefore for services and information provided over the Internet—guarantees for that care through quality control. This should be considered a priority. In the present case, it is essential to understand the quality control of information in its entirety. Thus, the scientific principals to which the information should be held, its utility and pertinence, the target audience, legal aspects, and ethical concerns applicable to any medical activity should be taken into account in order ensure the information is appropriate for the needs of the patients, healthcare professionals, and the health system itself.

With regard to quality control of web-based information, we highlight 2 initiatives that have been in place for 10 years now. The most widespread international one is the Health on the Net Foundation, established in Switzerland in 1996. In Spain, the most widely known according to surveys<sup>3</sup> is the *Web Médica Acreditada* (WMA - Certified Medical Web) program, overseen by the Barcelona Physicians Association. This program, in which the authors of this letter are directly involved, began in 1999. These initiatives offer different tools, with the overall aim of serving society and with some common objectives: an improvement in the quality of medical information and more secure user access to the network. These tools are based on the need to advise those responsible for the web pages, through a review process, about how they should offer web-based

health services according to legal recommendations of the information society and ethical aspects of the profession<sup>4</sup> and how to provide the general public with elements of health education (such as the “10 Tips for Internet Users” of the WMA), as well as to incorporate information filters to access quality webs (such as application of semantic web technology developed by the WMA).<sup>5</sup> In addition, these initiatives encourage the active participation of the Internet community, which acts as an observatory.

Any holistic and flexible overall vision of health care and the information technologies should include each and every one of the elements available for shaping them and obtaining maximum benefit from their application. Quality control of the information available on the web is one of the elements to be taken into account if eHealth environments are to continue offering the guarantees, professionalism, and security required of them, while adapting to the needs of all those who participate in this continuously changing scene.

Miguel A. Mayer,<sup>a,b,\*</sup> and Angela Leis<sup>a</sup>

<sup>a</sup>*Departamento de Web Médica Acreditada, Colegio Oficial de Médicos, Barcelona, Spain*

<sup>b</sup>*Programa de Investigación en Informática Biomédica (GRIB), IMIM-Universitat Pompeu Fabra, Barcelona, Spain*

\* Corresponding author:

E-mail address: [mmayer@comb.cat](mailto:mmayer@comb.cat) (M.A. Mayer).

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## REFERENCES

1. Lupiáñez-Villanueva F. Salud e internet: más allá de la calidad de la información. *Rev Esp Cardiol*. 2011;64:849–50.
2. Ramírez D. Grupo de Gestión de la Calidad de SEMERGEN, 2005. Definición e introducción a los modelos de calidad asistencial [accessed 2011 Sep 2]. Available from: <http://www.semergen.es/semergen/microsites/opinion/opinion5/definicion.pdf>
3. Health on the Net Foundation. Analysis of the 9th HON Survey of Health and medical Internet users. Winter 2004–2005 [accessed 2011 Sep 2]. Available from: <http://www.hon.ch/Survey/Survey2005/res.html>
4. Mayer MA, Leis A, Sanz F. Información de salud en internet y sellos de confianza como indicadores de calidad: el caso de las vacunas. *Aten Primaria*. 2009;41:534–44.
5. Mayer MA, Karampiperis P, Kukurikos A, Karkaletsis V, Stamatakis K, Villarroya D, et al. Applying semantic Web technologies to improve the retrieval, credibility and use of health-related web resources. *Health Informatics J*. 2011;17:95–115.

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## Quality Control of Information on Health-Related Content Websites Goes Further on the Internet. Response

### *El control de la calidad de la información de webs de salud va más allá en internet. Respuesta*

To the Editor,

Health professionals have been concerned about the quality of information on the Internet since the technology was first introduced. In 1998, *JAMA* published a review of instruments to assess the quality of information on the Internet.<sup>1</sup> The article

concluded by questioning both the aims of and need for such instruments, given that the most important aspect is the way people use the available information. In that context, it is important to note that there is little scientific evidence on the relationship between health-related information on the Internet and its negative impact on the health of users.<sup>2</sup>

Subsequent systematic reviews of these instruments have noted both their proliferation and the lack of agreement on how the concept of quality should be defined and measured.<sup>3,4</sup> In addition to these formal difficulties, Adams et al.<sup>5</sup> set out a further series of criticisms. First, they questioned whether Internet users are aware of this type of quality control initiative. Second, even if

users are aware of such initiatives there is no guarantee that they understand the information provided. Third, they note how easy it is to reproduce or acquire such instruments without the approval of the developers. Fourth, the process of acquiring such instruments has sometimes been criticized for a lack of transparency and for the interests of those involved. Critics suggest that although this type of instrument has made it easier to identify and highlight problems related to the quality of information online, they have not solved the problem because there is no clear evidence that they are effective in that regard.<sup>6,7</sup>

There is then a need to develop strategies for quality control which will help healthcare organizations, professionals, and citizens optimize the potential of the Internet as a source of health information.<sup>8</sup> These new strategies must take into account the technological and social nature of the Internet<sup>9</sup> and focus on the way information is used rather than only focusing on formal aspects.<sup>10,11</sup> The experience gained in developing and applying strategies based on “control” will be very useful in shaping new strategies centered on “use”.

Francisco Lupiáñez-Villanueva

*Departamento de Ciencias de la Información y la Comunicación,  
Universitat Oberta de Catalunya, Barcelona, Spain*

*E-mail address:* [flupianez@uoc.edu](mailto:flupianez@uoc.edu)

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## REFERENCES

1. Jadad AR, Gagliardi A. Rating health information on the Internet: navigating to knowledge or to Babel? *JAMA*. 1998;279:611–4.
2. Bessell TL, McDonald S, Silagy CA, Anderson JN, Hiller JE, Sansom LN. Do Internet interventions for consumers cause more harm than good? A systematic review. *Health Expect*. 2002;5:28–37.
3. Bernstam EV, Shelton DM, Walji M, Meric-Bernstam F. Instruments to assess the quality of health information on the World Wide Web: what can our patients actually use? *Int J Med Inform*. 2005;74:13–9.
4. O'Grady L. Future directions for depicting credibility in health care web sites. *Int J Med Inform*. 2006;75:58–65.
5. Adams SA, De Bont AA. More than just a mouse click: research into work practices behind the assignment of medical trust marks on the World Wide Web. *Int J Med Inform*. 2007;76:S14–20.
6. Seale C. New directions for critical internet health studies: representing cancer experience on the web. *Sociol Health Illn*. 2005;27:515–40.
7. Burkell J. Health information seals of approval: what do they signify? *Information Communication & Society*. 2004;7:491–509.
8. Deshpande A, Jadad AR. Trying to measure the quality of health information on the internet: is it time to move on? *J Rheumatol*. 2009;36:1–3.
9. Castells M. Informacionalismo, redes y sociedad red: una propuesta teórica. In: Castells M, editor. *La sociedad red: una visión global*. Madrid: Alianza; 2006. p. 27–78.
10. Adams SA. Revisiting the online health information reliability debate in the wake of “web 2.0”: an inter-disciplinary literature and website review. *Int J Med Inform*. 2010;79:391–400.
11. Colledge A, Car J, Donnelly A, Majeed A. Health information for patients: time to look beyond patient information leaflets. *J R Soc Med*. 2008;101:447–53.

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