



# Internet healthcare: do self-diagnosis sites do more harm than good?

Angela Ryan & Sue Wilson

To cite this article: Angela Ryan & Sue Wilson (2008) Internet healthcare: do self-diagnosis sites do more harm than good?, Expert Opinion on Drug Safety, 7:3, 227-229, DOI: [10.1517/14740338.7.3.227](https://doi.org/10.1517/14740338.7.3.227)

To link to this article: <https://doi.org/10.1517/14740338.7.3.227>



Published online: 08 May 2008.



Submit your article to this journal [↗](#)



Article views: 773



View related articles [↗](#)



Citing articles: 14 View citing articles [↗](#)

# Expert Opinion

1. What do we mean by 'self-diagnosis sites'?
2. Is this any different from what has gone before?
3. Possible benefits of self-diagnosis websites
4. Possible harms of self-diagnosis websites
5. Research in this area
6. Expert opinion

**informa**  
healthcare

## Internet healthcare: do self-diagnosis sites do more harm than good?

Angela Ryan<sup>†</sup> & Sue Wilson

*The University of Birmingham, Department of Primary Care and General Practice, Edgbaston, Birmingham, B15 2TT, UK*

**Background:** The growth of the Internet has enabled the public to more readily access information about health and disease. Available websites include those that provide possible diagnoses for particular symptoms and those that then assist people to decide whether to self-treat or consult a doctor. **Objective:** To describe the possible impact of the use of self-diagnosis websites. **Methods:** Self-diagnosis websites were reviewed and existing literature in this area was considered. **Conclusions:** Although information about possible diagnoses and their management has previously been available through books and leaflets, the development of self-diagnosis websites is different for several reasons. This editorial highlights these differences and possible harms and benefits that could arise from the use of self-diagnosis websites.

**Keywords:** diagnosis, Internet, self-care

*Expert Opin. Drug Saf.* (2008) 7(3):227-229

### 1. What do we mean by 'self-diagnosis sites'?

As government-funded health services have become increasingly stretched, and as patient empowerment and patient choice [1] have become increasingly common buzz-words, self-management and self-care have been increasingly advocated [2]. Illness and disease have always been of interest to many: how to prevent a condition, or how best to manage it. The growth of the Internet has enabled a wider population than before to access such information, and a large number of websites that focus on health and disease have been developed. Websites include those that provide information and support for people with diagnosed conditions [3], those that provide possible diagnoses for particular symptoms [4], and those that then assist people to decide whether to self-treat or consult a doctor [5]. Websites that aim to provide potential diagnoses based on self-reported symptoms are provided by a number of private companies, as well as by some recognised healthcare providers, such as the NHS Direct website in the UK [6].

### 2. Is this any different from what has gone before?

Information about how to diagnose conditions and about how to manage those conditions has previously been available to the public through self-help leaflets and books [7], but the development of self-diagnosis websites is different for several reasons.

The Internet is more immediately accessible than traditional written materials, and could therefore be quicker and easier to access than a visit to the doctor. This accessibility might mean that people seek information on symptoms that have been present for only a short time and that would previously have resolved before a visit to a doctor.

The accuracy and quality of some health-related internet websites has been reported to be low [8,9]. Anyone can set up a website, and hearsay or individual experience related to a specific condition may be presented or treated by the reader as fact. It is possible that even information from reputable organisations might be less well edited and checked than when presented in previous print publications about symptoms and self-diagnosis.

Although many developers of health-related websites may intend to provide clear accurate information for the benefit of the public, others may have other agendas, such as using their web presence to sell products or services. Some self-diagnosis websites ultimately recommend purchasing drugs or alternative therapies, which could lead to people being financially exploited. A further logical extension of self-diagnosis internet sites is the marketing of home treatments or diagnostic aids, which have their own harms and benefits. In 2006, more than 100 unique self-tests for more than 20 different conditions were available to buy via the Internet by members of the UK public [10].

### 3. Possible benefits of self-diagnosis websites

---

An increase in the availability of good-quality constructive information about symptoms undoubtedly has possible benefits. Patients may have to wait several days for an appointment with a doctor for symptoms that are not immediately serious, and well-constructed websites could provide reassurance and support in the meantime. Education about when symptoms are overwhelmingly likely to be benign and self-limiting with appropriate home or over-the-counter remedies could also lead to a reduction in inappropriate and unnecessary visits to the doctor. Such information could also be coupled with additional information about when it is appropriate and desirable to visit a doctor, for example when symptoms necessitate the exclusion of serious diagnoses. Information could also empower patients so that when they do visit the doctor they are enabled to make the most of their limited appointment time by, for example, seeking clarification as to why the doctor has chosen a particular treatment or testing pathway. Well-constructed websites could also have subsidiary benefits, not related to the original aim of self-diagnosis, for example educating people about how to stay healthy.

### 4. Possible harms of self-diagnosis websites

---

Self-diagnosis websites do, however, have potential harms. People who visit self-diagnosis websites may be likely to be overly concerned with their health and bodily sensations; the term 'cyberchondria' [11] has even been coined to describe people who use the Internet to find out more about health or their illnesses. The use of

self-diagnosis sites may then lead to further anxiety associated with a false or true diagnosis of a serious and/or life-threatening condition. Furthermore, this diagnosis would be delivered without the presence of a health professional to provide a context, to reflect on the likelihood of different diagnoses, or to put in place any steps that are necessary to make a definitive diagnosis. These harms that may occur from receiving diagnoses from websites may also be compounded if people go on to attempt to self-medicate by buying over-the-counter remedies or prescription drugs from internet pharmacies. Conversely, self-diagnosis websites could also provide false reassurance, leading to a delay in seeking professional assistance and diagnosis.

### 5. Research in this area

---

Research to date seems to be primarily related to the accuracy of information provided on websites or related to other self-care activities, such as use of over-the-counter medication or complementary therapies, rather than focusing on the use of self-diagnosis websites or self-testing by members of the public. Even where research has been done around the use of the Internet for diagnosis or medical decision making, this has usually been where health professionals are involved, for example the use of telemedicine or the impact of web chats hosted by the NHS Direct website with triage nurses [12]. Where research has centred on internet resources used by patients, this has tended to be simply describing available resources. There is a lack of research aiming to assess the impact of self-diagnosis websites on defined outcomes, such as symptom resolution, or aiming to determine the subsets of the population who are likely to benefit, or be harmed, by these websites.

### 6. Expert opinion

---

The Internet and self-diagnosis websites are here to stay, so it is essential that effort is expended to ensure as far as possible that self-diagnosis websites are well-edited, well-checked, well-referenced, and evidence-based. This should also be made clearly apparent, for example by some form of generally accepted quality mark, so that users are able to make well-informed choices about which are good-quality websites.

Our review of the literature suggests that affluence and higher educational attainment are associated with an increased interest in self-care. It could, therefore, be argued that self-diagnosis websites could lead to increased inequity in healthcare provision by further empowering well-educated affluent groups at the expense of people from less affluent groups. We should, therefore, also continue to ensure that there is a good level of basic healthcare and diagnostic and treatment services available to everyone within a reasonable time period.

The academic community still seems relatively unaware that patients now have access to, and are likely to be using, a much greater array of decision-making resources from the Internet without a doctor's or nurse's involvement. Further research is needed to determine the impact of the use of such resources, who that impact is focused on, and how self-diagnosis sites should be improved so that the user is most likely to make well-informed choices based on the available information with the minimum of anxiety and harm.

## Acknowledgement

A Ryan holds a Department of Health National Coordinating Centre for Research Capacity Development Researcher Development Award.

## Declaration of interest

The authors state no conflict of interest and have received no payment in preparation of this manuscript.

## Bibliography

Papers of special note have been highlighted as either of interest (•) or of considerable interest (••) to readers.

1. Rosen R, Curry N, Florin D. Public Views on Choices in Health and Health Care: A Qualitative Study. London: Kings Fund; 2005
2. Department of Health. Self Care – A Real Choice. Self-care Support – A Practical Option. London: Department of Health; 2005
- **This document sets out the UK Department of Health's policy to support self-care.**
3. What is Parkinson's? London, UK: Parkinson's Disease Society, 2008. Available from: [www.parkinsons.org.uk/about-parkinsons/what-is-parkinsons/what-is-parkinsons.aspx](http://www.parkinsons.org.uk/about-parkinsons/what-is-parkinsons/what-is-parkinsons.aspx) [Last accessed 14 January 2008]
4. Diagnose-Me: Online Diagnosis - Diagnostic Tool. Hawaii, USA: Diagnose-Me.com, 2008. Available from: [www.diagnose-me.com/](http://www.diagnose-me.com/) [Last accessed 14 January 2008]
5. Familydoctor.org. Abdominal Pain, Short-Term. Kansas, USA: American Academy of Family Physicians, 2008. Available from: [familydoctor.org/online/](http://familydoctor.org/online/)
6. NHS Direct. Self-Help Guide. London, UK: NHS Direct, 2007. Available from: [www.nhsdirect.nhs.uk/help/](http://www.nhsdirect.nhs.uk/help/) [Last accessed 15 January 2008]
7. British Medical Association. Family Doctor: Home Adviser. London: Dorling Kindersley; 1987
8. Pandolfini C, Impicciatore P, Bonati M. Parents on the Web: Risks for Quality Management of Cough in Children. *Pediatrics* 2000;105:e1
9. Lewiecki EM, Rudolph LA, Kiebzak GM, et al. Assessment of osteoporosis-website quality. *Osteoporos Int* 2006;17:741-52
10. Ryan A, Wilson S, Greenfield S, et al. Range of self-tests available to buy in the United Kingdom: an Internet survey. *J Public Health* 2006;28:370-4
- **This study describes diagnostic self-tests that are available to buy via the Internet by members of the UK public without involving a health professional: a systematic internet search was undertaken in 2006, and 104 unique self-tests related to 24 named conditions, including cancers, chronic conditions and infections, were identified.**
11. Smith PK, Fox AT, Davies P, Hamidi-Manesh L. Cyberchondriacs. *Int J Adolesc Med Health* 2006;18:209-13
12. Eminovic N, Wyatt JC, Tarpey AM, et al. First evaluation of the NHS Direct Online Clinical Enquiry Service: A Nurse-Led Web Chat Triage Service for the Public. *J Med Int Res* 2004;6:e17

## Affiliation

Angela Ryan<sup>†</sup>, Clinical Research Fellow & Sue Wilson, Professor of Clinical Epidemiology  
<sup>†</sup>Author for correspondence  
 The University of Birmingham,  
 Department of Primary Care and General Practice,  
 Edgbaston, Birmingham,  
 B15 2TT, UK  
 Tel: +44 121 415 8015; Fax: +44 121 451 6571;  
 E-mail: [a.v.ryan@bham.ac.uk](mailto:a.v.ryan@bham.ac.uk)

