

From the Medical School

Over the last six months, I've had an amazing opportunity to try my hand at editing. I wanted to try editing because clinical decisions made as a result of an article can really be dependent on how that particular evidence is presented. To me, it seems editing can not only keep me abreast with evidence-based medicine, but perhaps more importantly, I've been allowed to develop my critiquing skills. I'll need these skills next year, as I settle into an academic junior doctor job.

It's been incredibly satisfying to watch a submission, such as an SSM, develop into a journal-friendly article. The following articles, the first on self-diagnosis through the media, the second on legionella, are two interesting articles by medical

students. Any doctor who has been given a computer print-out of a potential diagnosis or a rundown of the latest EastEnders story will be able to relate to the article on self-diagnosis. I also hope that many doctors who dealt with the legionnaire's outbreak in 2002 will find the article on legionella particularly interesting. I'll certainly be looking forward to reading this edition of the *Journal*.

If any student is interested in submitting an article for the *Journal*, please email me at Laura.Gould@doctors.org.uk

Laura Gould
Student Assistant Editor

An investigation into the role of the media in the self-diagnosis of illness

Caroline Dover

INTRODUCTION

The media not only plays a prominent role in influencing society's opinions of the medical profession, but has also been a crucial factor in the evolution of healthcare and the way in which illness is diagnosed and managed. Diagnosis is a complex process. However, the desire for medical information and a quick self-diagnosis can lead to exclusion of vital steps in the diagnostic process, resulting in inaccurate results, and may put the patient at risk. This paper critically examines how patients use the internet, television and newspapers to diagnose their own medical problems and explores the accuracy of health information in various forms of the media, demonstrating that commercial interests can affect its reliability.

METHOD

In the case of the internet, www.google.co.uk was used to investigate one common symptom, in order to observe the ease with which a patient can acquire a diagnosis. Tiredness is commonly seen in general practice and can signify many conditions. Online diagnostic tools will be used and evaluated and, in addition, the role of television and newspaper articles in the role of self-diagnosis will be considered.

SELF-DIAGNOSIS THROUGH THE INTERNET

The opportunity to self-diagnosis through the internet is now virtually endless. Online sales of home self-testing kits have risen by 55% in the last 5 years,⁽¹⁾ allowing the 'consumer' to investigate a potential diagnosis in the home. Diagnosis is, in

fact, the most common health enquiry on the internet; Lewis discovers, in her examination of internet usage, the percentage of consumers searching material regarding the diagnosis of a specific disease is 63%, in comparison to 47% of all internet users seeking information on treatment and 44% on dietary supplements.⁽²⁾

The advent of internet search engines heralded the 'patient sleuth', the ordinary person who could research his own symptoms to obtain a diagnosis. In order to establish the ease of accessing methods of self-diagnosis via a search engine, Google was used to research the vague symptom of tiredness. On typing in 'tiredness' alone, search results included healthcare fact sheets and sponsored links and suggestions appeared including a sponsored self-diagnosing website called www.Diagnose-Me.com.⁽³⁾ Just glancing down the list of relevant matches, the diagnoses included chronic fatigue syndrome, myalgic encephalomyelitis (ME), anaemia and even leukaemia, purely from a single, vague symptom of tiredness.

The risk of such search engines is clear, namely, very limited information can engender anxiety in the ordinary person through the mention of major conditions. The *Independent* warns of a 'mix-and-match self-diagnosis... many with relatively trivial symptoms have been linking them with serious diseases.'⁽⁴⁾ Conversely, there is a risk that 'red flag' symptoms of underlying, serious pathology might be misdiagnosed by the internet as a relatively minor ailment. This is not, of course, to dismiss the usefulness of medical websites altogether. As the Vice Chair of the Royal College of General Practitioners points out, such websites 'can be helpful once a diagnosis is confirmed' and 'informed patients can play a fantastic part in making their treatment work better.'⁽⁵⁾

The website Diagnose-Me.com offers a convenient method of establishing a diagnosis. Consumers answer a simple questionnaire and wait for an email response. A recommendation from a doctor assures users of its credibility and scientific accuracy. The website also states its advantages over seeking advice from the primary care setting, one being the claim that 'a doctor is human', whereas the online computer programme, The Analyst, 'does not suffer from forgetfulness or imprecise recall.' It also reminds us that a doctor 'deals with obvious symptoms', whereas The Analyst 'views your body as a highly interconnected system.'⁽³⁾ Programmes making such claims could seriously damage the relationship between a doctor and his patient. Another problem is its assumption that diagnosis is not a process, but an answer determined simply through limited questioning. It does not include diagnostic tests and the answers are limited by multiple choice.

Self-diagnosis over the internet need not be purely questionnaire based. Another result from the search query 'tiredness' on Google was a BUPA healthcare fact sheet. This patient-friendly website is easy to read, and has the advantages of categorising causes of tiredness and encouraging lifestyle adaptations to relieve symptoms. It does, however, have a section devoted to ME and lists illnesses of which tiredness is a secondary symptom, without providing the primary or other secondary symptoms that would be present. This could further induce anxiety, whilst ignoring the underlying ailment. After discussion of serious pathology surrounding the symptom of tiredness, its conclusion reminds readers that 'tiredness is usually a temporary situation which can be helped with some simple measures.'⁽⁶⁾

Users of internet websites need to be aware of the authors of a site, their credibility and their target audience. As the *Independent* reminds us, 'some are specifically intended for doctors and assume a clinical knowledge that will not mistake symptoms of indigestion for those of stomach cancer.'⁽⁴⁾ Whatever the differences in approach, it is nevertheless apparent that websites such as those investigated pose a risk of inducing anxiety and potentially an inaccurate diagnosis. Just as the credibility of some websites differs, so does the extent of the damage that they can cause; the problem for the consumer is knowing how to distinguish between them.

SELF-DIAGNOSIS THROUGH THE TELEVISION

Television is another easily accessible medium through which medical information reaches a wide variety of audiences, from those watching documentaries to those viewing medical dramas and soap operas. Here, the audience self-diagnose in a passive manner; absorbing healthcare information by chance, and being unable to select the topic of their choice.

General practitioners (GPs) claim to have witnessed undue anxiety as a result of self-diagnosis from soap operas. In a survey conducted by Norwich Union Healthcare, nine out of ten GPs maintained that patients were presenting with symptoms based on what they have seen on the television, along with those read in newspapers.⁽⁷⁾ The example given as a cause for concern was the 'EastEnders' storyline in which one of their characters was diagnosed with cancer. Admittedly, media coverage can raise public awareness, an obvious example being the 'Jade Goody effect' related to cervical cancer awareness. In the same year as she was diagnosed,

the number of women attending screening sessions increased by 400,000.⁽⁸⁾ An executive of Developing Patient Partnerships stresses that 'programme producers have a responsibility to ensure they convey realistic messages about health issues...ensuring that people can make sensible and informed judgments about their health',⁽⁷⁾ but this is not always the case.

SELF-DIAGNOSIS THROUGH THE TRADITIONAL PRESS

Newspapers, too, play their part in facilitating the self-diagnosing capabilities of a patient. Not only do they cover stories from other sources, such as the internet, but they provide questionnaires and 'fact' articles about specific conditions. Newspaper stories have the potential to 'allow subjects to be covered in more detail [than other sources], with more background information and useful advice.'⁽⁹⁾

THE EFFECT OF COMMERCIAL INTEREST

Commercial interest, without doubt, plays a large part in the media's coverage of medical issues and can result in the inaccurate reporting of information.

The internet is an easily accessible medium but, as we have seen, not without its drawbacks. Although search engines list their results in order of relevance to the key words entered, they also have sponsored links on the page; these are not pages that are the most relevant, but the websites that have paid the search engine to feature there, above the search results. This raises the question of whether patients are at risk from internet diagnosis, and whether by attempting to become empowered, they are in fact returning to a passive role.⁽²⁾

The reliability of health information we are given through television programmes may depend on how the producer views his audience. Journalist Bill Moyers wrote, 'If he sees them as consumers, then the truth becomes that which sells, nothing more. If he sees them as citizens, he sees them as yearning to know, to matter, to signify.'⁽¹⁰⁾ In a soap opera, for example, the audience is a consumer that needs to be encouraged to watch in the future. Soap storylines need not be accurate, as long as they are influential. A documentary, however, is viewed by an audience that wishes to learn. Therefore, the content is that which informs, and is likely to contain more detail.

In Hansen's study of specialist journalists, an anonymous health correspondent attributes the rise in medical coverage in newspapers to 'changing readership level' as a result of 'longer periods of education and higher qualifications', and not to the need to provide people with information.⁽¹¹⁾ This may imply that newspapers feel no moral obligation to inform the public. The information provided by newspapers differs depending on their target audience. Quality press journalists aim to satisfy expert and non-expert readers alike, have a varied audience and 'provide more satisfactory information about health issues.'⁽¹¹⁾ Those reading popular press publications are less likely to gain the accurate information they need when self-diagnosing. As Hansen discovered in his study, 'popular press journalists are acutely aware of their... dependence on mass audience appeal, and thus see their task almost exclusively as one of engaging the interest of a large audience.'⁽¹¹⁾

The tabloid newspapers often resort to over-simplified and, at times, inaccurate coverage of medical diagnoses. An example of this can be seen in recent coverage of the theory that a 'fat gene' predisposes certain individuals to obesity, thereby putting them at risk of other conditions, ranging from hypertension to heart disease. The *Daily Mail* in its coverage of this included two photographs. One depicted a girl who had this gene present, the other of a girl who did not. The implication was that the readers had to decide which shape in the two photos best matched their own, and from that could determine whether or not they too had the 'fat gene'.⁽¹²⁾ However, it is clearly not that simple and other factors that may lead to obesity need to be considered.

CONCLUSION

The media has opened up endless opportunities to the individual to self-diagnose, supposedly empowering the patient. However, the motives of the information providers, whether on the internet, or television, or in the tabloid press need to be scrutinised, since patients can be left vulnerable to misinformation and unfounded anxiety. The British Medical Association acknowledges that 'internet-informed patients are here to stay',⁽¹³⁾ and perhaps the focus should now be on how best to manage the so-called 'cyberchondriacs', ensuring they are more accurately diagnosed, by introducing them to a more reliable and credible source of information.⁽²⁾ Despite the bold claims of the media to the contrary, the truly empowered patient is still very much a thing of the future.

REFERENCES

1. Howden S. Health-aware public home in on DIY kits. *The Evening News*. 25 October 2007; p6
2. Lewis T. Seeking Health Information on the Internet; Lifestyle Choice or Bad Attack of Cyberchondria? *Media, Culture and Society* 2006;28(4):521-39
3. Muth S. Diagnose-Me.com. Diagnose-Me: Online Diagnostic Tool. [Online] 2008 (cited 30 November 2007) Available from: <http://www.Diagnose-Me>
4. Dobson R. Doctors warn the cybersick. *The Independent*. 28 June 1998; p10
5. McCann P. Confessions of a Cyberchondriac. *The Daily Mail*. 9 May 2006; p46
6. Bupa Health Information Team. Healthcare Fact Sheet: Beating Tiredness. [Online] 2004 (cited 2007 December 1) Available from: http://hcd2.bupa.co.uk/fact_sheets/html/beating_tiredness.html
7. BBC. TV soaps' ails fuelling sickness. [Online] 2005 (cited 24 November 2007). Available from: <http://news.bbc.co.uk/1/hi/health>
8. Sinclair J. 'Jade Goody effect' boosts cervical cancer screening rates. *The Guardian*. 22 October 2009
9. Entwistle V, Hancock-Beaulieu M. Health and medical coverage in the UK national press. *Public Understanding of Science*. 1992;1(4):367-82
10. Wallack L, Dorfman L, Jernigan D, Themba M. Media Advocacy and Public Health. *Health Education and Behaviour* 1994;21(4):543-6
11. Hansen A. Journalistic practices and science reporting in the British Press. *Public Understanding of Science* 1994;3(2):111-34
12. Calman B. Have you got the fat gene? *The Daily Mail*. 20 November 2007; p51
13. Valley P. Cyberchondria. *The Independent*. 18 April 2001; Pp1,7

Legionella

Rachel Grant

INTRODUCTION

Legionnaires' disease is an atypical pneumonia, caused by a gram negative bacterium that breeds in water.⁽¹⁾ It is an important cause of both community- and hospital-acquired pneumonia. Although the majority of reported cases are isolated and rare, outbreaks of the disease occur and it proves to be an important public health issue. It is the most common cause of atypical pneumonia in hospitalised patients, with upwards of 300 reported cases a year in the United Kingdom (UK).⁽²⁾ This case report has been written to highlight the reasons behind the 2002 outbreak of the disease in Barrow-in-Furness – how this was subsequently handled, as well as what has been learnt from this episode.

Legionella bacteria are found naturally in low numbers in ponds, lakes and rivers. They are able to survive between 6 and 60°C.⁽³⁾ Bacterial growth becomes problematic when it colonises in cooling systems, respiratory therapy equipment, spas, showers and decorative fountains.⁽⁴⁾ There, with nutrients and a supportive environment, the bacteria can colonise to great extents. Aerosol transmission occurs from these contaminated water sources. The bacterium is inhaled and invades macrophages and monocytes where it evades phagocytic destruction. It is also capable of replicating within alveolar epithelial cells.⁽⁵⁾ This invasion causes the resulting pneumonia.

There is an incubation period of two to ten days before the flu-like symptoms begin. These include malaise, body aches, a