View from the frontline: Learning from the web

Dr Harry Brown
NHS General Practitioner
DrHarry@DrHarry.net

With the vastness and almost infinite depth and variety of the internet, you could argue that this is the ultimate learning machine for a health professional.

There has been a sea-change in medical learning over the last few years and it will impact on us all, both now and in the future. Traditionally, we have read books, journals and attended lectures and it has been like that for many years, until very recently. This traditional method of learning and acquisition of knowledge has involved a considerable investment in both money (to subscribe to journals and buy books) and time – time taken out of a busy day to attend a postgraduate lecture. This form of medical education has gone on for decades but has recently been seriously challenged by the rising prominence of the web and, just as important, the easy and relatively cheap availability of a high-speed broadband connection.

That does not mean that this is the end of the traditional lecture, textbook or journal; it means that the platform for accessing knowledge has changed. For example, instead of travelling to attend a lecture and taking time out which may not be convenient for you, you could access a webcast of a lecture and watch it at your convenience.

Take the Medical Grand Rounds Webcasts archive from the University of Miami School of Medicine at <www.med.miami.edu/grandrounds/archive.asp> which shows what can be done with webcasts. The material does not have to be delivered as an audio-visual presentation; it can be an audio only file which means it could be played on a portable media device such as a MP3 player or a car entertainment system.

For a definition of webcasts/podcasts check out Wikipedia <http://en.wikipedia.org/wiki/Podcasting>, whilst a good example of a source of podcasts is MyMedicalPodcasts <www.mymedicalpodcasts.co.uk/>. For more background information and further resources read this entry – the 'Top 5 Medical Podcasts I Listen To' <http://casesblog.blogspot.com/2006/08/top-5-medical-podcasts-i-listen-to.html> – from the Clinical Cases and Images Blog.

The web contains a vast amount of medical educational and reference material that should satisfy most health professionals' standard educational needs. Does that mean that paper (in the form of books and journals) is dead? I think the simple answer is no, but the web is gaining more prominence because of its vastness, accessibility, the ability to serve a niche audience and relative cheapness.

... the web is gaining more prominence because of its vastness, accessibility, the ability to serve a niche audience and relative cheapness.

I see doctors in training resorting to the web to answer their clinical questions and update their knowledge rather than go to the library. A specific clinical query could be answered by a relevant and up-to-date textbook (which may have an associated website) although the book (but not the website if it is updated) can go quickly out of date and may be expensive to purchase unless you have easy access to a medical library either online or offline. However, there is still a demand for paper journals and printed textbooks, simply because of their portability, ease of use and the lack of the need for a computer. These printed materials have not stood still; they have had to adapt to the fast-moving publishing environment. Many of these publications have spruced themselves up by better layout and produced their own websites, sometimes subscription based, and the duo of a website/printed edition makes a powerful learning medium.

However, there are alternatives to the commercial publishers with the trend for many websites to offer good quality learning materials free of charge: look at Free Medical Journals <www.freemedicaljournals.com/> and FreeBooks4Doctors <www.freebooks4doctors.com/>. For qualifying NHS staff, free access to articles in subscription-based journal websites can be found with the help of the National Library for Health <www.library.nhs.uk/> via an Athens account <https://register.athensams.net/nhs/>.

There is also pressure for open-access material from respected academic institutions, such as Harvard in the USA <www.fas.harvard.edu/home/news_and_events/releases/scholarly_02122008.html> who are encouraging free and open access to the publications of their academic staff through a world-wide license and repository. This kind of approach will make access to knowledge easier but will also make life harder for publishers. In turn, publishers will have to learn to adapt to this kind of competition.

... the Medical Grand Rounds Webcasts archive from the University of Miami School of Medicine at <www.med.miami.edu/grandrounds/archive.asp> shows what can be done with webcasts.

Of course, the web does not have to be used simply as one big reference source that can be searched by a engine such as Google Scholar <http://scholar.google.co.uk/> that concentrates on high-quality research literature. It can also be used as an

interactive training medium using online quizzes or evolving case histories. Or it can be a way of networking and making new professional and personal contacts. Professional isolation can be overcome by using the medical equivalent of social networking sites such as Facebook <www.facebook.com/>. One such medical equivalent is DoctorsHangout <http://doctorshangout.com/> and, with the global nature of the internet, this is an area where health professionals with similar interests can exchange views and learn from each other. Effectively a virtual 'study group' could be hosted on such a facility.

With the vastness and almost infinite depth and variety of the internet, you could argue that this is the ultimate learning machine for a health professional, that they need not look any further and that paper-based education is dead. Well that is not exactly true. The dangers of learning from the web is that not all the material is necessarily accurate and suitable for a health professional, and it may not be easy to separate out the rubbish from the reliable. It can also be difficult to drill down to the desired information quickly. Furthermore, it is easy to surf around a number of websites in an unfocused and random manner. Now that may be fun, but it can also consume a lot of time and may detract from the mission in hand.

With the vastness and almost infinite depth and variety of the internet, you could argue that this is the ultimate learning machine for a health professional

As mentioned at the beginning of the article, one of the key drivers of the web becoming a mainstream tool of learning is the advent of the widespread roll out of broadband. Not only is this a force to be reckoned with in the consulting room or at home, but soon mobile broadband will become cheap and readily available. Currently, there are mobile devices such as the BlackBerry that have email and internet access but they are not cheap and usually don't use broadband. However, when such devices become cheaper, easier to use, and always utilise high-speed broadband, then the next stage of the information and learning revolution will occur. Knowledge and learning will be mediated through these powerful hand-held devices. The frightening thought is – what will replace them in years to come?

Joint Guidance on Protecting Electronic Patient Information

<www.connectingforhealth.nhs.uk/systemsandservices/nhscrs/publications/staff/jointguidance.pdf>

The BMA and NHS Connecting for Health have produced this guidance. It covers: personal responsibilities; organisational responsibilities; NHS Connecting for Health's Responsibilities; NHS Responsibilities. A number of links to further information is provided.

The impact of ehealth on the quality & safety of healthcare. A systematic overview & synthesis of the literature. Report for the NHS Connecting for Health Evaluation Programme

Car J *et al.*, Imperial College London, March 2008

Executive summary:
<www.pcpoh.bham.ac.uk/publichealth/cfhep/pdfs/NHS_CFHEP_001/NHS_CFHEP001_eHealth_report_Executive_Summary.pdf>

Full report:
<www.pcpoh.bham.ac.uk/publichealth/cfhep/pdfs/NHS_CFHEP_001/NHS_CFHEP001_eHealth_report_Full_version.pdf>

The main findings of the review are:

A ripe environment for information technology in healthcare

A vast and rapidly expanding body of literature that is poorly indexed, appraised and ordered

Evidence of variable quality that is difficult to interpret

The vast gap between theoretical and empirically demonstrated benefits

Inadequate attention being paid to socio-techno-cultural considerations.

The authors conclude that rigorous evidence that e-health applications improve the quality or safety of healthcare is very limited. However, they feel 'cautiously optimistic' that such applications could provide benefits. The authors recommend the following policy activities:

Interoperability

Data quality

Commitment to evaluation

Comparative studies to guide procurement decisions

Developing home-grown applications

Staff training and development

International collaborations.