The electronic health record

Yunkap Kwankam talks about the 'heart of eHealth'

I think it is time we talked about the electronic health record. This is the heart of the matter as far as eHealth goes. It is what enables so many possibilities; from a more complete medical history of an individual, to helping minimise medical errors, to improved public health knowledge about a community.

There is a plethora of different types of electronic record used for health purposes, and in some cases differing names for the same item. So, you are likely to come across terms such as 'electronic medical record' (EMR), 'electronic health record' (EHR), 'personal health record' (PHR), 'longitudinal health record' (LHR), etc., etc. Regardless of which terms are used, it all comes down to storing the data we collect about our health electronically and in a format that allows it to be retrieved and analysed.

There is a very informative video from Intel which dramatises the value of electronic health records. The video is about a Mr Bergen, who is rushed to the hospital in an ambulance suffering chest pains, during a visit to his daughter in another city. It describes two scenarios, one without EHR, and the other assuming EHR. The video highlights the significant advantages of electronic medical records in a subtle but compelling manner – the difference between knowing, or not knowing; what medication Mr Bergen is currently taking, (he knows it only as a 'heart pill'); the contrast between having his test results instantly available in the emergency room at the hospital where he is taken, or hunting for them in some paper file. If there is interest, I could set up a link from which to download the video. But it is a large file - 87MB.

Who owns the eHR?

In some jurisdictions, the eHR is owned by the individual whose record it is; in others by the institution which stores and manages the record; and in yet others, it is owned by the State, through the health authority.

But regardless of who owns it legally, morally it belongs to the individual. And in many jurisdictions there are acts in place to protect your privacy and the confidentiality of your data. When properly used, the EHR can lead to tremendous benefit for personal health as well as remarkable information and knowledge for public health purposes. Imagine a repository of complete longitudinal records – from conception to death – of every individual in a community. Then think of the recent work in genomics (with full expression through the human genome project). At birth it would be clear what health risks a person is likely to run during their lifetime, from their genetic makeup – and hence what precautions to take. No wonder the electronic health record is a key element of President Obama's five-pronged plan for health care in the US.

Where to begin

You can't even type the acronym EHR without a smart word processor helping out by 'correcting' it to read 'HER'. But that's a minor irritation. The real challenge is knowing where to begin with electronic health records. In anticipation of this challenge, WHO published *Electronic Health Records: A Manual for Developing Countries*. This 2006 publication can be purchased from WHO or you can download a free pdf version at http://wpro.who.int/publications/PUB_9290612177.htm.

The 76-page document provides a general overview, some basic definitions and examples of EHR practices. It covers some issues and challenges which may need to be addressed and some possible strategies, along with steps and approaches to implementation.

But if your interest is limited to your own individual record, Microsoft will store it for you in its Health Vault, while Google is glad to offer you space in its Google Health system. They both allow users to control their own health records, by organising health information in one place – medical records from doctors, hospitals, and pharmacies, which can then be shared with family, friends, and healthcare professionals.

To delve further, start by visiting the web sites of some of the movements aimed at making EHR free and widely used throughout the world: OpenMRS www.openmrs.org, and OpenEHR www.openehr.org.

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