SETTING THE RECORDS STRAIGHT

Electronic medical records (EMRs) have been touted as one of the top solutions for healthcare's cost and quality problems. Why then, asks **Dr Michael Miller**, haven't we seen more benefits?

The simple answer is that there is a disconnect between those who have to pay for EMRs and those who benefit from them. For example, many (if not most) national health reform proposals that are being suggested in the United States call for investing billions of dollars in EMR systems, claiming they will save the healthcare system substantial amounts of money. However, these projections hide many important factors related to the timing of any potential savings, and how different stakeholders would be affected. There are a number of specific questions that should be asked about investment into any new technology such as EMRs, including: what are the direct and indirect costs and savings for the innovation? What are the expected time-frames? How do each of these affect different stakeholders?

NUMBER CRUNCHING

Firstly, there is a very large upfront investment for hardware, software, training, and converting paper records into an electronic format. Installation costs in outpatient settings have been estimated at US$40,000-50,000 per physician. In addition, the process of migrating to EMR is different for every doctor. Clinical specialties that see patients more episodically (like surgeons), may find it easier to convert to EMRs than clinicians whose patients have chronic conditions (like diabetes) where it is important to have their long-term medical information in the EMR. Secondly, EMRs can increase physicians' billing revenue in the long term by enabling them to provide more accurate and complete information to payers, and thus get paid for more of the services they are actually providing and have fewer claims

DIRECT AND INDIRECT COSTS AND SAVINGS BY STAKEHOLDER GROUPS FOR EMR ADOPTION

STAKEHOLDER GROUP	DIRECT COSTS	INDIRECT COSTS	DIRECT SAVINGS	INDIRECT SAVINGS
Clinicians and providers	Purchasing system	Training costs and loss of revenue from repeat testing and services	Reduced staffing needs	Increased billing revenue
Payers	Subsidies for purchasing system?	Increased payments due to better billing	Reduced staffing needs and reduced payments for repeat testing and services	Ability to profile providers and monitor/ enforce costs reducing/ quality improving
Patients	Probably small	Additional co-payments for more accurate billing	Reduced co-payments for repeat testing and services	Less time spent managing paperwork and going to repeat tests etc.

returned because of insufficient information. Finally, EMRs can reduce the need for repeating tests when patient's medical records cannot be found. This would result in savings for payers and patients, but inevitably results in lost income for the clinicians that provide those tests and related services.

RECORD BREAKERS

One of the significant challenges of EMR systems is convincing people (particularly physicians and payers) that they will have real benefits that are worth the costs. Three recent articles have raised issues about the size and scope of the benefits EMRs can produce: Linder et. al. in the July 2007 *Archives of Internal Medicine* [1] reports that EMRs didn't correlate with better quality indicators based upon a US-wide survey of ambulatory care sites. Hartzband and Groopman's perspective piece in the April 17 2008 *New England Journal of Medicine* [2] notes that EMRs can "force doctors to give 'standard' rather than 'customised' care," and concludes that, "We need to make this technology work for us, rather than allowing ourselves to work for it." And the May 2007 issue of the *American Family Physician* [3] has more granular discussion about how EMRs can alter and intrude upon the physician-patient relationship. This 'Curbside Consultation' article notes that EMRs "can enhance physician-patient interactions even in a culture that seems to be moving away from face-to-face communications," but this does not occur automatically, and requires the physician to be aware of how an EMR can redirect their focus away from the patient.

EMRS: SALVATION OR SINKHOLE?

Recognising the potential pitfalls of EMRs, two recent initiatives to increase EMR use in doctors' offices across the US are taking different approaches to discovering the pros and cons of implementation - one in the state of Massachusetts and the other by the Medicare programme. The Massachusetts scheme is funded primarily by a $50 million fund from Blue Cross and Blue Shield of Massachusetts to a non-profit third party organisation (Massachusetts eHealth Collaborative [4]) that is providing direct funding and technical assistance to three pilot areas in the state.

In contrast, Medicare's demonstration programme will pay physician practices for installing EMR systems based upon the number of Medicare patients they see, and it also ties future year payments to reporting of quality information (in the second year) and then being able to demonstrate actual quality improvements (in years three, four and five). The challenge for Medicare's demonstrations is about money. With the high cost of EMR installation and training, physicians may take a Jerry Maguire-style "show me the money" attitude. However, the Medicare demonstration projects are not guaranteed money and the payments are made retroactively.

Electronic medical records systems have the potential to improve quality and reduce costs, but there are significant barriers to their adoption by independent and small groups of physicians. The results of Massachusetts' study and the success of Medicare's demonstration programme will be important for guiding future efforts to promote (or enforce) the use of EMRs in the United States or any other health system across the globe. MT

Dr Miller is an expert consultant who helps public and private organisations solve the challenges of internal and external customers successfully adopting innovations. Information about Dr Miller's consultancy and his insights into current health issues can be found at www.HealthPolCom.com and www.HealthPolCom.com/blog. Dr Miller can also be contacted directly at MMiller@HealthPolCom.com

[1] Electronic Health Record Use and the Quality of Ambulatory Care in the United States; Linder, J.A., et. al., *Arch Intern Med.* 2007;167(13):1400-1405.

[2] Off the Record — Avoiding the Pitfalls of Going Electronic; Hartzband, H and Groopman, J, *NEJM*, 358;16: 1656-58.

[3] How Do EHRs Affect the Physician-Patient Relationship?; Ventres W and Shah, A., *American Family Physician*, 75(9); 1385-90.

[4] http://www.maehc.org