

### MOTIVATING CHANGE: USHERING IN A NEW WORLD OF CLINICAL PRACTICE

After completing rounds with their residents, two prominent professors of medicine were overheard lamenting the deteriorating values of the profession.

"It's terrible that all these new graduates seem only to focus on making truckloads of money and being treated like gods," said one.

"It really is a shame," replied the other. "I remember the good old days when all we expected was to be treated like gods!"

In this issue of *ElectronicHealthcare*, we feature several articles that address the challenge of motivating physicians to adopt electronic record systems. I chose the humorous anecdote above to highlight the difficulties inherent in introducing a major change in clinical practice. Financial considerations and issues relating to the professional independence of clinical professionals are certainly key factors to be addressed as part of any change-management strategy. But, as the articles in this issue highlight, there are a multitude of other factors that have to be managed to achieve widespread physician adoption of these systems.

There is still significant uncertainty about how best to move to computerized patient records or CPRs (I'll use this term to include any system that stores and retrieves patient information electronically, including EHR, EMR and EPR). The reasons why we need to adopt CPRs, on the other hand, become more certain every day. There is an increasing body of evidence indicating that CPRs are the key to major gains in clinical quality, patient safety and practice efficiency. Indeed, comprehensive electronic management of patient information promises to revolutionize the practice of medicine.

It amazes me that after 30 years or so of trying to use computers to manage patient information, we are still operating at such a rudimentary level. Much of the literature still focuses on automating clinical transactions, rather than on developing strategies for using information technologies to address major clinical issues. I look forward to the day when we are engaging the medical profession in major drug-utilization

strategies or efforts to eradicate persistent infectious diseases. The SARS experience has taught us that transmissible diseases can be stamped out with a major effort to identify and treat patient contacts. CPR systems could help to facilitate and accelerate this process to address a variety of



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clinical problems. They could also be used to enhance enrolment in clinical trials, to identify patients who would benefit from newly licensed therapies, and to track antibiotic resistance.

But my enthusiasm for the myriad clinical applications of this technology causes me to digress. Why, with all this promise, are we still dealing with participation rates in the single digits?

Other industries do not seem to focus so much on how to increase adoption. They always focus on how to use technology to improve their business, either through increasing profit, growing market share or for strategic defence from competitors. The alternative to adoption of technology, of course, is to be overtaken by competitors and to perish. Hence, the motivation to change is strong. To be sure, many companies fail to adopt technology successfully. But those cases fall victim to the discipline of a competitive marketplace – they disappear quickly from the scene, taken over by more successful competitors. Hence, revolutionary technologies tend to sweep through free-market industries very quickly, spurred on by the consumer's relentless pursuit of greater value for the buck.

Healthcare lacks this degree of freewheeling market competition. In G7 countries, patients seldom pay directly for their healthcare and providers are highly regulated. There are also large networks of surrogate decision-makers that influence patient behaviour. In the absence of objective measures of care quality, patients often have difficulty assessing whether they are receiving the highest quality of care available.

This means the healthcare industry cannot depend on the discipline of a competitive market to drive the adoption of technology. We must

consider other change-management strategies to create the incentives we need to motivate the change. The papers in this issue highlight a number of successful strategies that have been employed to assist physicians with the transition to electronic systems.

The series of articles on international experiences contributed by Denis Protti et al. continues in this issue with a study of the New Zealand experience with physician adoption. In both Denmark and New Zealand, where physician adoption rates are remarkably high, payers provided financial incentives for adoption of electronic management of patient information. This helped to bridge the hybrid period during the transition when sporadic adoption necessitated use of both paper and electronic records for the early adopters. This is one of the most challenging elements of managing the transition to electronic systems. The real value of CPRs does not emerge until a large majority of records are electronic and linked between providers. If it were possible to jump to that state all at once, without going through the painful hybrid stage, making the case to physicians would be easy. Given the considerable inconvenience that a hybrid situation causes, additional incentives and support must be used to facilitate adoption during the transition period. Denmark and New Zealand have moved far ahead of us. We should take careful note of the approaches they used to achieve success.

Other articles in this issue identify other barriers to adoption. These include system-design architecture, required changes in workflow, technical support requirements, effective training, regulatory issues, privacy concerns, changes in professional roles and political considerations. Business redesign this fundamental cannot be left to the technology experts. Success will require concerted attention from the leadership of health organizations of all types. Hence the issue is not adoption of electronic systems; it is how to reinvent the industry to take advantage of the opportunities that new technology affords us.

To be sure, the health industry is facing some enormous challenges in the coming years. Efforts in the 1990s to contain rising health costs have

largely collapsed in the early part of this decade. This is challenging governments and employers as they try to meet growing demand for clinical care in the face of other societal needs for financial resources. A potential crisis in the availability of health human resources looms in our immediate future. The aging of the clinical professions is creating an unprecedented supply crunch as more professionals retire each year than new entrants graduate to replace them. CIHI has just released a study entitled "Bringing the Future into Focus: Projecting RN Retirement in Canada." This report is another in a long list of studies that forecast a significant drop in the availability of both nursing and medical professionals in the coming years. In the face of growing service demands from the aging population and new medical technology, these shortages look even more daunting.

Technology has something to contribute to addressing these challenges. Other industries have used technology to reinvent themselves, increasing quality while dramatically decreasing costs. Healthcare will likewise have to learn how to do more with less staff – not by working people harder (for that will make attrition rates worse) but by making their jobs easier with new technology. The supply-demand mismatch we face in the next five years will necessitate this reinvention.

The promise of major productivity increases secondary to computerization has been discredited in the health industry over the past decade by numerous projects that fell far short of this goal. Health practitioners have developed significant disbelief about the potential of information technology to make life easier. The experience of many is that computers increase the time it takes to take care of their patients. That experience has been limited mainly to partial implementations that burden providers with hybrid records that are part paper and part electronic, the latter generally being isolated systems that do not communicate with other systems. This creates extra work of double data entry, difficult communications, and searching for clinical data in more than one place. As a result, doubt that significant productivity improvement is possible runs rampant in the clinical professions.

But major productivity gains have been the experience in other industries. The adoption of technology has resulted in major increases in productivity. In 10 to 20 years, most industries have more than doubled output per hour worked. Indeed, healthcare experienced major productivity and quality improvements with the introduction of minimal-access surgical techniques, axial tomography and certain drugs like H2 receptor blockers for the treatment of ulcers. A similar productivity boost will come with CPRs.

It is easy to forget the burden that a largely manual care delivery process puts on clinical providers every day. The challenge of booking tests, getting access to clinical results and scheduling patients remains largely dependent on paper and telephones. This represents a massive opportunity to automate and optimize a major part of the health system. In so doing, we will put tools into the hands of clinicians to manage patient care proactively, reducing the burden of illness.

Given the lack of free-market drivers in healthcare and the enormous promise of the CPR, we had better start a dialogue on how to effectively support clinicians to adopt this new technology. This is beyond the scope of responsibility of most CIOs. Leaders throughout the health system will have to address this challenge if this change effort is to be successful. I hope some of the articles we have been publishing in *Electronic Healthcare* will clarify what it will take to complete the task.

And that is the challenge ahead of us – to implement comprehensive, electronic record systems that are interoperable across the spectrum of care. That they are comprehensive is the key, as partial systems, from a clinician's perspective, can be worse than a paper-only environment. As an industry, we have to devote the resources necessary to get on with completing the job as quickly as possible. We will need these technologies to meet the challenges that are already upon us. Besides, writing on scraps of paper is hardly becoming for "gods" in the 21st century!

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