Health Care of the Future: Vision 2020 - PART II

- William Pascal -

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Editorial note:

Information and communications technologies (ICTs) such as electronic health records, telemedicine, telehomecare and Internet-based health information are a key linchpin for revolutionizing Canadian health care and bringing it into the "information age".

In recognition of the growing importance ICTs are assuming for transforming Canadian health care, Health Canada's Office of Health and the Information Highway (OHIH) and its partner organizations across Canada held a number of workshops this past year to define a vision, for the year 2020, of a "Canadian health infostructure".

Health Canada (HC) will share the ideas generated by these workshops not only internally but also with provincial and territorial colleagues, as well as using these recommendations for future planning.

In our May issue, we communicated the findings of the first two Vision 2020 workshops held with child health care professionals and health care executives.

This article presents the ideas and opinions of participants in the latest two Vision 2020 workshops, held in March and May of this year, to obtain the perspectives of the nursing and the medical professions.

NURSING'S VISION FOR HEALTH CARE

At the Nursing Profession Vision workshop, organized with the Canadian Nurses Association (CNA), 30 registered nurses - from all sectors of nursing - with a strong interest in ICTs in health care met with OHIH to discuss ICTs' role from a nursing perspective.

Participants were positive and enthusiastic about the vision they put forward of an ICT-supported health care system focused on the individual, and aimed at health promotion and illness prevention in addition to intervention and treatment. In this future system, well-informed Canadians would participate fully in their own health care decisions, and registered nurses would practise more and more in community care.

In keeping with the shift to health promotion and illness prevention, telehealth and nursing telepractice would undergo a major expansion. Telehealth and electronic health records (EHRs) would vastly improve health care delivery, making more services available to people in their homes and communities. Nurses would play a key role in this "integrated" system, accessing clinical decision-support tools and exchanging real-time information through ICTs. Quality practice settings, where evidence-based nursing is practiced, would be the norm.

By seamlessly and electronically linking all points of care across geographic borders, ICTs would make the health system more accessible and efficient. The right health care provider would be in the right place at the right time, to achieve the best possible outcome. Providers and researchers, at any location, would be able (with permission) to access patients' EHRs, as well as up-to-date information and databases, to help backup decisions with evidence and research. Integrated EHRs would help reduce the need for duplicate medical tests, make it easier to identify health trends and eliminate the need for patients to repeat their medical histories. Discipline-specific national standards for entering and interpreting EHR data would be in place. Researchers could extract useful data from EHRs, determine the contribution various health providers made to a particular health care episode, and evaluate these episodes.

Technology would no longer be an issue. The focus would be on the quality outcomes it would help achieve. Equitable access to and widespread use of appropriate ICTs would be commonplace, and links with private industry would ensure that the technologies developed were appropriate to users' needs.

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Canadians could access health information on the Internet and actively participate in their own health. They would also be able to view and control their own EHRs (which would provide greater security than paper-based health records). National standards would ensure there was a proper balance between the protection of individual privacy and the sharing of information with health care providers.

New nursing graduates, practising Registered Nurses (RN's) and nursing specialists would all have the informatics skills they need to use ICTs in nursing - and these skills would be reinforced throughout their careers.

RNs would help ensure the best outcome for patients by actively participating in the design and implementation of new technologies. Nurses working in the community would also act as information brokers and educators, to support people using ICTs.

Challenges and Opportunities

While health care is front and centre on national, provincial and territorial agendas, these nurses believe they have a short window of opportunity to influence the development of national standards and policies, and shape a national framework and approach for health care delivery. Given the increased use of ICTs in nursing, it is critical that nurses participate in developing an ICT-based system. Nurses also have a responsibility to communicate this vision at the local, provincial and national levels, in order to gain the strongest support for it.

The nurses at the workshop felt that there was a nursing shortage in Canada, and therefore thought that an ICT-supported health care reform makes a lot of sense. It would optimize the role of RN's and enable them to focus on health promotion and prevention. Nurses could: involve the public in ICT design and implementation; create an Internet site with nursing information - with links to other health care disciplines; and develop core competencies in nursing informatics; and incorporate this subject into nursing curricula.

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The biggest hurdle nurses face is creating a positive information technology culture in nursing. Many Registered Nurses in Canada (except for specialists) have never had the need, time or opportunity to develop competencies in ICT use.

Among the several challenges nurses outlined, were the need to: develop a national approach and standards for ICT use; standardize health care data collection across provinces and territories; provide the infrastructure to support ICTs equitably across Canada; balance the protection of personal privacy with information-sharing; regulate nursing telepractice; and disseminate research data, knowledge and information to support evidence-based practice.

Nurses must also ensure ICTs fulfill the public's needs and inspire confidence. They are keenly aware that ICTs could create new groups of disenfranchised individuals (seniors, mentally/physically challenged, illiterate) who are uncomfortable with the new technology.

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Other challenges for nurses will be to: develop a shared vision and establish effective partnerships with other health care stakeholders; develop a common understanding and awareness about ICTs; and maintain a long-term perspective while delivering on short-term results.

Implementing the Nursing Vision

Now is the time for action, but no one group can achieve this vision alone. It will entail the collaboration of all stakeholders.

The creation of a positive information technology culture in nursing is the biggest critical success factor. This will involve the professional, regulatory, educational, and labour union nursing bodies at the provincial, territorial and national levels.

Other action items nurses recommended were to: celebrate nursing's successes with ICTs; identify and recognize nursing leadership in IT; initiate demonstration projects showing the benefits of ICT use; share information on the Internet, and establish links with other knowledge networks, such as OHIH's Telehealth Knowledge Management site; and ensure the voice of nursing is heard at all decision-making levels.

The nurses noted that OHIH can take the lead in defining and promoting an ICT-based health care system, but implementation is largely a provincial/territorial responsibility. Government funding and local support are critical: OHIH, CNA, nursing and health care provider associations and the public must all become advocates for funding, and the public must be involved in all ICT planning initiatives.

Participants suggested that CNA should lead the development of a national regulatory framework and approach for nursing telepractice, and the integration of nursing data into national databases, while Health Canada and the Canadian Institute for Health Information, should spearhead the development of national standards for ICT use.

PHYSICIAN'S VISION FOR HEALTH CARE

Participants in the latest Vision 2020 workshop - which took place in Ottawa, in May, with representatives from OHIH, the Canadian Medical Association (CMA), and physicians from across Canada - were enthusiastic about the opportunity to develop a vision of a fully integrated health system using ICTs and EHRs. Physicians saw a pressing need for such a system. Many were frustrated by the current lack of integration, such as electronic links to the rest of the health community.

Physicians envisioned a patient-centric health care system focusing on the individual, with patients involved in the process of change.

This vision for an integrated health care system, which would operate seamlessly across geographic boundaries and use interoperable technology - accessible to physicians and others - would speed up communications, do away with needless paperwork and improve care delivery at all levels.

It would allow physicians to practise medicine from any geographic location, and enable patients to be cared for by the physician who best suited their needs. Physicians would have more freedom to consult one another, which would benefit patients. And patients would expect physicians to be aware of the latest medical information on the Internet, and be able to advise them on how it relates to their situation.

Patient information would be fully protected, and accessible only on a "need-to-know" basis. With access to credible, quality information, physicians could choose the right course of action for their patients. The course of treatment would be fully tracked and documented, and the patient's health closely monitored, to ensure treatment was successful.

Ongoing funding for health care would be balanced between the interests of various parties, and sustained funding for key components (such as EHR and connectivity) would be assured. Providers would have confidence in the new system and feel they could contribute to its development.

Physicians emphasized the importance of involving patients, from the very beginning, in building an enhanced health care system. If they are to accept changes to the system, they must see the improvements. Ease of connectivity and the ability to "speak to" one another are critical for success.

Challenges and Opportunities

Because of their influential position in society, these physicians felt they could play a leadership role in shaping the development of an integrated health care system. Patients may more readily accept changes to the system if physicians believe in its benefits.

The physicians felt that now is the time for action. They also believe that Canada has the financial resources and technical know-how to improve our health infostructure system and build the kind of system Canadians need and want.

EHRs offer many benefits. An integrated, user-friendly EHR system would provide better statistical information and allow health professionals to spot trends early, and focus on prevention. The efficiencies developed now will save time later. It takes time to build a database and organize it in a user-friendly way but if, for example, articles on a particular disease were prioritized and physicians told which were most relevant, this would improve treatment.

"Many challenges remain before achieving physician's vision for health care. Chief among these is the need to change their attitudes to technology... Likewise, new doctors need better training in ICT use, and practising physicians need to learn to apply technology in their day-to-day work."

Many challenges remain before achieving physician's vision for health care. Chief among these is the need to change their attitudes to technology. The participants acknowledged that most physicians are afraid of technology. It threatens their position as pillars of knowledge.

If they can see past this, they will be able to provide better health care to their patients. But they must be convinced that change will benefit them. To convince them, information presented to physicians must be user-friendly, practical and relevant to their immediate situation. Physicians are frustrated by the lack of a shared vision among health care providers, and often feel they are the last to be consulted in any discussions about improving the system.

If enhancements to the health infostructure are not well orchestrated and implemented, changes could be put at risk. Users may have concerns about privacy, confidentiality or security or may lack confidence in the new technology (e.g., because of technological glitches or computer viruses).

Physicians expressed unease about who would ensure the protection of patients' privacy if physicians no longer have custody of patient health records.

Implementing the Physicians' Vision

The Canadian Medical Association, the College of Family Physicians of Canada (CFPC) and the Royal College of Physicians and Surgeons of Canada (RCPSC), along with Health Canada, are the most likely co-leaders, to consolidate and implement a shared vision. All stakeholders must be involved. Building strong alliances early on is the best way to achieve "buy-in".

Innovative public-private partnerships may be one way to gain the expertise required to develop and sustain ICTs over the long term, but the risks involved must be fully explored.

The CMA, Health Canada, provincial and territorial governments, and other organizations all have a part to play in creating partnerships with stakeholders to integrate standards for terminology and technology (an urgent priority). A co-partnership between CMA and the Canadian Institute for Health Information - which is currently doing work on data standards - may be one solution. Participants felt that it would be easier to implement standards if they are introduced at the grassroots level.

As stated previously, education of physicians in ICT use is crucial to the success of an enhanced health infostructure. This must also be done from the ground up, by: educating new graduates in the use of ICTs; involving practising senior physicians and other health care providers in technology development; and demonstrating the benefits of ICTs and EHRs.

The knowledge gained from current ICT-based initiatives could form the basis for a national business model for a fully integrated health infostructure. However, it is important to create a model at the regional level, first, to address any shortcomings before launching it on a national basis. All end-users should be involved in this process so that alliances are in place to communicate its advantages, once it is fully developed.

Testing is also crucial. Physicians and other health care providers must see clearly how the model works in the field, and how ICTs can benefit their patients and practices.

Canadians should understand that this business model will not produce the usual short-term return on investment, but that it will yield valuable social and financial results in the long term.

Participants in both workshops were keenly aware of the important and timely role they played in promoting the use of ICTs and patient records in Canada's health system. They fully agreed that all stakeholders must be willing to co-operate, to achieve the vision of a fully interdependent, integrated health care system.

Readers may view the complete workshop reports on OHIH's Web site at www.hc-sc.gc.ca/ohih-bsi/ Under the heading:" What's Available".