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Digitizing medicine in Canada
Anna Reid, MD, CMA president

Diamond Kassum: A passion for change

Ahead of the curve: Three Calgary area physicians show commitment to EMRs, e-health

Blogging and tweeting to voters: Social media and the CMA presidency

Emailing patients: Time saver or time bomb?

Survey charts primary care progress with EMRs

My EMR of the future
We are going digital to improve health care for Canadians. It’s a bold statement, but one the Canadian Medical Association stands behind as we work with provincial and territorial medical associations (PTMAs) to help our members make the best use of electronic medical records (EMRs) and other electronic tools.

Simply put, the digitization agenda means ensuring doctors have the right tools and support in place to move from a paper-based system to one in which patient data is stored and shared in an electronic format. Going further, it means making the best use of new mobile technologies at the point of care and putting in place the infrastructure and safeguards to collaborate with other health care professionals and our patients in an electronic environment.

None of this is new for the CMA. Our goal has always been to provide our members with the support they need to use information technology in a way that makes sense in their practices so they can deliver care efficiently and effectively. For almost a decade, the CMA has had a policy framework in place to support this objective.

But as EMR adoption increases in Canada — with more than half of all family doctors using electronic records (see story on page 4) — and as governments and patients ask more of you in terms of collecting and sharing electronic data, this policy framework needs to be refreshed. Supporting the IT needs for physicians is also a fundamental part of CMA’s health care transformation agenda. External pressures such as the heightened interest in physician accountability and patient demand for online interaction with their physician (see story on page 8) also feed into the equation.

While updating our policy objectives to reflect new realities is important, we need to be clear that the underlying principles remain unchanged.

The CMA has always been, and remains, committed to ensuring investments in health information technology are primarily focused at the point of care in the community where practising physicians interact with their patients. Providing change management support, through the PTMAs, that physicians need to cope with the new environment also remains fundamentally important. So, too, does protecting the physicians’ key role as stewards of patient data.

The CMA will continue to insist that physicians have a voice at the table wherever decisions are made about health IT and how doctors practise.

However, with changes in models of care — primary care reform being an example — and potentially significant changes in funding models and the regulatory environment, we are revisiting how the CMA can ensure physicians are best supported. With EMR uptake well advanced among the medical profession, the goal shifts from not just urging late-adopters to get on board but helping those with EMRs to derive more clinical value, and making sure the connectivity is in place to allow better sharing of information.

We must remember that the only reason health IT is important is because of its potential to improve patient care — whether by reducing medication errors, improving individual health outcomes or increasing patient satisfaction.
There’s no doubting the enthusiasm of the head of Manitoba eHealth. For more than three decades, Dr. Diamond Kassum has hung in there — convinced against all odds that health informatics and the adoption of electronic clinical information are the way of the future.

Never mind that the patient-information “smart card” that he and his wife developed and tried to sell to individuals and family practice clinics failed as a business in 1990. It was heading in the right direction, it was just 20 years too early, says the man who is now Manitoba’s chief medical information officer.

Kassum’s dedication was acknowledged last November by COACH, Canada’s Health Informatics Association, when he received the Clinician Leadership award for 2012 recognizing “outstanding leadership in advancing the use of health information communication technology… and informatics in clinical practice” to improve both provider and patient experiences and outcomes. For Kassum, the honour symbolized appreciation from peers and recognition that the systems he has helped to create and promote are having an impact on patients’ health care outcomes and experiences.

The nomination documents for this award note that Kassum inspires everyone around him by “tirelessly endorsing the use of IT systems in health care” through presenting at national and international conferences, chairing related projects and committees, modelling with his own adoption of these technologies and leading the Physician Peer-to-Peer network in his province.

“I realized when I was doing surgery that I was fixing people one job at a time … but when I’m in this field I’m fixing systems,” he states, “(and) … I am in the business of changing lives of the 1.2 million people (in the province)” who are potentially impacted by health care processes and technology.

Sharing knowledge and information in this field energizes him. Among key successes, Kassum counts the following:

- launching an Electronic Patient Record (EPR) in 2007 at St. Boniface General Hospital, Winnipeg, adding tools like computerized physician order entry in 2009 and clinical documentation in 2012; initiated to improve both hospital efficiency and patient safety/quality of care, and now expanding to encompass community hospitals, followed soon by the Winnipeg Health Sciences Centre and rural hospitals
- seeing EMR (electronic medical record) system adoption in Manitoba grow from 15% of family physicians in 2010 to an expected 70% by the end of 2013
- launching and expanding eChart Manitoba, a secure electronic system that gives health-care providers in primary care clinics, emergency departments and now hospital sites access to a patient’s ongoing key health information, collected from various points of care (including lab test results, dispensed medication, diagnostic imaging reports, hospital encounter information, immunizations); expected to be in 300 sites by June 2013, with more than 4,000 accounts.

While he’s worked at all levels over the years, from hospital to regional to provincial, Kassum takes special pride in these e-health achievements because they have such direct benefits for both patients and physicians.

‘Full steam ahead’

In the not-too-distant future, Kassum predicts we’ll also see:

- enhanced voice recognition and activation solutions
- more mobile options
- patient portals to their medical records and health care advice
- a consistent move to more best-practice and evidence-based medicine
- “predictive informatics” that analyze large patient information databases, tracking information to help develop policies and processes to predict and prevent illness and improve population health — eventually to be married to genomics, to direct health care providers towards correct interventions […] and improve patient health outcomes.

These will be welcome developments from his perspective, driven by growing patient/public demand and expected by the current generation of tech-savvy medical students and residents.

For Kassum, the digitization of medicine cannot happen soon enough. “If my generation doesn’t do it, the next one will … because this change is inevitable,” he says.
This is the first of an occasional series focusing on physicians in major Canadian centres who are peer leaders or innovators in the use of EMRs and technology.

**WES JACKSON**

Sitting on his desk and poking out of filing cabinets in Wes Jackson’s office at the Sunridge Medical Teaching Centre Calgary, are 20 toy rats — gifts from each of his grandchildren. Unlike many medical academics, Jackson hasn’t filled his office with piles of medical journals stacked on the desk, shelves and floor.

“No journals, no stacks of papers, but I read,” says Jackson, assistant professor of medicine at the University of Calgary, pointing to his iPad and explaining how he uses software to access all the material he needs, such as *Canadian Medical Association Journal* and the InfoPOEMS that are delivered daily by email.

In his commitment to using technology and online clinical resources to support education, research and medical practice, Jackson is not unlike the students and residents he now teaches full time.

“They do not like paper,” he says.

Jackson’s use of technology in medicine goes back to 1984, when he first entered practice and used an electronic medical record (EMR) he describes as little more than a “fancy word processor.”

“The early EMRs weren’t that much better than paper. The records were more legible but they weren’t necessarily more convenient.” But when viable EMR systems became available, Jackson said his group practice felt moving to electronic records was the only logical choice.

“When we selected an EMR we saw it would cost twice as much as expanding the file room. But we also saw the other advantages of the EMR and realized we would never need to expand space for charts in the future.”

From that experience, Jackson evolved to using more modern EMR systems and embraced Alberta’s Physician Office System Program (POSP), which has been helping fund EMRs in physician offices and providing a variety of support and change management programs for a decade.

Since about 2003, Jackson has helped advise other Alberta physicians wanting to make the transition to an EMR. “I do like technology but I realize there’s a place for low tech as well. Sometimes it’s just better to use the pencil. I find it’s useful to talk to docs to see how they’re using the EMRs, and … see if there’s tips on how things would work more smoothly.”

One issue that has challenged Jackson
personally — as it has many Canadian physicians forced to switch EMR systems — is transferring patient data from one system to another.

“It has been a nightmare. The problem is, it’s not just the software, it’s how the users use the software. Different users interpret the fields differently. If there was an easy solution I think we would already have found it. I do think if we could get standardization of how data is entered across EMRs then that would be a help.” But, he adds, “that’s a very big if.”

Now that Jackson teaches full time, he’s involved in research projects under auspices of the Canadian Institutes of Health Research such as work that extracts data from a variety of EMRs using algorithms to identify people with diseases such as chronic obstructive pulmonary disease (COPD), rather than relying on the diagnosis that has been entered on the chart.

Jackson is also a member of another project in which a group of 20 preceptors have been provided with iPads rather than medical textbooks. Each has been equipped with an app that allows the participants to access data they need from Dynamed and other online medical resources, as well as educational videos. The participants will be assessed pre- and post-study to see how well they use these online resources.

“Medicine is going this way,” he says. “In the future we’ll be using our EMR on iPads or Android devices. There are so many ways of entering data, that just makes sense.”

However, Jackson does admit to some frustration about how concerns about patient confidentiality and data security have slowed the use of technology in health care.

“If FedEx can track a parcel why can’t we track a referral? In 2013 why am I still having trouble getting electronic lab results from some places? Why can’t I get an electronic copy of an x-ray in Calgary when they can in Edmonton?”

That being said, Jackson finishes the interview with an example of how technology is improving health care delivery.

“I was at home checking my task list and a patient called in and asked ‘Should I get the zoster vaccine?’ There was a Tools for Practice (emailed brief reviews of common clinical issues, from the Alberta College of Family Physicians) in October or November of last year that went through the data — the pros and cons of getting the vaccine and the actual statistics. So I was able to tell my nurse ‘here are the statistics’ and … able to attach the statistics to the phone message. I said ‘Call them (the patient) back and give them the statistics and let them decide.’ It took me six minutes or less to do all of that.”

NEIL COOPER

Like Jackson, Calgary pediatrician and Alberta Medical Association board member Neil Cooper has been using EMRs since he graduated from medical school.

“Even before we got into an EMR, we were using voice recognition and dictating our consults into (Microsoft) Word. It was just personal interest, and I couldn’t write very well. We just printed out records for the charts and mailed them out to the referring docs. Dragon and Word are what I used.”

Cooper moved on to different EMR systems as his career evolved. In 2008, when the POSP program unveiled new requirements for providing funding to physicians, he felt it was time to lead an approach that would benefit all area pediatricians.

“We all went through a process together (to select a vendor) … as a group. For the most part, we went from everybody being on different systems to all the pediatricians in Calgary being on one system.”

“We evaluated each of the three (eligible systems) quite vigorously. We went to demos with big groups and demos with smaller groups with office managers and physicians, all with scoring sheets. POSP helped us through all of that. I had been through a change before and I didn’t want to make a wrong choice, as we were choosing for 30 people.”

Using peer demonstrations to evaluate EMR systems prior to purchasing was novel at the time. Cooper said having a pediatrician doing an online demonstration of the system under consideration, rather than a vendor salesman, was most helpful.

Having a common system has been transformative. For instance, he notes, “this model of care that we’ve developed for the city has made a huge difference with locums. We could never get locums. Now it’s perfectly seamless for them, as we’re all using the same EMR.”

Cooper said there are special considerations when choosing an EMR for a specialist rather than a primary care physician.

“We live by letters. The referral letter coming in and our letter going out are the most important part of our job. It’s the same for all specialists. My letter has to be formatted well because it’s advertising for the sort of job I’m doing. So if the software doesn’t support me in making a good letter then it’s no good.”
In addition, he said, pediatricians have certain key tools that must be accessible in the EMR. For example, “growth parameters are our vital signs, and it is very important these get documented correctly.”

Cooper says he is working to develop tools that will help provide better pediatrics care. For instance, he has adapted tools that can track which patients have not had their HbA1c levels measured recently. Such reminders and follow up should also be possible for other patient groups, such as those with Down syndrome and children with autism.

“We know what we should be doing for those kids, but we see them at the point of care and don’t get around to doing it.”

Cooper said the key to programs such as POSP is helping doctors make better use of EMR systems.

“What government would like is the data, the ability to collect that data and use that data to plan population health. If we’re going to do that we need to have people using EMR systems much more than they are now. We’re still at the ‘replace your paper record with an electronic version of it’ stage. I’m just now starting to delve into how I can get the system to make me a better physician.”

**JACQUES BRANCH**

What began as a project to improve the basic functionality of an EMR system has turned into a growing sideline for Jacques Branch, a family physician in Black Diamond, a rural community just south of Calgary.

Branch is a member of the Foothills Family Medical Centre, part of the Calgary Rural Primary Care Network. When he joined the practice about 10 years ago, Branch said the group assessed several EMRs, settling on the Wolf system — now part of Telus Health.

Although he was told it would take a few months for the practice to successfully implement the EMR, Branch said “it took two years before we could say we were using the EMR efficiently and were back to the same sort of level of productivity we had before.”

However, data from local laboratories were not integrated into the EMR — requiring lab data to be faxed and then scanned so it could be entered into the system. After trying to solve this problem for more than two years and being told it was impossible, Branch said he helped create a small software company that developed an integration appliance that was able to easily enter lab data into the EMR.

“What I do like is looking for technology solutions that will help me practise better,” he said.

In addition to his medical practice, Branch is now chief medical officer for the Calgary-based company Coalesce Health Systems Incorporated, which provides secure, browser-based access to portions of the patient record from most EMRs.

He said the idea was: “… if we have this integration appliance that can suck information from any database and put it into any other format, can we then take information that’s in the EMR and present it back to physicians in a way that allows them to practise better patient care?”

Using the Coalesce appliance, Branch said it is possible to produce reports that “go beyond the basics” and tell physicians “how they are doing with keeping up with guidelines — which patients are not being seen or managed properly, and for improving patient outcomes.” As an example, Branch has shown how the information can be used to identify best practices in hypertension management and measure the performance of a multidisciplinary team in improving these measures.

In addition, he said, the Coalesce application allows easy access to data stored in an EMR from mobile devices such as iPads and smartphones. Branch says paramedics have been able to use the system to retrieve patient data from the scene of an accident “and provide better patient care as a result.”

The whole concept of better integrating IT systems is one Branch says he’s passionate about. “We have to get systems across the province and across the country speaking to each other.”

In addition, “we need to start using EMRs far more effectively for measurement, identifying best practices, identifying areas where we need to allocate resources. That’s … huge.”
Five years ago, Barack Obama showed the power of social media in politics when he used social media tools in an innovative and effective way to help win the U.S. presidency for his first term in office. The win was seen as a turning point, confirming the legitimacy of using Facebook and other social media as ways to communicate and influence voters.

While the race to become president-elect of the Canadian Medical Association (CMA) may not have the same profile as the American presidential election, the two candidates (from Ontario) for the CMA’s highest office showed just how pervasive the use of social media has become. In the campaign that concluded last month, they used Facebook, blogged and tweeted regularly.

Both Gail Beck, an Ottawa-based child psychiatrist, and Chris Simpson, a Kingston cardiologist, felt it was important to integrate social media into their communications strategies to reach Ontario Medical Association (OMA) members and prospective voters.

“I’ve been using social media for a fairly long time, especially Facebook,” said Beck. “I’ve just recently gotten more into Twitter and LinkedIn. We started to use Twitter at the Ontario Medical Association and I realized how easy it was to engage people in that context,” she said in an interview. Beck also had a blog (online commentary) in place prior to the election.

Simpson said: “I have been on Facebook for a long time, mainly for social reasons because my kids are (there) … and it was a good chance to figure out what’s going on with them. I created a new Facebook account for the election and all my friends … jumped onto it.

“I had signed up for Twitter in 2007 but it didn’t really take off. (Now) I’ve been surprised at how much I’ve learned from Twitter. That’s the big value for me. I have to say Twitter has been a bit of a disappointment as an election tool. The vast majority of prospective voters are not on Twitter, apart from the leaders of the OMA and the students and residents.

However, Twitter suddenly came alive as an election tool in late January when a McMaster family medicine resident organized a tweet chat (an online town hall) specifically to give those on Twitter a chance to question the candidates directly.

During the Twitter chat Beck and Simpson provided answers to several questions on issues such as health equity, health human resources, mental health and CMA member engagement. Other physicians also made comments — adding #CMAElect to their tweets to ensure their contributions were seen by others involved in the election-oriented discussions.

Commenting on the Twitterverse, Beck said: “I’m finding that I’m reaching new people — people that I think may not have had any contact previously. I’m also finding I can consolidate the contacts I already have.”

She said she thinks it’s going to be important to use social media in future campaigns for the CMA president-elect position. Younger colleagues already “know its power,” and she noted it’s not feasible to call every potential voter in larger provinces such as Ontario.

For Simpson, “my suspicion is (that) a much higher percentage of people who are involved in social media … will be voting. Given that traditionally only 10% or 15% of the eligible population vote, they may punch above their weight a little bit.” However, he said email was probably a more productive tool for reaching candidates with his views.

Beck and Simpson agreed that keeping active on social media during the election campaign had become overwhelming.

“It’s certainly more time-consuming than I would like it to be, and the time I spend on it is not sustainable in the future,” said Simpson. Beck said she expected to continue to blog — regardless of the election results — in order to have an outlet to express her views in writing.
Late last year, shortly after Dr. Tara Kiran saw survey results showing how poorly Canadian primary care doctors were doing relative to other countries in their use of information technology, she was asked to write a guest commentary on the website “Healthy Debate” on why more doctors don’t use email to communicate with their patients.
Kiran was also hearing from residents at St. Michael’s Hospital, Toronto, where her family health team is affiliated, who stressed how important it is to have safe, secure methods for e-communication with patients.

“We need to stop making excuses for not using communication technologies in healthcare that are commonplace in every other aspect of our life,” wrote the primary care health researcher and part-time primary care advisor for the Toronto Central local health integration network (LHIN).

Her blog post prompted a lively discussion on social media platforms, but the question of why doctors and patients are not emailing with each other currently has no simple answer in Canada.

While there are some Canadian physicians and physician offices routinely using email to interact with patients on personal clinical issues or for administrative matters such as booking appointments, the reality is they’re in the minority.

And despite several extensive sets of guidelines from the Canadian Medical Protective Association (CMPA), Canadian Medical Association (CMA) and provincial regulatory bodies and privacy agencies, use of email to communicate with patients is often done on an ad hoc basis — with individual doctors and patients setting their own rules on what works for them.

**EMAIL COMMUNICATIONS BETWEEN DOCTOR AND PATIENT**

The best data on email use for communication with patients in Canada comes from the Commonwealth Fund survey of more than 2,000 family doctors or general practitioners conducted a year ago — the poll that drew Kiran’s attention. That poll showed 11% of these primary care doctors said patients can contact them by email to address questions or concerns. This was the lowest percentage of any of the 10 countries surveyed. (In Switzerland, the number is 68%)

Data from the National Physician Survey 2010 indicated 14.4% of primary care doctors email with patients for clinical purposes, and 4.9% do so for other reasons.

These figures show that despite patient wishes to use email to communicate with their physicians, most Canadian doctors are not yet willing to make this available.

For doctors, the barriers to email communications with patients are many. They can include lack of remuneration, concerns about security or privacy and — perhaps most importantly — the spectre of unrestricted email queries from needy patients clogging inboxes.

Dr. Jonathan Kerr, a Belleville, Ont., physician and former chair of the College of Family Physicians of Canada’s ‘First Five Years in Family Practice’ committee is an exception to the trend. “I personally use it (email) quite a lot,” Kerr said in an interview, explaining that he only uses it in the context of an existing doctor–patient relationship.

“I don’t give my email out to every patient, because with some … there is no issue they would need it for. With patients for whom I think it would be helpful for them and for me, I do give them my email address and say follow up by email. They initiate questions. I never initiate any questions… It’s just another form of access I provide to patients who I feel would benefit from it. For the most part they have been very respectful and understanding of my personal time.”

While Kerr says he does set the ground rules with patients prior to initiating an email relationship, he does not have them sign any forms. He says the advice he gives by email tends to be of a more general nature, and notes that all email communication is copied into the patient record.

As part of a family health organization with a capitated practice, Kerr said he feels he is paid to provide service by email.

“My job is to look after my patients 365 days a year. That’s my contract with the government. If I can email back and forth with a patient about a rash or a cough or something and it takes three minutes, that’s time they don’t have to come to the office. I think the patient model helps us provide better customer service than in the past.”

Dr. Jessica Otte, who is currently providing locum services in Nunuvut and northern British Columbia, routinely uses email to communicate with patients. She says she does not use an encrypted email system but does use double-factor authentication “so my account is safe.

“This authentication seems the safest option without creating a ridiculously cumbersome system, a relevant worry when it comes to my elderly, less tech-literate patients,” Otte says.

What Kerr, Otte and others are doing is definitely sought by patients. For her part, Kiran does not presently use email with patients because she works within a hospital that — until now — has not had a policy on the matter, and thus discouraged staff from using this channel due to privacy and security concerns. Kiran does, however, email her own doctor for “administrative” purposes such as booking appointments, checking clinic hours and noting changes to programs or services.

Surveys clearly show that people want email access to their doctor, and to “actually have some discussions with their doctor as an alternative to using the telephone,” notes Michael Martineau, vice-president of sales and marketing, B Sharp Technologies, Toronto, a longtime commentator on e-health issues in Canada.

Email is “one of those areas where there’s a difference between what patients would like to see and what doctors are
“My job is to look after my patients 365 days a year. That’s my contract with the government … I think the patient model helps us provide better customer service than in the past.”

— Dr. Jonathan Kerr

prepared to provide,” Martineau noted in an interview.

He said studies, such as one from the University of Kansas, show physician concerns about being overburdened by unrealistic patient demands are generally unfounded.

“In some cases what I am seeing is doctors using email to inform their patients about (test) results and then bringing (them) … in to discuss those results. Patients don’t seem to abuse it, and most doctors are saying email is easier to manage than the telephone because they can control when to respond.”

Martineau said he agrees with Dave Chase, a health consultant in the United States, who describes email as “a gateway drug for patient engagement.”

CURRENT GUIDELINES

The guidelines that have been established for email communication are intended to safeguard both physicians and patients.

The most recent communication from the CMPA on this issue was contained in “Technology-unleashed — The evolution of online communication,” an article published last June. In it, the CMPA warned “there are several potential risk areas in email communication including privacy and security, timeliness of responses, and clarity of communication.”

In addition to checking applicable regulatory and statutory requirements, CMPA said physicians should consider the need to obtain patient consent and the fact that “all emails and attachments should have adequate encryption.”

Otte notes that the CMPA recommendations are “pretty general.

“I’m sure as more people adopt this there will be more firm ideas about what is expected and what works best.”

The CMA developed a policy on online communications with patients in 2005, and most of that advice remains relevant. The policy document states that when using online channels for communication, “privacy and confidentiality should be maintained at a level that is comparable to that currently expected for the patient record.” The document urges physicians to develop an office protocol for online communications and sets out detailed checklists physicians can use.

An example of advice from a college comes from the privacy toolkit published by the BC College of Physicians and Surgeons in June 2009 which outlines five steps a physician should take before implementing physician–patient email communication. One of those steps states: “where possible, use alternative and secure methods of delivering personal information … Do not email sensitive information such as personal health information unless absolutely and immediately necessary.”

For its part, the Office of the Information and Privacy Commissioner of Alberta published a practice note in August 2012, stating that while emailing patients can improve health outcomes and overall efficiency the practice is susceptible to risks such as interception, misdirection, alteration, loss and interference.

The College of Family Physicians of Canada has also published an FAQ on email communication with patients that begins by noting “physicians could face liability around confidentiality, privacy and security, timeliness of responses and clarity of communication.”

While these and other guidance documents are consistent in message, the tone is not encouraging for integration of email into standard office practice.

PAYING FOR POSTING

British Columbia is presently the only jurisdiction in Canada that explicitly provides fee-for-service payments to some physicians who communicate with patients by email for certain purposes. However, the recently signed Physician Services Agreement between the Ontario Medical Association and the provincial government, which comes into effect this year, will also explore introducing payments for email communication.

In British Columbia, Dr. Bill Cavers is co-chair of the General Practice Services Committee (GPSC), a joint committee of the provincial government and the BC Medical Association (BCMA), first established in 2002. The committee’s funding is derived from the Physician Master Agreement between the province and the BCMA. Cavers said the GPSC first provided special fees to encourage physicians to offer telephone and email followup support in about 2007. These fees were established to facilitate follow-up care for palliative care patients and those with mental health issues, COPD and those requiring complex care by physician or physician’s delegated representative, including medical office assistant.

Last year, he said, these fees were amalgamated under one code covering a total five email/telephone follow ups.
To date, Cavers said his committee believes most of payments have been for telephone follow up. In the most recent calendar year, he said some 1,279 GPs billed for 17,471 services covering about $10,000 at a flat rate of $15 per follow up.

Cavers said the province’s specialist committee is bringing in its own fee structure to cover follow-up services, with a higher rate for telephone follow up and another for email.

Under the BCMA’s Shared Care Committee, Cavers said a group of psychiatrists has been piloting a program to do group visits for patients with depression and anxiety that includes email follow-up. The pilot has involved about 4,000 patients since March 2009, and Cavers said participating psychiatrists find it really improves the efficiency of care. Those in the project don’t use encrypted email, but patients are advised of this beforehand.

Despite having the follow-up email fees available, Cavers said “the GP population isn’t at a place where they trust emails. They’re afraid if they give out their email address that they will get 1,200 emails a day.” However, the mindset is slowly changing.

In Ontario, virtual care is included in the new fee agreement that will become effective April 1. An appendix to the agreement states that “an evaluation project will be developed to enable standards-based, patient-initiated patient to primary care provider eConsultations, including initial evaluations of capitated sites followed by an evaluation in a fee-for-service setting.”

According to David Jensen, a spokesman for the Ontario Ministry of Health and Long-Term Care, “virtual tools that allow patients to communicate remotely with their doctors (e.g., email) … can improve patient convenience and shorten wait times, as fewer patients will need to schedule and attend full appointments when all they want is to ask their doctor a routine question. Addressing these issues can… prevent adverse events and improve the overall patient experience.”

With millions of patients in the United States — in health care organizations such as Kaiser Permanente — using email routinely, and with the development of secure patient portals to facilitate online communication between doctors and patients, it’s clear the email question will continue to evolve in Canada.

Published research has yet to show definitively that email communication between patients and doctors improves patient outcomes or makes the system more efficient, but patients obviously want to see it in wider use. There is also a sense that, as with electronic medical records, doctors making use of this tool have no intention of stopping.

“[The GP population] are afraid if they give out their email address that they will get 1,200 emails a day.”

— Dr. Bill Cavers

“I use email mainly with my difficult diabetics. These were the patients who were just started on insulin or who had been on insulin but never really understood it. It seemed like I had to hold their hand a little just to get them confident in adjusting their doses, fixing their diets, and understanding the consequences of high or low sugars. Initially I tried to fit them in for once-weekly appointments and had them call me every few days to check in. It was one of my patients who travels a lot who suggested email. Why not? It worked really well for the busy both of us. Being a regular locum … meant I wasn’t there all the time but I was committed to some continuity with patients. I could help titrate insulin, send links to good online resources about diabetic diets or easing into exercise, and let them know someone cared and was holding them to account.

“I thought it would remove a barrier and for some it did. They were more engaged, and realized that managing their illness didn’t have to be scary. I think that the ease of email unfortunately didn’t push anyone from the pre-contemplative to action stage of change. There are lots of parallels with quitting smoking — online support seems to work, but only for those people who are … ready to quit.

“In future, I would continue to do this. However, I’d make some changes to make sure I don’t bring work home with me. Initially I used my main email address to contact patients because I don’t access my government one often, and I was afraid that a delay in response could be seen as not making this support a priority.

“In the future, I would also set aside 10 minutes on workdays to go through these ‘work’ emails in a separate inbox, in future, and consider group emails and even group appointments, as patients can help each other stay motivated. I would also send more templates and standardized patient handouts from the get-go, and refer back to them rather than just attaching one to each email. That way, keen patients could sift through reliable resources at their own pace.

“In short, using email with patients can be really helpful and personally rewarding if they are motivated and if I set some clear boundaries at the outset.”

— Dr. Jessica Otte
Emailing from the patient perspective

Canadian patient advocates confirm that patients want to use email to communicate with physicians.

Jenn Sprung is a patient advocate and mother of a child with special needs in Belleville, Ont. She said when her son was first diagnosed with a rare genetic disorder she used email extensively to receive genetic information from doctors around the world.

“Communication with a physician (in person or by phone) is often very brief and hard to get. Knowing you have that additional option of contacting them a different way, when they have a few minutes to think about it and get back to you … is enough for people to make it through to the next appointment,” she says.

“Generally speaking, (I think) we understand doctors are very busy and (to use email) it needs to be … important enough that we feel it can’t wait for the next appointment.”

Kathy Kastner, founder and CEO of Toronto-based Ability4life.com and patient advocate on end-of-life issues, agrees. “Those who email would love to have a doctor who is willing to communicate with them that way … I think it is going to be the way of the world.” However, “it is really important to set up parameters so the future of electronic communications is not killed before it gets off the ground.”

She admits her own GP does not use email, citing lack of time.

While acknowledging physicians need to work within the confines set by regulatory bodies, Kastner says asking a patient to sign a form prior to initiating an email relationship is likely to scare the patient off.

As a council member for the College of Occupational Therapists of Ontario, she says processes used by regulatory bodies to set regulations can be “incredibly slow-moving” and hopes the college will acknowledge that a more “organic process” is needed to govern email communications.
More than half of all family and general practitioners in Canada now use electronic medical records (EMRs), according to the most recent large-scale survey on the topic.

However, primary care physicians in Canada still badly trail their colleagues in several other countries when it comes to uptake of EMRs and their use in clinical care.

The findings come from a 10-nation survey conducted by the Commonwealth Fund and released last November, supplemented by a regional breakdown and commentary by the Health Council of Canada — which helped provide funding to increase the sample size in Canada. The health council published its own report on the findings in January.

The survey involved 2,124 family or general practitioners but no primary care specialists in Canada. The sample size was larger than that used in most other countries, where about 500–1,000 physicians were polled by mail or telephone between March and July, 2012. The questions mirrored an earlier 2009 Commonwealth Fund survey, with the health council also using data from a 2006 survey for comparison.

Last year’s survey showed use of EMRs by primary care doctors increased from 23% in 2006 to 37% in 2009 and 57% in 2012. While a significant jump from three years ago, the results still placed Canada second-last among the 10 countries polled. Only Switzerland scored lower.

“We have come a long way. We find these results are very encouraging,” said Dr. Marie-Dominique Beaulieu, president of the College of Family Physicians of Canada. “This reflects the work that has been done to better equip family physicians.”

John Abbott, CEO of the Health Council of Canada, agreed — to a point.

“The data indicate that we have improved significantly in the last six years and we’ve managed to track that over a number of surveys,” he said. “But the hard reality is that we still have a long way to go, and in 2012 … there would be an expectation that we would have been much further along.”
“But the hard reality is that we still have a long way to go, and in 2012 … there would be an expectation that we would have been much further along.”

— John Abbott

“EMR implementation in Canada has found its momentum.”

— Richard Alvarez

Beaulieu noted that Quebec was one of the last provinces to put a provincewide funding program in place to support family physicians. “We’re very happy that there’s something in place.”

She added: “As one of the laggards we can learn what has been put in place by the other provinces, in terms of what specifications are needed for EMRs … I’m looking forward to seeing the province of Quebec catching up.”

With new primary care doctors coming into practice expecting to work in an electronic environment — and with patients also increasingly having this expectation — Abbott said it will not be long before use of an EMR is mandated and considered the standard of care.

While the overall message from the Commonwealth survey was positive, findings that highlight specific ways for EMRs to deliver care show just how far Canada is behind other countries.

For example, only 24% of Canada’s primary care physicians say they can easily generate a list of those patients due for tests or preventive care versus 90% in the U.K. and 81% in New Zealand. And while 13% of Canadian doctors say they have a computerized system to routinely send reminder notices to patients requiring preventive or followup care, 88% of New Zealand physicians have this capability.

In the original article on the survey findings published by Cathy Schoen and colleagues in *Health Affairs*, it was noted that “the rapid spread of health information technology capacity in the United States and Canada and the evolution of multifunctional capacity in many coun-
Doctors’ use of electronic medical records in their practice, 2009 and 2012

"This reflects the work that has been done to better equip family physicians."
— Dr. Marie-Dominique Beaulieu

Doctors with electronic medical records multifunctional health IT capacity

tries since the 2009 survey underscore opportunities for global learning as physicians become proficient users of health information technology systems."

However, the Health Council of Canada in its report concludes by observing that for primary care doctors to improve the quality of care for their patients in this country “all physicians must be able to monitor their clinical outcomes and compare their performance to their peers.”
The Canadian health care enterprise is at least a $200-billion per year machine. But despite the advancement in technology in health care and the digitization of communication, it is shocking that paper forms and filing cabinets are still so prevalent. It’s time for our medical system to catch up to other industries.

Canadian physicians are some of the best in the world and they are experts in overcoming the complexities of medicine to deliver high-quality health care. But we can do better and the answer lies in custom computer applications for point of care use, such as with the electronic medical record (EMR).

When I graduate from medical school I would like to use an EMR that mirrors Apple’s iTunes Genius. Just as the Genius automatically generates a playlist of songs similar to the selected song, I want to be using an EMR that could intelligently build on the data it has on a patient — the ‘wow’ factor.

Patient files can be massive. Digitizing these notes using the current EMRs is not a significant improvement. The quantity of data that accumulates is still quite large and difficult to sift through.

However, if an EMR had some intelligence then data could be analyzed for the physician and presented in a more useful and efficient manner. Intelligent EMRs could take the information submitted by the physician and use probability to identify appropriate diagnostic tests or suggest possible treatments. It could also analyze costs and recommend less expensive diagnostic tests, which will ultimately save money for the system.

The future physician should have a device like the iPad mini or Nexus 7 in his white lab coat pocket. During the patient-physician interview, the tablet would be used to record relevant information on the patient’s medical history, whether that is by typing, using a stylus or even voice recording and context recognition. The tablet would also be able to interpret that data, organize symptoms and signs, reveal correlations between current and past medical visits and allow for quick, easy text searches.

The future of EMRs should also include patient tracking, through a database that physicians across Canada can utilize in order to better understand their patient’s medical history. Someone who presents to their family doctor with chest pain that is eventually diagnosed as chronic stable angina would usually see multiple physicians through the course to diagnosis and treatment. A common central database system could keep track of the time it took to identify the illness, the diagnostic tests that were used, opinions given by the many physicians, and even dollars spent.

This information could give feedback to what is working well and what needs to be changed. It should also give educational feedback to practitioners, notifying them not only of their mistakes and areas of weakness but also strengths and successes.

An EMR or supporting computer applications would not replace the physician, as a computer can never replace the one-on-one care that a physician provides. But the evolution of computer applications can assist physicians by enabling them to maximize their time with patients, explaining ailments, providing counsel and assisting them in achieving positive health outcomes. If we can develop computer technology like this, we can improve the system. The challenge lies in supporting the development of these ideas, and current medical students who are digital natives should discuss these issues, and promote technological advancement in health care.

Given that we live in an era when cars can parallel park on their own and video games look like real life, surely developing an intelligent EMR is not an unrealistic ambition for the future of our health care system.

William Parker is a medical student (Class of 2016) at the University of Alberta.
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