Ahead of the Curve: How social media are changing the way Canadian doctors practise

Canada continues slow climb up EMR adoption curve
Experiences from the forefront of EMR use

20 Canadian physician case studies

Regina, Sask. otolaryngologist
Dr. James Fritz

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As doctors across this country inch toward more widespread use of electronic medical records (EMRs), it becomes clearer and clearer that a national lens needs to be applied to the process.

I believe the Canadian Medical Association (CMA), working in conjunction with the provincial and territorial medical associations (PTMAs), is well positioned to provide just that focus to ensure physicians have the technology they need to support their practices and patient care now and in the future.

Over the past decade, the CMA has been working closely with the PTMAs and other organizations, such as Canada Health Infoway, to make sure physician interests are being considered as the health information technology (HIT) revolution unfolds.

This has meant supporting programs to help encourage the appropriate introduction of EMRs into community practices, ensuring physicians are deeply involved in planning processes and — in the acute care sector — supporting the proper use of decision support tools such as CPOE (computerized physician order entry), drug management systems and bar coding.

At times, it has seemed an uphill battle. Programs to help provide funding and change management support to physicians for EMR implementation have been slow in coming and still exist in only embryonic form in some jurisdictions.

The recognition that placing EMRs in community practices is a foundational element for any nationwide electronic health record infrastructure has only recently been acknowledged by decision-makers. In addition, the evidence base needed to show how EMRs can improve patient care and health outcomes has been slow in coming.

But despite all these issues, progress has been made. All provinces now have an EMR program, and there is enough money in the pipeline to ensure that 60% of community-based physicians can acquire an EMR. Behind the scenes, there is growing recognition that there needs to be a national framework around setting the standards by which EMRs should be made available to Canadian doctors.

The CMA has long maintained that physicians need a range of choices in selecting an EMR, but the patchwork standard-setting process that has seen jurisdictions limit the systems they will fund — and their funding of different systems — is now acknowledged to be hurting the entire process. The CMA is committed to working with Canada Health Infoway to ensure that this national standard-setting process will help ensure physicians can get the EMRs they need without jeopardizing jurisdictional autonomy.

Recently the CMA and PTMAs met and agreed to work together more closely to ensure development of a national approach to HIT. This approach will involve identifying critical issues that will allow the HIT agenda to move forward and then working collaboratively to address them.

In addition, the CMA Board of Directors recently approved the establishment of a working group that will see the CMA work with other key stakeholders to help electronic prescribing become a reality in Canada. To many, electronic prescribing is the “killer app” that will ratchet up implementation of EMRs in Canada and make the benefits of these systems transparently obvious to both physicians and patients.

Working with the PTMAs, the CMA will ensure that the physician voice remains clearly audible in ongoing discussions about how Canada can best harness HIT for the betterment of physicians and patients.

Dr. John Haggie is president of the Canadian Medical Association.
À mesure que les médecins du pays se dirigent peu à peu vers une utilisation plus généralisée du dossier médical électronique (DME), il devient de plus en plus clair qu’il faut aborder ce processus dans une perspective nationale.

J’estime que l’Association médicale canadienne (AMC), en collaboration avec les associations médicales provinciales et territoriales, est bien placée pour apporter ce nouvel éclairage afin que les médecins puissent disposer de la technologie dont ils ont besoin pour soutenir leurs pratiques et les soins aux patients, maintenant et à l’avenir. Depuis une dizaine d’années, l’AMC travaille en étroite collaboration avec les associations médicales provinciales et territoriales, et d’autres organisations, notamment Inforoute Santé du Canada, pour s’assurer que la révolution des technologies de l’information (TI) en santé ne s’opère pas sans prendre en compte les intérêts des médecins.

Pour ce faire, il a fallu soutenir des programmes afin de favoriser une intégration appropriée de systèmes de DME dans les cabinets de médecins en milieu communautaire, faire en sorte que les médecins participent pleinement aux processus de planification et, dans le secteur des soins de courte durée, soutenir l’utilisation adéquate des outils d’aide à la décision tels que les systèmes de saisie informatisée des ordonnances et plans de traitement, les systèmes de gestion des médicaments et les systèmes de codes à barres.

Nous avons réalisé des progrès. Toutes les provinces sont maintenant dotées d’un programme de DME, et le financement est suffisant pour que 60 % des médecins en milieu communautaire puissent se procurer un système de DME. Dans les coulisses, on reconnaît de plus en plus le besoin de créer un cadre national d’élaboration de normes sur la façon dont les DME devraient être mis à la disposition des médecins au Canada.

L’AMC a longtemps soutenu que les médecins doivent pouvoir choisir un DME parmi un éventail de systèmes, mais on reconnaît aujourd’hui que les processus disparates de normalisation en raison desquels les provinces et territoires ont dû restreindre les systèmes qu’ils vont financer — et leur financement de divers systèmes — ont plutôt nui au processus dans son ensemble. L’AMC est déterminée à travailler avec Inforoute Santé du Canada pour que ce processus de normalisation garantisse aux médecins de pouvoir obtenir le système de DME dont ils ont besoin sans compromettre l’autonomie des provinces et des territoires.

Récemment, l’AMC et les associations médicales provinciales et territoriales ont convenu de travailler en plus étroite collaboration pour assurer la création d’une stratégie nationale de développement des TI en santé. Il faudra d’abord déterminer les principaux enjeux qui permettront au programme d’implantation des TI en santé d’aller de l’avant, puis collaborer à cet égard.

De plus, le Conseil d’administration de l’AMC a récemment approuvé la création d’un groupe de travail dans le cadre duquel l’AMC et d’autres intervenants clés verront à concrétiser un système d’établissement d’ordonnances électroniques au Canada. Pour plusieurs, un tel système est l’application décisive qui va propulser de l’avant la mise en œuvre du DME au Canada et rendre plus évidents que jamais les avantages de ce système pour les médecins et les patients.

En collaboration avec les associations médicales provinciales et territoriales, l’AMC fera en sorte que la voix des médecins continue d’être entendue dans les discussions en cours sur la façon dont le Canada peut le mieux tirer parti des TI en santé, au bénéfice des médecins et des patients.

Dr. John Haggie est président de l’Association médicale canadienne.
Physicians and patients alike are encouraged by results from the National Physician Survey (NPS) 2010 that show physician use of electronic medical records (EMRs) in Canada is steadily increasing. But don’t break out the sparklers just yet — it’s not a wholehearted embrace.

Close to one in six physicians (16.1%) reported that they use EMR systems exclusively for their patient records, a definite improvement over the 2007 survey’s finding of one in 10 (9.8%). Nevertheless, this rate of uptake pales beside that reported in many other countries. Research done in 2009 by the Commonwealth Fund, an independent research organization, found that in some European countries from 40% to 98% of primary care physicians keep patient records in an electronic system.

In Canada, CMA’s chief technology officer Bill Pascal calls it “an evolution, not a revolution… slow, but steady.”

Dr. Alan Brookstone, an industry analyst, family physician and CEO of the Canadian EMR resource website, is only “guardedly optimistic” that EMR uptake will improve significantly. Following the June 2011 release of NPS 2010 numbers, he blogged: “these numbers are not stellar by any means.”

Not surprisingly, EMR use is most prevalent in provinces that have support programs and designated funding in place (Alberta, British Columbia, Manitoba, Nova Scotia, Ontario and Saskatchewan).

Digging deeper

It’s revealing to find from the survey that some 34% of physicians use a combination of paper and electronic records. (Almost twice as many “other specialists” as family physicians/general practitioners reported using both paper and electronic systems.)

Whether that’s because it can take considerable time, effort and resources to choose the right EMR and transition to it or because some physicians work in both private practice and hospitals and experience varying resources and degrees of connectivity, it means there are still large gaps in the move to an exclusively electronic system, resulting in inefficiencies. Time spent on documentation, for example, is doubled — at the expense of time available for care.

Although there’s a sense that many physicians resist technological advancement, the NPS 2010 results refute that notion. About 18% of survey respondents said they have a practice website (up marginally from 17% in 2007), and more than half use email to discuss clinical matters with colleagues. Large numbers of doctors routinely refer patients to websites for information on specific diseases, treatments and patient support.
As numerous blog entries and journal and press articles relate, physicians are enthusiastically using smartphones and tablets for many clinical tasks, such as drug references, connecting with colleagues and pulling up electronic files on patients.

The NPS data show that fluctuations in EMR use across age groups are leveling out, but there is a marked drop-off in full use of electronic record-keeping among physicians age 65 and older.

Residents
Predictably, residents and new graduates are highly motivated to use EMRs, and they plan to continue when they enter into practice. More than 78% of the 2,546 residents who responded to the NPS 2010 said they had used or been exposed to EMRs during their clinical training and close to 77% of them hope to use EMRs rather than paper in future practice settings. Considering the low number of physicians who reported using electronic records systems to enter and retrieve clinical patient notes (39%) and the small number (16%) who are using EMRs exclusively, it’s clear this is setting up a conflict in practice styles and expectations.

As Dr. Adam Kaufman, president of the Canadian Association of Internes and Residents, stated in a news release about the NPS 2010’s medical student and resident findings: “Resident physicians know that meeting the health care needs of Canadians means working smarter…. To do this we need a system that provides hands-on experience with up-to-date information and technologies.”

What’s missing?
Not all EMR systems are as user-friendly or as well suited to physicians’ needs as they could be, experts say. In the early stages, the time needed — by both physicians and staff — to learn how to use one effectively takes a toll on office productivity. There’s a definite impact on the bottom line.

Ontario Hospital Association president and CEO Tom Closson, raised eyebrows in June when he stated at the e-Health 2011 conference in Toronto that doctors who don’t use EMRs should face penalties. “Changing the way they are paid changes the way they practise,” the Canada Health Infoway board member was quoted as saying, arguing that pay-for-performance measures should be imposed to move physicians more quickly to full EMR adoption.

Brookstone has also commented on the funding issue, telling Future Practice that physicians will resist using EMRs without additional support to offset their inability to raise fees “to compensate for unanticipated expenses.” He favours the “meaningful use” compensation model, where doctors receive additional funds for achieving desired health outcomes with their patients.

There’s also the question of functionality. Today’s sophisticated system users are chiefly concerned with what information the EMR system can capture, how it is presented, the type of decision support embedded in the EMR and how effectively and easily it can communicate with other parts of the health care information technology ecosystem.

Brookstone points out two core EMR elements that are lacking: e-prescribing and the ability to smoothly refer patients electronically. Overall, he says, EMR adoption across Canada is “piecemeal,” a series of proprietary systems that have been developed to different sets of standards and priorities. Information often isn’t easily captured or shared among the various levels of the health care system.

“We need real-time data on the EMR markets, so that people can look at where we need to focus [for product improvements]…. We need to demonstrate effective use and functionality,” Brookstone states, before we’ll see widespread adoption.

Pascal agrees. “Physicians are saying ‘I’ll get on board when I see the value in it.’

“Will an EMR help them provide better patient care, reduce their practice costs and give them tools they need (and can easily use) to better manage their time and manage their practice?” Those are the EMR elements physicians are waiting to see.

Marla Fletcher is on the editorial staff of Future Practice.
As Canada Health Infoway enters its 10th year, its focus is broadening — from investing a national infrastructure for sharing key health information to influencing point-of-care electronic medical record (EMR) system improvements in an attempt to offer improved clinical value for physicians.

In May 2011, Infoway announced that it is adding certification of EMRs to its roster of services. President and CEO Richard Alvarez says the move is intended to make system selection easier for physicians. In press announcements at the time, he stated: “Certification of EMR systems will signal to users that the product they are considering is a trusted solution that conforms to Canadian and international standards.”

In September, the agency followed up with the appointment of a new clinical council that will advise on investments and clinical engagement strategies. Dr. Michael Golbey, chair of the Canadian Medical Association (CMA) Board of Directors, is also chair of the new council.

**Interaction**
It’s all part of a movement toward enhancing the way an EMR interacts with other critical sources of patient information throughout the health care system — including assuring information security — to boost the individual practitioner’s efficiency and quality of care. Observers say the emphasis is moving from large national networks to local solutions, because the majority of physicians working in primary care are most concerned with connecting at the local level.

“Electronic medical records are an important tool for today’s clinicians, helping them to free up time to provide care, while improving services to patients,” states Alvarez. “Infoway’s new EMR program aims to deliver increased clinical value at the point of care, complementing earlier investments in key building blocks, such as the ability to capture and share digital diagnostic imaging and medication profiles with authorized clinicians.”

In 2010, $500 million in new federal funding was allocated to Infoway, of which $380 million is being invested to encourage EMR adoption by physicians and extend interoperability across Canada. Much of that money has now been distributed through agreements with the provinces and territories. This is in line with what the CMA and its partners and affiliates have been seeking: support for physicians who undertake the costly, time-consuming process of transitioning to fully electronic patient records.

“Doctors are clear on their requirements to adopt an EMR: quick electronic access to drug information, access to their colleagues (for consultations), to local hospital and lab information... at the point of care,” observes Bill Pascal, chief technology officer for the CMA. If vendors and policymakers can deliver on these priorities, he believes the adoption rate will surge.

**Beyond original mandate**
There’s been criticism, however, that Infoway hasn’t met expectations in...
terms of fulfilling its mandate: to build an interoperable electronic health record (EHR) infrastructure across Canada to provide better health care. The specific goal set by Infoway and its provincial and territorial partners was to make EHRs available to 50% of the population by 2010.

Rate of progress
Some $2.1 billion in federal funding later — and a decade after Infoway started its work — in March 2011 that objective was met. However, much remains to be done. For example, virtually no jurisdictional system exists that connects patients with their own medical records. And although physicians in a few leading jurisdictions can now access EHR information in their offices or while caring for patients in institutional settings, availability of this level of connectivity across the country is spotty at best.

Infoway says progress on a national EHR depends on how quickly jurisdictions implement standards-compliant systems that deliver key components of EHR information, such as medication profiles and shared lab test results. It continues to support such implementation efforts.

In addition, some $45 million has been earmarked for working with jurisdictions to implement and test consumer health solutions — enabling, for example, patient access to health care services online or via mobile devices, according to Dennis Giokas, Infoway’s chief technology officer. The corporation also seeks to accelerate the use and spread of technology in three additional areas ranked as priorities by Canadians: e-scheduling, e-consults and prescription renewal.
Advocates say Web platforms may revolutionize family medicine by allowing family physicians the ability to communicate with patients and provide medical services or advice online.

They also contend that by offering more comprehensive access to health information, the Web platforms empower patients to take more control of their health, and that online doctoring will save money for both patients and doctors. The former won’t have to take time off work to see their doctor for a form or test result, while the latter will cut reception costs by utilizing online booking.
systems and automatic patient notification services.

When doctors sign up to one of the Web platforms — such as mypatientaccess.ca, HealthConnex, mydoctor.ca or myOSCAR — their patients get access, to varying degrees, to such information as medical records, lab results and long-term health indicators like blood pressure and blood-glucose levels. The platforms also allow patients to securely email their physicians.

But the services typically involve a fee, because provincial insurers do not generally remunerate doctors for the time they spend providing patients advice on the phone or Internet.

For some, such fees raise questions around equitable access to health care. The fees essentially give patients the option of paying for more expedient and convenient access to a doctor, which could violate the Canada Health Act, says Mike McBane, national coordinator of the Canadian Health Coalition. “It’s an area we’re going to demand action on.”

Patients who register with mypatientaccess.ca, for example, pay between $40 and $75 (the fee is set by the doctor) per email conversation with their physician. Such fees offer more value than block fees (www.cmaj.ca/cgi/doi/10.1503/cmaj.109-3815) now being charged by many physicians, argues Moe Jiwan, president of Toronto-based Canadian Patient Access Inc., which partnered with Nightingale Informatix Corporation to create mypatientaccess.ca. “Our offering gives patients access to a suite of services never before brought forward and at a very reasonable rate,” says Jiwan, who argues that the Web platforms promote greater accessibility for patients.

Patients who want to receive advice from their doctors via email will likely have to pay fees, which has raised questions of equitable access to health care.

Jiwan also contends that e-consults are rare and thus don’t limit time available for in-office visits. But they are “helpful for patients who travel a lot. One of the physicians had a patient recently email him, ‘Hey Doc, I’m in China and I’m finding that my sugar levels are all over the place. What should I do?’”

Doctors who subscribe to mypatientaccess.ca can use the portal for free, and basic services like online appointment scheduling are free for patients as well. Patients who want additional services, such as comprehensive lab reports and medical histories, pay $6.50 or more per month. Separate fees are charged for e-consults and online prescription refills. Jiwan says the bulk of the moneys go to physicians, of whom about 3300 are using the portal, making it the most widely used platform now on the market.

At mydoctor.ca, which was launched in 2008 by MD Physician Services, a division of the Canadian Medical Association, patients pay an annual fee of $19.95. About 200 physicians have signed on, says Lyndon McPhail, a product manager at MD Physician Services.

The portal is helpful for patients with chronic diseases because they can track indicators like blood sugar levels and weight over time, McPhail says.

Some family physicians give the portals a definite thumbs-up. Providing patients more ready access to lab results reduces their stress levels, says Dr. David Kaplan, associate family physician-in-chief at the North York General Hospital in Toronto. “Before, if we left a patient a message on Friday and told them to come to the office, all of a sudden they’re anxious for the weekend. Now they can log in and access the results at any time.”

But there are risks to online doctoring, acknowledges Dr. David Price, chair of the Department of Family Medicine at McMaster University in Hamilton, Ontario, who will launch a university-developed portal for his family health team in September.

Price says that providing patients with access to diagnostic results or health indicators is “empowering,” but some patients may misinterpret lab results that are uploaded onto the portal, for instance, and jump to the wrong conclusions.

While many believe that the portals will become more commonplace in the future and that physicians will likely be compensated by provincial governments for such services, the ramifications for health care remain murky. “I don’t think we understand how this technology is going to change how we provide care and how we receive care as patients,” Price says.

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MAKING EMRs MANDATORY: a discussion

At the e-Health 2011 conference in Toronto this spring, Tom Closson, then president and CEO of the Ontario Hospital Association raised more than a few eyebrows by stating that physicians should be forced to use electronic medical records (EMRs). In a panel discussion, Closson noted the poor uptake of EMRs by Canadian physicians and stated, “I don’t believe they should have any choice.”

Later in the summer, Dr. Alan Brookstone hosted a podcast on this topic on his CanadianEMR website with Dr. Mark Dermer, an Ottawa family physician and longtime commentator on EMR-related issues. The full podcast is available here, but an abbreviated transcript follows:

Brookstone: The U.S. government is using a number of mechanisms to encourage adoption of EMRs by physicians. These include incentives and penalties. The concept is that what you do not catch with a carrot you catch with a stick. However, in Canada, we’ve been much more hands-off in terms of national and provincial EMR policies. What are your thoughts? Do you think physicians should be forced to adopt EMRs?

Dermer: Well I think that there is certainly evidence that supports physicians being forced to adopt EMRs. We’re looking at imperatives of safety and quality and also of efficiency. That said, I don’t think that you can reasonably force people
to adopt something that is not fully mature, and I think that the products that we have right now would not be fairly imposed on physicians because they cannot achieve adequately the imperatives that we’re trying to pursue without excessively burdening the doctors who have to use them on the front line.

Brookstone: That’s my opinion as well, that there are certain prerequisites, so if there is a mandatory requirement for physicians to adopt EMRs, they need to be complete solutions. In other words, users should not have to function in these hybrid type practices with half paper and half electronic, which seems to be less efficient than either the paper or the electronic alone. Just thinking about this, what do you see as the key requirements for systems if they are to be mandated?

Dermer: Well, I think you have already alluded to one of them, which is they have to be comprehensive, and I would add to what you just said about the fact that hybrids are less efficient. Quite frankly, we did a fairly slow implementation of our EMR in 2002 in our practice and I don’t think the care was ever more unsafe than during the era when we were hybrid. But the issue is not only that [EMRs] have to be comprehensive; another major failing is, as I alluded to previously, they have to be usable. They can’t be burdensome or intrusive into the way a doctor or a nurse or any other practitioner works so that it makes it hard to do their jobs well and hard to be efficient.

Brookstone: Let’s talk for a moment about choice, because currently we’ve got essentially 10 different EMR markets, with each province having its own provincial certification program. What do you think we should do in terms of EMR numbers? Should we limit the number of EMRs or should any vendor who meets certain requirements, such as messaging and interoperability, be able to sell their software in Canada?

Dermer: First of all, as to the question of the number of EMR markets, the fact that we are once again balkanized into 10 provinces and three territories for the purpose of health care systems has enormously harmed Canadian health care, and it’s really damaged the EMR industry and what’s available. To say that there are distinctions between the markets [and] the needs of Manitoba versus Newfoundland really borders on the disingenuous.

“…what we still need to do is make it [EMR technology] good enough that people will willingly embrace it”

— Dr. Mark Dermer

We have to be clear… the governments were providing money that would potentially sustain products that otherwise would not exist. But if they had actually taken a look at the way their funding programs work and delivered funding related to satisfaction of user experience and truly getting the systems to be… optimized, then there would have never been the need to limit products, because the products that weren’t any good would have died a needed death.

Brookstone: Final question, should we require that mandated EMRs be Canadian?

Dermer: I don’t suppose it’s very fair of me to have just a few moments ago articulated the fact that the differences between each of our provincial and territorial jurisdictions are self-servingly overblown and then turn around and say that there are distinctions in Canadian health care that really justify us using information systems that are only home grown. I had the opportunity to visit five colleagues in five different nations in Europe in the fall of 2010, and what really took me aback was just how similarly medicine is practised, how the fundamental encounters between a health care provider and patients and the way in which that has been documented and the processes are the same everywhere.

Brookstone: Mark, any final comments before we close this up?

Dermer: I think that we obviously need to use EMRs, and I think that we need to focus on making EMRs good enough so that the big fat middle of the adoption curve—which is the position in the adoption curve that we are having a hard time moving through at present—needs to be addressed by quality of product, usability and what have you. If we do that and get to 80% or 85% [adoption of EMRs], the place where you would have to use a literal regulatory stick will be taken care of by the fact that this is emergent as a standard of care and people will practise without them at their peril. So, to get there, what we still need to do is make it [EMR technology] good enough that people will willingly embrace it… We can probably do that as quickly or maybe even more quickly than trying to come up with some kind of scheme to say we’re going to impose this on you and make you use a lousy item just to say that we’ve checked off our list that we now have electronic records and take that to the population in the next election.
You know something has entered the psyche of Canadian medicine when it starts showing up as a topic at the annual meetings of specialty societies. Such is the case with social media. This fall, both the Canadian Psychiatric Association (CPA) and the Canadian Diabetes Association held special symposia or lectures dealing with this subject.

Expect to see more… much more. Social media — Facebook, Twitter and other sites that allow people to search and collate information and engage with others in conversations and debates — are now a well-established means by which members of society communicate with each other. As such, it should come as no surprise that the issue of how and why physicians would use these tools in their professional lives is the subject of active debate.

Social media can be defined as a set of web-based and mobile technologies that allow people to monitor, create, share and manipulate text, audio, photos and video with others. This sharing can be done in the form of an individual online blog, an audio podcast or YouTube video, an interactive exchange on a social networking site such as Facebook or an online discussion forum.

**Canadian physician view**

A survey conducted by the Canadian Medical Association (CMA) through its volunteer e-panel at the beginning of 2011 showed that, although many physicians use social media sites, such as Facebook, in their personal lives, few are using them for professional purposes.

Many of those polled took time to share their concerns about these new media and the implications of their use.

“I personally feel threatened by all the electronic media,” one physician wrote. “I don’t like to be ‘on display’ and [prefer] to use the little spare time I have for family activities.”

Another wrote: “Given the weight of privacy issues, using social media in a physician–patient relationship is a dangerous trap, best to be avoided.”

But as Dr. Layla Dabby, a fourth-year resident in psychiatry at McGill University noted in the symposium she helped deliver at the CPA meeting, “Medicine is not very good at picking up on cultural trends.”

One of the physicians from the CMA e-panel wrote, “If physicians don’t get into social media, we will be so far behind we will never catch up.” Another said, “Social media is very important for us and should be harnessed. I greatly welcome this for patient–patient and physician–physician interaction.”

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**Pat Rich**

Dr. Layla Dabby
Dabby and her three resident-co-presenters argued that even physicians not actively using social media need to be aware of their “digital footprint” and check regularly to see how they are being profiled online. They noted that even physicians without their own Facebook page or Twitter account can show up in searches online if others are posting comments about them or pictures in which they appear.

Canadian physicians are currently operating in somewhat of a vacuum when it comes to how to deal with all the social media and regulate their use within medicine, Dabby notes.

Regulatory bodies
A few regulatory authorities, such as the colleges of physicians and surgeons in British Columbia and New Brunswick and the Canadian Medical Protective Association, have issued guidelines that caution physicians about the professional risks social media can expose them to.

Appearing last year, the document from the British Columbia college is a comprehensive overview of those risks and the steps physicians can take to try to avoid them. The New Brunswick college council limited its notice to Facebook, stating: “Council does not believe there is ever a need, or a point, to posting any information regarding a physician’s professional or clinical activity in such a fashion.”

CMA guidance
The CMA is taking a different tack and has been working with stakeholders to develop a document that will provide a balanced look at the risks and benefits of social media as well as the “rules of engagement” for those who choose to use them. It will be submitted to the CMA Board of Directors for approval in the near future.

In the interim, physicians are left with guidelines prepared by other associations, such as the American Medical Association and British Medical Association, and, in the case of many health care institutions, a void or prohibition on their use.

For medical students and residents, social media are part of the milieu in which they grew up and, as such, their acceptance and comfort levels are high.

Benefits of social media
At the CPA seminar, Dr. Leon Tourian, also a McGill resident, argued that, for all physicians, social media are tools that can be used to improve communication and knowledge translation. For example, he said, clinical narratives (posted without identifying the patient) can promote reflection and a greater understanding of the physician–patient relationship.

Use of social media can also encourage the exchange of ideas and collaboration between physicians or within the research community, Tourian said. He said he was most excited about the potential of Twitter to gather credible sources and information updates in one location.

In addition, he said, social media can help physicians disseminate information, such as research results or patient safety tools, to the public very effectively. However, most experts in the field acknowledge that direct one-on-one patient care is an area where use of social media may not be useful or appropriate.

Medical students
“Medical students do use social media. That’s certain,” said Robin Clouston, a third-year medical student at Memorial University of Newfoundland, and until recently VP communications for the Canadian Federation of Medical Students (CFMS).

“More than 50%, and perhaps even more than 75%, of medical students are using social media. We don’t have any research to back that up, but certainly among my colleagues at CFMS we’re hearing from the CFMS reps and the medical society reps is that most medical students are on Facebook. It’s entertaining, a way to unwind.”

“For me, in the class of 2013 at Memorial University, before we even started there was a Facebook group for the class and I think that would be pretty standard across Canada.”

The same situation exists with Twitter, the microblogging site. “Certainly, there seems to be an increased number of medical students on Twitter. The message is to increase your presence and to be known,” Clouston says.
Professionalism

Medical students are well aware of the professionalism issues surrounding being online and using social media, Clouston says, noting this has been “a hot topic” within CFMS for the past couple of years. While some medical schools discuss social media within classes dealing with ethics and law, she adds, this varies from school to school.

“I think medical students realize that medical students are professionals and need to respect each other as well as the external organizations that we deal with via social media. It is always at the forefront of our minds.”

The psychiatry residents speaking at the CPA meeting said maintaining professionalism is critical for physicians, and this can be a challenge as social media lead to a “merging” of professional and public identities.

According to Tourian, the implication is that physicians should maintain a high level of professionalism in all aspects of life. He likened the online community to a small town in which a physician must always maintain a certain decorum.

“You can’t be reckless. You need to be very mature about it,” he says. This is a two-way situation, Dabby says, because if a physician finds out more information about a patient online than he or she intended to, it can be a huge breach of privacy.

That said, Tourian argues that social media can be useful in monitoring patient activity when patients post information on public sites. He discussed this in the context of a patient whose mental health deterioration was documented in postings on his site, with a health care worker intervening as a result.

Coulsen also notes that medical students are now starting to discuss how to use social media in their professional lives.

“I think that the message has evolved. In recent past years, the message has been social media is dangerous, use it at your own risk: delete your Facebook before you apply to CaRMS. That seems to have changed a bit now. “I think it’s well within the realm of possibility that the generation of
medical students today will use social media to communicate with patients.”

**Organizational use**

Medical organizations, such as the CFMS and the CPA as well as many provincial and territorial medical associations, have also recently started using social media tools, such as Facebook and Twitter, for bidirectional communication and to engage their members.

“Over the last year, our online presence via social media at CFMS has increased because we’re responding to the way medical students are using the Internet,” Clouston says.

At the recent CPA annual meeting the association created a Twitter feed (#cpaconference) to allow any delegates using Twitter to post and follow comments related to the meeting.

In this regard, the CMA has been somewhat ahead of the pack. It has an active Twitter account and has used Twitter for its annual General Council meeting for the past three years. In addition, the CMA used Facebook and a dedicated website (www.healthcaretransformation.ca) to engage the public in its recent health care transformation initiative. More than a thousand people registered on the site and posted comments. The CMA also hosts Asklepios, the only social networking site specifically for Canadian physicians.

Another pioneer was the British Columbia Medical Association, which may have been the first Canadian medical organization to use Facebook in support of an advocacy campaign.

“At the time [about 2 1/2 years ago], we were aiming to get addiction covered as a medical expense,” explains Sharon Shore, senior manager, communications and public affairs for the association.

“We wanted to know what the public thought about that and decided that instead of a survey, we’d go online and use this as a test case. [As] with any social media campaign, when you want to get people talking, we started the conversation with a question: do you think addiction is a disease or a human failing?

“We sent an ‘invitation’ out to numerous stakeholder groups to get the conversation started and asked everyone we could to ‘like’ the page so that we might get more hits and, therefore, more conversation. We added to the page ourselves by asking more questions, highlighted news articles about addiction and used statistics where we could, and we responded to people’s posts when we could. I think, when all is said and done, we received over a thousand ‘likes,’ and people continue to post (as do we).”

The association has since launched a second campaign dealing with childhood obesity.

CMA President Dr. John Haggie, explains that the CMA approaches social media strategically and carefully selects how and when to engage its audiences. “We know social media can be a very powerful communications and advocacy tool when used properly,” he said. “It is an important part of our communications toolbox, to ensure physicians, the media and key stakeholders are not only aware of our messages, but are also enabled to easily engage and share comments with us and with others.”

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Pat Rich is editor of Future Practice.
People, connectivity and content — for physicians those three words could sum up the key components of this year’s Medicine 2.0: World Congress on Social Media and Web 2.0 in Health Medicine and Biomedical Research held at Stanford University in Palo Alto, California, in mid-September.

The conference showcased physicians and others who are leading the way in using social media to enhance how health information is communicated and delivered and, potentially, to improve health outcomes.

**People**

These speakers, who included leading U.S medical bloggers such as Dr. Bryan Vartabedian, were among the more than 450 delegates from 28 nations who attended this annual conference that had started in Toronto in 2007.

This year’s conference was noteworthy because of the planned presence of a number of “e-patients” — patients who are active bloggers, participants in online medical forums.
or users of tools such as Twitter to understand more about their conditions or take more control over their health care management.

A seminal moment at the conference occurred during a session in which a number of these patients — most with chronic conditions of “invisible” illnesses — sat together at the front of a lecture hall and told their stories, explaining why they became e-patients.

“I’m not asking you to be a cowboy. Follow the rules.”
— Dr. Wendy Sue Swanson

In a departure from the past, this year’s meeting was a three-day event with the first day — the Stanford Summit@Medicine 2.0 — focusing on “luminaries” in the field rather than research findings.

These leaders included Lee Aase, director of the Mayo Clinic Center for Social Media, and Dr. Bertalan Meskó, a young Hungarian physician, who is director of Wébciana, a free “curated” website of medical information, and designer of a course on social media that he teaches to medical students.

Connectivity
As the conference was held in Silicon Valley, delegates were also treated to demonstrations by startup companies featuring innovative technologies intended to improve health, including the official launch of healthism.com, a Canadian project designed to help people maintain their own health.

However, the real talking points were the technologies underlying the conference itself, features that enhanced connectivity between delegates and with those who were unable to attend.

Front and centre were the innovative delegate ID badges. In addition to a photo and the delegates’ Twitter account name, if available, the badges also featured QR codes. These programmed symbols allowed other people to use their mobile phones to download the profile and contact information of the badge holder. Linked back to the Medicine 2.0 website, this feature made it easy for delegates to contact other participants.

The other main connectivity tool at the conference was the Twitter feed #med2, which allowed attendees and others using Twitter to put their comments into one stream that could be viewed by everybody.

Over the course of the meeting, 5,802 tweets were posted from 680 users, including many who were not present at the conference. In addition to highlights of what they had just heard, those using Twitter also posted links to associated content and their own opinions about the presentations.

Content
When it comes to content, the critical importance of finding ways to use technology to enhance direct interactions between patients and physicians and improve health outcomes was a major theme that emerged from the meeting.

“How do we deliver leading-edge care while still making it personal?” was how the issue was posed by Dr. Amir Dan Rubin, CEO of Stanford Hospitals and Clinics, in introductory remarks to the conference.

Dr. Abraham Verghese, professor of theory and practice of medicine at Stanford and best-selling author, expressed concern about trends in hospitals to deal with the “virtual” rather than the real patient when planning care. Verghese talked about the inherent tension between digital recording and actual patient care at the bedside.

Others at the conference noted how many patients want to become more engaged in their own care and use social media tools to do this but often have to do so without the participation of their own physician.

“If they [patients] are online, we need to be there,” said Dr. Wendy Sue Swanson, a pediatrician and author of the popular Seattle Mama Doc blog. She said physicians can do this without threatening patient confidentiality and jeopardizing their professionalism.

“I’m not asking you to be a cowboy. Follow the rules,” she told physicians in the audience during a panel discussion, adding that she is able to fit her blogging activities into her schedule because she is paid to do it.

Comments on how physicians can and should become positively involved in social media and technological innovation were countered to a degree by Dr. Jay Parkinson, who gained notoriety for trying to establish an online “housecalls” service in the U.S.

Parkinson strongly condemned the medical profession as being
conservative and anti-creative, arguing that these traits are instilled in medical school.

However, later in the conference, Dr. Enoch Choi, a primary care physician from the Palo Alto Medical Foundation, demonstrated just how creative a physician can be in integrating social media into his practice. For example, he noted that physicians can use YouTube very effectively to reach a lot of people to demonstrate particular medical issues or procedures.

**Twitter**

Two physicians from the Netherlands have gone even further, showing that Twitter can be used to deliver care in the primary care setting. Drs. Bart Brandenburg and Erik Jensen announced at the conference that they were winding up their unfunded, two-year pilot study with Twitter after demonstrating that, for some patients, this channel is sufficient for receiving answers to specific health issues.

Brandenburg noted that many of the patients who contacted them on Twitter were seeking a degree of interaction that they were unable to achieve with their own physician. A survey of patients who had used their Twitter service indicated that the three main reasons for contacting them were advice, reassurance and triage (i.e., should I see a doctor?).

**Canadian content**

The Canadian content quotient was strong at the conference and included a presentation by Dr. Gunther Eysenbach, associate professor at University of Toronto and senior scientist at the Centre for Global eHealth Innovation, who originated the conference.

In addition to delegates from centres such as the University Health Network in Toronto, Dalhousie, Laval and the University of Montreal, Canadian work was featured and included:

- results from a Canadian Medical Association survey of physician use of social media and attitudes about social media
- a demonstration of tools that can track and analyze public health trends based on data from the Internet and social media
- an examination of the role of support for patients with breast cancer using online communities
- emergency room physicians’ intentions to use wiki-based reminders to promote evidence-based primary care
- use of iPhones, iPads and other mobile devices in medical education

Other presentations at the conference were equally diverse and included:

- an analysis of physician reviews on online review sites
- young patients with inflammatory bowel disease using Facebook as a social support tool
- the effect of a physician social networking site on clinical reasoning
- the availability of influenza and vaccine information on the Web
- a review of iPhone applications for diabetes self-management
- the willingness of orthopedic surgeons to refer patients to online health information

Despite the number of positive presentations and comments concerning advances in the use of social media in medicine and health, many noted that physicians themselves are still lagging behind in their involvement.

Denise Silber, a health care consultant in Paris, France, was the organizer of a conference for physicians and social media in Paris this summer. She noted a main issue that arose at both conferences: the sense that there are still two solitudes in social media — patients communicate with patients and physicians with other physicians, but there is little interaction between the two groups.

Pat Rich is editor of Future Practice.
New data from almost 500 United States physicians demonstrate that social media are being used to exchange medical information within the profession in a learning environment but that uptake of these technologies varies widely.

“This is a novel, first-line data set,” said Dr. Brian McGowan (PhD), senior director of oncology in the medical education group at Pfizer, which funded the study. McGowan coordinated the study with a number of collaborators, some of whom were on hand with him to provide a summary of findings during a session at the Medicine 2.0 conference.

According to McGowan, medical education has gone as far as it can in “shoving more information into physicians’ heads... and from here on out we have to move on past knowledge transfer and try to help physicians use the knowledge they have more effectively.”

McGowan and his colleagues argued that to do this, physicians and other health care professionals have to adopt a social learning culture.

The goal, he said, should be “to support physicians’ interactions with each other. The meaningful use of social media as an element of one’s commitment to lifelong learning is a natural extension of social learning theory,” he said.

McGowan summarized data from other sources on social media use by physicians, and noted the findings are extremely inconsistent because of the questions used or the physician population polled.

“What do we really know about physicians using social media? I would like to suggest we know nothing at this point. We really have not one peer-reviewed, published article that explores meaningful use of social media.”

The presentation noted that health care professionals can use social media in three main areas: to treat patients and engage with them directly, to provide timely and credible education, or to share medical information and knowledge.

Social media to learn

The group developed a study that focused on how physicians are using social media in the third area — namely how doctors are using social media to learn and exchange information within the profession. The
definition of social media they adopted was “Internet-based applications which allow for the creation and exchange of user-generated content.”

An email survey was distributed to a random sample of about 1,800 practising primary care physicians and oncologists in the U.S. in March; responses were received from 299 primary care physicians and 186 oncologists (an approximate 30% response rate).

Dr. Molly Wasko (PhD), chair of the University of Alabama at Birmingham school of business, detailed the findings of the survey at the conference.

Asked how likely they were to use specific technologies to share medical knowledge, respondents identified email and restricted online medical communities as the two most popular applications, followed by cellphone applications and texting.

“People are very comfortable using these online communities,” said Wasko.

The physicians identified podcasts, blogs, Twitter and RSS feeds as the technologies they were least likely to use to share medical knowledge, respondents identified email and restricted online medical communities as the two most popular applications, followed by cellphone applications and texting.

“What people are very comfortable using these online communities,” said Wasko.

The physicians identified podcasts, blogs, Twitter and RSS feeds as the technologies they were least likely to use to share medical knowledge, respondents identified email and restricted online medical communities as the two most popular applications, followed by cellphone applications and texting.

The survey also revealed that some respondents were still unaware of such popular social media tools as iTunes, RSS feeds and LinkedIn.

When the findings were evaluated in terms of the age of the respondents, Wasko said no significant differences were found in use of many forms of social media based on years since graduation from medical school.

Looking at gender, the survey found few differences except that female physicians were significantly more likely to use online communities, such as Sermo, whereas male physicians were more likely to use RSS feeds.

**Personal**

In terms of personal versus professional use of the tools, Wasko noted that the findings indicated personal use was driving the adoption and use of the tools in the respondents’ professional lives.

Results for frequency of use revealed some surprises, said Wasko, such as the fact that podcasting for professional use outweighed use in the personal setting.

The only significant difference between oncologists and primary care providers was that oncologists were more likely to use email whereas primary care providers were more likely to use Facebook. However, Wasko said more oncologists were adamantly opposed to using some of the technologies.

Dr. Bryan Vartabedian, an assistant professor of pediatrics at Baylor College of Medicine with an active blog and a presence on Twitter, who collaborated on the survey, said the findings demonstrate that the ways in which physicians communicate with each other are changing rapidly.

He noted that, even three to four years ago, the survey findings would likely have been very different.

Dr. Robert Miller, a medical oncologist at Johns Hopkins University School of Medicine, and another collaborator on the project, said it is easy to understand why physicians are inherently “a little skittish” about using social media.

“Using social learning is quite different from the way most of us were trained,” he said, because the information does not come from an established authority in a hierarchical setting.
“What’s a blog?” That was the question I asked my friend Matthew, back in 2005 when he suggested I consider writing one. Back then, I was a social media virgin and, to a degree, so too was the rest of the world.

Matthew went on to explain, “You should blog because you’ve got a lot to say.” What I couldn’t understand was, other than my grandmother, who would want to read it? However, as Matthew had been independently ranked as one of Canada’s top young marketers, I decided to listen to him and, in December 2005, my blog Weighty Matters was born.

It’s been one hell of a ride. At first, no one read it. The blog statistics program I’d installed reported that about seven folks a day stopped by. Between my relatives and my co-workers, I’m pretty sure I could account for all of them.

But I kept at it because I found blogging to be a fabulous outlet. It helped me shape my opinions in ways that simple internal thought processes couldn’t do. More important to my practice, blogging was helping me develop thoughts and ideas that translated into better care for my patients.

Even a year into blogging, I’d rarely, if ever, had 300 people read one of my blogs, but unbeknownst to me, included in my readership were some reporters and at least one researcher from the House of Commons. Amazingly, they were paying attention.

In one blog I’d been highly critical of what I feel are incredible shortcomings in Canada’s Food Guide. In early 2006, a draft version of our current guide had been leaked and, for those of us who care about evidence-based nutrition, it was frightening. I didn’t hold back in my blog and, consequent to the criticisms I’d been levelling, I was contacted by the CMAJ to discuss my claim that the food guide is obesogenic (CMAJ 174[5]:605-6). A few months later, the House of Commons Standing Committee on Health asked me to provide testimony.
about my concerns to its childhood obesity panel. In response to my testimony, Health Canada was recalled to respond to the standing committee. Ultimately, I believe my blog played at least some part in a few minor last-minute improvements to the guide.

Another early reader of my blog was Dr. Arya Sharma, the scientific director of the Canadian Obesity Network. When we first met at the radio and television interviews and, consequent to those, I was included in various reporters’ Rolodexes for matters pertaining to nutrition. My blog also caught the eye of the folks who produce CBC’s award winning investigative journalism show, Marketplace, and after a telephone call we started working on Calorie Confidential — an episode that helped expose Canada to the non-intuitive and hugely calorific realities of meals out. More

“Although daunting at first, the social media world is a magical one”

2006 Obesity Society conference, I encouraged him to start his own blog, and a few months later he did, with his Director’s Notes, which later morphed into his now invaluable Obesity Notes. Had I not been writing my blog when I met Arya, I’m doubtful we’d have had more than a “hello” to say to one another, and I’m absolutely certain that he never would have asked me to help him complete a textbook on obesity management (Best Weight: A Practical Guide to Office-Based Obesity Management). The textbook is now freely available for download from the Canadian Obesity Network website, and Arya and I are good friends.

I first garnered significant traffic to my blog in January 2007. Google chose Weighty Matters as a “Google Blog of Note,” and over the course of two days, 30,000 people stopped by. The rush continued for nearly a month before it finally settled down; instead of 100 readers daily, I had closer to 1,000.

The final release of the 2007 Canada’s Food Guide a few weeks later led to literally dozens of print, recently, I helped Marketplace tackle the Heart and Stroke Foundation’s Health Check program and explore what goes on behind the doors at Herbal Magic. Again, none of this would ever have occurred had it not been for this social media venue.

My patients were reading my blog as well. Although I have found some new patients as a result of the blog, more were reading it because it served as a handout repository for my office. If we cover a topic in an office appointment that I’ve also covered on the blog, I’ll often ask my patient for his or her email address and send a link to the blog post to help reinforce our discussion. Others who were not my patients were reading too, because I regularly provide healthy living advice and suggestions.

In late 2008, at the urging of folks I’d met blogging, I joined Twitter (www.twitter.com/yonifreedhoff). It took me a while to understand its value. I was uncertain how to wield the 140 characters to which a tweet is restricted.

At first I found Twitter to be a remarkable means to aggregate information. “Following” like-minded people — physicians, dietitians, health reporters, etc. — and reading their tweets was like having a team of newsreaders scouring the Internet for links that I’d find interesting. When they read something online that they think is important or relevant, they include a link to it in their tweets. Over time, I also learned to appreciate that Twitter is remarkably useful for networking. Through Twitter, I’ve been able to establish true friendships with folks around the world because, unlike one-way blogging, Twitter is personal, real-time and back and forth.

Although daunting at first, the social media world is a magical one. The formula required to excel in using social media tools depends on what you want out of them. If you’d like to use social media as a means to expand your knowledge base, join Twitter and poke around until you find a thought leader in your area and then follow many of his or her followers and build from there. If you’d like to use it to expand your own platform, engage regularly and provide quality content.

Those two initials we have at the end of our names: MD? Rightly or wrongly, people listen to us because of them. Whether it’s a blog, tweeting or a Facebook page, at the very least those initials can help you reach your patients in a manner that five minutes in your office just can’t replicate.

The most important advice I’ve got if you hope to reach a larger audience? Assume no one’s reading and write with passion. Do that long enough, and who knows what might happen?

Dr. Yoni Freedhoff is director of the Bariatric Medical Institute in Ottawa.
I started blogging in 2005 before a medical volunteering trip to the Himalayas. It helped me to develop culture and medicine there, to create a journal and to network with others who had participated in similar trips.

Around the same time I decided to write about uncomfortable and funny situations that cropped up during my clerkship. Being shocked by conflict in the operating room, struggling the first time I had to tell a patient they were dying or feeling confident in choosing family medicine as my career were monumental events in my training; after sharing these experiences on my blog I found they were not unique to me.

I got more serious about blogging when I started residency. To be a healthy physician, one needs to decompress. Broadcasting my experiences seemed like the easiest way to normalize or validate them. A bad day could be something comical or at least easier to let go of once typed out.

I was also worried about “staying human” and saw blogging as an opportunity to keep my ego in check. Getting Bell’s palsy was an adventure in role reversal, wherein I became the frightened patient. That event in particular — and sharing it via social media and my blog — helped humble me.

A couple of my real-life friends who feared going to the doctor
told me that my blog posts helped make the prospect far less intimidating. Hearing this made me feel like I was meeting my objective of being authentic and approachable — the main reason I continue to blog. Using my own name rather than being anonymous means I’m accountable for everything I write, something that not all physicians remember during their first foray online.

To physicians considering using social media, I recommend that you first think about *why* you want to do so. Is it for you? To update your friends and family? To communicate with patients? To get famous? What is the long-term benefit, and can you invest the time to achieve your goals?

Feeling a compulsion to keep a blog or Twitter feed updated can take the joy out of it. Remember that the medium isn’t the message. Use the tools consistently, participate in critical thinking rather than simply disseminating information and add value to the discussion by providing your opinion or correcting misinformation.¹

One has to be respectful of confidentiality when discussing patient encounters on any social media site, blog or otherwise. The usual rules apply: no demographic information should be shared that would allow someone to identify the patient. The grey area comes when thinking “could the patients identify themselves in this passage?” In trying to avoid this, I often change the details of a story or amalgamate patient encounters to ensure anonymity. The reality is there are some incredibly profound stories that simply cannot be told without betraying someone’s identity.

There have been times when the views I expressed online have generated a backlash. When I described the way patients in our local methadone clinic tried to manipulate prescribers, a lot of American methadone patients who read the post responded defensively. At first, I felt like an idiot because I thought my overall message had been in support of harm reduction. But their input helped me see some of the biases I held and realize that I was contributing to methadone’s stigma.

Perfectionism and the taboo against making errors are still embedded in the culture of medicine, but I have learned to acknowledge and share my own mistakes. With patients? To get famous? What is the long-term benefit, and can you invest the time to achieve your goals?

Perfectionism and the taboo against making errors are still embedded in the culture of medicine, but I have learned to acknowledge and share my own mistakes. Social media provide an easy platform to do this. Personal growth from considering the questions and challenges presented by readers is another key reason I keep blogging. I use Twitter to connect with other bloggers and to share my writing; developing a broader readership through Twitter means having more people to challenge my ideas.

Beyond sharing medical news and writing, Twitter can be very useful to a physician. It can facilitate micro-collaboration with colleagues from overseas in solving clinical and ethical problems. This is more overtly done in chats centred around #hcs (a signifier that a message belongs to the “health care social media” topic of discussion).

Health advice — beyond the basic well-accepted suggestions for preventative care — rarely finds its way to my page. If I do write about it, I cite a source. Although there is certainly a niche for clinicians who wish to use social media to provide medical information to their patients, I have chosen not to do this. I can’t contribute any special expertise, and dispensing medical advice doesn’t help me meet my goals of personal reflection to maintain wellness, having my opinions challenged to grow as a critical thinker or normalizing my experience.

Among the other forms of social media, Facebook is something I prefer not to use professionally. The interface seems more inclined to either socializing — which I don’t do with patients — or self-promotion — not an important aspect of practice for Canadian physicians. However, in the United States, where patients shop around for health-care services, institutions are recruiting patients using videos on YouTube, Facebook “fan” pages and helpful tweets.

Social media in health care can be a clinical resource, which, like any other, you can take or leave. For me, the time I take to blog and tweet pays large dividends in terms of personal wellness, and the small investment of time is worth it to stay human.

Dr. Jessica Otte is a family physician in Nunavut.

As a product of the mid-1980s, I have grown up in a world where the Internet, MP3 players, game consoles and smartphones have been essential aspects of the social culture around me. Now as a medical resident, I find that technology’s impact on the way I access information, facilitate patient care and manage my interactions with colleagues continues to be immeasurable.

Social media have provided a new platform for people around the world to interact. While the Internet serves as a place where information can be accessed, social media take things one step beyond, allowing individuals to receive up-to-the-second updates of customizable “channels” of information and even interact with those who deliver information.

In July 2010, as a curious medical student rotating through my clerkship at McMaster University, I created my first Twitter account, @NaheedD (www.twitter.com/naheedd). After using it for a year, I have found that it has enhanced my career by allowing me to make new connections with other medical students, residents, physicians and health care professionals, by providing a platform from which to advocate causes that I am passionate about and by providing up-to-date news and guidelines that are relevant to my daily practice. In effect, social media have become a cornerstone of my daily routine, as natural as picking up the morning newspaper.

Connecting

Through my contributions to the “conversation” on Twitter, I have had the pleasure of connecting and conversing with incredible people, all around the world. Meeting other medical students and residents, such as 3rd-year Columbia University medical student Marianne di Naps (@MarianneDiNaps), and 4th-year University of Pittsburgh medical student, Chinita Furiosa (@chinitafuriosa), has provided an outlet to discuss difficult cases and topics, share our trials and tribulations and learn about the most effective resources for studying.

I have also had the pleasure of meeting many wonderful staff physicians, such as Dr. Mark Ryan (@RichmondDoc), a family physician in Richmond, Virginia, who works with underserved populations. Learning about physicians like Dr. Ryan and his work as a medical student and resident has provided me with inspiration and a path that I continue to aspire to.

Exposure to the perspectives of people with multidisciplinary backgrounds has also been an advantage. Through “tweet” updates from Kamini Kalia (@nursekama) a clinical nurse specialist working...
in mental health in London, Ont., I have learned a lot about nursing perspectives on patient care. Finally, it was through social media that I met one of my mentors, Dr. Ritika Goel (@RitikaGoelTO), a Toronto-based family physician. After making her acquaintance on Twitter, I applied for and completed an elective in inner-city medicine with her, which later inspired me to pursue my current residency in family medicine at St. Michael’s Hospital in downtown Toronto. Dr. Goel is now pursuing her master’s in public health at Johns Hopkins University in Baltimore, Maryland. While the Internet has made information available to the masses, social media have facilitated connections between individuals who consume this information, globally.

Platform
At the centre of the community that has embraced social media is the platform itself. Through it, I have been able to engage in and advocate for issues that I am passionate about. As an advocate for the promotion of global health and care for disadvantaged populations, I receive information and raise awareness of my followers with regular tweets about related topics. My tweets are often based on my own experiences, news articles and sometimes relevant research findings. Finally, I have used the platform to successfully advocate for programming that I am directly involved in. As director of communications of Altitude: Healthcare Mentoring (@AltitudeHCM), I have successfully used the medium to tell my followers, participants and potential sponsors about this initiative of the Ontario Medical Association (OMA), aimed at exposing at-risk youth to a career in health care through a mentorship experience. Overall, I have found that Twitter is an incredible platform for advocacy-based work — raising awareness and understanding on a variety of important topics.

A theme that has consistently permeated my training is the fact that medicine is a profession of “lifelong learning.” In an era where new information is produced at such a fast pace, social media have made lifelong learning a reality, by allowing users to customize the content they receive. Using Twitter, I follow a variety of medical sources that provide the latest information, news and clinical practice guidelines. Many people are surprised to hear that “traditional” medical journals like the New England Journal of Medicine, The Lancet and Journal of the American Medical Association use social media to share articles and content. Canadian physicians need look no further, as the Canadian Medical Association Journal and the Canadian Family Physician post all of their content on Twitter. In addition, physicians should know that the OMA, CMA and hundreds of other Canadian-based health organizations use social media to share content as well. By using social media efficiently and effectively, I have never had to flip through a paper publication, yet I receive content before it even hits the printing press! This has positively impacted my care for patients and helped me during my training.

At St. Michael’s Hospital in Toronto, where I am currently completing my residency, social media have also been embraced with the establishment of a “Health Tips” blog site (health.stmichaelsfoundation.com /clients/healthtipsfromstmichaels/), which features contributions from the hospital’s staff family physicians. The site is complemented by a Twitter account (@HealthCtr80Bond), which provides information for patients and answers questions from users.

Reaching out
“Social media allow us to reach out to more patients. Even for the patients who are already connected to us, it is an effective means of sending out information quickly. In medicine, we strive for high-fidelity asynchronous communication; Twitter helps achieve that,” says Dr. Fok-Han Leung, clinical lead and staff family physician at the Health Centre at 80 Bond, one of five family practice teaching units at St. Michael’s Hospital. When asked about the potential impact of social media on primary care in the future, Dr. Leung states that, “We always need to ground ourselves in the patient’s encounter with the physician. With that said, social media have a lot of potential for added value. One of the big things that we have always struggled to do effectively and efficiently is connecting patients with each other, for example, connecting patients who are being treated for a chronic medical condition. Social media may provide the opportunity for support groups to be formed without the physical presence.”

Although social media technology is still in its infancy, it has proved to be a useful and essential part of my repertoire, enabling me to communicate with peers, advocate important issues and effectively practice evidence-based medicine.

Dr. Naheed Dosani is a first-year family medicine resident at the University of Toronto.
Making reasonable decisions about health care today means having sufficient accurate information. We need information that is credible, transparent and from diverse sources and we need it quickly. The difficulty is where to get this information, who to believe and how to share it. I believe social media and, specifically, Twitter provide part of the answer.

I have been using a computer for more than two decades and, for the past six years I have explored the use of various forms of social media: blogging, fiddling with Facebook and LinkedIn. However, I am most fascinated by the microblogging site Twitter, and its potential to flatten the playing field of knowledge, access and influence. Twitter has the ability to educate and engage hundreds of millions of participants in a network available 365 days a year, 24 hours a day with instant delivery of each tweet to all or directed to individuals or organizations of your choosing.

Of course, as with the Internet in general, there is plenty of misinformation on Twitter and potentially unscrupulous individuals and groups make use of it. But the upside of communicating with clarity and brevity in 140 characters or less, sharing information and engaging others in important discussions or actions of our time should not be underestimated. Twitter is not just for celebrities like Justin Bieber to share what he had for breakfast with his fans.

With Twitter, you can establish your own network of contacts, choose who you follow, who can follow you and, if necessary, block peddlers of suspicious wares (aka. spammers). Messages can be sent directly to mutual connections, and even taken back once they are sent if you feel the need. However, tweets are public, which brings a certain element of transparency and accountability. The public nature of tweeting invites questions and open scrutiny, which encourage deeper thought.

Twitter is a marketplace of ideas and information exchange. There is no other place where you can connect with a government minister — although in reality it might be a paid staffer receiving, sending and responding to tweets — a reporter, a world-renowned medical clinic and members of the public, all in a matter of seconds.

The value of breaking down the usual hierarchies and silos that prevent discussion and idea sharing is transformational. No longer do traditional media or organized groups or government control the message. The power that open communication brings to the masses is healthy, even though the technology might be considered “disruptive.”

Trusted health care professionals and the facilities and organizations they work with need to have a social media presence, not only to provide accurate and helpful information to the public but also to stimulate thoughtful discussion surrounding health care issues and to encourage more active involvement of patients in their own health and the health of others.

Whether you believe that social media sites such as Twitter have a role in medicine or not, as a physician or health care provider you will understand the importance of communication to educate, engage and empower. Social media can do all that and more.

Dr. Merrilee Fullerton is an Ottawa-based family physician.
Social media have given physicians the ability to communicate with each other, other health care providers and patients in new and unprecedented ways. They have also enabled patients to become more engaged in their health care by sharing information. Although the potential benefits of this trend are substantial, so too are the risks to both parties when interacting in largely public environments.

As social media platforms evolve quickly, it is important for online physicians to keep up with the latest trends and issues. The following is a primer on the major platforms, their unique functions and important privacy considerations.

**Blogs and YouTube**

*The basics:* A blog (short for web log) is a type of online interactive journal or website. Entries or “blog posts” appear in chronological order and are often indexed by subject. They can be personal or a collaborative effort.

Many free services such as Google’s Blogger (blogger.com) and Wordpress (wordpress.org) provide easy-to-use blogging templates. Tumblr (tumblr.com) is a more recent and popular service that combines a traditional blogging platform with other social features like increased sharing capabilities.

YouTube, one of the most trafficked websites on the Internet, might best be described as a video blog. Users can create an account, upload their videos and create a “channel” to which other users can subscribe.

*Privacy and security:* Although it is possible to have a private blog available only to approved subscribers, most blogs, by their nature, are public. Disclaimers can be used to provide context to opinions expressed, and some bloggers choose to be anonymous, but even when such precautions are taken, the same rules of professionalism and patient confidentiality must be followed. Blogs and YouTube posts that are comment-enabled should be monitored in the event they
might reflect negatively on the blog. When you upload a video to YouTube, you retain copyright, but give YouTube the right to use it in any form that it may desire, until it is removed by you.

**Physician use:** Many successful blogs are run by physicians and have proved to be a popular forum for thought leading, advocacy, collaboration and even self-expression. Some have a single-topic focus, such as Dr. Alan Brookstone’s Canadian EMR blog (canadianemr.ca). Others, such as the site KevinMD.com, feature views on a variety of hot topics from a large community of guest bloggers. YouTube can be a valuable tool for physicians looking to explain or illustrate complex concepts related to their practice or area of expertise, and it has also been singled out for its potential as a learning tool and forum for patient education.

**Facebook**

**The basics:** Facebook is the world’s most popular social network with over 750 million active users. It enables people to connect and share a wide variety of information (including photos and event invitations) and people generally use it to interact with people they know — “friends” — through a profile. But Facebook offers companies, public figures and organizations the option to create public “pages” to share information with anyone on the site.

**Privacy and security:** Facebook does not allow the use of pseudonyms, and friend requests must be sent and accepted for mutual sharing. However, if the profile is set to “public” others may be able to see your information and your profile and information may be indexed in Google search results. Facebook’s functionality is vast and privacy settings, found under the “account” tab, are complex, so much so that they attracted the attention of the privacy commissioner of Canada in 2009. This makes it especially important to carefully adjust and test your settings to determine what information is visible and how Facebook, friends and third-party applications or “apps” (e.g., games or virtual gifts) can access and use it. Also, with new features and privacy controls continually being added, it is a good idea to revisit your settings regularly.

Just as malicious software is spread by email, “spam” is also prevalent on social networks. Although Facebook has safeguards to prevent spam, installed apps that spam you and your friends are still a problem. Be sure to disable any offending app and report it.

**Physician use:** A recent survey of the CMA e-Panel showed that just over half of respondents have a personal Facebook profile. Although some physicians have created a page for their practice, this use appears to be a single-topic focus, such as Dr. Alan Brookstone’s Canadian EMR blog (canadianemr.ca). Others, such as the site KevinMD.com, feature views on a variety of hot topics from a large community of guest bloggers. YouTube can be a valuable tool for physicians looking to explain or illustrate complex concepts related to their practice or area of expertise, and it has also been singled out for its potential as a learning tool and forum for patient education.

**Twitter**

**The basics:** Commonly referred to as a “microblogging” service, Twitter enables users to share and receive tweets — messages consisting of 140 characters or less — that can include photos or links to other media. Unlike Facebook and LinkedIn, permission is not required to see updates from or “follow” a person or entity. You can search Twitter for words or phrases or use its indexing system of “hashtags” — a subject tag preceded by # — to follow specific topics or conversations. However, it is possible to have a “locked” Twitter feed which is limited to people whom you give permission to view.

**Privacy and security:** Twitter’s privacy setting is straightforward — an account is either public and indexed in Google search results or “protected” meaning that followers must be granted permission to see the user’s tweets. The “protect my tweets” checkbox is found in the settings tab, but note that having a locked account will not prevent followers from publicly “retweeting” an update. Twitter does not require you to use your real name, but, as with blogging, anonymity does not exempt you from professional or legal risk. Twitter also allows you to maintain multiple accounts and also has a list feature, which helps you keep track of different interests or groups of followers.

As in Facebook, third-party apps provide increased functionality. Before installing an app, Twitter will specify the type of access sought and ask your consent. You can revoke an app’s access to your account at any time from the “Applications” tab in your settings.

Spam is a problem on Twitter. If you suspect that your account has been compromised and is being used to spread spam, consult the Twitter Help Center about what to do.

**Physician use:** As identities are not authenticated on Twitter, no reliable data are available on the number of physicians using the service. However, recent research looking at use by self-identified physicians shows a mix of medical-related tweets (49%) and
personal messages (21%). A relatively small but concerning number (3%) were considered to be unprofessional. Twitter’s dynamic search capabilities make it a valuable news and information resource and this can hold unique appeal for physicians. For example, it can alert to breaking news updates, such as new influenza cases in a pandemic or the availability of resources in an emergency, and “crowd-source” information. Hashtags are frequently used at medical conferences and enable “tweet chats” and collaboration on topics of interest in health care.

**LinkedIn**

*The basics:* LinkedIn is a social network based on professional connections. Users are asked to complete an online CV and add professional contacts to their network. Professionals use the site to: search for openings, recruit candidates, give and receive recommendations, follow companies, institutions or organizations (departures and hires), keep an online record of professional accomplishments, stay up-to-date on industry news, join public or private “groups” (formal or subject-based) and participate in discussions.

*Privacy and security:* Similar to Facebook, LinkedIn allows you to choose how visible you want your profile to be by adjusting privacy controls located under the settings tab. Recently, LinkedIn came under fire for introducing a “default setting” that allowed it to use users’ names and photos in social advertising. After negative reaction, LinkedIn removed this feature. Check your controls regularly to verify how your information is being used.

*Physician use:* Although LinkedIn boasts 150 million members, some experts have noted that physicians have been slow to join and are less active on the service. The American Medical Association recently published an article that translated the potential benefits of the system for physicians.

**Google+**

*The basics:* Launched this summer, Google+ combines some of the features of existing networks with new functionality and integration with other popular Google services. These new features include: live video chat (hangouts), instant photo uploading and group instant messaging (huddles). Google+ asks users to create “circles” of contacts (e.g., family, co-workers). As on Twitter, permission is not required to see a person’s public updates. Google+ accounts are personal and users are required to use their real name. It has not yet introduced an option for businesses or organizations.

*Privacy and security:* Privacy is a key focus of Google+, and privacy experts have already responded favourably to the easy-to-customize system. User-defined circles, which by default are private, govern how information is shared on the network. Uploaded photos and other information are also private by default until they are shared with a circle.

*Physician use:* Google+ was only rolled out to everyone in September; time will tell whether this new network will thrive and how physicians will use it.

**Private physician social networks:** Sermo, Asklepios

*The basics:* Several social networks cater exclusively to physicians. Sermo
is the largest online physician community in the United States with over 120,000 members. On Sermo, physicians “collaborate on difficult cases and exchange observations about drugs, devices and clinical issues.” For years Sermo has indicated an intent to expand into Canada, but that has yet to happen. Canadian physicians can join Asklepios, the CMA’s private network of validated physicians. Asklepios’ bilingual platform offers peer-to-peer collaboration through group discussions, live chat and events. It is described as a community where physicians “connect, share best practices and learn from each other.”

Privacy and security: Sermo is a private network in the sense that all members are verified physicians; however, certain types of access are granted to third-party partners, such as health care institutions, financial services firms and pharmaceutical companies, and Sermo shares aggregated demographic information with them. Although Asklepios may allow third-party sponsorship, express consent will be sought before information is shared. Similarly, any participation by CMA is transparent. All data are held in Canada and, therefore, not subject to foreign law. You can adjust your privacy settings, in the “Settings” tab, to make your Asklepios profile as public or as private as you wish. Although both these networks are restricted to physicians, as with all other social networks there is always the potential that conservations can be made public.

Physician use: In the CMA e-Panel survey, 26% of respondents indicated that they belong to a physician social network and trends show that they are a growing global phenomenon.

Regardless of the network used or level of privacy afforded, the same rules of professional ethics and patient confidentiality apply to physicians online as off. Many professional associations, regulators and insurers have released guidelines and policies on the use of social media by physicians. Later this year, the CMA is set to release its “Rules of Engagement” for social media use, which discuss the potential benefits of using social media as well as providing physicians with guidelines on how the technology can be used safely and effectively.

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Further reading

What is RSS?
Really Simple Syndication (RSS) feeds enable you to view real-time Web updates, including public social media streams like Facebook page notes, Twitter streams and Google+ updates, on a dedicated platform — usually through an RSS reader or by email. RSS is an easy way to streamline the flow of information and makes it possible to stay up-to-date on new Web content without having to visit multiple sites.
I am a digital nomad. I tweet, I Facebook and I’m not afraid to use my BlackBerry for a consultation.

I don’t have much time, nor can I live without social media.

I am not alone.

In Mexican hospitals, my collaborators use Facebook instead of hospital pagers, because the hospital doesn’t have the funds to give everyone a pager. Yet, everyone has a smartphone with Internet access.

In the Netherlands, our sister hospital uses Twitter in the emergency room to notify staff where to go and who is who, similar to the whiteboard we are all too familiar with. These profiles are open, fully operational, unprotected and equally integrated into the daily workflow.

With social media, the first question I always hear from physicians is: “Why bother?”

Let me tell you two recent stories.

Imagine yourself with an established practice, in a specialty of your choice. Your family has lived in this same community for a number of years and actively contributes to it through volunteerism. One day, your son, who is in his teenage years and a national-level athlete, gets a little out of character due to excessive alcohol consumption and ends up being convinced by his friends to join an ongoing riot because the Vancouver Canucks lost the Stanley Cup. Your son gets photographed, caught for burning a police car, and your family begins to be shunned in the neighbourhood where you have lived for over a dozen years.

Being a Web-savvy doctor, you have set up a Google Alerts, which sends you an email every time your name is published and found by Google on the Web.

Lo and behold, a few days after the riot, a tsunami of emails begins. Your rating on the physician online rating site, ratemymds.com, is sinking by the minute because of actions indirectly related to you. You are called a poor father and an equally poor physician.

Is it fair? Should you care? Can you change these ratings?

How about the patient who believes she was treated poorly at the hospital where you work one day a week? She picks up her phone and videotapes herself, from the bedside, complaining about the care she has received. She proceeds to name each physician and nurse who treated her well and those who did not, and then uploads the same video to YouTube — all from her mobile phone.

Neither of these stories is fiction, nor are they meant to scare you. They are the reality in which physicians now live and have to operate.

Not only do we have no time to keep up with the latest research in our specialties, but soon enough we will not have a choice about whether to tweet, Facebook or blog and let patients “in.” We live in an era in which if we do not manage our identity and reputation someone else will.

I believe that social media tools, if used effectively, can help make physicians more efficient.

For me, it’s no longer a question of whether to use social media, but how. I wonder how long it will take for others to feel the same way.

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- Identify appropriate non-pharmacologic and pharmacologic management options
- Weigh and address ethical and legal issues
- Manage caregiver issues

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 Skin disorders

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- Discuss how to improve the level of care and preserve independence and quality of life
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- Be aware of the services available to patients and families

COURSE DEVELOPED IN COLLABORATION WITH THE CANADIAN NEUROLOGICAL SCIENCES FEDERATION

All courses developed in collaboration with CMA and Memorial University through an educational grant from Pfizer Canada. Accreditation for Parkinson’s disease and skin disorders courses was provided by Memorial University of Newfoundland, Faculty of Medicine, Professional Development and Conferencing Services.