Q How does CMA membership help you in your day-to-day?

A Honestly? In many ways.

As a cardiologist, I can quickly access point-of-care tools that help me deliver high-quality care. As a clinician, educator and researcher, they help me stay up to speed with the latest evidence-based medicine. And, as a family man, easy access to these resources allows me to spend time on other priorities.

Dr. Chris Simpson, Kingston, Ont.

From point of care to everywhere

With relevant tools, resources and opportunities, the CMA helps you take care of your patients and your profession — as well as your family, finances and future.

Ask yourself, are you taking full advantage of your CMA membership?

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2 Forward to basics

3 News from the world of HIT

6 Digital connectivity: stress builder or time saver

10 Pioneering spirit on the Bay of Quinte

13 Innovation, Canadian style: Scraps, snippets and insights from Hacking Health Toronto 2013

16 The need for quality data: a modest proposal
“SHOULD I BE GOOGLING MY patients?” is probably not a top-of-mind question for most Canadian physicians.

But consider the fact that in early 2014 some physicians have been engaging online and in social media in some very thoughtful discussions around this topic. The talk around electronic communications and health information technology (HIT) has become very broad indeed. (One of the more thoughtful answers to the Googling question comes from Canadian emergency room physician and CBC commentator Dr. Brian Goldman, who wrote: “do it if your conscience says there’s a good clinical reason for doing so.”)

Another demonstration of how broad the HIT spectrum has become can be witnessed by contrasting the US with Canada in terms of how electronic medical records (EMRs) are being used in interactions with patients. In that country, incentive payments under the HITECH legislation (read: “meaningful use”) are pushing doctors to provide patient portals and online patient information so they can meaningfully engage with their patients and allow them access to their own medical records in a timely fashion. In Canada, such interactions are still only possible through institution-specific and pilot initiatives. Witness also the prediction by the global consulting giant Deloitte that e-visits will replace 10% of all in-person doctor visits in 2014, and that sometime soon the use of wearable technology such as Google Glass will become routine for surgeons performing operations.

If all of this sounds a bit far-fetched (if not pure science fiction) as it relates to your practice, that’s because it probably is.

Before we can progress and harvest some of these major HIT benefits, Canadian doctors have to be provided with the basic infrastructure that will allow them to eventually use these innovations to improve patient care and engagement. That is why the Canadian Medical Association continues to work with our provincial and territorial association colleagues to advocate for such fundamental components as the interoperability of and connectivity of e-health systems.

As underlined by Dr. Marion Lyver in the previous edition of Future Practice and by Dr. Ewan Affleck in this edition, we must also pay serious attention to the core building blocks of an e-health system: namely national EMR standards and reliable patient data.

Without good national standards for EMRs, Lyver pointed out, doctors will never be able to effectively use their systems to improve practice effectiveness, efficiency and productivity. The same is true for aggregated, quality patient data, says Affleck. Similarly, new educational frameworks (as seen in plans to include e-health in a revised CanMEDS framework) are needed to teach physicians how to best work with e-health systems.

While e-health may form the basis of a brave new world of physician–patient interactions, we cannot neglect the basic building blocks needed for this to happen.

Acknowledgments
Speaking of e-health and change, I would like to take this opportunity to thank the long-standing editorial board of Future Practice: Drs. Steve Edworthy, Brian Gamble, Michael Golbey and Robert Perreault, for all they have done to make this publication such an invaluable resource for CMA members. At this time, we are pleased to announce a new lineup of editorial board members: Drs. Ewan Affleck, Eric Cadesky, Naheed Dosani and Darren Larsen, who will be helping to ensure that Future Practice continues to serve as a lively physician voice on e-health issues in Canada.
INFOWAY releases white paper on “mHealth”

CANADA HEALTH INFOWAY believes mobile devices represent the biggest technological advance to transform the delivery of health care in this country since the introduction of the electronic medical record. However, in a white paper on the subject released at the end of 2013 as part of its series on emerging technology, INFOWAY acknowledges that widespread use of mobile devices by clinicians also poses new challenges ranging from infection control to protection of patient privacy and confidentiality.

“INFOWAY believes that the greatest value from mobile device use will be realized when authorized clinicians can seamlessly access local, regional and provincial patient data repositories, streaming patient monitoring data and advanced services such as health analytics and clinical decision support, to perform functions just as they would traditionally do using a hospital or office workstation,” the paper states.

However, the document notes that the enthusiasm with which clinicians have embraced smartphones and other mobile devices has often exceeded the capacity of many Canadian health organizations to support their needs in this area. INFOWAY quotes statistics indicating 67% of Canadian family physicians own a smartphone and 30% own an iPad, with the majority (62%) of them using it for professional purposes.

INFOWAY identified some of the most common uses of mobile devices by clinicians with their patients as being:

- texting to promote health
- improved transitions of care
- remote patient monitoring
- gaining remote access to patient information

The document concludes that “clinicians are embracing mobility and in some organizations are champions leading their colleagues forward. INFOWAY is confident that mobile devices and apps will continue to evolve and become valued and trusted clinical tools just as the stethoscope has been for nearly 200 years.”
Canadian physician use of SOCIAL MEDIA remains low

THE MAJORITY OF CANADIAN PHYSICIANS ARE NOT USING SOCIAL media tools such as Twitter and Facebook for professional purposes because they anticipate too many pitfalls and too few benefits, a new CMA poll reveals. The survey results show only 19% of respondents reported using LinkedIn for either professional purposes alone or professional and personal purposes and 9.2% using Twitter in the same way.

The results, from a 2013 survey involving the CMA’s Member e-Panel, offer an assessment of doctors’ use of social media and paint a discouraging picture for those who feel physicians should use these tools to improve their own knowledge of patient care.

The poll is the most current and detailed survey of Canadian physician use of social media, with results based on responses from 885 (24%) practising or retired physicians, medical residents and students belonging to the CMA’s Member e-Panel.

The findings, which mirror to a large degree those from a similar survey conducted three years ago, show that almost 90% of respondents believe the use of social media tools in medicine poses professional and legal risks. Almost 40% of respondents said they think social media tools are of little or no use in day-to-day medical practice.

Physicians’ other online involvement for professional reasons tells a different story. Almost 40% of respondents said they had joined an MD-oriented online community, 45% had participated in an online discussion forum on a medical topic and 96% had used Google when seeking medical information. As well, almost one-third of respondents had recommended a medical app to a patient, reflecting the burgeoning growth in these mobile tools.

There are clear demographic trends — medical students who responded were not only more aware of the risks inherent in social media but also recognized potential benefits. Most of those who did use social media for professional purposes said they did so to network with fellow physicians and/or patients.

Dozens of individual comments provided along with survey findings exemplify current attitudes within the profession. The majority of those posting comments expressed the view that social media platforms were in no way suitable for individual patient care and voiced concerns about the time and effort required to be involved in social media.

“At this point, I don’t believe any of these social media are safe enough to protect patient confidentiality and physician privacy,” one doctor wrote.

Another critic responded: “Social media is just another distraction from real patient care. Do not waste our time.”

However, a counterpoint came from this respondent: “I think social media is a very powerful tool that cannot be ignored in today’s society. While anything powerful comes with inherent risks, I believe that wise and professional use can mitigate them.”

Another doctor took the middle ground — “I would not feel comfortable using social media to communicate with individual patients, but it may be useful for group communication or educational activities.”

### Canadian physicians using social media on regular basis

<table>
<thead>
<tr>
<th>Social Media</th>
<th>Personal Purpose</th>
<th>Professional Purpose</th>
<th>Both</th>
<th>Do Not Use</th>
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<td>9.8%</td>
<td>4.0%</td>
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Source: CMA epanel
EHR uptake in US increasing even as “meaningful use” deadlines may be delayed

RESULTS FROM A 2013 SURVEY OF electronic health record (EHR) use among office-based physicians in the United States show significant implementation of this technology over the past 12 years.

However, interpretations of findings from the Centers for Disease Control and Prevention’s National Center for Health Statistics poll appear to vary widely — depending on your views about the success of the HITECH legislation intended to encourage doctors and hospitals in the US to adopt health information technology.

Under the legislation, physicians who make meaningful use of a certified EHR to document and provide clinical care are eligible for up to $44,000 in extra payments from Medicare and Medicaid. But those who don’t meet the requirements are supposed to be subject to penalties, starting next year.

However, there are signs that the “carrot and stick” approach used to encourage “meaningful use” of electronic health records by clinicians is not a total success, for various reasons. It was recently announced that the deadline for meeting Stage 2 of the meaningful use provisions may be extended from October 2014 to 2016. Physicians who do not meet Stage 2 will face a 1% penalty on Medicare payments.

Results from the CDC survey show that nearly 80% of office-based physicians in the US now have some type of EHR, an increase of 60% since 2001. The poll also indicates 70% of these doctors intend to participate in the EHR incentive program.

“Overall we are encouraged to see that physician adoption of EHRs meeting Meaningful Use Stage 2 is increasing significantly,” wrote Dr. Karen DeSalvo, the new National Coordinator of Health Information Technology for the federal department of health and human services, in a January blog post. But, she added, “the report does also tell us there is more to do and we agree.”

Contrast this with a post from Erin McCann, associate editor of Healthcare IT News, also commenting on the CDC figures, who wrote: “The Stage 2 numbers for eligible docs are, some might say, a little bit scary. Most office-based physicians are not prepared for the October 2014 beginning attestation date.”

[Map showing percentage of office-based physicians with a basic EHR system, by state: United States, 2013. Source: CDC/NCHS National Ambulatory Medical Care Survey, Electronic Health Records Survey]
The same irony could be seen in promotion of a well-populated Twitter stream created for the meeting (#CCPH13) and used enthusiastically by both conference organizers such as Dr. Derek Puddester, the Canadian Medical Association (CMA) director of physician health, and many other delegates. Medical students, residents and others not attending the meeting were also following the tweet stream.

These examples reflect the new reality of how digital connectivity and current technologies can improve physicians’ ability to work and communicate more effectively while putting undue pressure on others, and potentially having a negative impact on their health and well-being.

Conference organizers had acknowledged the relevance of this issue by stating that one of the event’s main learning objectives was to ensure participants would be able to “identify how different technologies are both a benefit and challenge to physician health.”

Given the lack of substantive data on this topic, it is perhaps not surprising that organizers selected as the closing presentation a highly entertaining and light-hearted debate. Panellists referenced everything from the “Borg” in the television series “Star Trek” to the dangers of texting while driving, to bolster arguments for or against the resolution that “digital connectivity is a positive determinant of physician health.”

Tellingly, responses indicated the audience remained as evenly divided at the end of the debate as they had been at its outset — with 52% of 112 active participants (in a mainly physician audience) disagreeing with the statement.
Polling of the audience showed the degree to which new communications technologies have had an impact on physicians’ lives:
- 35% said they couldn’t remember the last time they slept without a cellphone beside their bed (see chart)
- 18% of respondents admitted to texting while in the washroom
- 50% felt multi-tasking with a mobile device made them more efficient
- 51% felt they did not have a professional responsibility to keep up with new communications technologies

One keynote speaker who addressed the impact of new technologies on health was Canadian physician health expert Dr. Michael Myers, who is currently professor of clinical psychiatry in the department of psychiatry and behavioural sciences at SUNY Downstate Medical Center, Brooklyn, NY.

Myers touched on how access to mobile devices and other new technologies can blur the boundaries between work and personal life for physicians who now check on their practices “24/7.” He noted some physicians have trouble getting back to sleep after waking at night to check messages or emails on their mobile devices or computers.

His comments provided a common theme to much of the discussion about how new technologies and digital connectivity impact personal physician health — that the technologies are tools that can be used or abused, depending on how the physician chooses to implement them.

In an interview, Dr. Michael Kaufmann, medical director of the Physician Health Program in Ontario, noted that the perceived stress caused by new information technologies and digital connectivity may exist but is not being overtly identified by physicians he encounters through the provincial physician health assistance program.

Dr. Farris Timimi, a cardiologist at the Mayo Clinic, Rochester, NY, and medical director of the clinic’s Center for Social Media — the only centre of its kind in North America — is an eloquent advocate for the professional use of social media by physicians. Timimi feels digital connectivity can actually improve physicians’ lives by making them more efficient.

“These are particular tools that have both risks and benefits,” Timimi said in an interview. “It’s similar to taking a medical student and giving (him/her) a scalpel for a procedure. If you don’t provide them training it’s a significant liability but if they’re adept at using a scalpel and strategic with it, it’s a powerful tool.”

“Digital connectivity is not going to go away, it is part of our reality,” said Dr. David Ward, a fourth year resident at the University of Calgary and one of two debaters assigned to argue the positive impact of this connectivity. While he admitted the technologies enabling connectivity may have grown more quickly than our ability to fully understand them, he said “as physicians we can lead the way … and help to guide our patients and … our societies in managing the complications that come with this in terms of health.”

His debating colleague Dr. Kendall Ho, director of e-health strategy and a professor of emergency medicine at the University of British Columbia, added: “We communicate in different ways. Digital is just one additional way to connect and to communicate.”

Ward also argued new technology can help physicians with meeting all the determinants of health, especially using tools such as Skype or Facebook to provide social support and connect with family members or significant others who may not be physically present.

CMA past president Dr. Anna Reid and University of Calgary second year medical student Joshua Bezanson talked about the primacy of face-to-face communication in discussing the negative impact of digital connectivity on health.

Reid also briefly referenced a number of recent scientific studies showing how multi-tasking has a negative impact on cognitive functioning, and how frequent use of the Internet has a similar negative impact on heart rate variability.
Both Reid and Bezanson argued that rather than bringing people together, social media and mobile devices make people more prone to social isolation.

Kaufmann said that, to his knowledge, there is no hard data linking the increase in digital connectivity with physician health issues.

“I can’t say it surfaces in our environment here as being a big deal,” he said. “It’s probably something that’s just there. It’s not a highlight when doctors call us who are stressed or distressed.”

Kaufmann noted technology both facilitates the jobs physicians do and can contribute to the burden. “It creates another layer of stuff we need to deal with as we struggle for balance in our life.”

Timimi identified repetitive content and conversation elevation as two main areas where social media and digital connectivity have been shown to improve physician efficiency.

By ‘repetitive content’, he means the ability to use digital channels to transmit useful information to a larger population in an efficient fashion.

For example, a pediatrician may spend a few minutes of each patient encounter with parents discussing the importance of using a bike helmet and how to pick the correct helmet. However, he pointed out, if someone uses a video camera to record the physician giving that message, it can be posted to YouTube. The doctor can then advise parents to watch it, and post a QR code in his/her office so that parents can watch it on their mobile device. This could save that physician several minutes per patient visit.

“Conversation elevation’ refers to how physicians can provide patients with useful information through tools such as videos to view before the visit, thereby ensuring the in-office discussion is at a more informed level.

“Instead of beginning at ground zero, I’ve moved it (the conversation) up to a higher educational plane. So I’ll have a much more meaningful interaction … and we’ll have a much better use of our time because (patients) will be much more empowered, engaged and enlightened.”

Timimi acknowledged that if the value proposition for physicians to use social media is not made “abundantly clear” it’s going to be viewed as just another incursion on their valuable time. He said he believes the majority of physicians who do take advantage of digital tools don’t use them to excess, thus impairing their own well-being.

The more general issue of how implementation of electronic medical records (EMRs) and e-health systems has impacted the individual health and well-being of physicians has not really raised much interest in either Canada or the US.

However, a Rand Corp. study done on behalf of the American Medical Association last fall raises some significant concerns about the way e-health is currently being implemented. The study was based on findings from 30 practices involving 220 physicians in six states — Colorado, Massachusetts, North Carolina, Texas, Washington and Wisconsin.

The study found that while physicians noted some advantages to electronic health records, they complained existing systems are cumbersome to operate and contribute significantly to their dissatisfaction.

“Many things affect physician professional satisfaction, but a common theme is that physicians describe feeling stressed and unhappy when they see barriers preventing them from providing quality care,” said Dr. Mark Friedberg, the study’s lead author and a scientist at Rand, in a news release.

“Those surveyed expressed concern that current electronic health record technology interferes with face-to-face discussions with patients, requires physicians to spend too much time performing clerical work and degrades the accuracy of medical records by encouraging template-generated notes,” the Rand release stated.

“Physicians believe in the benefits of electronic health records, and most do not want to go back to paper charts,” Friedberg said. “But at the same time, they report that electronic systems are deeply problematic in several ways.”

Kaufmann says colleagues raise this with him as well, suggesting jokingly that there should be a DSM-V diagnosis for “tech-nostress” when systems go down.

Dr. Darren Larsen, Physician Advisor, Quality, Innovation and Leadership at the Ontario Medical Association and OntarioMD, disagrees and feels stress-related problems seen with EMRs are usually limited to the implementation phase.

“Once established, EMRs improve work flow and efficiency,” he said.
Another recent reference to the challenges facing physicians in the US due to new technology came in a guest column posted on the Health IT Outcomes website, titled “Is technology contributing to physician burnout?” Written by Dr. Linda Girgis, a family physician from South River, NJ, the article looked at how recent US legislation forcing the adoption of EMRs in that country may be having a negative impact on physician health.

The article quoted a survey by the online physician community Sermo indicating that 95% of respondents felt technology was contributing to physician burnout.

Girgis argues that the inadequacy of existing e-health systems to help physicians meet requirements under the “meaningful use” provisions of the legislation means “the technology designed to improve workflow and free up time for patient care has, in many cases, had the opposite effect for a substantial number of doctors. For doctors who are already pressed for time, this has added to the burden, causing many to feel crushed for time and contributing to burnout.”

She also cited the growth of medical ‘apps’, and pressures from patients who are seeking advice on the most appropriate mobile tools. “Patients ask for advice, but the rapid infusion of them into the market makes it difficult to keep pace.”

“Technology in medicine is advancing at exponential rates,” she concluded. “It has the potential to truly advance the medical field and quality of medical care. However, as we are riding out the development of these technologies, we risk burning out in the learning and implementation process.”

Larsen counters that we should plan for change to proactively avoid the stress as much as possible. “It is the lack of planning and attention to implementation detail that gets most users most of the time,” he said.

Concerns such as these are the reason many Canadian jurisdictions have invested in making change management an important part of their EMR funding programs. Teaching physicians and their staff how to properly implement an EMR and use it effectively continues to be a priority in many provinces.

At the Calgary conference, Ho said the Internet and social media can also offer important resources to help physicians maintain their own health and well-being. His comments were echoed by Dr. Don Smallman, an ophthalmologist and assistant professor at Queen’s University, Kingston, Ont., in an exchange on Twitter.

“I find Twitter to be an excellent source of positive affirmations and meditations that work well for self-awareness and mental health,” he said. “You can find good feeds for positive affirmation all over the place.”

Smallman, an active tweeter, acknowledges that some physicians may become too enamoured of using social media platforms such as Twitter. “Like everything in life, it’s about moderation. If it disrupts your work or home life, switch it off,” he recommends.

Ho made a similar point noting that while new technologies and new media are like a giant amusement park, “I don’t like every single ride.”

“I think much of the discomfort of physicians with technology, and possible ill effects can be ascribed to the social and cultural turmoil that accompanies a paradigm shift of this scope — a revolution. I believe we are culturally ill equipped to deal with the possibilities offered by the new technology, and that is stressing us out as a collective. It takes a great deal of time and energy to undergo cultural transformation. We currently lack the tools and expertise to navigate the new world of networked information, particularly in an industry as conservative and bound to tradition as the health care industry. Just consider the confusion surrounding the debate about the role of privacy and it’s interplay with quality. We are wholly ill equipped to manage information with new technology with our old privacy constructs. This has led to confusion, inefficiencies and many stressed health care workers. This is a byproduct of the clash between new technology and old outmoded legislative constructs — a paradigm clash. I deal with this every day.”

— Dr. Ewan Affleck
Family physician
NWT
YOU PROBABLY WOULDN’T THINK OF BELLEVILLE, ONTARIO, (population about 50,000) as a community where the use of social media in pediatric care is being pioneered in Canada. But it is.
At Quinte and Adolescent Medicine, pediatrician Dr. Paul Dempsey — assisted by Sara Hamil, director of social media and communications for the clinic — has spent the last few years developing various social media platforms and electronic communication tools to expand outreach to his population of some 2,000 pediatric and adolescent patients.

“We’re talking website, Facebook, Twitter, YouTube, blog, a secure patient portal with email capabilities and even Instagram — all used to better inform and engage patients about their care. “Back in 2009 our patients were young, early adopters of social media so we wanted to be where they were, and wanted to be able to figure out how communicate with them after hours,” said Dempsey. “Our patients come here, they see us between 9 and 5 when the doors are open, and many of them have the same questions … which means many more of them have the same questions outside [office hours].”

“If I’m giving the same message about respiratory infection to three patients within the first three hours of the morning, there are probably (more) out there who would benefit from the same information.”

So rather than having these patients go to Dr. Google for answers, Dempsey’s clinic set up a Facebook page and Twitter account (@QuintePediatric) to provide them with basic information on pediatric health issues. Dempsey pointed out this was not an attempt to replace existing after-hours care channels already in place.

However, having set up these accounts, Dempsey said he didn’t do much with them until Christmas 2010, when he connected with Hamil. She already had an active social media presence in the community.

“The basic dilemma is how much time does the doctor put into it? I didn’t want to take on the role of the nurse as communicator.” Via Twitter Dempsey asked: “Do you consult?”

Hamil, who works in public relations and had moved back to Belleville from Toronto, said she became “very excited” by the prospect of using social media channels at Quinte Pediatrics and accepted a position with the clinic.

“Sara solved two problems at once,” said Dempsey. He explained that because Hamil was in the age group of many parents seen at the clinic, she was able to provide insights on their needs and experiences. She also had the experience needed to deal with the social media tools, as well as connections and a public profile within the local community.

In April 2011, Hamil came on board and escalated the amount of communication delivered through the website and Twitter account. At the same time, she said, they started a WordPress blog. “That was new, and … gave the clinic a voice.”

She continued: “In addition to sharing relevant articles, we started writing our own pieces that were snapshots of what was happening here … behind the scenes, why we do things the way we do and references to things that were occurring in the local community.”

On the Facebook page, Hamil said she launched a project called “What and where.” She would photograph medical equipment and parts of the clinic close up, and ask people to identify them. Special needs families who spent a lot of time at the clinic were able to identify with what was in the photographs, and as a result felt a stronger sense of community and “ownership” with the place.

“When one person engages with your connect on Facebook it has that ripple effect, and suddenly their friends see who they are talking with as well.”

Awareness of these initiatives and channels was spread largely by word of mouth, and through what Hamil described as “champion patient parents” who were already connected with the clinic. Dempsey noted a November 2011 front-page story in the local daily paper, The Belleville Intelligencer, had a big role in making people aware of what the clinic was doing.

The article documented how the clinic had won a $2,500 prize offered by B Sharp Technologies Inc., a Toronto health software company, to enhance their social media efforts. “We were particularly impressed by Quinte Pediatrics’ willingness to experiment with various forms of social media and their commitment to making it an integral part of their practice,” wrote Michael Martineau, B Sharp’s vice-president of sales and marketing, in a press release quoted in the article.

Hamil recalled the clinic’s website was very static when she was hired, so the next step was to create a more dynamic website (http://quintepediatrics.com/), which she personally rebuilt. The aim was to create a social Media Hub that connects all the other tools and platforms — such as Facebook, Twitter and the blog.

The website provides these linkages plus basic administrative information such as office hours and special clinics. The Facebook page, which features queries and general responses (where appropriate) on health issues, can change daily or weekly.

In addition to the clinic Twitter account, Dempsey has his own account (@drpaul Dempsey). While he initially used this account to engage broadly with the Twitter health care community, Dempsey said he has since scaled back to give more focus to the clinic account.

Dempsey is now using his personal account for more professional interactions with peers. However, he noted that Twitter is still used by only a limited number of pediatricians; neither he nor Hamil know of other Belleville physicians who are active on Twitter.

The B Sharp award was used to explore video and to set up a YouTube account for the clinic (www.youtube.com/user/Quinte Pediatrics). Hamil said they’re still investigating how to best use this channel but to date have posted five videos. Among these are a Q&A on common pediatric health issues and a video featuring patients discussing why they value being able to communicate with the clinic using social media.

Foursquare is another tool the clinic uses,
because Dempsey operates from multiple locations across the region and it enables him to tell patients where he is at any particular time.

Instagram is being tapped more frequently now, said Hamil, to show snapshots and behind-the-scenes views of Quinte Pediatric while respecting patient privacy. For example, this may involve showing medical students doing placements at the clinic. The clinic has patients sign a standard media release form that covers all the platforms being used.

Dempsey said they are very aware of the potential of “over-sharing” photos of babies and young children on social media, and with parents’ permission the clinic will post only pictures they feel “good about in our consciences.” The intent is that the child will not be upset with the posting years from now.

Hamil said the clinic’s next step will be to explore use of Vine, a tool that mobile video devices can use to produce and circulate six-second clips. She said the plan is to use this for quick definitions of common medical terms and conditions. They hope compilation videos of a series of Vine clips will emerge.

“We have tried to use social media strategically,” explained Dempsey. “Patients want to know about their doctor, and I can tell them something about me (on social media) that can feed that desire without giving them too much personal information.”

Dempsey said he hears “almost… daily” that a new patient he has not met before will say he or she recognizes him from one of his social media profile pictures.

Currently, the clinic has just over 1,100 followers on Twitter, and about 500 who have ‘liked’ the clinic’s Facebook page. Hamil said Twitter followers are drawn from a broad demographic and geographic range, whereas those following the Facebook site tend to be parents and others living in the Belleville area.

Neither clinic representative is considering dropping any of the social media tools they are presently using, they said, but admit that they’ve revisited their strategy for certain channels such as YouTube.

“There’s a bit of experimentation to figure out what the best use is,” said Dempsey.

The approach has been to use social media tools to meet patients on their own terms, Dempsey said, and with more teens ramping up their use of the microblogging platform Tumblr he anticipates the clinic will start to use this as well.

Asked why he was investing so much time and effort in social media approach, Dempsey replied: “One of the jobs of a physician is communication. I know patients are going to Dr. Google. It drives me nuts. I want them to have credible sources online, so that even if they never come through my doors they’ve got an incredible source of information that will answer their questions.” He said use of social media also helps physicians fulfill another role — improving the health of the community.

Quinte Pediatrics has opened another door in physician–patient interaction by using a patient portal that allows Dempsey to communicate with patients through secure email and to share treatment plans.

Dempsey said virtually all patients who have been offered access to the Wellx system have signed up since it was offered at the beginning of the year. After the initial quiet rollout, patients can now join through the Belleville clinic’s website. “We’re watching how this evolves,” Dempsey said, noting open enrolment has been offered for about a month.

While the clinic’s catchment area includes several disadvantaged populations, almost all patients — with the exception of some older parents — choose to take advantage of digital communication tools made available, such as the secure communication community.
INNOVATION, CANADIAN STYLE

Scrap, snippets and insights from Hacking Health Toronto 2013

Pat Rich

IN MIDS-NOVEMBER, MORE THAN 400 DOCTORS, DESIGNERS, DEVELOPERS, hackers and health care professionals gathered at the MaRS Centre in Toronto to brainstorm the development of mobile applications and other innovative solutions to current health care challenges. A total 42 pitches were made for challenges to address. Teams were then formed and given 48 hours to develop solutions and demos of new products. Welcome to Hacking Health, a concept launched in 2012 by Dr. Jeeshan Chowdhury and colleagues Dominic Savoie and Luc Sirois that has taken Canada by storm. To put in perspective the views of physicians and others on this new approach to innovation and how a “hack-athon” works, we offer this “crowdsourced” summary.
**Friday, Nov. 8**

7 pm — Introductions complete, the attendees listen to opening presentations. Pitches are made by those with ideas they want to develop over the weekend.

Hacking Health (HH) is about much more than creating the next great app or digital health care solution. It fosters a highly collaborative and accelerated learning environment. Everyone leaves the event having learned something.

— Colleen Young, Princess Margaret Cancer Centre

The pitches demonstrated innovation, out-of-box thinking and creativity that is essential to improve the inefficiencies that currently exist with the health care industry.

— Dr. Sheila Lakhoo, family doctor, St. Michael’s Hospital

A couple of groups performed short skits — wore lab coats and stethoscopes to play docs and modelled a situation where their application/hardware might be used. Some questions from judges about privacy issues — Where is patient info stored? How is data encrypted? Judges also questioned often — How is this different from existing patient portals/wellness apps/EHR programs, etc.? Questions also about how much confidence one can have in data inputted directly by patient. — Emily Nicholas, Patients Canada

Great to see hardware pitches this year: Wearable technology used to aid in smoking cessation + wearable sensor glove for people with impaired hand mobility. Will we prescribe these in the future as part of smoking cessation or rehabilitation programs?

— Varuna Prakash, medical student, University of Toronto

Inspiring to see non-medical professionals as excited about developing solutions to health care problems as we are.

— Dr. Noor Ramji, family physician, St. Michael’s Hospital

It’s incredibly difficult for your average Silicon Valley app developer to understand the intricacies of patient flow, med management complexities, physician workflow, etc. I think this is why HH is so important — allowing the insiders with access to demystify these things for the outsiders with the ability to develop. — Prakash

9:30 pm — Attendees form into teams and network. Selected individuals serve as mentors who use their expertise to assist groups when requested.

We wanted to turn our paper *My Baby and Me Infant Passport* booklet into a smartphone app that our young, homeless, pregnant mums could use. We pitched our idea to a very passionate crowd of health care professionals and hackers, and then crossed our fingers that our idea would resonate. We wound up with an amazing, diverse team of developers and designers who arrived Saturday morning full of ideas and energy. Our team consists of OCAD (Ontario College of Art and Design University) students, designers, seasoned developers, a biologist/researcher cum designer and a first year out-of-town computer science student who spent the weekend sleeping on a friend’s floor! One of the most amazing aspects of HH was how we were all able to come together and communicate with each other despite our differences in “operating systems.”

Now, 18 hours in, we not only know the difference between a designer and a developer and what ‘writing code’ actually means but we are well on our way to having an app that mums can access on their phones. And the best bit? We would have been happy with an app that was a digital translation of our paper booklet but instead will have an app that will totally enhance experiences. Our app will have an interactive “wheel” that graphically represents each pregnancy, have a tool to integrate appointments and use GPS technology to figure out how close you are to needed services like shelters and addiction services. In a weekend! All in a weekend! — Marisa Cicero and Amanda Hignell, social workers, St. Michael’s Hospital

GLIA (project name) had a psychiatrist, MPH grad doing research at CAMH (Centre for Addiction and Mental Health, Toronto), a social worker from Women’s College (Hospital), graphic designers and an MBA grad (who shared her own experience trying to navigate the health system to find psychological support). I spent some time working with them to develop personas for the type of people who might come to their site looking for help with finding mental health services. Did some storyboarding to create a timeline from an event which might trigger someone to seek help, how they would search online, what level of help they would be looking for. — Nicholas
Saturday, Nov. 9
8:30 am — Groups engage in a team-building exercise and then return to the main business of hacking solutions to the challenges posted in the pitches. This continues throughout the day until 10:30 pm, then resumes on Sunday from 8 am to 2 pm — when teams demonstrate their proposed solutions.

I’m a psychiatrist at St. Joseph’s Health Centre in Toronto. I have a degree in computer science. From a working clinician perspective I am able to see where there are process gaps and inefficiencies; my computer training helps me see where software can help fix the problem. I went to Hacking Health to get help in refining my programs, improving the user interface and fixing technical problems that were beyond my expertise. The weekend was fantastic. The room was filled with supersmart people, content experts who were more than eager to share their knowledge. I met a fourth-year engineering student who designed an elegant and information-rich user interface, and a software developer who rewrote one of my apps in less than a day and showed me a program that solved a data management problem I thought was unsolvable. One of the floating mentors spent an hour with me discussing project management, identifying the obstacles I needed to overcome and suggesting where to get funding. — Dr. David Gotlib, St. Joseph’s Health Centre, Toronto

Talking with the designers and developers forces clinicians to speak in plain language, which helps make their product marketable. If they can’t describe the pathway of their solution in a way that the designer and developer can draw out the app architecture, then it won’t be user-friendly. Many app solutions incorporated a social component, but few understood the human resource requirements to build and sustain (a) community online. Technology alone does not build community. You can’t build a house and expect people to move in. — Young

Sunday, Nov. 10
3:30 pm — Judges deliberate on what they have seen and select winners.

I would love to see more med students attend. This generation of med students is enormously tech savvy. Consequently, we’re all going to be in for a rude surprise when we get to the hospitals and discover tech that lags behind other industries by at least a decade. Strongly believe that the only way to remedy this is to get our hands dirty and jump right into the design process. Otherwise, we can’t complain when someone totally distanced from the health care industry writes a frustratingly unusable piece of software that we’re stuck with for years. — Prakash

I would definitely encourage medical students, residents and health care providers to incorporate events such as HH into their curriculum/career early on. — Lakhoo

An event like this would be great to add to the medicine curriculum and inspire new health care practitioners to consider disruptive innovation in quality improvement initiatives. — Ramji

And the winners were...

People’s choice award:
Breathe.io (wearable technology to help people quit smoking)

Judges’ picks:
Best solution for clinical application
S.O.S. (app to prevent unnecessary transfer of patients from long-term care to the emergency room)

Best solution for health administration
PatientFlow (automated patient assignment and ticketing system)

Best solution for consumer health/patient application
My Baby and Me Passport (mobile app for underprivileged expectant mothers)

Hacking Health choice
GLIA (web solution to match patients with psychotherapists)
Data are essential to achieve quality of care. All follows from this.

Our current health care system is a long way from delivering quality care to patients. More than 200,000 Americans are expected to die from preventable medical errors in 2014, yet there is little public outcry. Similar patterns of medical error have been described in Canada and reveal a stark quality deficit.

Quality deficits, or medical errors, occur throughout health care systems, the byproduct of countless, discrete point-of-care choices made daily in the interaction between patients and the system.

Studies suggest that proven effective treatments are frequently under-prescribed, that patients are not always properly informed of their care options, and that those who receive higher volumes of care may have no better or worse outcomes than those receiving less care. The provision of care for the same condition can vary dramatically from location to location. Point-of-care decisions are frequently influenced by factors such as where a clinician practices, with whom he or she works or the local supply of resources (hospital beds, CT scanners, etc.), than by clinical standards of excellence.

Yet most health care providers do not understand what influences their decisions or what impact these choices have on quality.

To promote quality care, it must be defined, measured and evaluated against a benchmark of excellence, and modified as part of a continuous quality improvement cycle.

While standards of excellence abound, the availability of coherent patient-care data to evaluate quality care is spotty. In the pre-digital age, paper-based health information was a poor source of accessible aggregate patient data. In this environment, patient data served only as an internal communication tool used to guide individual patient care, and as a medico-legal necessity. Traditional medical education left most physicians without the functional literacy to meaningfully manipulate health data.

Hospitals have traditionally paid more attention to health data, as have population health departments. However, the lack of proper technology infrastructure and shared governance between hospitals and community-based practices has impeded the ability to share meaningful health data and promote collaborative care.

The advent of digital health systems has liberated data from the confines of paper, making the collection and aggregation of patient-care data a practical reality. There are now widespread initiatives to improve patient safety, promote quality of care and address physician accountability. Population-based front-line health care can now be a reality, with real-time patient data driving rules-based preventative care and chronic disease management.

Standardization of care across teams can be achieved with enterprise patient-centric digital systems and accountability frameworks based on benchmarks of excellence. Population health departments, hospitals and out-patient health services can now drive excellence founded on shared standards and outcome measurements. The tools now exist for aggregate patient data to drive quality care.

But cultural and structural obstacles remain. Health services have adopted digital systems but health providers are largely employing these tools as surrogates of paper systems — without deploying the full power of data-driven analytics.

Those providers who want to embrace analytics to drive quality of care are frustrated because this expertise remains sequestered in population health departments and universities.

Opportunities for collaboration are impaired by fractured governance, inadequate technology and cultural reluctance. Perhaps most importantly there is a legacy of disinterest or distrust for data collection and practice evaluation. There’s the lingering sense that a preoccupation with data is interfering with patient care.

Unfortunately, digital systems have often been implemented along service lines rather than in a patient-centred way, impairing the simple aggregation of patient-care data. According to the Journal of Patient Safety we are in the midst of an “epidemic of patient-harm.” Yet despite this crisis the health profession seems unable to embrace the importance of self-evaluation, frozen by the cultural schism between fiduciary responsibility to quality patient care and the value of practice-based analytics.

A paradigm shift is required to drive the quality agenda, one that accepts data’s central place in to achieving quality care. Medical curricula must reflect the centrality of analytics to the function of all physicians, and the efforts of public health departments and front-line providers to jointly embrace practice-based population health initiatives.

And what about patients? Perhaps their collective voice is needed to convince the health care system to embrace the networked world and the use of personal health data in aggregate form for collective good.

To ignore this rich resource at the expense of quality care is no longer acceptable.

Dr. Ewan Affleck is a family physician in the Northwest Territories and recent recipient of the Order of Canada for his commitment to improving health care services in northern communities.
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