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E-PRESCRIBING: nothing to write home about yet

Chris Simpson

IT’S NOT EVERY DAY — OR EVERY MONTH, FOR THAT MATTER — THAT the Canadian Medical Association (CMA) receives a public accolade from the head of Canada Health Infoway.

So it was worth noting when Richard Alvarez spoke kindly of us at the E-health 2014 conference in Vancouver in June. He acknowledged the leadership of the CMA and the Canadian Pharmacists Association (CPhA) in pushing for widespread implementation of electronic prescribing in Canada.

"The leadership that they’re showing is terrific," Alvarez said.

While Alvarez was referring specifically to the degree of leadership shown by the two organizations, his comments touch on a tender subject. Sadly, when it comes to making electronic prescribing the norm in Canada his congratulatory statement is the only good news we can report.

Frankly, this is embarrassing. It was only two years ago that our organizations issued a joint statement predicting that by 2015 e-prescribing “will be the means by which prescriptions are generated for Canadians.”

Even worse, an earlier resolution adopted by the CMA General Council in 2009 called for electronic prescribing to be in place by 2012.

The fact that we are nowhere near delivering on that goal speaks volumes about the complexities involved. Few would deny that e-prescribing can improve medical adherence, prevent fraud, increase provider collaboration and make life easier for patients and yet, a digital solution eludes us.

Despite statistics seen from the Commonwealth Fund survey suggesting the contrary, the reality is that virtually no Canadian physician outside Quebec is yet able to electronically transmit a prescription to a pharmacist — who then fills the prescription. Data from 2012 indicating 43% of Canadian family physicians routinely use electronic prescribing probably includes many who enter prescribing information into the electronic medical record and then print the prescription out for the patient or fax it to the pharmacist.

What are the barriers to implementing true e-prescribing? A recent survey of more than 400 CMA members identified the following top issues impairing their ability to e-prescribe:

■ not knowing of a pharmacy that accepts e-prescriptions
■ EMR usability issues

Other challenges may vary by jurisdiction, but include the following:

■ lack of government leadership
■ lack of e-prescribing functionality in some EMR systems
■ lack of interoperability between EMRs in physician practices and pharmacy management software
■ lack of a provider registry so physicians will know which pharmacies accept such scripts
■ lack of a functional drug information system
■ lack of incentives for physicians and pharmacists to e-prescribe

The picture is not universally gloomy. In Quebec, as part of the Quebec Health Record initiative, physicians in certain medical clinics and community pharmacies can view a patient’s pharmacological profile and create and receive electronic prescriptions. To date, results from this pilot project have been positive.

At the national level, the CMA remains committed to working with the CPhA and other organizations to advocate for system changes that will facilitate the implementation of e-prescribing to maximize efficiencies for physicians and pharmacists while improving the process for patients.

We are disappointed at the lack of progress on this goal, but feel it is an important issue to persevere with, in the interests of both the profession and the public.

Dr. Chris Simpson is the President of the Canadian Medical Association.
I just read and enjoyed the June 2014 edition of Future Practice. I’m fairly new to the EMR, having adopted the OSCAR system in our four-doctor practice in 2013. However, I consider myself computer-literate and I’m no Luddite.

I particularly enjoyed Canadian Medical Association President Dr. Louis Hugo Francescutti’s article and the expression “meaningful use of meaningful use”. That issue of Future Practice paid a lot of attention to the hoopla at the HIMSS convention in the United States.

Reading your reviewers’ articles, however, there seemed to be little mention of any critical thinking at this conference regarding the implications of widespread health IT (information technology), American-style. As Dr. Francescutti pointed out, “meaningful use” in this context is pay-for-performance. In one article, Drs. Larsen and Pomedli discussed the difference in measurement goals between the US and Canada, whereby the US inverts its IT priorities to produce cost efficiencies, to detect insurance fraud, and for benchmarking and reporting on quality metrics. The goal of improved quality comes later.

I am concerned that we might be heading down the same path as the United Kingdom, where processes became more important than outcomes. This was epitomized in the Quality Outcomes Framework (QoF) — although I gather it has since undergone some major revisions. In the early days of the QoF, some respected critical thinkers applied their minds to the initiative. There is evidence that these sorts of incentives improve the quality of documentation while having a much more limited effect on underlying standards of care. A 2007 article from the BMJ titled “Measuring performance and missing the point?” made some points worth quoting.

As noted in the article’s introduction, targets do not necessarily translate into improvements for service users.

“Evidence based care was never meant to be a substitute for clinical judgment but, combined with the inducements of the quality and outcomes framework, it becomes so. Mechanistic blanket management strategies, embedded into computer software, become fixed and static with the danger that innovation will be stifled. Interventions become routine, and practitioners … are no longer required to grapple with the innate uncertainty of each different clinical situation …

“It (the QoF) encourages the illusion that health inequalities can be solved by the health service and allows policy makers to ignore the extent to which health inequalities are a symptom of socioeconomic inequalities that continue to widen … It is based on the astonishing assumption that everyone wants to live as long as possible … None of the framework measures estimate clinically important outcomes. What they assess is treatment processes that are supposed to lead to improved outcomes. A marked discrepancy exists between the likely effect on health and the level of monetary reward …”

Tim Reynolds, a UK lipids expert, made the following observations in a 2007 BMJ article: “Many elderly patients are referred to my lipid clinic because they do not meet the government targets set in the QoF despite high doses of statin and the consequent myalgia. Frequently after a discussion of the meaning of risk, these patients opt not to be treated because the likely benefits are so small they do not outweigh the adverse side effects.” Reynolds concluded that “the main casualty of target-based medicine is common sense.”

We in Canada have the opportunity for sober critical thinking about our use of information technology. We can learn from the mistakes of other jurisdictions and benefit from the successes of others such as New Zealand, Catalonia and, I believe, Hungary.

— Dr. Ralph Jones, Chilliwack, BC

1Heath I, Hippisley-Cox J, Smeeth L. Measuring performance and missing the point? BMJ 2007;335:1075-6 (http://www.bmj.com/cgi/content/full/335/7629/1075)
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Panel gives update on Canada’s digital health journey

Pat Rich

Clinician reluctance to embrace new health information (IT) technologies was identified as one of the primary reasons implementation of digital health care in Canada has been so slow. Asked to reflect on health IT developments over the past decade in a plenary session at the e-Health conference in Vancouver, three leading Canadian experts were unapologetic in describing the pace of uptake.

While such e-Health plenaries have historically been wildly uneven in terms of entertainment value and knowledge exchange, entertainment was assured at this session as delegates had a last opportunity to hear from Richard Alvarez, who is retiring after a decade as president and chief executive officer of Canada Health Infoway. Alvarez was part of a panel discussion that also featured Dr. Ed Brown, CEO of the Ontario Telemedicine Network and current president of the American Telemedicine Association, and Dr. Sarah Muttitt, chief medical information officer for Alberta Health Services since 2013 (after five years as chief information officer for Singapore’s ministry of health).

The theme for the panel was “Looking back — moving forward,” and Alvarez admitted “it has been a struggle to get to where we are today.”

He said he and other policy-makers did not fully appreciate the “incredible” culture shift required of physicians to embrace digital health care. “If your clinicians are not accepting of it … then implementation is going to be extraordinarily difficult.”

“We’re asking health care providers to change the way they work,” Brown added. “All of us have become change agents in an industry that doesn’t particularly want to change.”

With only 4% of Canadian hospitals having implemented a CPOE (computerized physician order entry) system despite its proven ability to reduce mortality and improve patient safety, Alvarez said it is time for hospital leaders to step up and mandate CPOE use by their physicians.

Alvarez said that a decade ago clinicians didn’t acknowledge the value that health IT and EMRs could bring to the health care system. “They are absolutely on this page today.”

Significant progress has been made overall, he said, noting that EMR use in Canada has increased from about 20% of physicians in 2006–07 to a level that now approaches 70%. He singled out the Canadian Medical Association and the Canadian Pharmacists Association for leadership in advocating for making e-prescribing the norm.

“Ontario leads the way in automating physicians,” Brown said, noting that more than 80% of family physicians in the province have electronic medical records (EMRs). However, rather than using the data gathered in EMRs to improve the quality of care, he said most
doctors have just been using them as "fancy notepads." When it comes to using health data that is gathered electronically to improve clinical decision-making and planning, "we have a lot of work to do yet."

Discussing the evolution of telemedicine and virtual care, Brown said there's growing understanding of the vital role that telemedicine can play. This is due to increased recognition of the burden of chronic diseases and how telemedicine can help with chronic disease management and in meeting consumer demand. "Our health care systems survival may be dependent on moving these applications to the forefront."

When asked why it has taken so long to implement digital health in Canada, Alvarez countered with "compared to what?" Digitizing other sectors such as banking has been an equally time-consuming process, he stated. "These things do take time."

Albert Muttitt added that the "painful process" of standardizing health data so it can be used effectively has been a lengthy, expensive transition that is often not appreciated. Exchange of health data between clinicians in Canada remains "extraordinarily poor," according to Alvarez. He attributes this largely to the lack of alignment with incentives paid to physicians to utilize e-prescribing and e-referrals.

'Dr.' Watson poised to help Canadian clinicians make decisions

'Dr.' Watson is coming to Canada.

He speaks your language and probably knows a lot more about medical advances than you do. But not to worry, he's here to help — not take your job.

'Dr.' Watson is IBM's Watson, the artificial intelligence computer capable of answering questions posed in natural language that's already being used for patient care in the United States.

During a sponsored presentation at e-Health, IBM Canada executive Paul Sulkers revealed IBM is actively involved in discussions with a Canadian institution to bring Watson to this country. (While Sulkers named the institution involved, the organization told Future Practice talks are ongoing, and it would be premature to discuss the arrangement.)

The development of Watson raises obvious questions about the ability of computers to replace clinicians, but Sulkers made it clear the technology is there to assist physicians in making treatment decisions.

Yes, those stories about Watson attending medical school at the Cleveland Clinic to expand its knowledge base are true. And yes, Watson will be taking medical exams later this year — but the intent when using Watson is that final decisions will "always, always reside with the clinician," Sulkers emphasized.

According to IBM, "Watson uses natural language capabilities, hypothesis generation and evidence-based learning to support medical professionals as they make decisions." Sulkers added that Watson has the ability to ask a question, uncover insights into diseases and innovative therapies, and to help clinicians in their decision-making.

"Watson mines the patient data to find relevant facts about family history, current medications and other existing conditions," IBM literature states. "It combines this information with current findings from tests and instruments and then examines all available data sources to form hypotheses and test them. Watson can incorporate treatment guidelines, electronic medical record data, doctors' and nurses' notes, research, clinical studies, journal articles and patient information into the data available for analysis."

Why do doctors need Watson? IBM notes only 20% of the knowledge physicians currently use to make diagnosis and treatment decisions is evidence-based, and as a result one in five diagnoses are incorrect or incomplete, and nearly 1.5 million medication errors are made in the US annually. The role of Watson is "to help you digest what is out there," Sulkers said.

In his presentation, Sulkers briefly described developments with Watson since it came to notoriety three years ago by winning over human competitors on the game show Jeopardy. IBM Watson is now a separate division of IBM with 2,500 staff and the capability to offer the technology as a service through cloud-based computing.

The first health care application of Watson has been Watson Oncology, being used at Memorial Sloan-Kettering Cancer Center in the US. With a database of several hundred thousand articles on oncology and structured data and non-structured clinical notes on specific patients, Watson provides clinicians with a ranked set of treatment options based on cancer treatment guidelines.

Here again, Sulkers stresses Watson is not the decision-maker but an advisor to the physician.

In addition to Watson Oncology, Sulkers described other applications, including the ability to assist clinicians in summarizing data from electronic medical records and helping medical students learn why certain treatment options are selected.

IBM is actively looking for Canadian partners who want to be early adopters of the technology, he said.

In response to an audience question, Sulkers said IBM "is not pushing for Watson to be used directly with patients — that will be up to the provider organization."
Nova Scotia reveals promise of the patient health record

INITIAL ANALYSIS OF THE EXPERIENCE WITH AN ELECTRONIC PERSONAL health record (PHR) has indicated positive results in Nova Scotia. Having a PHR that patients and doctors can use to manage patient health information, as well as allowing the patient to check test results and email from his or her physician, has been well accepted. Based on a more detailed analysis of PHR use by the patients of 30 family physicians in the Capital Health region over a 12-month period, Mary Russell, project director of PHRs for the department of health and wellness, said the province will now need to decide whether to make the tool more widely available.

“Are Nova Scotia citizens ready for this? I would say ‘yes,’” Russell commented. However, some of the findings raised questions about the potential impact of a PHR on physician income and workload.

The PHR used in the Nova Scotia demonstration project provided more than 5,000 patients with laboratory results, booking capabilities, the ability to communicate with their physician electronically and served as a health information repository. Patient representatives served on the project steering committee.

Patients recruited during office visits were given the option to use the PHR. Russell noted recruitment was “not a problem at all,” and the target 100 patient participants from each physician practice was reached six months ahead of schedule. Russell said most patients found the PHR “fairly easy to use” although they felt entering data into the record could have been made easier.

Russell said the analysis looked at the PHR’s impact on chronic disease management, patient/provider interaction, health services utilization and quality of services provided. Data were collected from focus groups and through an online survey (17.3% response rate).

“We’re quite confident of the results,” Russell said.

THUMBS-UP FROM PATIENTS
Receiving laboratory and test results electronically was the function most highly rated by patients. Eighty-five per cent of survey respondents said they felt this capability helped them manage their health better and be more involved in their own care.

“Overall, the patients love it,” Russell said; “physicians want to make it a part of their practice.”

Electronic appointment booking was also rated highly, although Russell noted the system required a dual workflow in some practices because of the way appointments were managed. She said patients also requested the ability to see the physician’s schedule and pick the time for their appointment, although physicians were not as keen on this idea.

Other key findings from the patients’ perspective:

■ 68% would call or visit the practice to ask about test results if they heard nothing; only 10% said they would follow up on normal test results
■ of the 91% who emailed doctors for advice, 10% said they would otherwise have called and made an appointment

All physicians surveyed said the ability to transmit test results electronically was useful, as was the PHR broadcast messaging function that allowed them to send a message simultaneously to all patients.

Russell said physicians rated other PHR functions such as the electronic booking capability as more useful for patients than for the practice. Concerning having secure messaging to get routine medical advice, 87% of the physician respondents felt this was valuable or extremely valuable to patients. Only 69% thought it was of value to the practice, though — especially since physicians are not paid extra for providing advice online.

“We’re working on that (a fee code for online advice) in Nova Scotia,” Russell said.

She said providing care through the tool rather than bringing the patient back for an additional visit appears to be the best business case for using a PHR.

A case study of one practice — in which half of the 1,300 patients used a PHR and the others didn’t — showed total services by the practice increased 22% after implementation of the PHR because it could provide services remotely.

Conversely, the number of services provided to patients in the office decreased, and this had a negative impact on fee-for-service. Russell said this highlights the need for a new payment model for using PHRs. Otherwise, physicians will be reluctant to implement the technology.

Russell noted that integration of the PHR with the electronic medical record is critical to the success of this approach, as is more education for physicians and patients about the benefits of PHRs.
Toronto surgeon looks to future through Google Glass

Chethan Sathya

Surgeons across the world are fascinated by Google Glass. This voice-activated wearable computer allows surgeons to transmit live video of what they’re seeing, review patient scans and communicate with colleagues — without ever having to put down the scalpel.

Whether Google Glass will help patients in the long run is anyone’s guess, but one thing is clear. The potential uses are limitless. And Canadian surgeons are at the forefront of the Google Glass revolution.

“Okay, Glass,” commands Dr. Teodor Grantcharov, a minimally invasive surgeon at St. Michael’s Hospital, Toronto. “Take a video.” As we sit in his office, Grantcharov’s Google glasses transmit live video of what he sees directly to my laptop.

Similarly, Grantcharov can stream video of himself performing an operation to surgeons anywhere in the world, providing him with expert real-time advice if he encounters difficulties or something unusual during an operation. What’s more, Grantcharov can use Glass to teach surgeons how to recognize and avoid mistakes in the operating room.

This could mean safer surgeries for patients. And since Glass allows surgeons to be in otherwise inaccessible places, such as remote and rural areas, the impact could be far-reaching.

Google Glass looks like a pair of lightweight glasses. Instead of lenses, however, there’s a crystal prism that sits just above the right eye. Glass is activated by either tapping the right side of the frame and saying “Okay, Glass” or tilting the head slightly backward.

A small computer screen is projected onto the crystal. Despite the fact that the screen is over the right eye, the display appears in the centre of the wearer’s vision. And since the display and screen are transparent, they become part of your natural sight.

Google Glass hasn’t been easy to get in the early stages. Since beta release in 2012, only those dubbed “early explorers” could
acquire a pair, at a cost of US$1,500. A consumer version is scheduled to be released later this year.

But with help from colleagues in the United States and a proposal to pursue health care research using Google Glass, Grantcharov became one of the first surgeons in Canada to receive a pair in 2013.

In many ways, Glass is the logical extension to technology presently used in the operating room. But by using hands-free wireless technology and voice commands, it really takes things to the next level.

Ceiling-mounted operating room cameras already exist and can easily record surgeries. However, they don’t capture exactly what the surgeon sees during an operation. They also require significant manoeuvring during surgery, which disrupts workflow, surgeon concentration and sterility.

Google Glass, on the other hand, becomes part of the surgeon’s vision. No extra movements are required, and there’s no disruption to the surgery at hand. In addition, the ability of Glass to connect surgeons with the Web and virtually communicate with others is unparalleled.

“For these reasons, it’s obvious why Google Glass has gained traction globally. Surgeons in Europe, the US, India and South America have all experimented with it. Many have used the device to review patient CT and MRI scans while operating, communicate with family members during surgery and stream surgeries in real time.

Grantcharov’s research will focus on the video streaming capabilities of Glass: “By giving surgeons the option to call for help and get expert real-time advice, surgeries will become safer and quicker.”

For example, there are circumstances where expert surgeons encounter an unusual condition during an operation. Usually the surgeon has to stop the operation, get a second opinion and then bring the patient back to the operating room another day. “Glass makes it possible to get opinions from experts immediately,” says Grantcharov.

But Grantcharov wants to push Glass even further. He wants to use it to coach...
surgeons by helping them identify when they make errors so they can avoid repeat slip-ups, similar to how coaches train athletes.

To do this, he plans to pair Glass with his recently developed surgical “blackbox,” which tracks surgeon’s movements during an operation and identifies errors. In essence, the blackbox has the ability to tell surgeons when they are veering “off course.”

By combining the two technologies, Grantcharov hopes to develop a system that gives surgeons real-time analytics on how they’re performing. “We know that, on average, surgeons make about 20 errors during each operation,” Grantcharov says. “We want to prevent these.”

When it comes to coaching, junior surgeons may have the most to gain, Grantcharov notes. “Surgeons just starting their practice are often left alone and would feel better with occasional mentorship.” Glass would make virtual mentoring a possibility. And as a result, surgeries would become safer for patients, he adds.

But Google Glass isn’t without its own problems. Battery life is a major issue; the device doesn’t last longer than 30 minutes without recharging. A strong wireless connection is vital. Weak connections, which may exist in some operating rooms, can really hinder functionality, and Grantcharov says eyestrain and limited voice commands make Glass hard to use at times.

Also, Grantcharov says Glass doesn’t always capture the exact image you want. Since the camera is located at eyebrow level, the image transmitted is often slightly above what the wearer sees. Some surgeons have developed earpieces that tilt the camera into better position, but Grantcharov states these aren’t perfect.

One of the major concerns about using Glass during surgery is patient privacy. Glass typically uses unsecure Google servers.

Medico-legal organizations recommend caution. “As with all technologies, the CMPA would advise physicians on the importance of protecting patient privacy and confidentiality, and of obtaining consent when patients are asked to participate in a shared-learning activity,” says Doug Bell, the associate executive director of the Canadian Medical Protective Association.

Grantcharov’s research team is developing special Google Glass software to ensure that patient privacy and confidentiality is upheld. “Glass will be completely compliant with the (US) Health Insurance Portability and Accountability Act before we test it out in the operating room.”

In the meantime, he has been testing the live streaming capabilities of Glass in simulations. Final touches to the privacy-compliant programming are expected to be complete soon, at which time Grantcharov will begin using Glass in the operating room.

“We plan to rigorously study Google Glass in the operating room to determine if it actually makes surgeries safer and results in better patient outcomes,” he says.

And Grantcharov does think the results will be promising. His team has already proven that the blackbox technology improves surgeries by preventing repeat mistakes. Pairing this technology with Glass, in addition to the potential for virtual consults, is bound to make a difference, he says.
Twitter rejuvenates the journal club

Pat Rich

THE ONLINE SOCIAL MEDIA GIANT TWITTER IS PUMPING NEW LIFE INTO one of the more ubiquitous forms of academic medical knowledge sharing — the journal club — and Canadian physicians are helping pioneer this work.

Twitter is effectively expanding the scope of journal clubs beyond the constraints of a set time and place and across international borders.

Research was recently published in *European Urology* documenting the initial year’s experience with what is generally acknowledged to be the first of these international journal clubs, the International Urology Journal Club (#urojc).

The genesis of the club is detailed in the initial @iurojc Twitter account blog post in October 2012: “Recently, Canadian urologist Dr. Michael Leveridge was live tweeting during one of his local journal club meetings and his tweets drew the attention of international urologists.

"From ensuing tweets, the idea of an international urology journal club was born.”

The posting also described the rationale behind the club’s format.

“(Upon) careful examination of the world clock times and the very fact that surgeons are frequently time poor and have irregular schedules, a live tweet discussion for an international audience was considered not to be practical at this... time ... Having decided upon this project being worth pursuing, it should commence sooner rather than later. The outcome of ideas put on the back burner is that they may never get off the ground.”

The urology journal club is an asynchronous 48-hour monthly club moderated by the @iurojc Twitter account. It focuses on papers selected within four weeks of publication online, ahead of print, in major urology journals.

The analysis by Australian surgeon Dr. Isaac Thangasamy, from Rockhampton Base Hospital, The Range, Queensland and colleagues (including Leveridge) shows the journal club first-year activity involved 189 people from 19 countries with a mean of 39 monthly participants. The study notes the @iurojc account now has more than 1,000 followers.

“Perhaps the most remarkable feature” of the journal club as noted by the study authors is the involvement of article authors in the discussion.

“This feature provides unique insights that both conventional and local social media journal clubs could not possibly achieve.”

Dr. Rajiv Singal, a Toronto endourology and robotics surgeon at Toronto East General Hospital and an active journal club participant, describes it as “a great endeavour.”

“The new professional relationships worldwide that it has created... (are) awesome. That alone is reason enough to participate,” he noted in an email interview.

Last summer, urology surgeon Dr. Henry Woo of the University of Sydney, one of the founders of #iurojc, blogged about what he considered important principles for launching a successful international Twitter-based journal club. His list is paraphrased here.

- Hold the chat over a 48-hour period to enable global involvement without the constraints of time zones.
- Select cutting-edge publications for discussion. Papers that are within four weeks of publication online (ahead of print)
Canadian launches respirology Twitter journal club

The success of the urology journal club prompted another Canadian physician to start her own journal club in the area of respirology and sleep research.

provide incentive for participants who wish to be at the forefront of the latest findings and opinion.

- Engage journals to provide open access of the selected articles online. Easy access for participants has been a huge benefit to those who do not otherwise have ready access to manuscripts hidden behind a journal paywall.
- Invite study authors to participate in the Twitter discussion.
- Offer a prize for the best tweet.
- Routinely ‘follow-back’ urology followers on Twitter, and follow any other urologists the journal hosts become aware of. This policy maintains an open door for feedback and suggestions without users having to request a follow for direct messaging.

The study concluded that this Twitter-based international club has revitalized journal clubs “into a vibrant forum for discussion on cutting-edge research with renowned experts. It is also a tremendous opportunity to foster and maintain relationships with international colleagues.”

Dr. Anju Anand (@thelungdr), a respirologist and sleep medicine physician at St. Michael’s Hospital, Toronto, was a Twitter neophyte when she became aware of the work of friend and associate Dr. Michael Leveridge and #urojc.

“After following along one night I thought to myself this would be great in any field,” she said.

Although Anand said previous work has shown that respirologists are slow to use social media, she created #rsjc (@respandsleepjc) in hopes of starting a revolution.

She obtained program approval to pilot the journal club in the University of Toronto respirology resident training program after giving talks on social media within her division, Anand said. She also surveyed staff and residents on social media trends and perceived risks and benefits. Anand succeeded in obtaining accreditation from the Royal College of Physicians and Surgeons of Canada, with section 1 MOC credits for participation.

Anand says #rsjc, which is a monthly asynchronous tweet stream, critically appraises two respirology-related articles in each. She said the journal club “has exceeded expectations, as has Twitter overall.”

“Our tweets overcome geographical and time-related barriers. We are able to invite experts in the field as tweetees and we can post related articles and slides in real time.”

She said growth in the number of participants has been slow but sure. The journal club’s Twitter account now has 136 followers.

Whereas 25% of residents and 20% of fellows in the Toronto residency program said they had a Twitter account prior to the launch of #rsjc, Anand said all residents and fellows now report having a Twitter account for professional use.

“On a trainee satisfaction questionnaire, 92% found #rsjc to be a valuable part of the program, with 90% of residents and fellows expressing intentions to continue using it over time. In addition to the monthly discussion, interesting CME and talks in the division are tweeted and it has helped to foster relationships with colleagues around the city and world,” Anand said.

“Don’t believe me — try it,” she adds.
This was well documented at the recent e-Health conference in Vancouver, where several sessions focused on projects in which telehomecare is starting to be used successfully for chronic disease management in jurisdictions across Canada.

An article on home health monitoring by Dr. Michael Guerriere, chief medical officer for Telus Health, published in Canadian Healthcare Technology and circulated at the conference, featured an analysis of four published peer-reviewed studies of such monitoring.

Guerriere wrote that based on the analysis “there is a strong business case to be made for home health monitoring care — particularly for sub-acute patient populations at risk of exacerbating their condition and being readmitted to hospital or having to visit an emergency department. “

“The benefits gained by reducing the use of acute care services alone provide a compelling argument for investing in technologies that support home health monitoring.”

However, Dr. Ed Brown, chief executive officer of the Ontario Telemedicine Network, noted in one conference session that the research community remains skeptical of the benefits of telehomecare, and other studies have yielded ambivalent findings concerning home health monitoring. He argued the real benefits from telehomecare come from better educating patients about their condition; focusing on this in research studies would yield more positive results.

Brown discussed the Ontario Telemedicine Network’s “very exciting history” with telehomecare and plans to expand services from six local health integration networks (LHINs) to all 14 in the province. He said the intent is to “bake it (telehomecare) right into the health system” so it is an integral part of overall health care delivery.
“Telehomecare, for us, is about remote monitoring, but perhaps even more importantly it’s about coaching,” he told conference participants.

“We view this as a health care intervention where people with significant chronic disease … for six months are paired with a coach who is trained … on behaviour change and motivation to really get people to understand what their health problems are … and to have them motivate themselves to actually adhere with the program.

“This is all about helping chronic disease patients to ‘get it’ and understand the things … they do that make them sick, and the things they have to do to get well.”

Brown said results from the 2007-08 pilot study done in Ontario have shown dramatic improvements in outcomes, with reductions in hospitalization of 70%–80%. More recent analysis with 130 patients at one hospital showed a 71% reduction in hospitalization for patients involved in telehomecare.

He said the Ontario program, aimed at patients with heart failure, chronic lung disease or diabetes, is guideline-based and has specially trained nurses or respiratory technologists coach the patients. He said the program is limited to six months although the benefits extend beyond this period.

Brown said earlier work with a four-month program showed the time was insufficient to change patient behaviour, but “by the end of six months it has either worked or it hasn’t.”

He explained that patients are referred into the program by primary care physicians, but noted there has been some “inertia” on the part of physicians. As a result, other approaches are being investigated to enrol patients — such as having them automatically opted in from the hospital.

“The bottom line in this is wonderful care for patients. They love it, they appreciate it and they do better in terms of their health outcomes, and we reduce costs to the health care system.

“This is a very, very powerful intervention,” Brown concluded.

During the same session, a high-level overview of how British Columbia is working with Telus to implement telehomecare in the province was presented by Lindsay Kislock, the assistant deputy minister responsible for overseeing e-health initiatives in the province.

Kislock said several small pilot programs with telehomecare have been ongoing since 2006 with “really good results.” She said BC is interested in the technology, not only because of its ability to deliver care, but also because of its capacity to educate patients on their own care.

“We want to move… from hospital-based care into patient-centred care,” she said.

“We’re also interested in leveraging innovation and improving outcomes.”

Kislock said the province has signed a multi-million dollar agreement with Telus to launch a provincial home health monitoring program that will begin with patients who have experienced heart failure. She said initial experience with more than 200 patients enrolled in the program has shown a 50%–80% reduction in emergency room visits. If patients were admitted, their hospital stay was reduced by half.

At another e-Health session, Henry Van Boxtel from the Island Health Authority, Vancouver Island, described the successful expansion of the agency’s home health monitoring program for patients with heart failure and the program’s success in reducing hospitalizations and emergency room visits.

Kislock said initial experience in BC has shown telehomecare can have a major impact on patient knowledge and behaviour.

“When they show up in the emergency room they know exactly what they need. They’re in and they’re out. You can’t buy this kind of engagement,” she said.

However, Brown cautioned that proper patient selection for telehomecare is important. For example, he said, a 92-year-old patient with a broken arm is unlikely to be a good candidate for using an iPad to enter data remotely.

Having the proper infrastructure is also important. At a session on telehealth in First Nations communities, it was noted that telehomecare is not viable in these communities because they don’t have Internet connections that make remote monitoring and coaching possible. ■
Telemedicine comes under more scrutiny

INCREASING USE OF TELEMEDICINE IN CANADA HAS PROMPTED some licensing authorities and at least one provincial government to take a closer look at this mode of health care delivery.

In June, British Columbia Health Minister Terry Lake announced a comprehensive review of telemedicine in that province that’s expected to be concluded this fall.

“… (A)s government, we want to make sure that we contain growing costs,” Lake told the Vancouver Sun. The ministry noted in announcing the review that it had seen an increase of telemedicine services delivered by private vendors.

In the newspaper interview, Lake speculated that because doctors can get higher fees by seeing patients online, this may lure physicians away from providing comprehensive in-office care and create a situation comparable to walk-in clinics. “Our goal … is to strengthen community-based services to (replace) one-off acute care visits with planned, proactive care,” the ministry said.

In a recent newsletter, the College of Physicians and Surgeons of British Columbia referred physicians to a revised practice standard published by the college.

“Telemedicine is here to stay,” the article said, but “like the telephone, physicians must use these new technologies safely …

“Telemedicine has the potential to reduce the risk of error by providing physicians with considerably more information. However, a decision to rely on a virtual visit to conclude a medical assessment for an acute concern will always be a high-stakes one, which requires thoughtful consideration and superior clinical judgment.”

Physicians were referred to both the new standard and a March 2014 letter to the provincial medical journal by college deputy registrar Dr. Willem Vroom.

Vroom stated:

The biggest challenges facing telemedicine today are not the gaps in technology but how telemedicine is applied. If telemedicine is allowed to flourish as a new form of medicine rather than as a tool that a physician chooses to optimize patient encounters, the risk is that it will become an industry in itself and lead to tele-walk-in clinics and prescription-refilling services. And depending on how remunerative it is, it could potentially draw physicians away from clinic or hospital-based work. Should we not learn from the example of walk-in clinics eroding the traditional primary care home?

The College of Physicians and Surgeons of Ontario (CPSO) is also updating its telemedicine guidelines and has published a draft policy for review and comment.

In the preamble, the college states: “The expectations set out in the draft policy are based on the notion that the practice of telemedicine is the practice of medicine; as such, physicians’ existing legal and professional obligations with respect to practising the profession remain applicable when providing care via telemedicine.”

The college noted the following revisions:

- The definition of telemedicine has been updated and includes email as well as videoconferencing and the use of mobile devices.
- Conditions for the appropriate use of telemedicine are specified.
- The policy clarifies that a doctor–patient relationship can be established via telemedicine, without a face-to-face visit.
- A new expectation is added for CPSO members who refer patients to out-of-province physicians.
- There are new expectations for non-CPSO members.
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