



Rethinking primary care delivery in the digital age.

How Canadian practices are using technology to become more efficient and patient-focused.

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Rethinking primary care delivery in the digital age.

How Canadian practices are using technology to become more efficient and patient-focused.

In a recent speech, the Chair of the Canadian Medical Association challenged healthcare stakeholders to adopt the principle of disruptive innovation and to “unlearn (old ways) and adapt to the changing world.”¹

The pressure to innovate and to disrupt healthcare delivery is not new. Over the past two decades, a broad range of technologies have electronically interconnected healthcare providers so they could communicate privately and securely. Today, the focus has shifted to extending this connectivity to patients and their primary care team.

However, busy clinicians and administrators find themselves with an overwhelming selection of digital offerings, and few guidelines for determining which solutions will deliver immediate improvements to patient experience or clinic efficiency, while minimizing the day-to-day impact of these new ways of working.

This white paper discusses how virtual care and online appointment booking can enhance administrative efficiency and the patient experience. Based on the experiences of two busy primary care clinics, the paper makes the case for a carefully-planned digital transformation and suggests these two technologies are an impactful place to start.

Online appointment booking

Appointment management is a significant aspect of primary care administration. By offering patients the opportunity to search for and book convenient appointment times on their mobile devices, [online appointment booking technologies](#) reduce inbound call volumes, releasing clinic administrators to focus on patient interactions. These solutions also [automate appointment reminders](#) and allow patients to easily cancel or reschedule visits, thereby reducing costly no-shows and optimizing clinicians’ schedules.

The ability to offer one-on-one interactions without requiring the patient to be physically present increases the productivity of clinic staff, and enables physicians to deliver a better patient experience by spending more face-to-face time with complex cases.

It also eliminates points of friction for patients, such as travel and wait times. Indeed, Canadians are eager to embrace virtual care, with **seven in ten Canadians saying they would take advantage of virtual physician visits**, and 40 per cent saying they would do so for over half of their physician visits.²

Virtual care

Virtual care uses mobile video, voice and text messaging to connect patients with their care teams in real-time. Patients who require a simple service, such as a prescription renewal or lab test, can send their request by text and receive the required documentation directly on their mobile device. For more complex interactions, voice and video can be used for diagnoses, treatment plan discussions, and patient questions.

When selecting, implementing, and learning to use a new health technology solution, it can be challenging to assess its impact on clinic management and on the patient experience. The following case studies outline how two clinics – both part of TELUS’ network of partners – have successfully integrated these tools into their practices.³

¹ Dr. Brian Brodie, keynote address to Canadian Medical Association Health Summit, August 2018.

² Ipsos study commissioned by the Canadian Medical Association. *Shaping the Future of Health and Medicine*. August 14, 2018. Page 4.

³ TELUS Health has invested in Clinique médicale Saint-Louis and Union Health to drive and support development of technologies, with the ultimate objective of improving patient outcomes.

Case study 1: Clinique médicale Saint-Louis (CMSL)⁴



Online appointment booking increases patient satisfaction and clinic efficiency.

Nearly 40 physicians and allied health professionals serve 46,000 registered patients at this Quebec City primary care clinic. The clinic currently books more than 8,500 appointments per month, as well as an average of 3,800 walk-in consults.

[CMSL](#) recently faced two significant issues. The first was a very high volume of daily telephone calls. Clinic staff was **spending well over 100 hours per month fielding inbound calls and reminding patients about upcoming appointments**. As a result, the clinic's phone lines were constantly jammed, and patients were having a great deal of trouble getting through to speak with administrators.

This traffic also meant patients were less likely to call to cancel appointments, **which raised the clinic's no-show rate and directly impacted physicians' compensation**. The situation was critical and was creating dissatisfaction among patients, as well as inefficiencies and increased stress levels for the clinic's staff.

A second significant issue was **managing the flow of walk-in patients**. This situation was especially problematic as these patients often spent significant

time lining up outdoors waiting for the clinic to open - sometimes in frigid winter conditions. Once inside, they would often wait many more hours before being seen by a clinician.

It was clear to the clinic's director and owners that managing this high volume - both by phone and in-person - needed to become more efficient.

Adopting technology for better call management.

Initially, CMSL considered hiring new staff to deal with the high patient traffic and call volume experienced at peak times, such as early morning. However, after consulting with the clinic's owners and assessing costs, the administration opted to implement several modules of [Petal Booking](#), a Petal MD solution offered by TELUS Health, which includes an automated appointment solution.

CMSL: Why innovate?



Very high call volume



Elevated patient no-show rate



Problems managing walk-ins



Decreased employee morale



Need to modernize clinic

⁴ All quotes and data in this section are taken from the Petal MD case study *Clinique médicale Saint-Louis: How Petal Booking Improves Access to Medical Clinics*.



CMSL thus gained a number of automated services, including an online appointment booking portal and a system that creates and sends patients appointment reminders via SMS, email, or phone. Clinic staff also have the ability to attach forms to appointment reminders, so patients can complete their intake documents before arriving at the clinic. For a more streamlined workflow, these modules were also integrated with CMSL's Electronic Medical Records (EMR) technology, [KinLogix](#).

Managing adoption among patients.

To ensure successful deployment of the online appointment booking solution, CMSL recognized the need to educate staff and patients about the solution, and to manage the change with certain patient groups. There were two main concerns in this regard:

- Would senior and elderly patients, who generally prefer to use the phone, actually use the online appointment portal?
- Would the time slots made available online be fully filled, or would physicians end up with significant gaps in their schedules?

To mitigate these concerns, initially only 30 per cent of doctors' time slots were made available online. This further ensured there would be appointments available for seniors and other patients who continued to call the clinic. After a few weeks, however, it was clear this concern was unfounded. **Today, 100 per cent of time slots are available online as well as through call-ins, and most seniors appear comfortable using the new solution.**

To address the concern regarding physicians' schedules, the clinic put significant effort into educating its patients about the new solution. Posters, business cards, and a slideshow were prominently displayed in the clinic, and staff members explained the process to visiting patients.

A guide to walk patients through the process of creating an online appointment booking account was also distributed.

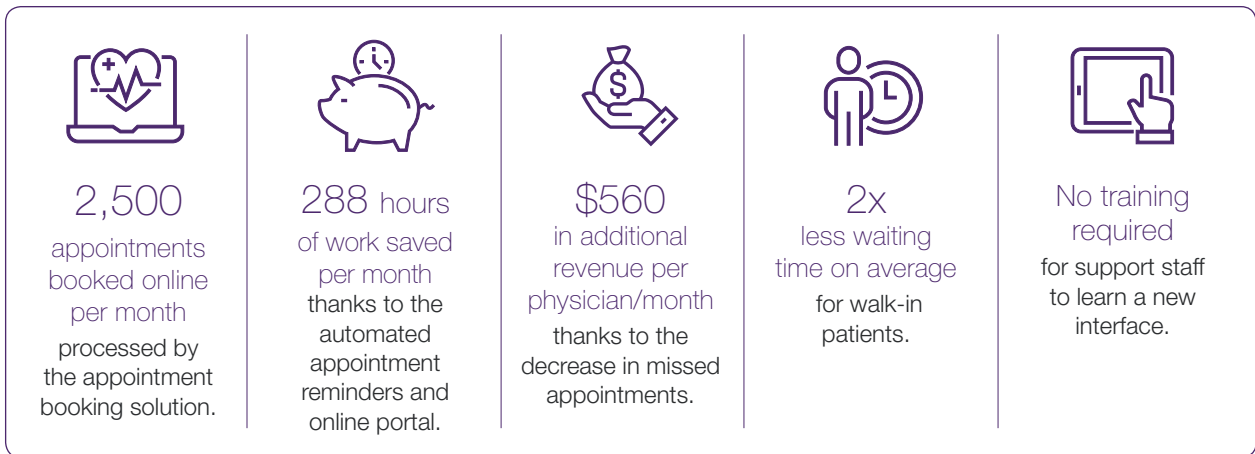
Patients' enthusiasm was strong from the outset and use of the online booking portal soared within weeks of its launch. **Only one month after the solution was set up, hundreds of patients were using it to book appointments. The widespread use of the new online system saved clinic staff roughly 100 hours per month**, which would previously have been spent booking appointments on the phone and making reminder calls.

Streamlining workflow and training clinicians and administrators.

The automated appointment reminder module also rapidly enabled CMSL physicians to better manage their schedules. Patients can now cancel their appointment well in advance, which instantly frees up the time slot for other patients. Some doctors saw their **missed appointment rate drop by as much as 75 per cent**, largely due to these automated reminders.

"Almost every week, one or two of my scheduled appointments are cancelled. Before, these slots would stay empty because the cancellations were last-minute, or because patients just didn't bother notifying us," reported one CMSL physician. This more efficient workflow also helped raise each CMSL physician's annual revenue by more than \$6,800.

On the administrative side, there was concern that overworked staff members would require additional time and effort to familiarize themselves with the new solution. In this instance, interoperability played a key role. The solution was synced with the clinic's KinLogix EMR, so staff could continue managing appointments through the same interface they were already accustomed to using. Thus, no additional staff training was required, which generated significant time and cost savings.



Source: <https://www.petalmid.com/case-study-st-louis-medical-clinic?hsCtaTracking=d6c1a69e-8197-4f0e-91be-7e0ba061ca7f%7Caa30fc6b-0e6f-4aaf-8d80-a89ca7de4961>

Finally, **identifying internal ambassadors and super-users also helped accelerate and streamline the solution’s roll-out to staff.** “Having a team of strong internal advocates for the online booking solution made it much easier for everyone to buy into the new way of doing things, and ultimately to promote it to our patients as well,” said Julie Deslauriers, CMSL’s Clinic Director. “The fact that another clinic in our group was also implementing the solution really helped as well.”

Finally, the solution’s automated appointment reminders (via phone call, SMS or email) saved clinic staff a significant amount of time. Given that CMSL handles roughly 4,800 booked appointments every month, clinic staff were able to **save nearly 120 hours of work on this task every month**, based on an average of 90 seconds for every appointment reminder message.

Reducing wait times and patient dissatisfaction.

The strongest impact of CMSL’s new online appointment booking solution occurred when the clinic made walk-in consultations available online. **On average, the online appointment booking portal cut walk-in patients’ waiting time in half.** “In just a few weeks, our waiting room has gone from being practically full every morning to being empty. Now, patients come in a few minutes before their appointment, allowing my colleagues and me to deal with them one by one,” noted a CMSL administrative assistant.

More importantly, these patients – many of whom had to arrange time off from work or school – reported a more pleasant overall experience, since they could better manage and plan their consult. It also allowed them to make appointments when it was convenient for them, rather than only during the clinic’s hours of operation, and to spend less time waiting on hold or for a callback.





Case study 2: Union Health clinic



Virtual care app delivers efficiency with a personal touch.

Union Health is a new family medicine clinic which opened in April 2019 at 25 York Street in Toronto. Managed by Akira Health, a Toronto-based healthcare technology company, the clinic serves two main patient groups: workers in the downtown core and families living in and around the area. In addition to offering traditional in-person consults with its primary care providers, Union Health differentiates itself by offering patients **a comprehensive virtual care mobile app** that addresses the heart of the patient experience.

Integrating virtual care.

Downloadable to any mobile or desktop device, Akira Health's virtual care mobile app represents the patient's first contact with the Union Health team. Through the app, patients can text, video or voice chat with a healthcare professional to discuss their medical issues without travelling to the clinic. Since its 2016 launch, the app has facilitated more than 40,000 consults with patients across Canada.

Patients download and register for the app free of charge. Once registered, they can access a range of 24/7/365 services, including:

- Online appointment booking
- Access to personal health records
- Communication via secure text with their clinical care team
- Results and referral management and communication

For a monthly subscription fee, Union Health patients can also benefit from virtual health consults at any time and from their preferred location. A fee is charged because in Ontario, virtual consults are not covered by the provincial insurance plan, whereas they are covered elsewhere, such as British Columbia. Moving forward, the regulatory environment will likely adapt to virtual care, both within and between provinces.⁵

Seamless virtual and in-person experiences.

Through this subscription, patients can start a conversation with a doctor or nurse practitioner regarding their condition and symptoms.

If the patient can be treated virtually, the practitioner can provide medical advice, offer a diagnosis, send prescriptions directly to a pharmacy, and/or refer the patient for lab and imaging tests. The practitioner will also check in with the patient within 48 hours to follow up.

If the patient cannot be treated virtually, the intake coordinator will help her/him book an in-person consult, after which the doctor's clinical notes and care plan are documented in the app. When this information becomes available, patients receive a notification on their device. Both the clinician and the Akira practitioner will also send follow-up messages 48 hours after the clinic visit.

Virtual and in-clinic experiences are seamlessly integrated to ensure that the patient's continuity and transition of care are not impacted.

Virtual care's biggest fans.

Support for virtual visits is highest among patients who:

- Have had a virtual visit in the past
- Are between the ages of 18 and 34 years
- Are heavy users of the health system (11+ consults/year)
- Are parents

Source: Ipsos study commissioned by the Canadian Medical Association. *Shaping the Future of Health and Medicine*. August 14, 2018. Page 4.


⁵ Canadian Medical Association (CMA) News. Scaling up virtual care in Canada: CMA a key player in new national task force. March 18, 2019. Retrieved at: <https://www.cma.ca/scaling-virtual-care-canada-cma-key-player-new-national-task-force>.



Better communication improves patient experience and clinic efficiency.

The virtual care app helps establish a new, bi-directional communication link between healthcare providers and patients. Matt Zukowski, Chief Technology Officer at Akira Health, believes this technology contributes to strengthening the therapeutic relationship between patients and providers. “It facilitates a lot more communication between patients and doctors on an ongoing basis,” he said. “Patients feel like they have this expert who really knows and understands them - someone they can reach out to if they have a question or before their condition becomes serious. It’s a move away from episodic care, and establishes a stronger, more collaborative relationship.”

Union Health also believes its use of virtual care as a primary method of patient communication will lower its administrative and staffing costs. **Over half of patients’ medical questions and issues can be resolved through in-app communication**, improving clinic access for patients requiring an in-person consult.



“ Technology does play a role in deciding whether virtual care is for you, but it’s also about getting people to reimagine how they interact with their health. ”

Meghan van Zanden, Head of Clinical Operations at Akira Health, believes a broad range of patients will embrace virtual care - not only the young or tech-savvy. “Technology does play a role in deciding whether virtual care is for you, but it’s also about getting people to reimagine how they interact with their health,” she said. “It’s not so much a question of whether they can use the technology, but whether that’s how they want to engage with the healthcare system or with their provider. That isn’t limited by age or location or any other demographic; that’s very individual and personal.”

Five keys to successful technology integration.

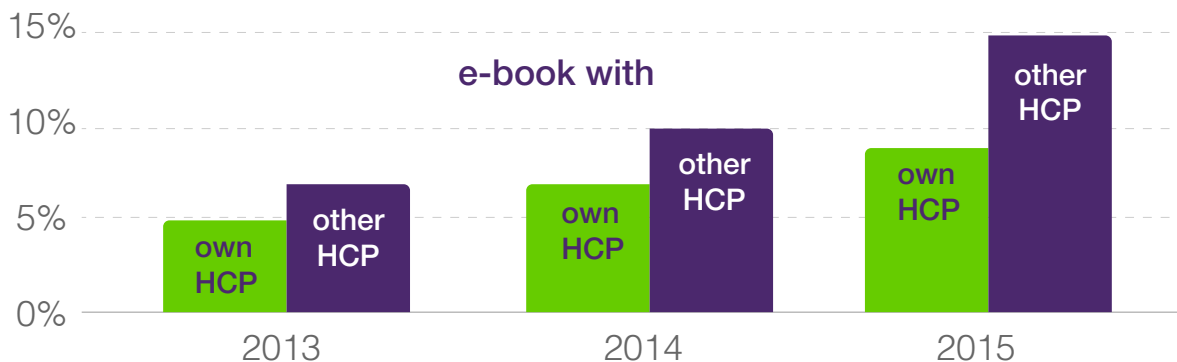
Both CMSL and Union Health offer some important insights into successfully implementing new technologies into busy clinics, while maintaining a clear focus on quality care and patient outcomes.

1. Ensure the solution addresses a specific and pressing problem.

The chosen solution must fill a true need, rather than simply offering bells and whistles. As an example, online appointment booking capabilities have been in high demand for some time. As far back as 2013, 90 per cent of Canadians said they would book an appointment with their healthcare provider electronically, if such a functionality became available.⁶ A great solution must have some existing demand from patients, clinic staff, or both.

Access is slowly growing.

% of Canadians who report ability to electronically book an appointment with health care provider (HCP)



Source: <https://www.infoway-inforoute.ca/en/component/edocman/2717-patient-e-booking-practice-perspectives-on-the-benefits-challenges-and-lessons-learned/view-document?Itemid=101>

2. Have a guiding vision for your technology adoption.

A successful technology shift requires forethought and careful analysis. Many technology investments are underutilized because goals and values were misaligned. It's crucial that all stakeholders understand the value that a given technology will deliver, and how it will help the organization achieve its overall goals.

For example, CMSL's management team thoroughly analyzed all available options. The decision to adopt an e-booking solution fit two important criteria: it was more economical than hiring new staff, and it would permit staff to devote more time to patient interactions. "Automating tasks that used to require manual input has made our staff more available to patients – something every clinic wants," Deslauriers noted.

⁶ Ipsos Reid Survey, 2013. Cited in Canada Health Infoway, Consumer Health Solutions. Exploring the value, benefits and common concerns of e-booking: a White Paper. 2013, page 3. Retrieved at: <https://www.infoway-inforoute.ca/en/component/edocman/1832-exploring-the-value-benefits-and-common-concerns-of-e-booking>.

3. Interoperability is key.

Choosing a technology partner with significant expertise and experience with primary care clinics is another important element. With the right partner by their side, clinic staff can leave the complex technology decisions to a team of seasoned experts. “Our technology partner became a trusted advisor and helped us work through the change management required to implement a new digital solution like this,” Julie Deslauriers said.

An expert technology partner can also ensure a strong level of interoperability to maximize efficiencies between the clinic’s existing management systems - such as an EMR - or other software the clinic may want to implement in the future. It also streamlines clinic workflow and administration, while ensuring that sensitive patient data remains secure, and can easily accept supplemental inputs from a variety of patient platforms and devices.

At CMSL, integrating the e-booking portal with its existing EMR allowed everything to be managed from a single interface – one which staff was already comfortable using. One clinic physician noted that “implementing the online booking solution didn’t involve any additional administrative tasks or learning.”

4. Communicate, communicate, communicate.

Identifying internal ambassadors and communicating the project plan (timeline, tools, training requirements, etc.) to staff and patients alike is crucial. In healthcare – where the stakes can be extremely high if mistakes are made – ambassadors can help reassure colleagues and act as change agents during the initial phases. “Having internal ambassadors was a game-changer for our clinic,” Deslauriers said. “By testing the solution first, they reassured us that it would be easy to use and wouldn’t require any additional training.”

At Union Health, the virtual care component was integrated into the clinic’s care offer from the outset. However, internal buy-in was still crucially important. “By virtue of being a new clinic and building from the ground up, we were free to try new things, so everyone was comfortable,” Matt Zukowski noted. “The staff has been positive about it so far, and this positive outlook will help them promote the benefits of this service to patients in an authentic way.”

To ensure patient buy-in, this group should also be consulted and kept in the loop throughout the process. “You have to communicate to your existing patient base what these solutions will bring to them, and make them want to engage,” Meghan van Zanden stressed. “The last thing you want to do as a clinic is to invest in a new technology, invest in a new care model or a new way to practice, and then have no patients benefitting from it.”

At CMSL, the key to patient adoption of the new e-booking solution was raising awareness of its time-saving benefits and additional functionality. “Our technology partner gave us little business cards that we could hand out to patients, explaining the process of creating an online account,” Deslauriers noted. “That’s the kind of touch that helped many patients start making appointments online, and cleared up our phone lines.”

5. Take a gradual approach and measure constantly.

A phased approach will help dispel resistance to change and enable clinic staff to better assess their efforts over time.

Meghan van Zanden believes this approach can also reduce physician uncertainty over a new care delivery model. “Physicians might wonder how they will convert their clinical practice from something they know and do in person, to actually delivering that care virtually. You should take the time to make sure physicians are comfortable using the virtual care technology, and don’t underestimate how long the process might take.”





What's next in Canadian healthcare technology?

As the case studies presented in this white paper show, adopting digital technology can significantly improve clinic efficiency, enhance patients' overall experience, and enable primary care physicians to focus their time and attention on delivering outstanding care.

Online appointment booking and virtual care are just the tip of the iceberg. Canadians can expect to see large, collaborative information-sharing solutions such as TELUS' Health Exchange. This technology framework connects pharmacists, physicians and other healthcare professionals, acting as a single repository that accelerates access to health data and enables it to move rapidly between stakeholders. These solutions are also capable of managing a wide range of patient and provider consents, thus connecting and interconnecting all actors within the continuum of care.

Health technology will also be founded on increasingly strong security controls. Today, the rate at which information is digitally shared is skyrocketing, and public demands for stronger security continue to increase. As a result, new legislation and policies are being implemented worldwide to ensure cybersecurity becomes an integral part of patient safety policies.⁷

Finally, the scalability of software services and solutions will be increasingly important as patient expectations grow, support needs from physicians and clinic staff increase, and new technology becomes available.

Beyond interconnectivity and common platforms, there are other revolutionary trends and innovations in the works which may radically change the way patients and providers look at healthcare:

- What if physicians could perform surgeries remotely?
- What if sensors in the home could alert primary care physicians when their elderly patients have fallen or fainted?
- What if at birth, a data chip was embedded into our bodies, into which all of our health, genetic, and lifestyle information would be progressively added over our lifetimes?

As we await these and many other technological breakthroughs in digital healthcare, it's important to take some time to assess your current clinic set-up, and ensure it is future-proofed for maximum efficiency and patient satisfaction moving forward.

⁷ Lynne Coventry and Dawn Branley. Cybersecurity in healthcare: A narrative review of trends, threats and ways forward. *Maturitas*, Volume 113, July 2018, Pages 48-52.

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